

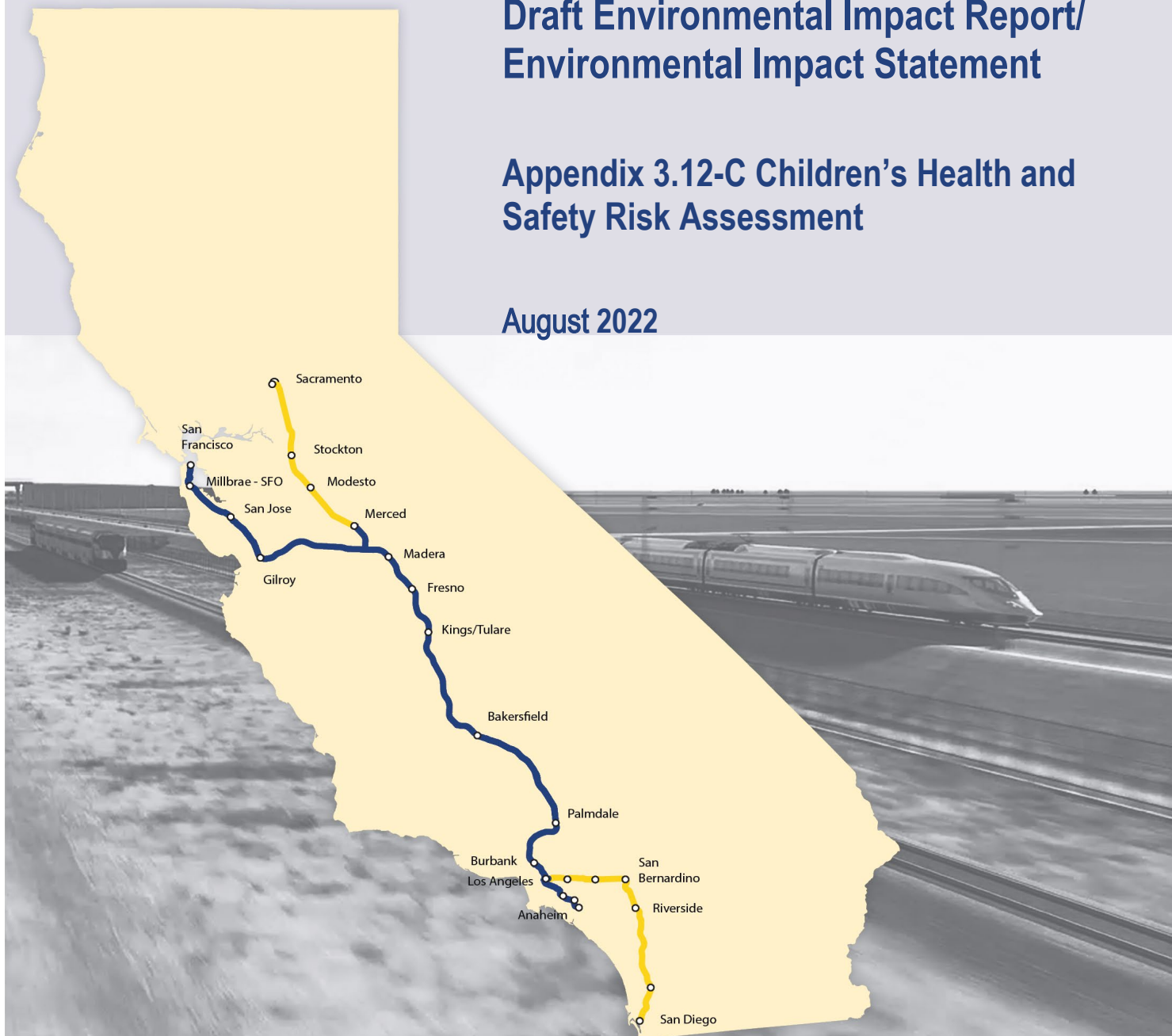
California High-Speed Rail Authority

# *Palmdale to Burbank* *Project Section*

Draft Environmental Impact Report/  
Environmental Impact Statement

Appendix 3.12-C Children's Health and  
Safety Risk Assessment

August 2022



The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being or have been carried out by the State of California pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated July 23, 2019, and executed by the Federal Railroad Administration and the State of California.

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## APPENDIX 3.12-C: CHILDREN'S HEALTH AND SAFETY RISK ASSESSMENT

### 1 INTRODUCTION

This appendix describes potential children's environmental health and safety risks in the California High-Speed Rail (HSR) Palmdale to Burbank Section RSA associated with the No Project Alternative, the HSR Build Alternatives (Refined SR14, SR14A, E1, E1A, E2, and E2A), and station locations. The following sections discuss the regulator setting, the methodology, existing conditions, and environmental consequences.

### 2 REGULATORY SETTING

Federal Executive Order 13045 (USEO 13045), Protection of Children From Environmental Health and Safety Risks, was issued in 1997 to minimize environmental health and safety risks to children, and to prioritize the identification and assessment of environmental health and safety risks that may have a disproportionate effect on children. USEO 13045 also ensures that federal agencies, in their policies, programs, activities, and standards, address environmental and safety risks to children. Environmental health risks and safety risks include risks to health or to safety that are attributable to products or substances that a child is likely to come in contact with or ingest, such as air, food, drinking water, recreation waters, soil, or products they might use or be exposed to. In proportion to their size, children breathe more air, drink more water, and eat more food than adults. This puts them at greater risk of exposure to pollutants. Children's bodies are also less able to metabolize, detoxify, and expunge these pollutants (USEO 13045).

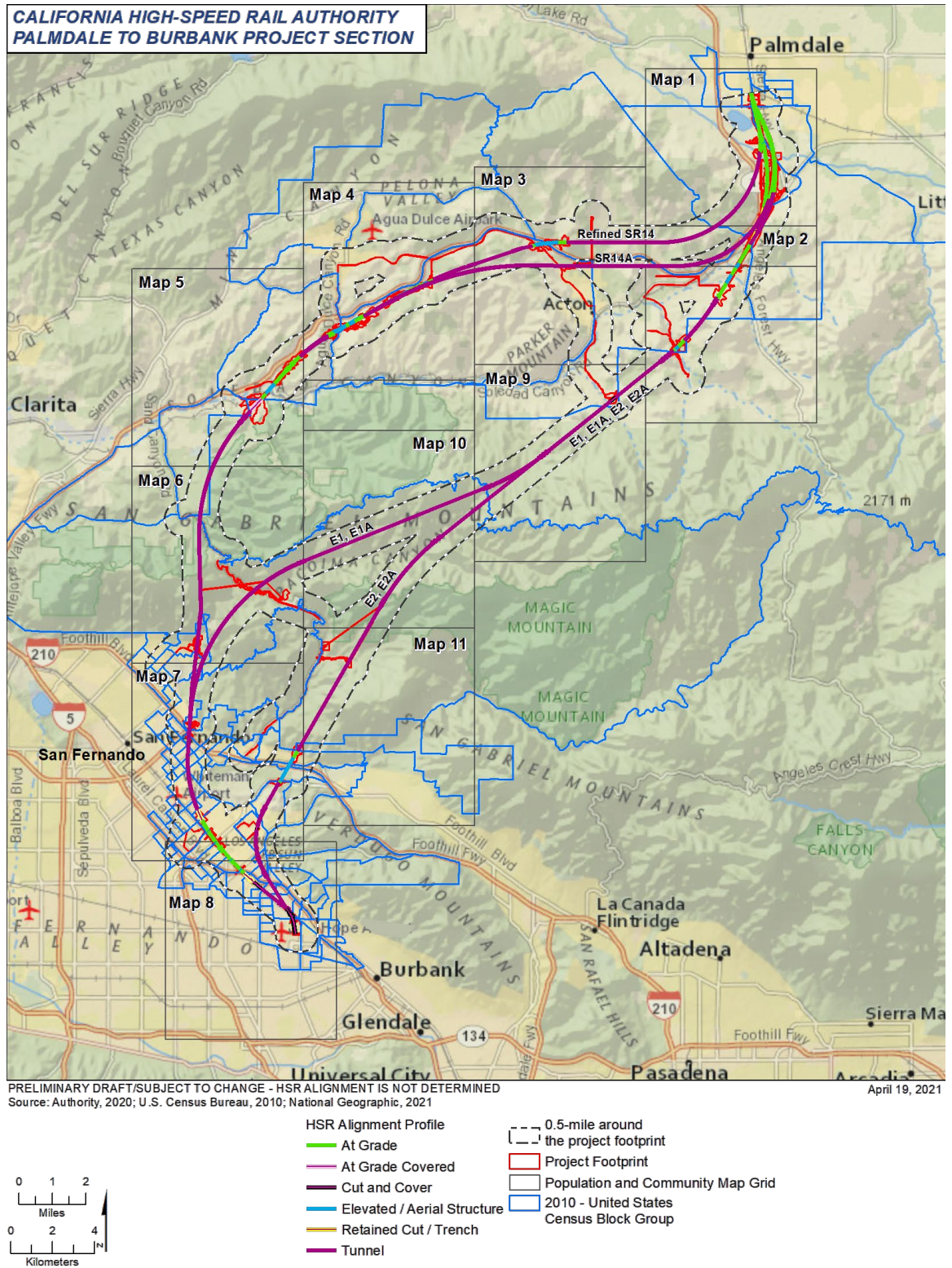
### 3 METHODOLOGY FOR EVALUATING IMPACTS

In accordance with USEO 13045, this analysis includes demographic analysis, review of project alternatives in relation to schools and childcare facilities, and a qualitative assessment of whether the project would result in children's environmental health and safety risks. The analysis presented in this appendix supports the California HSR, Palmdale to Burbank Section EIR/EIS. The analysis relies on detailed technical analysis in a number of the technical reports prepared to support the California HSR, Palmdale to Burbank Section EIR/EIS. The following environmental topics would have the greatest potential effect children's health and safety:

- Section 3.2, Transportation.
- Section 3.3, Air Quality and Global Climate Change.
- Section 3.4, Noise and Vibration.
- Section 3.5 Electromagnetic Fields and Electromagnetic Interference (EMF/EMI).
- Section 3.8, Hydrology and Water Resources.
- Section 3.10, Hazardous Materials and Wastes.
- Section 3.11, Safety and Security.
- Section 3.12, Socioeconomics, Communities, and Environmental Justice.
- Section 3.15 Parks, Recreation, and Open Space.

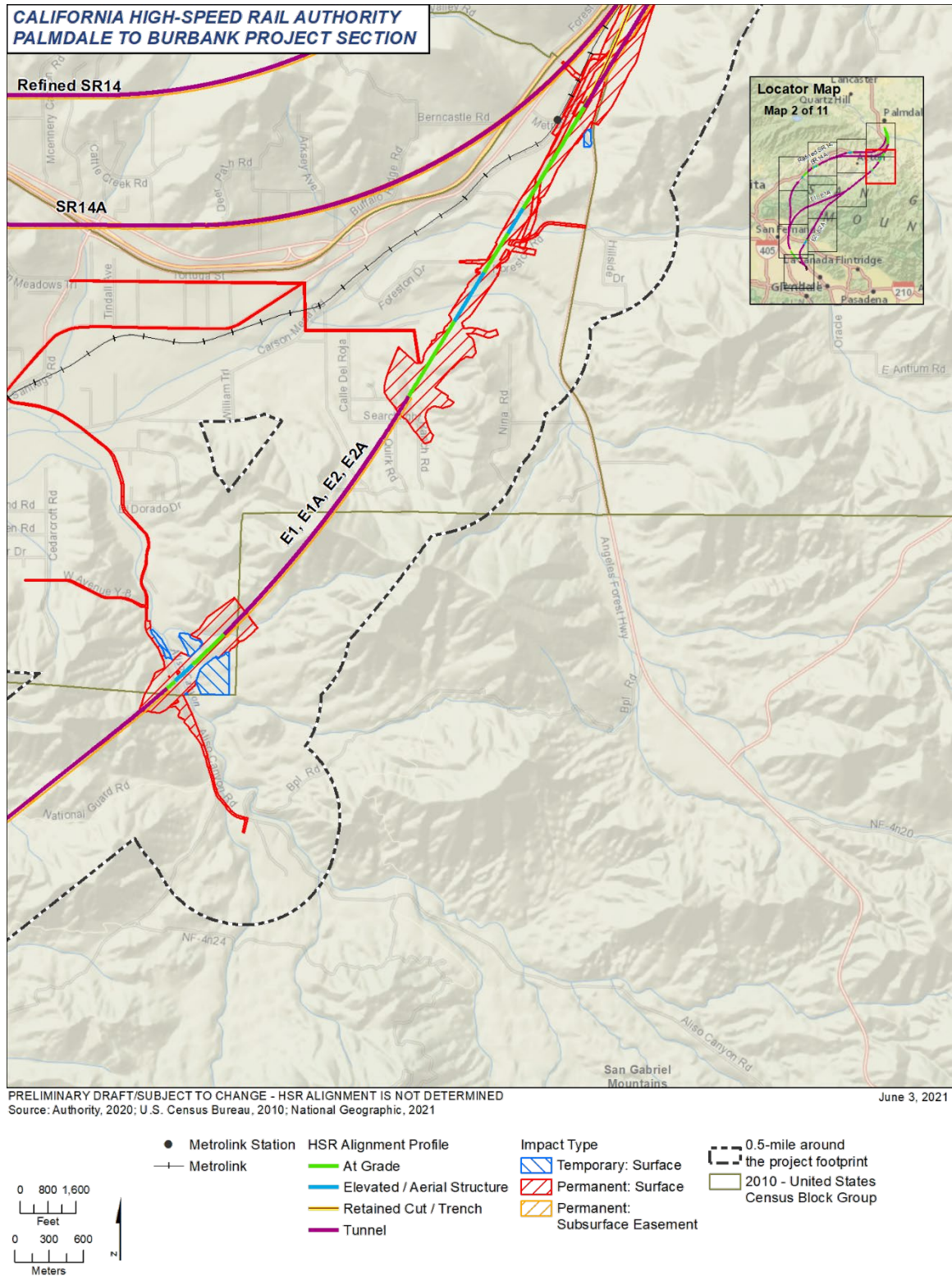
#### 3.1 Definition of Resource Study Area

This analysis evaluates these topics for their potential to result in health and safety effects on children. The resource study area (RSA) for this analysis comprises all census block groups that are within—or partially within—a 0.5 mile buffer around the project footprint (i.e. the entirety of any U.S. Census block group that intersects this buffer is included in the RSA). For the community setting and analysis of community facilities, the RSA is defined as 0.5 mile from the project footprint. Refer to Figure 3.12-C-1 through Figure 3.12-C-12 below for maps depicting both RSAs.



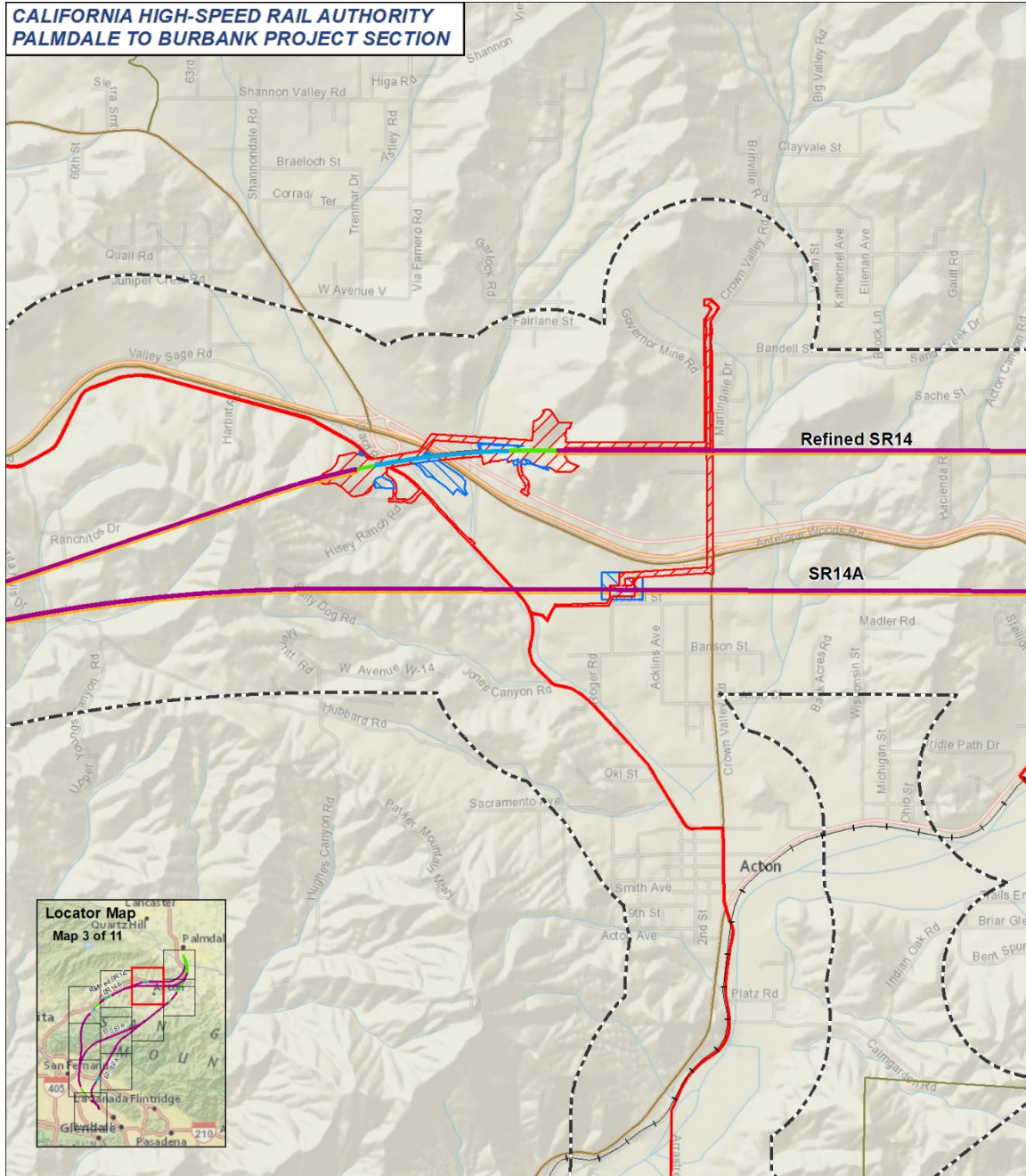
**Figure 3.12-C-1 Population and Community Resource Study Area Overview**



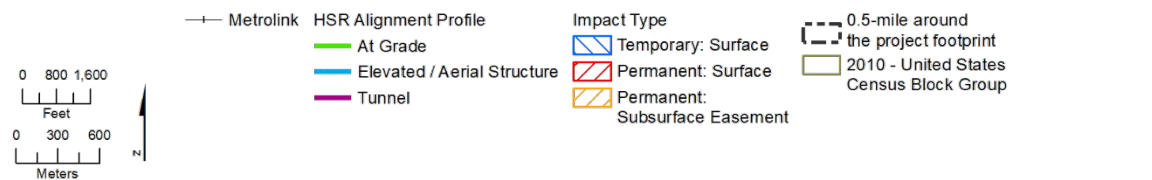


**Figure 3.12-C-3 Population and Community Resource Study Area (Map 2 of 11)**

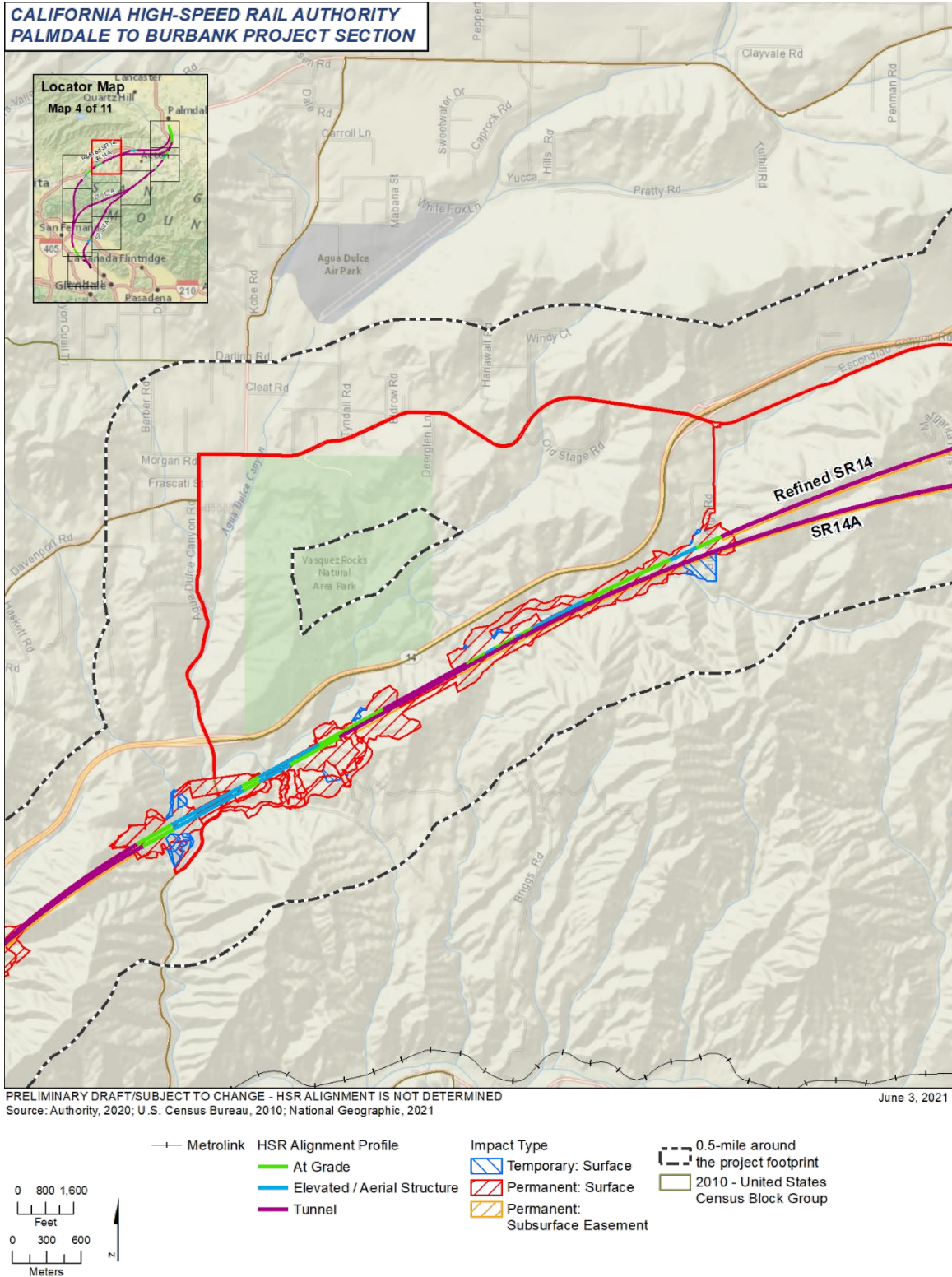




PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED  
 Source: Authority, 2020; U.S. Census Bureau, 2010; National Geographic, 2021  
 June 3, 2021



**Figure 3.12-C-4 Population and Community Resource Study Area (Map 3 of 11)**



**Figure 3.12-C-5 Population and Community Resource Study Area (Map 4 of 11)**

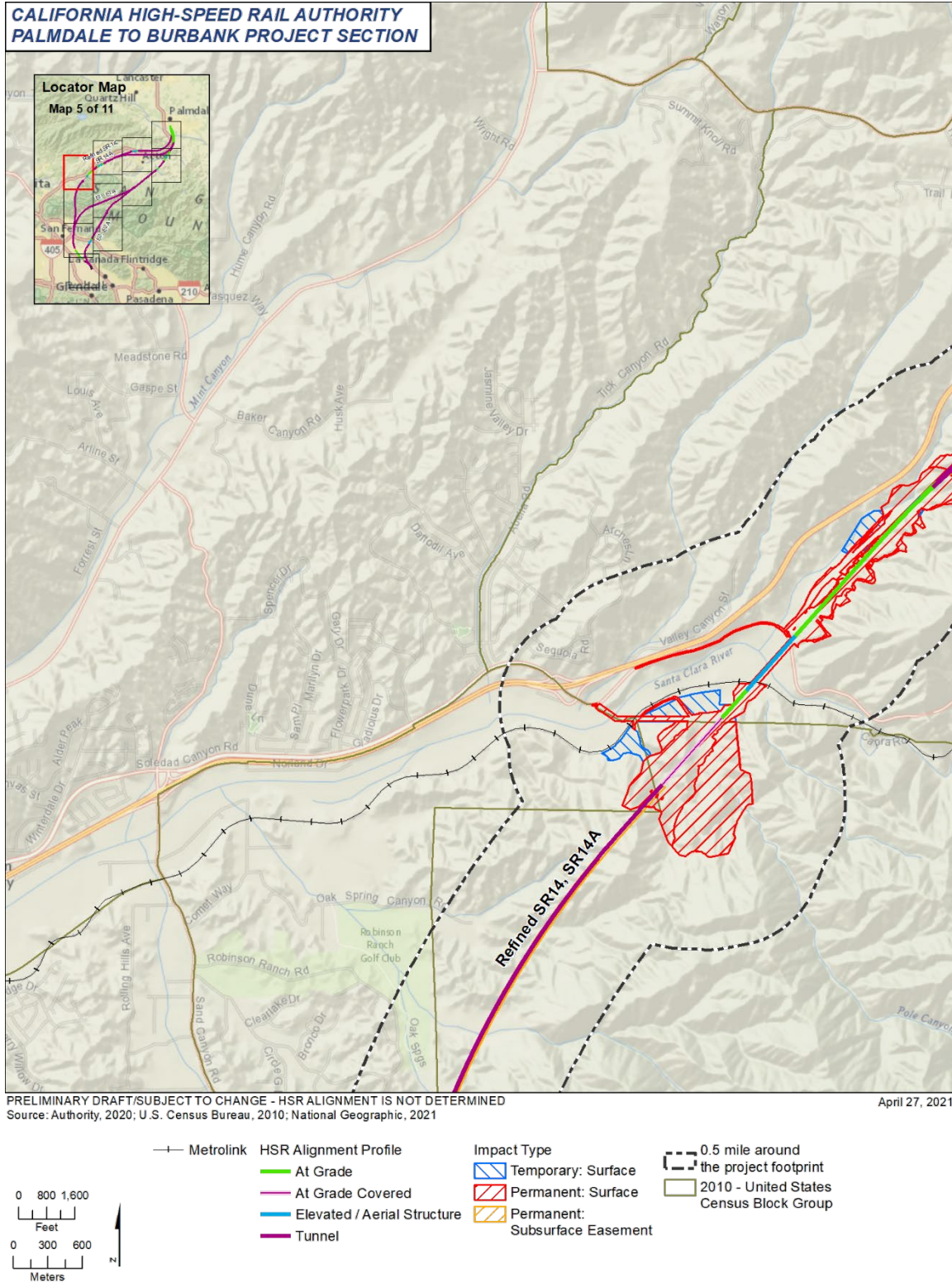
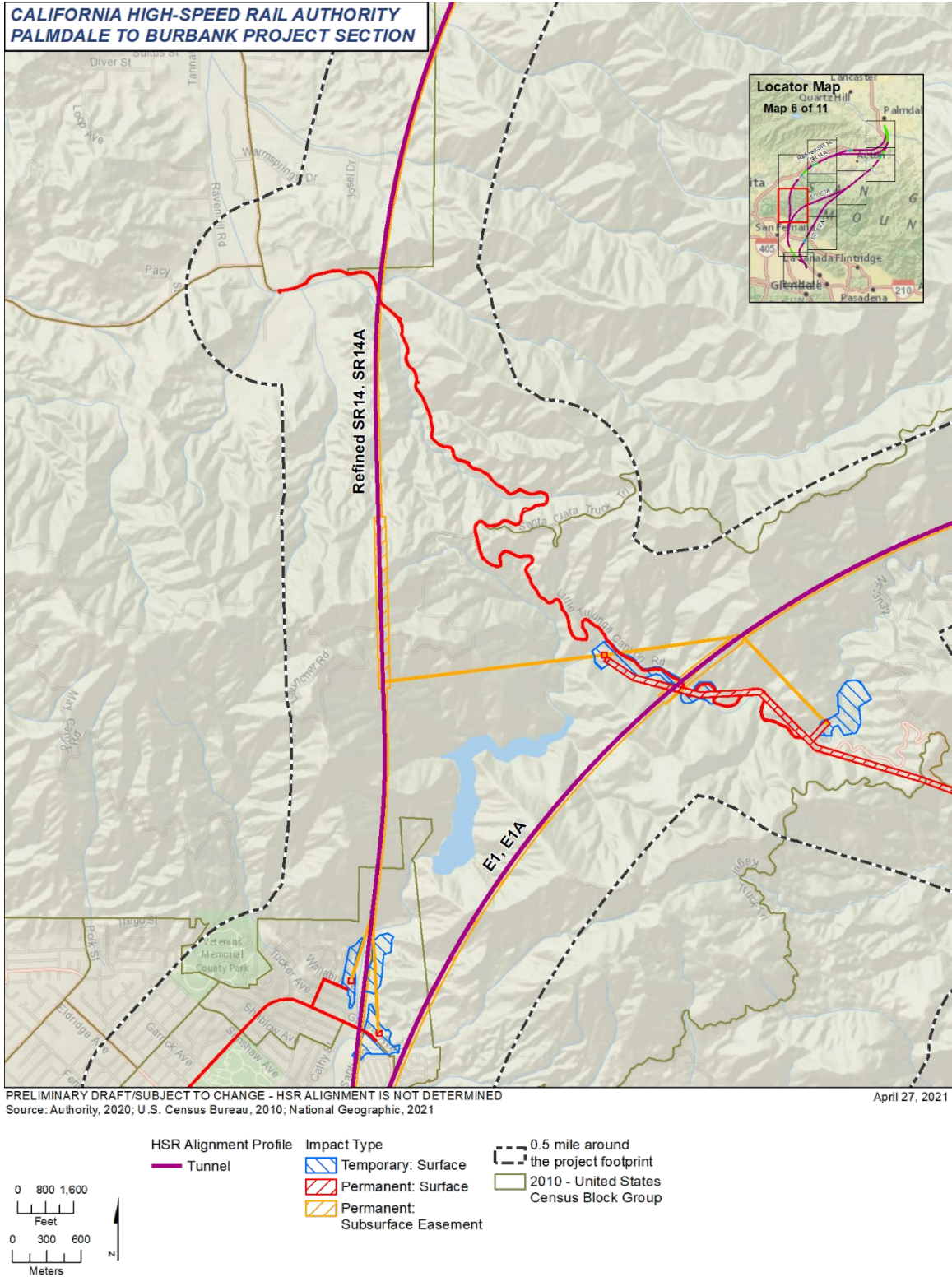
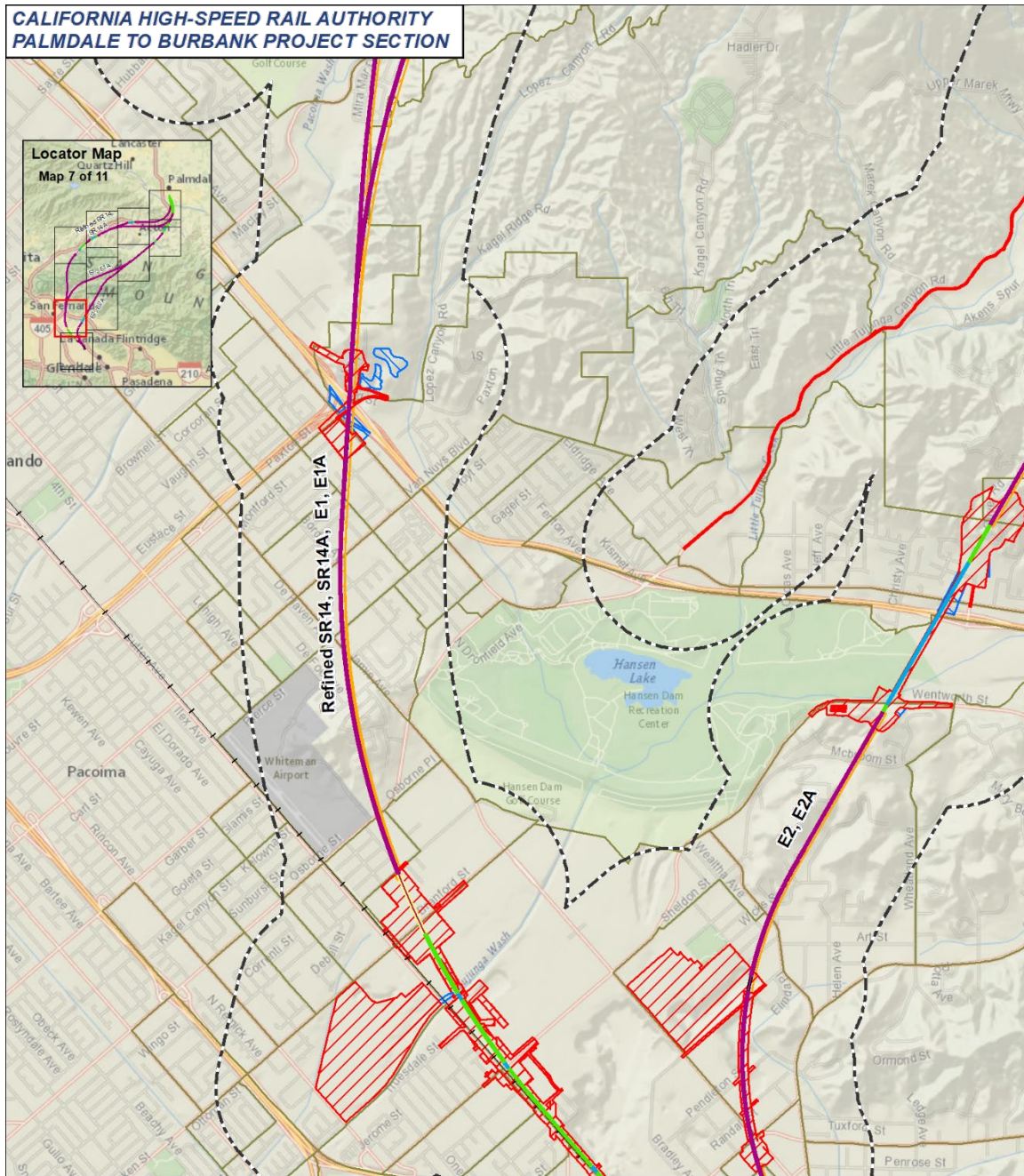


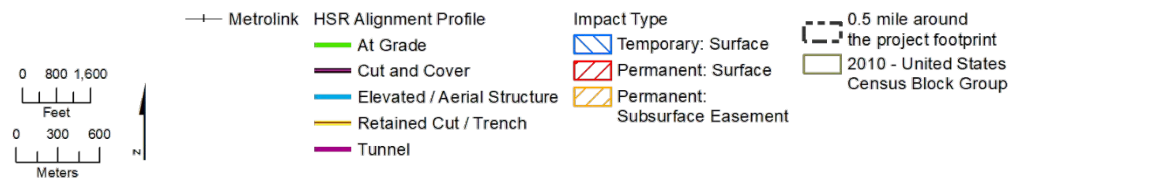
Figure 3.12-C-6 Population and Community Resource Study Area (Map 5 of 11)



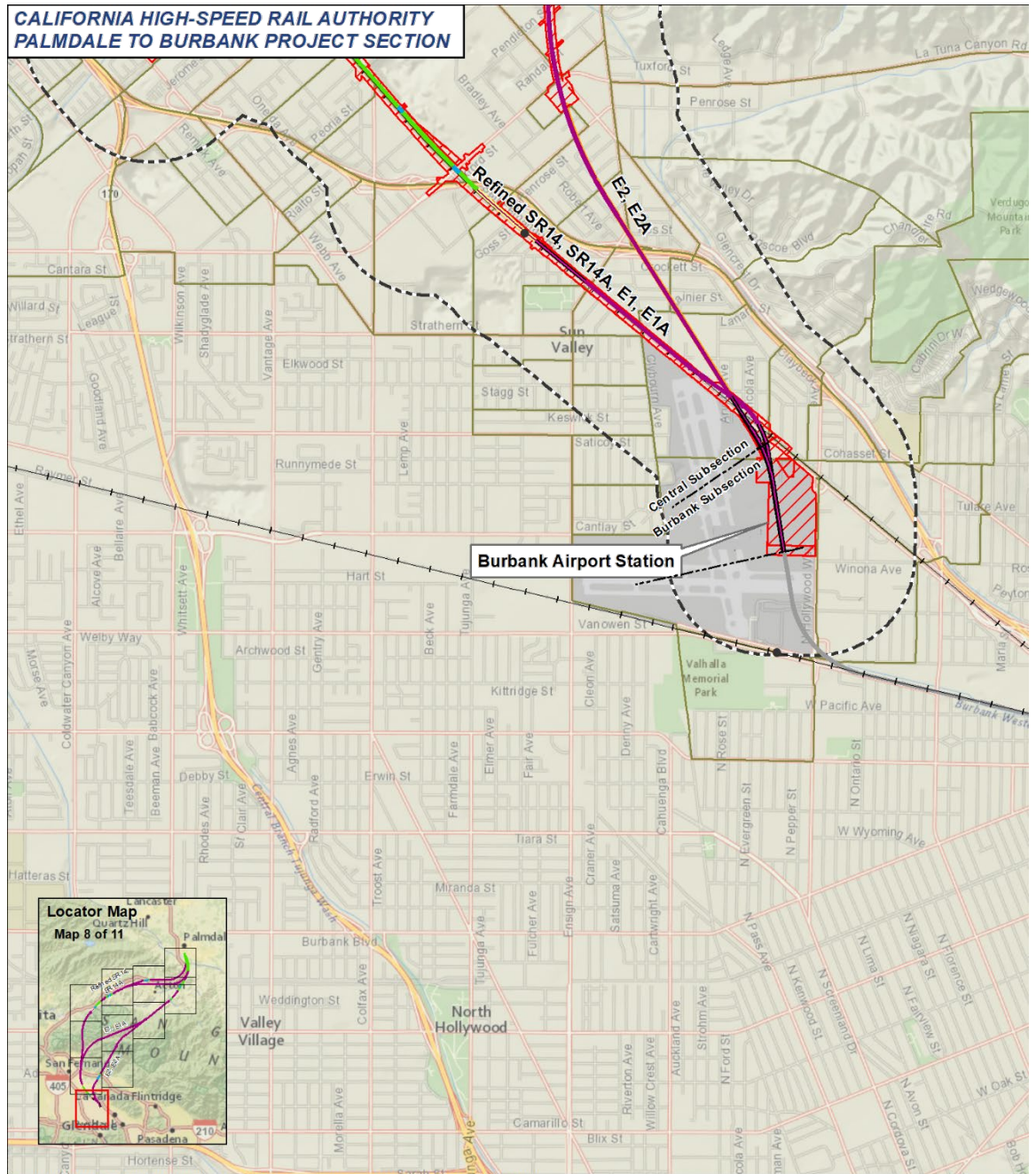
**Figure 3.12-C-7 Population and Community Resource Study Area (Map 6 of 11)**



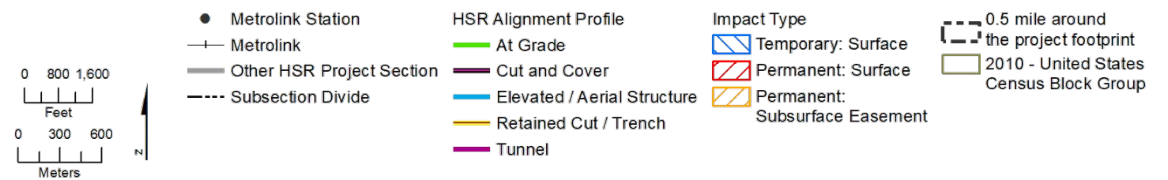
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED  
 Source: Authority, 2020; U.S. Census Bureau, 2010; National Geographic, 2021  
 April 27, 2021



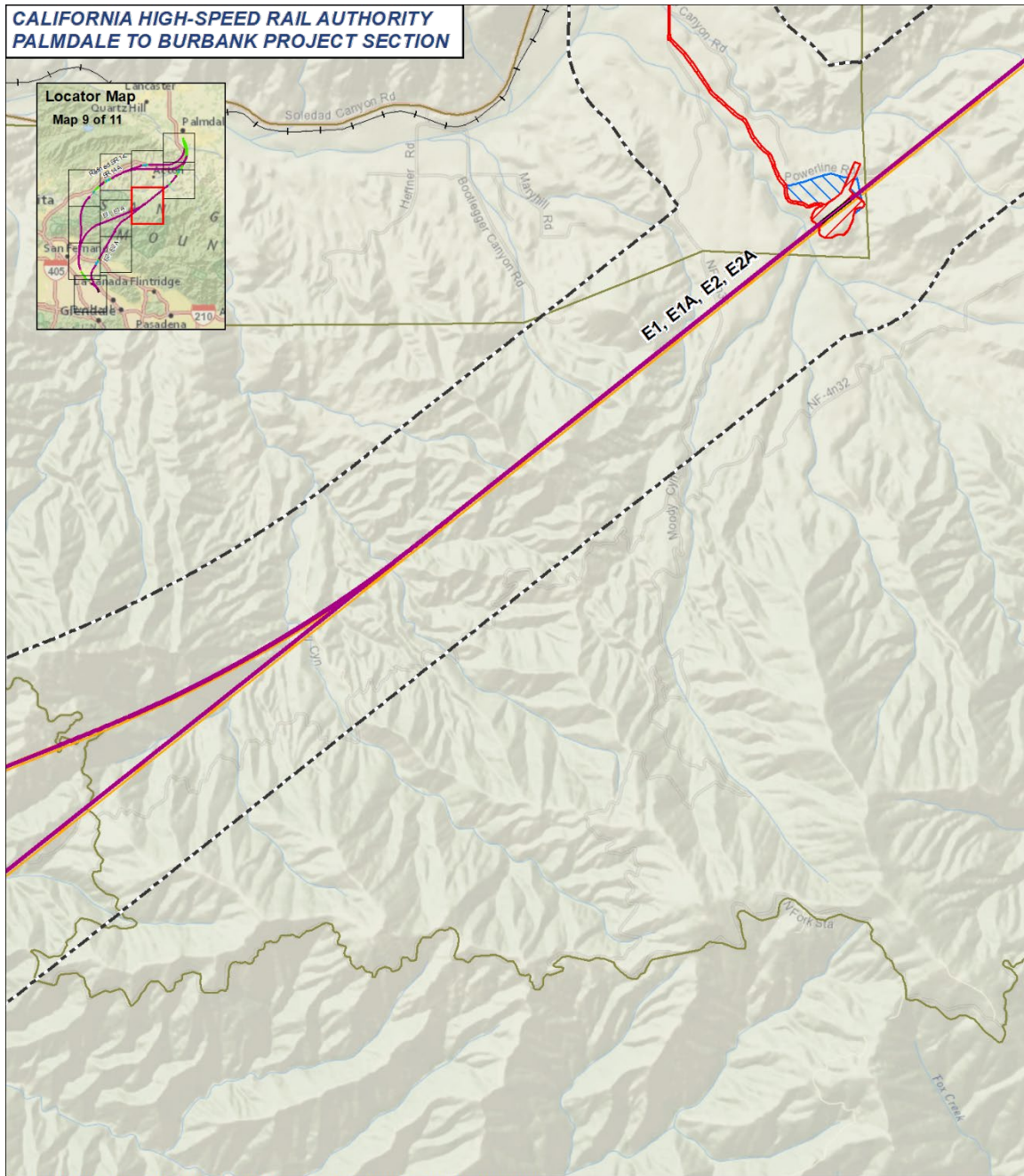
**Figure 3.12-C-8 Population and Community Resource Study Area (Map 7 of 11)**



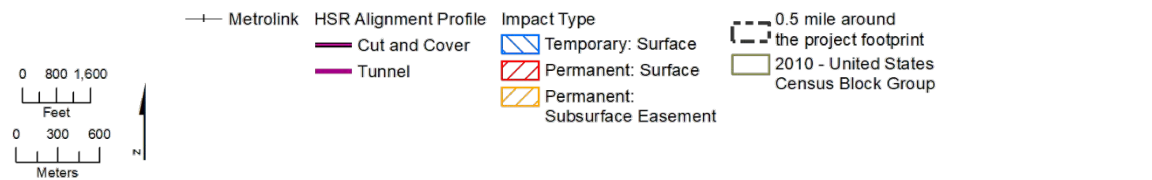
PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED  
 Source: Authority, 2020; U.S. Census Bureau, 2010; National Geographic, 2021  
 April 27, 2021



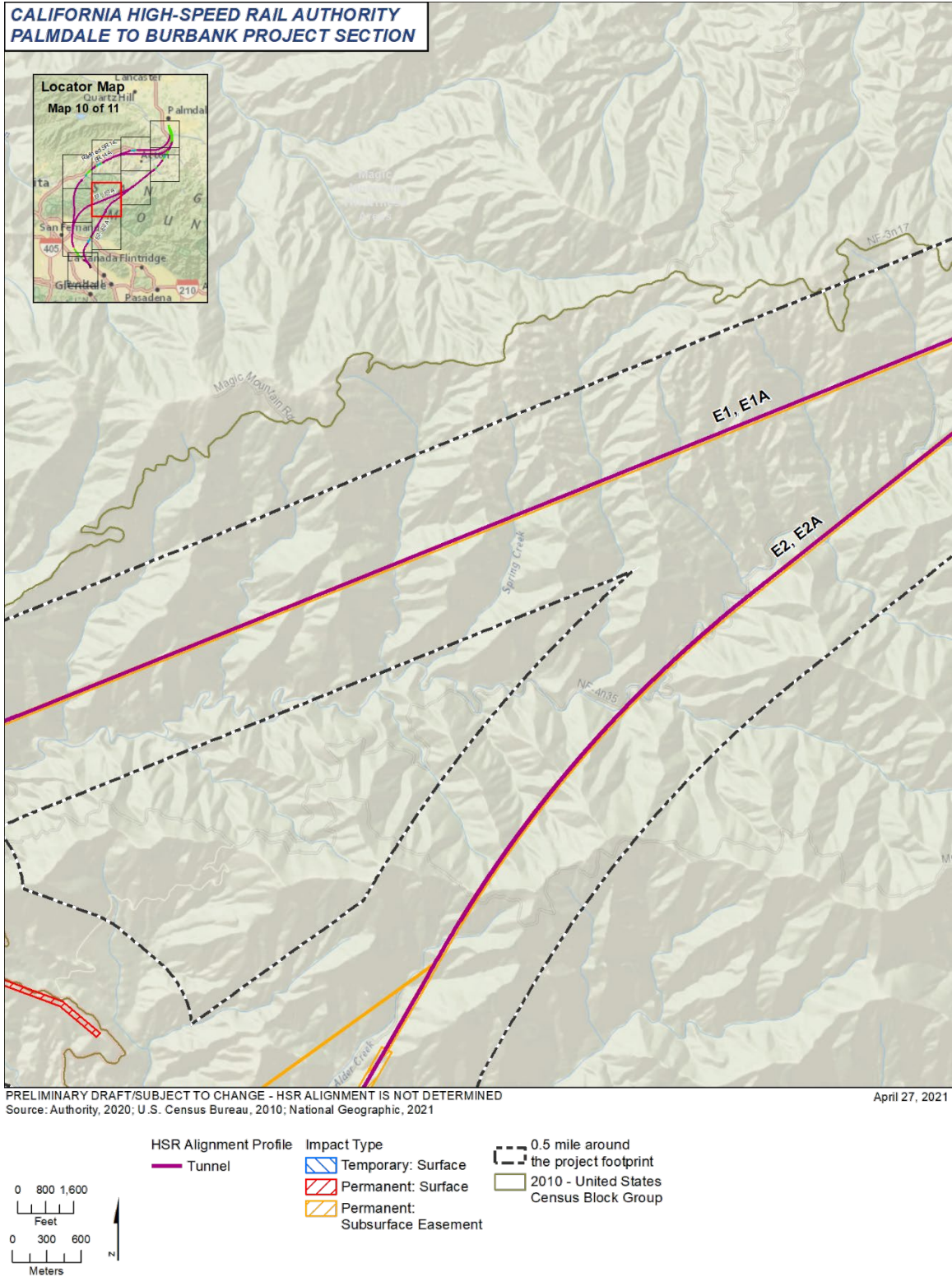
**Figure 3.12-C-9 Population and Community Resource Study Area (Map 8 of 11)**



PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED  
 Source: Authority, 2020; U.S. Census Bureau, 2010; National Geographic, 2021  
 April 27, 2021

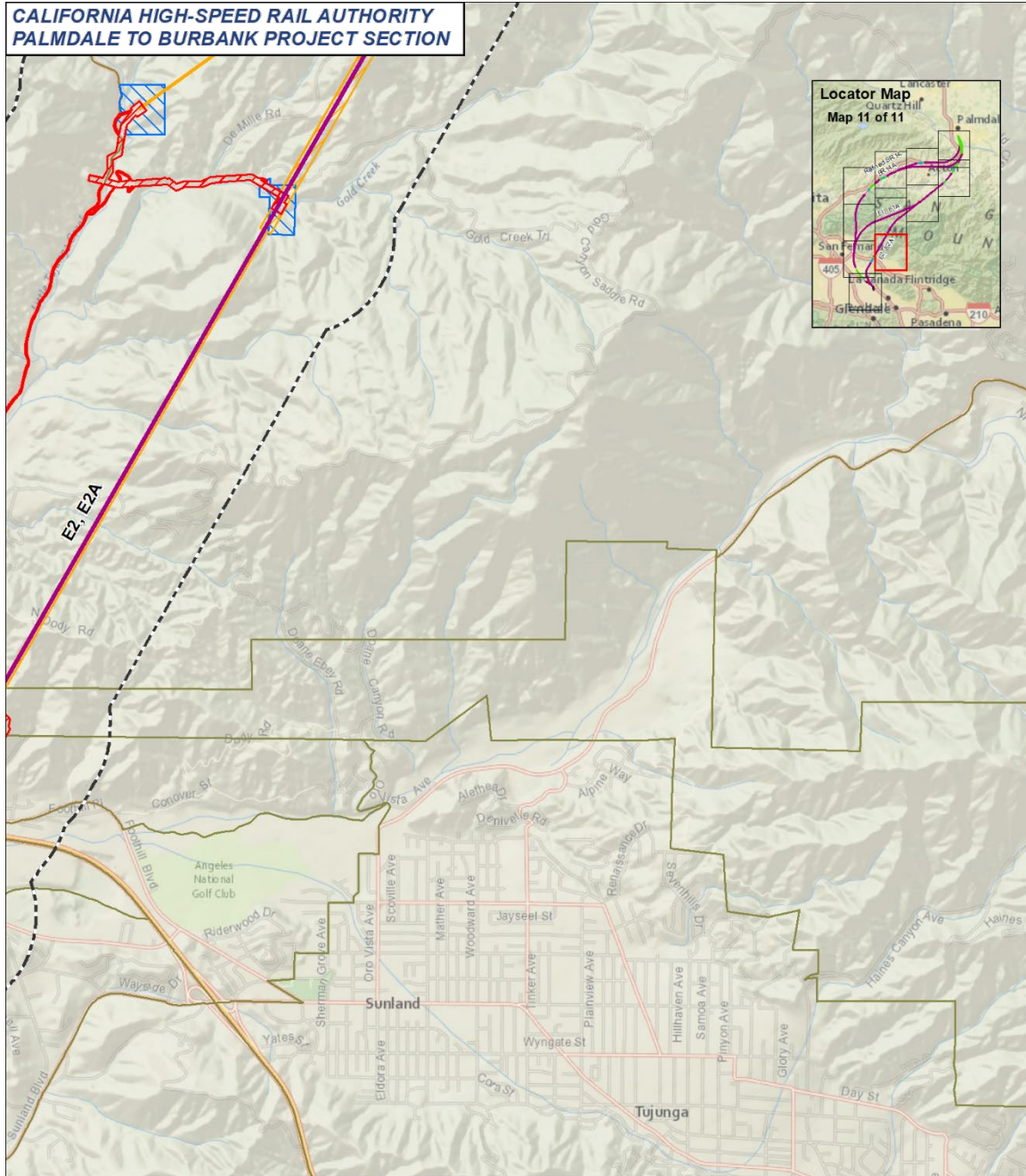


**Figure 3.12-C -10 Population and Community Resource Study Area (Map 9 of 11)**



**Figure 3.12-C -11 Population and Community Resource Study Area (Map 10 of 11)**





PRELIMINARY DRAFT/SUBJECT TO CHANGE - HSR ALIGNMENT IS NOT DETERMINED  
 Source: Authority, 2020; U.S. Census Bureau, 2010; National Geographic, 2021  
 April 27, 2021

**Figure 3.12-C-12 Population and Community Resource Study Area (Map 11 of 11)**

### 3.2 Determination of Impacts

For the purposes of this analysis, children are defined as the population within the study area age 19 or younger. In accordance with USEO 13045, effects on children’s health and safety are defined as those effects on the environment that result in negative impacts on children as a result of one or more of the following (the associate resources are provided in parenthesis):

- Potential respiratory impacts, including asthma from air pollutant emissions and generation of fugitive dust (Air Quality and Global Climate Change).
- Potential noise impacts on health and learning, especially in areas where children congregate (such as schools, park, and residential areas) (Noise and Vibration).
- Potential impacts from the use of chemicals, such as dust suppression methods and hazardous materials (Hazardous Materials and Wastes).
- Potential safety risks to children, especially where the alternatives are located near areas where children congregate (Transportation; Electromagnetic Fields and Electromagnetic Interference; Hydrology and Water Resources; Safety and Security; Socioeconomics and Communities; Parks Recreation and Open Space; and Cumulative Impacts).

## 4 EXISTING CONDITIONS

This section provides information on demographics, community setting, schools, parks, and other community facilities located within the study area. This analysis focuses schools, parks, and community facilities because they are all locations where children are likely to congregate. Refer to the *Palmdale to Burbank Project Section: Community Impact Assessment* (Community Impact Assessment), for complete information on the HSR Build Alternatives (Authority 2019b).

### 4.1 Demographics

Table 3.12-C-1 provides information on the child population of cities within the resource study area (RSA) established for evaluation of population and community effects. Table 3.12-C-2 summarizes the child population for each subsection of each Build Alternative. As discussed in Section 3.2, for the purposes of this analysis, a child is defined as any person 19 years of age or younger. Demographic characteristics are provided for the City of Lancaster and the City of Palmdale for further context.

**Table 3.12-C-1 Regional Child Population**

| Jurisdiction          | Population | Population 19 Years Old and Under | Population 19 Years Old and Under (Percentage of Total Population) |
|-----------------------|------------|-----------------------------------|--|
| Los Angeles County    | 9,974,203  | 2,643,164                         | 26.5   |
| City of Lancaster     | 159,092    | 51,705                            | 32.5   |
| City of Palmdale      | 155,810    | 55,936                            | 35.9   |
| City of Santa Clarita | 179,030    | 51,203                            | 28.6   |
| City of Los Angeles   | 3,862,210  | 973,277                           | 25.2   |
| City of San Fernando  | 24,050     | 7,504                             | 31.2   |
| City of Burbank       | 104,484    | 22,673                            | 21.7   |

Source: Authority, 2019b

**Table 3.12-C-2 Child Population within the RSA by Alternative**

| Subsection/Area           | Existing Population | Population 19 Years Old and Under | Population 19 Years Old and Under (Percentage of Subsection/Area Population) <sup>1</sup> |
|---------------------------|---------------------|-----------------------------------|---|
| <b>Refined SR14</b>       |                     |                                   |   |
| Palmdale                  | 34,681              | 9,537                             | 27.5%   |
| Central                   | 148,711             | 33,609                            | 22.6%   |
| Burbank                   | 13,527              | 3,084                             | 22.8%   |
| Maintenance Facility      | 8,891               | 1,894                             | 21.3%   |
| <b>Total Refined SR14</b> | <b>205,810</b>      | <b>48,365</b>                     | <b>23.5%</b>  |
| <b>SR14A</b>              |                     |                                   |   |
| Palmdale                  | 34,681              | 9,537                             | 27.5%   |
| Central                   | 148,711             | 33,609                            | 22.6%   |
| Burbank                   | 13,527              | 3,084                             | 22.8%   |
| Maintenance Facility      | 8,891               | 1,894                             | 21.3%   |
| <b>Total SR14A</b>        | <b>205,810</b>      | <b>48,365</b>                     | <b>23.5%</b>  |
| <b>E1</b>                 |                     |                                   |   |
| Palmdale                  | 34,681              | 9,537                             | 27.5%   |
| Central                   | 122,068             | 27,832                            | 22.8%   |
| Burbank                   | 23,832              | 5,744                             | 24.1%   |
| Maintenance Facility      | 8,891               | 1,894                             | 21.3%   |
| <b>Total E1</b>           | <b>189,472</b>      | <b>45,473</b>                     | <b>24.0%</b>  |
| <b>E1A</b>                |                     |                                   |   |
| Palmdale                  | 34,681              | 9,537                             | 27.5%   |
| Central                   | 122,068             | 27,832                            | 22.8%   |
| Burbank                   | 23,832              | 5,744                             | 24.1%   |
| Maintenance Facility      | 8,891               | 1,894                             | 21.3%   |
| <b>Total E1A</b>          | <b>189,472</b>      | <b>45,473</b>                     | <b>24.0%</b>  |
| <b>E2</b>                 |                     |                                   |   |
| Palmdale                  | 34,681              | 9,537                             | 27.5  |
| Central                   | 55,704              | 13,759                            | 24.7  |
| Burbank                   | 13,527              | 3,084                             | 22.8  |
| Maintenance Facility      | 8,891               | 1,894                             | 21.3  |
| <b>Total E2</b>           | <b>112,803</b>      | <b>27,073</b>                     | <b>24%</b>  |

| Subsection/Area      | Existing Population | Population 19 Years Old and Under | Population 19 Years Old and Under (Percentage of Subsection/Area Population) <sup>1</sup> |
|----------------------|---------------------|-----------------------------------|---|
| <b>E2A</b>           |                     |                                   |   |
| Palmdale             | 34,681              | 9,537                             | 27.5  |
| Central              | 55,704              | 13,759                            | 24.7  |
| Burbank              | 13,527              | 3,084                             | 22.8  |
| Maintenance Facility | 8,891               | 1,894                             | 21.3  |
| <b>Total E2A</b>     | <b>112,803</b>      | <b>27,073</b>                     | <b>24%</b>  |

<sup>1</sup> The SR14A, E1A, and E2A Build Alternatives encounter identical U.S. Census block groups and therefore have identical demographic characteristics to the Refined SR14, E1, and E2 Build Alternatives, respectively.

Within the region, the City of Palmdale has the largest proportion of children as a percent of the population (35.9 percent) while the City of Burbank has the smallest (21.7 percent). In general, the child population within the RSA is lower than the Los Angeles County average of 26.5 percent. The Refined SR14 and SR14A Build Alternative RSAs have the largest child population overall (48,365 – 49,523 children) while the E2 and E2A Build Alternatives have the smallest (27,073 children).

## 4.2 Community Setting

This discussion provides general information on the communities within the RSA. For complete information on the community setting, refer to Section 5.1, Community Background and Land Use Setting, of the Community Impact Assessment. As discussed in Section 3.1 of this appendix, the RSA for population and communities extends 0.5 mile around the project footprint including the entirety of any U.S. Census block groups that intersect this buffer. The RSA is completely contained within Los Angeles County.

All of the Build Alternatives have the same setting within the Burbank Subsection.<sup>1</sup> The Central Subsection varies for each Build Alternative and is therefore discussed under the separate alternative headers below. In the maintenance facility area, approximately 78 percent of the land is currently vacant. In contrast, the Palmdale Subsection contains several key community facilities that contribute to community cohesion. These include Palmdale City Hall, Poncitlan Square, Palmdale City Library, the Chamber of Commerce, and the Chimbole Cultural Center, all within an area of less than one square mile. Located south of the existing Palmdale Transit Center, R. Rex Parris High School is an alternative high school that serves students from across the Antelope Valley Union High School District (AVUHSD) who have fallen behind in credits at their previous school. Residential communities to the north, west, and south surround the school, and Metrolink tracks border the school to the east.

### 4.2.1 Central Subsection Community Setting

#### 4.2.1.1 Refined SR14 and SR14A Build Alternatives

The Refined SR14 and SR14A Central Subsection RSA encompasses the southernmost portion of Palmdale, portions of unincorporated Acton and Agua Dulce, and several northern neighborhoods in the city of Los Angeles. Acton is an unincorporated community located southwest of Antelope Valley. The portion of Acton located with the Refined SR14 Central Subsection RSA is characterized by low-density residential communities. Many of these communities have limited access to the town centers of Acton or Agua Dulce. One contributing

<sup>1</sup> The E1, E1A, E2, and E2A Burbank Subsection RSAs are identical to the Refined SR14 and SR14A Burbank RSAs despite differences in project footprint due to the 0.5 mile buffer included around the Burbank Station Areas.

source of community cohesion for these outlying areas is Vasquez High School, located near the intersection of Sierra Highway and Red Rover Mine Road.

The Refined SR14 and SR14A Central Subsection RSA also includes the City of Los Angeles neighborhoods of Sylmar, Pacoima and Sun Valley. Located south of the Pacoima Reservoir, the areas of Sylmar and Pacoima encompassed by the RSA are residential suburbs that feature few areas to shop or dine. Located between Bromont Avenue and Dronfeld Avenue, the Hubert H. Humphrey recreation center offers Pacoima residents a variety of sports facilities including baseball/softball and soccer fields.

Further south, the neighborhood of Sun Valley features several residential communities separated by areas devoted to industrial businesses related to wholesale and mining. Facilities that foster community cohesion within Sun Valley include the Sun Valley Branch library, Burbank Islamic Center, Roscoe Elementary School, Glenwood Elementary School, and Sun Valley Park.

#### **4.2.1.2 E1 and E1A Build Alternatives**

The E1 and E1A Central Subsection RSA encompasses several isolated residential communities located near the Vincent Substation in the northern portion of the Central Subsection. Lacking commercial areas and community facilities, residents in these communities depend on access to State Route 14. South of these communities, the RSA covers approximately 18 miles of uninhabited land located within the Angeles National Forest (ANF) before reaching the communities of Sylmar and Pacoima. Within this portion of the Central Subsection, the E1 and E1A Build Alternatives traverse the same communities discussed under the Refined SR14 and SR14A Build Alternatives community setting.

#### **4.2.1.3 E2 and E2A Build Alternatives**

Instead of heading southwest toward Sylmar and Pacoima, after traversing the San Gabriel Mountains National Monument (SGMNM) and ANF, the E2 and E2A Central Subsection travels south toward the Los Angeles communities of Lake View Terrace and Shadow Hills. Lake View Terrace features residential neighborhoods with large lots that can support horse-keeping. Most of the community-oriented facilities in Lake View Terrace are located in the western portion of the community, outside the RSA. Due to the prevalence of equestrian activities in Lake View Terrace, the Courtship Ranch Equestrian facility located to the east of Dominica Avenue is considered an important source of community cohesion. The facility includes boarding for horses as well as trail riding facilities.

Before reaching Burbank, the E2 and E2A Build Alternative alignment would traverse both the Shadow Hills and Sun Valley neighborhoods. The RSA encompasses portions of both neighborhoods that mainly comprise residential homes contain few community facilities or opportunities to shop and dine. Due to the relatively large amounts of undeveloped land in Shadow Hills, many of the communities included in the RSA are isolated from one another.

#### **4.2.2 Burbank Subsection Community Setting**

For each HSR Build Alternative, the Burbank Subsection is characterized by fully developed industrial lots. Much of the area within the Burbank Subsection RSA is occupied by the Hollywood Burbank Airport, west of the proposed Burbank Airport Station. Because of the lack of residential communities and the prominence of industrial- and airport-related land uses, the area of Burbank encompassed by the RSA lacks a strong sense of community cohesion.

## 4.3 Schools

### 4.3.1 School Locations

There are 50 schools<sup>2</sup> within the 0.5 mile of the HSR Build Alternatives including public and private elementary, middle, and high schools.<sup>3</sup> These schools are presented in Table 3.12-C-3.

**Table 3.12-C-3 Schools within the RSA**

| School Name   | Address                                | Relevant Alternatives        |
|---|--|------------------------------|
| Agua Dulce Elementary School  | 11311 West Frascati Street, Agua Dulce | Refined SR14, SR14A          |
| Alliance 6-12 College-Ready Academy   | 8926 Sunland Boulevard, Sun Valley     | E2, E2A                      |
| Albert Einstein Academy for Letters, Arts, and Sciences                             | 11311 Frascati Street, Agua Dulce      | Refined SR14, SR14A, E1, E1A |
| Antelope Valley ROP   | 1156 East Avenue S, Palmdale           | All six Build Alternatives   |
| Bert Corona Charter School  | 9400 Remick Avenue, Pacoima            | All six Build Alternatives   |
| Charles Maclay Middle School  | 12540 Pierce Street, Pacoima           | Refined SR14, SR14A, E1, E1A |
| Child Care Resource Center – Antelope Valley  | 250 Grand Cypress Avenue, Pacoima      | All six Build Alternatives   |
| City of Los Angeles Community Development Department - Pacoima Family source Center | 11243 Glenoaks Boulevard               | Refined SR14, SR14A, E1, E1A |
| Community Collaborative Charter   | 32248 Crown Valley Road, Acton         | Refined SR14, SR14A          |
| Concordia Junior/Senior High School   | 13570 Eldridge Avenue, Sylmar          | Refined SR14, SR14A, E1, E1A |
| Discovery Charter Preparatory School  | 12550 Van Nuys Boulevard, Pacoima      | Refined SR14, SR14A, E1, E1A |

<sup>2</sup> Of these schools, five are located in the Palmdale Subsection and are provided in Table 3.12-C-3 for further context.

<sup>3</sup> Although some of the children considered in this analysis could be enrolled in colleges and universities, the number would not be substantial. Therefore, Table 3.12-C-3 does not include post-secondary education facilities.

| School Name  | Address                                  | Relevant Alternatives        |
|--|--|------------------------------|
| Fenton Academy for Social and Emotional Learning   | 8926 Sunland Boulevard, Sun Valley       | All six Build Alternatives   |
| Fenton Primary Center  | 11351 Dronfield Avenue, Pacoima          | Refined SR14, SR14A, E1, E1A |
| Fenton STEM Academy: Elementary School Center for Science Technology Engineering and Mathematics | 8926 Sunland Boulevard, Sun Valley       | E2, E2A                      |
| George Washington Elementary School  | 2322 North Lincoln Street, Burbank       | All six Build Alternatives   |
| Glenwood Elementary School   | 8001 Ledge Ave, Sun Valley               | All six Build Alternatives   |
| Guardian Angel Elementary School   | 10919 Norris Avenue, Pacoima             | Refined SR14, SR14A, E1, E1A |
| Guidance Charter School  | 1125 East Palmdale Boulevard, Palmdale   | All six Build Alternatives   |
| Fernangeles Elementary School  | 12001 Art Street, Sun Valley             | Refined SR14, SR14A, E1, E1A |
| High Desert Middle School  | 3620 Antelope Woods Road, Acton          | Refined SR14, SR14A          |
| Hillery T. Broadus Elementary School   | 12561 Filmore Street, Pacoima            | Refined SR14, SR14A, E1, E1A |
| Hubbard Street Elementary School   | 13325 Hubbard Street, Sylmar             | Refined SR14, SR14A, E1, E1A |
| Inspire Charter School   | 33323 Santiago Road, Acton               | E1, E1A, E2, E2A             |
| Montague Charter Academy   | 13000 Montague Street, Pacoima           | Refined SR14, SR14A, E1, E1A |
| Mosaica Online Academy of Los Angeles  | 33319 Agua Dulce Canyon Road, Agua Dulce | Refined SR14, SR14A          |

| School Name   | Address                                   | Relevant Alternatives        |
|---|---|------------------------------|
| Northeast Valley Health Corporation - Pacoima Health Center And WIC Site                | 12756 Van Nuys Blvd, Pacoima              | Refined SR14, SR14A, E1, E1A |
| Our Lady of the Holy Rosary   | 7802 Vineland Avenue, Sun Valley          | Refined SR14, SR14A, E1, E1A |
| Pacoima Charter Elementary School   | 11016 Norris Avenue, Pacoima              | Refined SR14, SR14A, E1, E1A |
| Palm Tree Elementary School <sup>1</sup>  | 326 East Avenue R, Palmdale               | All six Build Alternatives   |
| Palmdale Learning Plaza <sup>1</sup>  | 38043 Division Street, Palmdale           | All six Build Alternatives   |
| Providencia Elementary School   | 1919 North Ontario Street, Burbank        | E2, E2A                      |
| North Valley Military Institute College Preparatory Academy                             | 12105 Allegheny Street, Sun Valley        | All six Build Alternatives   |
| PUC Community Charter Middle School and PUC Community Charter Early College High School | 11500 Eldridge Avenue, Sylmar             | E2, E2A                      |
| R. Rex Parris High School <sup>1</sup>  | 38801 Clock Tower Plaza Drive E, Palmdale | All six Build Alternatives   |
| Roscoe Elementary School  | 10765 Strathern Street, Sun Valley        | All six Build Alternatives   |
| Sara Coughlin Elementary School   | 11035 Borden Avenue, Pacoima              | Refined SR14, SR14A, E1, E1A |
| Stonehurst Avenue Elementary School   | 9851 Stonehurst Avenue, Sun Valley        | All six Build Alternatives   |
| SCALE Leadership Academy  | 32248 Crown Valley Road, Acton            | Refined SR14, SR14A, E1, E1A |
| Sol Del Valle   | 10725 Penrose Street, Sun Valley          | E2, E2A                      |
| South Antelope Valley Adult School  | 1212 East Avenue S, Palmdale              | All six Build Alternatives   |
| Stonehurst Avenue Elementary School   | 9851 Stonehurst Avenue, Sun Valley        | E2, E2A                      |
| Strathern Park Preschool  | 11111 Strathern Street, Sun Valley        | Refined SR14, SR14A, E1, E1A |



| School Name  | Address                            | Relevant Alternatives        |
|--|------------------------------------|------------------------------|
| Sun Valley High School   | 9171 Telfair Avenue, Sun Valley    | Refined SR14, SR14A, E1, E1A |
| Sunland Christian School   | 13216 Leach Street, Sylmar         | Refined SR14, SR14A, E1, E1A |
| Tumbleweed Elementary School <sup>1</sup>                              | 1100 East Avenue R-4, Palmdale     | All six Build Alternatives   |
| Vasquez High School  | 33630 Red Rover Mine Road, Acton   | Refined SR14, SR14A          |
| Volunteers of America – Head Start - Strathern Park                    | 11111 Strathern Street, Sun Valley | All six Build Alternatives   |
| Volunteers of America – Head Start - Van Nuys – Pierce Park Apartments | 12700 Van Nuys, Pacoima            | Refined SR14, SR14A, E1, E1A |
| YPI Valley Public Charter High School                                  | 12513 Gain Street, Pacoima         | Refined SR14, SR14A, E1, E1A |
| Yucca Elementary School <sup>1</sup>                                   | 38440 Second Street East, Palmdale | All six Build Alternatives   |

Source: Authority, 2019b

<sup>1</sup> These schools are located 0.5-mile from project features located in the Palmdale Subsection.

### 4.3.2 School District Boundaries

Outside of the urban areas, the school district boundaries are very large and extend into transportation corridors such as the SR-14 corridor and natural areas such as the ANF. It is likely that many of the students in these school districts use transportation provided by the school district, rely on family members, or drive themselves to school. Refer to Appendix 3.12-B: Effects on School District Funding and Transportation Bus Routes, for maps of school district boundaries in the study area.

### 4.4 Parks and Recreation

Table 3.12-C-4 lists the public parks and recreation facilities within the RSA and includes information on whether the resources are considered passive or active. Passive resources are those that are typically associated with open space areas with trails and/or picnic areas. Passive parks are less likely to be resources where children would congregate. Active resources are those that include development of some sort (such as playgrounds and ballfields). Given the presence of these resources targeted toward children, it is reasonable to assume that children would congregate at active parks to a greater degree than at passive parks. Based on Table 3.12-C-4, of the 28 parks, recreation and open space resources in the RSA, 15 are passive and 13 are active.

**Table 3.12-C-4 Parks within the RSA**

| Resource Name   | Location                | Build Alternative |       |     |     |     |     | Passive / Active |
|---|-------------------------|-------------------|-------|-----|-----|-----|-----|------------------|
|   |                         | Refined SR14      | SR14A | E1  | E1A | E2  | E2A |                  |
| <b>Maintenance Facility</b>   |                         |                   |       |     |     |     |     |                  |
| <i>There are no parks or recreation facilities within the Maintenance Facility area</i> |                         |                   |       |     |     |     |     |                  |
| <b>Palmdale Subsection</b>  |                         |                   |       |     |     |     |     |                  |
| Desert Sands Park   | City of Palmdale        | X                 | X     | X   | X   | X   | X   | Active           |
| Dr. Robert C. Saint Clair Parkway   | City of Palmdale        | X                 | X     | X   | X   | X   | X   | Passive          |
| Hammack Activity Center   | City of Palmdale        | X                 | X     | X   | X   | X   | X   | Active           |
| Poncitlan Square  | City of Palmdale        | X                 | X     | X   | X   | X   | X   | Active           |
| Legacy Commons Recreational Center  | City of Palmdale        | X                 | X     | X   | X   | X   | X   | Active           |
| Courson Park  | City of Palmdale        | X                 | X     | X   | X   | X   | X   | Active           |
| Yucca Elementary School   | City of Palmdale        | X                 | X     | X   | X   | X   | X   | Active           |
| <b>Central Subsection</b>   |                         |                   |       |     |     |     |     |                  |
| Rim of the Valley Trail   | Sylmar                  | X                 | X     | X   | X   | X   | X   | Passive          |
| Angeles National Forest/San Gabriel Mountains National Monument                         | Angeles National Forest | X                 | X     | X   | X   | X   | X   | Passive          |
| Vasquez Rocks Natural Area Park   | Agua Dulce              | X                 | X     | N/A | N/A | N/A | N/A | Passive          |
| Veterans Memorial Community Regional Park   | Sylmar                  | X                 | X     | N/A | N/A | N/A | N/A | Active           |
| El Cariso Golf Course/Regional Park   | Sylmar                  | X                 | X     | N/A | N/A | N/A | N/A | Active           |

| Resource Name                           | Location  | Build Alternative |       |     |     |     |     | Passive / Active |
|---|---|-------------------|-------|-----|-----|-----|-----|------------------|
|   |   | Refined SR14      | SR14A | E1  | E1A | E2  | E2A |                  |
| HHH Memorial Recreation Center and Pool | Pacoima   | X                 | X     | X   | X   | N/A | N/A | Active           |
| Hansen Dam Open Space Area              | Lake View terrace   | X                 | X     | X   | X   | X   | X   | Passive          |
| Tujunga Ponds Wildlife Sanctuary        | Tujunga   | N/A               | N/A   | N/A | N/A | X   | X   | Passive          |
| Roger Jessup Park                       | Pacoima   | X                 | X     | X   | X   | N/A | N/A | Active           |
| Stonehurst Park and Recreation Center   | Sun Valley  | N/A               | N/A   | N/A | N/A | X   | X   | Active           |
| Sun Valley Recreation Center and Pool   | Sun Valley  | X                 | X     | X   | X   | X   | X   | Active           |
| Acton Wash Wildlife Sanctuary           | Acton   | N/A               | N/A   | N/A | N/A | X   | X   | Passive          |
| High Desert Middle School               | Acton   | X                 | X     | N/A | N/A | N/A | N/A | Active           |
| Vasquez High School                     | Acton   | X                 | X     | N/A | N/A | N/A | N/A | Active           |
| Hillery T. Broadous Elementary School   | Pacoima   | X                 | X     | X   | X   | N/A | N/A | Active           |
| Charles Maclay Middle School            | Pacoima   | X                 | X     | X   | X   | N/A | N/A | Active           |
| Stonehurst Avenue Elementary School     | Sun Valley  | N/A               | N/A   | N/A | N/A | X   | X   | Active           |
| Roscoe Elementary School                | Sun Valley  | X                 | X     | X   | X   | X   | X   | Active           |
| Pacific Crest Trail                     | Runs from Manning Park on the US-Mexico border, just south of Campo, CA | X                 | X     | X   | X   | X   | X   | Passive          |

| Resource Name               | Location   | Build Alternative |       |     |     |     |     | Passive / Active |
|-----------------------------|--|-------------------|-------|-----|-----|-----|-----|------------------|
|                             |  | Refined SR14      | SR14A | E1  | E1A | E2  | E2A |                  |
| Palmdale Hills Trail        | Runs parallel to Barrel Springs Road and the California Aqueduct, south of Palmdale  | X                 | X     | X   | X   | X   | X   | Passive          |
| Pacoima Wash Urban Greenway | Approximately three miles northeast of Sylmar  | X                 | X     | N/A | N/A | N/A | N/A | Passive          |
| Vasquez Loop Trail          | Acton  | X                 | X     | X   | X   | X   | X   | Passive          |
| Littlerock Trail            | Runs south along the Sierra Highway until E. Soledad Road, and then veers east into the ANF/SGMNM                              | X                 | X     | X   | X   | N/A | N/A | Passive          |
| Acton Community Trail       | Acton Community Trail follows the existing Metrolink tracks through Acton, and loops via Cedarcroft Road and County Ways Road. | N/A               | N/A   | X   | X   | X   | X   | Passive          |
| Darrell Readmond Trail      | Acton  | X                 | X     | N/A | N/A | N/A | N/A | Passive          |
| Santa Clara River Trail     | Generally follows the Santa Clara River, near the Antelope Valley Freeway southeast of Forest Park                             | X                 | X     | N/A | N/A | N/A | N/A | Passive          |

| Resource Name              | Location  | Build Alternative |       |     |     |     |     | Passive / Active |
|----------------------------|---|-------------------|-------|-----|-----|-----|-----|------------------|
|                            |   | Refined SR14      | SR14A | E1  | E1A | E2  | E2A |                  |
| Tejon Equestrian Park      | East of the Sierra Highway and south of Barrel Springs Road | N/A               | X     | N/A | X   | N/A | X   | Passive          |
| <b>Burbank Subsection</b>  |   |                   |       |     |     |     |     |                  |
| Glenwood Elementary School | Sun Valley  | X                 | X     | X   | X   | X   | X   | Active           |

## 4.5 Community Facilities

For this analysis, community facilities include those places where children congregate, including religious institutions, daycare facilities, museums, libraries, and community centers. Within the RSA, these community facilities are concentrated in urban areas. Complete information on the type and location of the community facilities within each community is presented in Appendix A, Community Facilities, of the Community Impact Assessment. Table 3.12-C-5 presents the number of community facilities in each of the HSR Build Alternative RSAs.

**Table 3.12-C-5 Community Facilities within the RSA**

| Subsection           | Build Alternative |            |            |            |            |            |
|----------------------|-------------------|------------|------------|------------|------------|------------|
|                      | Refined SR14      | SR14A      | E1         | E1A        | E2         | E2A        |
| Palmdale             | 74                | 74         | 74         | 74         | 74         | 74         |
| Central              | 125               | 125        | 122        | 122        | 78         | 78         |
| Burbank              | 15                | 15         | 15         | 15         | 14         | 14         |
| Maintenance Facility | 16                | 16         | 16         | 16         | 16         | 16         |
| <b>Total</b>         | <b>230</b>        | <b>230</b> | <b>227</b> | <b>227</b> | <b>182</b> | <b>182</b> |

## 5 ENVIRONMENTAL CONSEQUENCES

This section describes the environmental health and safety risks resulting from construction and operation of the proposed project that that could disproportionately affect children. Analysts reviewed the following sections of the EIR/EIS to identify significant impacts related to children’s health and safety:

- Section 3.2, Transportation
- Section 3.3, Air Quality and Global Climate Change
- Section 3.4, Noise and Vibration
- Section 3.5, Electromagnetic Fields and Electromagnetic Interference
- Section 3.8, Hydrology and water Resources
- Section 3.10, Hazardous Materials and Wastes

- Section 3.11, Safety and Security
- Section 3.15, Parks, Recreation, and Open Space
- Section 3.18, Cumulative Impacts

## 5.1 Overview

The project would primarily be located along existing transportation corridors and in other areas with no community facilities where children would be reasonably expected to congregate, such as industrial and commercial areas and the ANF (refer to Section 5.1, Community Background and Land Use Setting, of the Community Impact Assessment, for more information on this topic). New grade-separated crossings would replace existing at-grade rail crossings in Palmdale and would be beneficial to children who need to cross the rail corridor for school or to access other community facilities (see the *Palmdale to Burbank Project Section: Transportation Technical Report* [Transportation Technical Report] [Authority 2019c]). Implementation of mitigation measures would ensure that potential respiratory effects from air pollutant emissions and generation of fugitive dust would be limited to acceptable levels near sensitive receptors. Similarly, mitigation measures would limit potential noise effects in areas where children congregate, such as schools, parks, and residences.

## 5.2 No Project Alternative

The No Project Alternative assumes the Palmdale to Burbank Project Section would not be constructed but that other HSR project sections with Tier 2 environmental clearance as of November 2016 would be constructed or operational. These are the Merced to Fresno and Fresno to Bakersfield project sections. No other Southern California project sections are assumed to be constructed or operational under the No Project future condition. Accordingly, given the distance from the Palmdale to Burbank area, this aspect of the No Project Alternative would not be expected to have direct or indirect effects on the Palmdale to Burbank area.

The No Project Alternative also includes all currently known, programmed, and funded improvements to the intercity transportation system (highway, rail, and transit) and reasonably foreseeable local development projects (with funding sources already identified) expected to be developed as planned by 2040. *Appendix 3.19-A, Planned and Potential Projects and Plans*, of the Palmdale to Burbank Project Section Draft EIR/EIS lists the foreseeable future projects.

Future developments planned under the No Project Alternative would require individual environmental review. This review would include an analysis of future development impacts on schools, parks, and community facilities. As discussed in the *Palmdale to Burbank Project Section: Air Quality Technical Report*, the current and projected future transportation system would continue to result in deteriorating air quality and increased congestion under the No Project condition, resulting in increased respiratory and safety risks to children (Authority 2019a). Such risks would be reduced with implementation of the Palmdale to Burbank Project Section.

## 5.3 HSR Alternatives

### 5.3.1 Construction-Period Impacts

#### 5.3.1.1 Impacts Common to All HSR Build Alternatives

The impacts on children's health and safety from construction of all HSR Build Alternatives were determined by reviewing the construction impacts associated with the environmental elements addressed in the Palmdale to Burbank Section EIR/EIS. Table 3.12-C-6 provides information about the potential impacts common to all Build Alternatives and their significance after the implementation of mitigation measures.

**Table 3.12-C-1 Construction Impacts on Children’s Health and Safety Common to All Build Alternatives**

| Environmental Element      | Impacts Summary   | Relevance to Children’s Health and Safety  |
|----------------------------|---|--|
| Traffic and Transportation | <p>Local roadway modifications and construction activities including spoils hauling may temporarily disrupt circulation patterns in some communities. Although access to some neighborhoods, businesses, or community facilities would be disrupted and detoured for short periods during construction, access would be available. Any roadways that would require realignment would be constructed before the closure of the existing roadway to minimize effects. Construction would also require an increase in truck trips that could increase congestion. In addition, construction activities would affect pedestrians, bicyclists, and transit because of detours, traffic delays, and increased congestion.</p> <p>During construction, there may be temporary effects related to school bus detours due to road closures. Standard construction procedures related to traffic management would be used to maintain traffic flow during peak travel periods, including identification of when and where temporary closures and detours would occur. For example, in those areas where a new crossing is required, detours would be built first and traffic diverted. After construction is completed, traffic would be diverted back to the new overcrossing.</p> | <p>Before construction, a Construction Management Plan would be implemented and include information to address communications, safety controls, and traffic controls to minimize effects and maintain access. Additionally, a Construction Transportation Plan would be prepared before construction to provide information ensuring the safety of school children and advising school districts of construction activities. These measures would adequately mitigate effects on children’s health and safety.</p> |

| Environmental Element | Impacts Summary   | Relevance to Children's Health and Safety  |
|-----------------------|---|--|
| Air Quality           | <p>Construction activities such as earthmoving and operation of diesel-fueled construction equipment could result in a substantial amount of fugitive dust emissions and potential exposure to cancer risks. These emissions could have potential localized impacts on children in the vicinity of construction activities. Effects related to fugitive dust and asbestos exposure from demolition activities would be reduced through the implementation of an asbestos abatement plan and fugitive dust control plan. Such plans would focus on children and the elderly in particular because of their sensitive receptor status.</p> <p>A health risk assessment (HRA) evaluated potential health effects on sensitive receptors from construction period emissions. Although measures such as fugitive dust minimization measures, selection of low volatile organic compound (VOC) paint and coating, use of renewable diesel, and reduction of exhaust from construction equipment would be put in place to reduce emissions, communities located near each of the Build Alternatives may experience health risk increases, assuming worst-case scenarios for construction activities. Changes to the construction periods and equipment assumptions could be adjusted to reduce health risks, however undertaking this process at this time would be premature, as the final construction activities and equipment used in 2022-2023 may change the emission calculations. As such, a final HRA for construction period emissions would be conducted once construction plans have been finalized.</p> | <p>Construction-related health risk increases experienced by communities located near the Build Alternatives would disproportionately affect children because of their status as sensitive receptors. A final HRA for construction-period emissions would be conducted following finalization of the construction plans. This HRA would explore adjustments to the construction period and equipment to reduce health risk effects on children and other sensitive receptors.</p> <p>Additionally, the contractor would complete a health risk assessment each year of the construction period, detailing any potential exceedances of the applicable threshold for cancer risk of 10 in a million and chronic and acute non-cancer hazard index of 1.0 (AQ-MM#2). Such assessment would focus on children and the elderly in particular because of their sensitive receptor status. Location specific mitigation measures would be implemented to meet these standards before issuance of construction permits.</p> |
| Noise and Vibration   | <p>Noise and vibration from construction activities would have the potential to temporarily exceed noise and vibration standards and affect sensitive receptors along the project corridor. Implementation of Mitigation Measure N&amp;V-MM#1 would reduce construction noise effects by using noise control measures such as temporary sound barriers, avoiding nighttime construction, re-routing construction truck traffic away from residences, and using low-noise emission equipment.</p>  | <p>With mitigation, there would be no effect on children's health and safety from construction-related noise and vibration.</p>  |
| EMF/EMI               | <p>There would be no effects during construction because construction equipment generates low levels of EMFs and EMI.</p>   | <p>There would be no EMF/EMI effects related to children's health and safety.</p>  |



| Environmental Element          | Impacts Summary   | Relevance to Children's Health and Safety  |
|--------------------------------|---|--|
| Hydrology and Water Resources  | All construction-related hydrology and water quality effects would be reduced to acceptable levels through the implementation of IAMFs and Mitigation Measures.   | There would be no hydrology and water resources effects related to children's health and safety.   |
| Hazardous Materials and Wastes | <p>Construction of the Build Alternatives could entail handling of hazardous materials or waste within 0.25 mile of school or other educational facility. However, spoils removed from portal locations would be uncontaminated and would not qualify as an 'extremely hazardous substance' as defined in PRC Section 21151.4. Refer to the Transportation Technical Report, for more information regarding haul routes.</p> <p>Implementation of HMW-MM#1 would limit the use of extremely hazardous materials near schools during construction. The contractor would prepare a memorandum acknowledging that prior to construction activities, signage will be installed to delineate all work areas within 0.25 mile of a school, informing contractors not to bring extremely hazardous substances into the area.</p> | Implementation of mitigation and compliance with California Public Resources Code Section 21151.4 would adequately reduce hazardous materials and waste related effects on children's health and safety. |

| Environmental Element      | Impacts Summary   | Relevance to Children’s Health and Safety   |
|----------------------------|---|---|
| <p>Safety and Security</p> | <p>As discussed in the Transportation Technical Report, Penrose Street in Sun Valley would be closed permanently where they cross the HSR alignment. The remaining roads crossing the HSR alignment would generally be built at the same locations as the existing roads, which would require temporary roadway closures of these intersections during construction. During construction, traffic would be temporarily detoured onto other roads. These detours would typically last 8-10 months and, under a worst-case scenario, the detours could last for 18 months. At these sites, lane closures and detours could create a distraction to automobile drivers, pedestrians, and cyclists. Distraction and unfamiliarity with detours could lead to accidents.</p> <p>The project would include development of a detailed construction transportation plan that would require coordination with local jurisdictions on emergency vehicle access. The plan would also contain a traffic control plan that establishes procedures for temporary road closures, including access to residences and businesses during construction, lane closure, signage and flag persons, temporary detour provisions, alternative bus and delivery routes, emergency vehicle access, pedestrian access, and alternative access locations. 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 to accommodate detoured traffic. This would typically result in 1–2 miles of out-of-direction travel during temporarily road closures.</p> | <p>The project would implement a construction transportation plan and associated traffic control plan, which would ensure safe access to pedestrian and bicycle facilities while restricting access to construction areas. Such measures would adequately minimize effects to children’s health and safety.</p> |

| Environmental Element             | Impacts Summary  | Relevance to Children’s Health and Safety  |
|-----------------------------------|--|--|
| Socioeconomics and Communities    | <p>Construction activities could be particularly disruptive to nearby community facilities and institutions such as schools because construction would occur primarily during their normal hours of operation, when noise, traffic, and other conflicts would be most problematic. Detailed construction access plans would be developed before the start of construction, and the affected municipalities would review these plans before construction begins (SOCIO-IAMF#1). This plan would include actions pertaining to communications, visual protection, air quality, safety controls, noise controls, and traffic controls. The plan would also ensure continued, safe access to community facilities. Other construction related effects on communities—and the measures used to minimize these effects—are discussed in the Air Quality, Noise, Traffic, and Aesthetics and Visual Quality sections of this table.</p> | <p>With implementation of mitigation measures proposed for transportation and noise and vibration, effects related to children’s health and safety would be adequately minimized.</p>                                      |
| Parks, Recreation, and Open Space | <p>Each of the Build Alternatives would result in construction-related impacts to public park and recreation facilities. These impacts would include increased noise caused by the operation of equipment and visual change caused by construction activities, construction related truck traffic, exposed earth, and stockpiled materials.</p> <p>However, construction-period measures including a fugitive dust control plan, sound barriers, low-emission equipment, and a Construction Transportation Plan would be implemented to reduce and avoid effects related to noise and dust. Visual effects would persist throughout the construction period, but these effects would not present a health or safety risk.</p>  | <p>Temporary construction effects on parks including noise, visual, and traffic effects would either avoided, minimized, or mitigated. Therefore, these effects would not present a health or safety risk to children.</p> |

Sources: Authority, 2019a, 2019b, 2019c

### **5.3.1.2 Differences in Impacts Among HSR Build Alternatives**

This section discusses differences in construction-period impacts among each of the Build Alternatives regarding children's health and safety.

#### **Hazardous Materials and Wastes**

As described in Table 3.12-C-6, construction of the alignment alternatives could entail handling of hazardous materials or waste within 0.25 mile of school or other educational facility. The Refined SR14 RSA contains 29-31 educational facilities, the SR14A RSA contains 34 educational facilities, the E1 and E1A RSAs contains 19-20, and the E2 and E2A RSAs contains 13. In addition, three schools are located within 0.25 mile of proposed spoil haul routes connecting tunnel portals to regional highway network: Vasquez High School, Calvary Baptist Literacy Council, and Hillery T. Broadous Elementary School. However, as established above, spoils removed from these portal locations would be uncontaminated and would not qualify as an 'extremely hazardous substance' as defined in PRC Section 21151.4.

#### **Parks Recreation and Open Space**

The following public park and recreation facilities would experience construction-related impacts: Angeles National Forest/San Gabriel Mountains National Monument (all Build Alternatives), Sun Valley Park and Recreation (Refined SR14, SR14A, E1, E1A), Hillery T. Broadous Elementary School (Refined SR14, SR14A, E1, E1A), Charles Maclay Middle School (Refined SR14, SR14A, E1, E1A), Roscoe Elementary School (Refined SR14), the Pacific Coast Trail, Rim of the Valley Trail (Refined SR14, SR14A, E1, E1A), Tujunga Ponds Wildlife Sanctuary (E2, E2A), Hansen Dam Open Space (E2, E2A), Stonehurst Park and Recreation Center (E2, E2A), and Stonehurst Avenue Elementary School (E2, E2A).

As established in Table 3.12-C-6, construction-period measures including a fugitive dust control plan, sound barriers, low-emission equipment, and a Construction Transportation Plan would be implemented to reduce and avoid effects related to noise and dust. Visual effects would persist throughout the construction period, but these effects would not present a health or safety risk.

### **5.3.2 Operational Period Impacts**

#### **5.3.2.1 Impacts Common to All HSR Alternatives**

The impacts on children's health and safety from operation of all alternatives were determined by reviewing the project operation impacts associated with the environmental elements addressed in the Palmdale to Burbank Section EIR/EIS. Table 3.12-C-7 provides information on the potential impacts and significance of the impacts after the implementation of mitigation measures.

**Table 3.12-C-2 Operational Impacts on Children’s Health and Safety Common to All Build Alternatives**

| Environmental Element | Impacts Summary   | Relevance to Children’s Health and Safety  |
|-----------------------|---|--|
| Transportation        | <p>Although project operation would have the potential to impact roadway segments, intersections, and ramp queuing, with implementation of mitigation measures, there would be no significant operational transportation impacts. Additionally, pedestrian and bicycle facilities would be provided to compensate for loss of existing facilities and to maintain safe connections to the regional pedestrian and bicycle network.</p>  | <p>With implementation of mitigation measures, there would be no significant effect on children’s health and safety.</p>   |
| Air Quality           | <p>Each of the alternatives is predicted to reduce statewide emissions of all applicable pollutants, with the exception of total organic gas emissions, which would increase as compared to the existing conditions. Therefore, the Build Alternatives would result in a net benefit to regional and statewide air quality.</p> <p>At eleven intersections located near the Palmdale and Burbank Stations, increases in localized carbon monoxide (CO) would result from large numbers of people traveling to park and ride on the HSR. However, such increases would be minimal—on the magnitude of 0.1 parts per million. For reference, the State air quality standard for 1-hour and 8-hour CO emissions are 20 ppm and 9 ppm, respectively. National air quality standards for 1-hour and 8-hour CO emissions are 35 ppm and 9 ppm, respectively.</p> <p>A health risk assessment (HRA) evaluated potential health effects on sensitive receptors from construction period emissions. Although measures such as fugitive dust minimization measures, selection of low volatile organic compound (VOC) paint and coating, use of renewable diesel, and reduction of exhaust from construction equipment would be put in place to reduce emissions, communities located near each of the Build Alternatives may experience health risk increases, assuming worst-case scenarios for construction activities. Changes to the construction periods and equipment assumptions could be adjusted to reduce health risks, however undertaking this process at this time would be premature, as the final construction activities and equipment used in 2022-2023 may change the emission calculations. As such, a final HRA for construction period emissions would be conducted once construction plans have been finalized.</p> | <p>In general, the Build Alternatives would result in a net-benefit to regional and statewide air quality and localized CO increases would not be expected to affect children’s health and safety. However, construction emissions related health risk increases experienced by communities located near the Build Alternatives would disproportionately affect children because of their status as sensitive receptors. A final HRA for construction-period emissions would be conducted following finalization of the construction plans. This HRA would explore adjustments to the construction period and equipment to reduce health risk effects on children and other sensitive receptors.</p> |

| Environmental Element          | Impacts Summary  | Relevance to Children's Health and Safety  |
|--------------------------------|--|--|
| Noise and Vibration            | Project operation could result in a number of moderate impacts due to increased noise levels. However, operational noise impacts to sensitive receptors would be reduced to less than significant levels through with implementation of sound barriers, vehicle noise specifications, special track work at crossovers and turnouts, and vibration mitigation. Therefore, there would be no significant impacts to sensitive receptors.  | Because mitigation measures would reduce operational noise and vibration impacts to less than significant levels at sensitive receptors such as homes, schools, and community facilities, there would be no impact to children's health and safety.  |
| EMF/EMI                        | It is expected that, during project operation, the HSR-generated EMI/EMF levels to which the public would be exposed would be lower than the applicable HSR project MPE standards for humans in uncontrolled (open) environments. Therefore, there would be no significant impacts.  | There would be no significant impacts on children's health and safety.   |
| Hydrology and Water Resources  | All operation-related hydrology and water quality impacts of the alternatives would be less than significant after implementation of IAMFs and Mitigation Measures.  | There would be no significant impacts on children's health and safety.   |
| Hazardous Materials and Wastes | Project operations could entail storage or usage of hazardous materials within 0.25 mile of a school. The use of hazardous materials and generation of hazardous waste would be limited mostly to the maintenance and repair of trains at the maintenance facility, but other activities within the HSR operating corridor or station areas could require the use of hazardous materials. The project would comply with federal and state regulations to reduce the potential for the release of large quantities of hazardous materials and wastes into the environment. However, these standard procedures would not eliminate the potential for an accidental release, within 0.25 mile of a school, of an extremely hazardous substance (as defined in PRC Section 21151.4) in a quantity equal to or greater than the state threshold specified pursuant to subdivision (j) of Section 25532 of the Health and Safety Code. With implementation of Hazardous Materials and Wastes Mitigation Measure #1 (HMW-MM#1), the use of extremely hazardous materials near schools would be reduced and this impact would be less than significant | An operations plan would be created by the Authority and coordinated with the relevant educational facilities to ensure that no extremely hazardous substances or mixture of extremely hazardous substances would be used in a quantity equal to or greater than the state threshold quantity within 0.25 mile of a school. This plan would be in compliance with Health and Safety Code Section 25532. Therefore, there would be no significant impacts to children's health and safety from the handling of hazardous materials or waste during project operation. |

| Environmental Element          | Impacts Summary  | Relevance to Children’s Health and Safety  |
|--------------------------------|--|--|
| Safety and Security            | <p>CCR 14010c calls for a separation between schools and power transmission lines of 100 feet for 50-kilovolt (kV) to 133-kV lines, 150 feet for 220- to 230-kV lines, and 350 feet for 500- to 550-kV lines. The project would be powered by a 25-kV system; therefore, the electrification of the trains itself would be a negligible safety hazard to schools. CCR 14010d requires a safety study for school sites within 1,500 feet of a railroad track easement. Because the HSR would carry passengers and be electric-powered, there would be no safety hazard associated with HSR cargo or fuel. The hazard associated with the derailment of a high-speed train is the physical mass and speed of the train colliding with a structure or people, which could only occur adjacent to the ROW.</p> <p>A basic design feature of an HSR system is to contain train sets within the operational corridor using methods including containment parapets, check rails, guard rails, and derailment walls in certain high-risk areas. Since high-speed trains began operating in 1964, there has only been one case in which a train within a dedicated HSR right-of-way left the operational corridor—the 2011 accident in China described in Section 3.11, Safety and Security. A formal government investigation identified the cause of the accident as a systemwide lack of emphasis on safety, both in terms of equipment development and operating personnel training, by the management of China’s HSR system. Where industry standards for design, maintenance, and operation have been employed, this type of accident has not occurred over four decades of HSR operation elsewhere in the world. Therefore, if an HSR derailment were to occur next to a school, there is a very high probability that the train would remain within the HSR ROW. Because the train would be contained in the HSR ROW and would not contain cargo or fuel that would result in a fire, explosion, or the release of toxic substances, the proposed project would not substantially increase hazards to nearby schools.</p> | <p>Of the schools located within 0.25 mile of the HSR Build Alternatives, none are located in an area where the HSR Build Alternatives would be at grade. Safety measures such as containment parapets, check rails, guard rails, and derailment walls would ensure the train would remain within the HSR right-of-way if a derailment were to occur. Therefore, effects on children’s health and safety would be minimal.</p> |
| Socioeconomics and Communities | <p>Project operations would permanently disrupt and divide established communities. With implementation of mitigation measures, cohesion within existing communities would be preserved to the maximum extent possible. In addition, the Authority would evaluate communities’ modified access and would incorporate effective and safe crossings to allow multimodal passage.</p>   | <p>Grade separated crossings would be constructed in areas where the new rail line would divide established communities in order to safely preserve community cohesion. With improved grade separated crossings in areas that are currently divided by existing rail lines, implementation of the project could have a beneficial effect on children’s health and safety.</p>  |

| Environmental Element             | Impacts Summary  | Relevance to Children’s Health and Safety  |
|-----------------------------------|--|--|
| Parks, Recreation, and Open Space | Prior to mitigation, each of the Build Alternatives would result in operation-period impacts to public park and recreation facilities. These impacts would involve changes to park or recreation facility use or character and would be less than significant with implementation of mitigation. | Project operation could affect park use or character but would not involve additional safety hazards to children. Furthermore, these effects would be adequately minimized with implementation of mitigation measures. |

Source: Authority, 2019a, 2019b, 2019c



### 5.3.2.2 Differences in Impacts Among Build Alternatives

This section discusses differences in operational period impacts among each of the Build Alternatives regarding children's health and safety.

#### Socioeconomics and Communities

Project operations would permanently disrupt and divide established communities in the unincorporated community of Harold (Refined SR14, E1, and E2), the Boulders at the Lake Mobile Home Park (SR14A, E1A, and E2A), a rural residential area near Big Springs Road in Agua Dulce (Refined SR14, SR14A), a residential area west of the Southern California Edison Vincent Substation in the eastern portion of the unincorporated community of Acton (E1, E1A, E2, and E2A), and the Lake View Terrace neighborhood. As established in Table 3.12-C-7, with implementation of mitigation measures, cohesion within existing communities would be preserved to the maximum extent possible. Additionally, because the project would include improved grade separated crossings in areas that are currently divided by existing rail lines, implementation of the project could have a beneficial effect on children's health and safety by preventing motor vehicles, bicycles, and pedestrians from crossing the tracks and being hit by trains.

#### Parks Recreation and Open Space

Prior to mitigation, there would be significant operation-period impacts to Palmdale Hills Trail (all Build Alternatives), Acton Community Trail (E1, E1A, E2, and E2A), Littlerock Trail (all Build Alternatives), Vasquez Rocks Natural Area (Refined SR14, SR14A), Sun Valley Pool/Sun Valley Park and Recreation Center (Refined SR14, SR14A, E1 and E1A), and Roscoe Elementary School (Refined SR14, SR14A, E1, and E1A). Project operation could affect park use or character but would not involve additional safety hazards to children; additionally, these effects would be adequately minimized with implementation of mitigation measures.

### 5.3.3 HSR Alternative Summary

Overall, none of the six Build Alternatives (including the Burbank Airport Station) would be anticipated to result in any substantial risk to children's health and safety.

### 5.3.4 Project Design Features and Mitigation Measures

To reduce the project effects, the Authority has considered avoidance and minimization measures as part of project design that are consistent with the Statewide Program EIR/EIS (Authority 2005). Statewide Program EIR/EIS mitigation strategies have been refined and adapted for this project-level EIR/EIS. As discussed in Table 3.12-C-6 and Table 3.12-C-7, the sections of the Palmdale to Burbank Section EIR/EIS include Impact Avoidance and Minimization Measures (IAMFs) would minimize or avoid effects on children's health and safety. The full text of each IAMFs that is applicable to the Palmdale to Burbank Project Section is provided in *Appendix 2-E, Project Impact Avoidance and Minimization Features*, of the Palmdale to Burbank Project Section Draft EIR/EIS.

### 5.3.5 Mitigation Measures

The Statewide Program EIR/EIS mitigation strategies have been refined and adapted for this project-level EIR/EIS. The evaluation of impacts in this technical memorandum is based largely on effects identified in the following sections of the Palmdale to Burbank Section EIR/EIS:

- Section 3.2, Transportation
- Section 3.3, Air Quality and Global Climate Change
- Section 3.4, Noise and Vibration
- Section 3.5, Electromagnetic Fields and Electromagnetic Interference
- Section 3.8, Hydrology and Water Resources
- Section 3.10, Hazardous Materials and Wastes

- Section 3.11, Safety and Security
- Section 3.12, Socioeconomics and Communities
- Section 3.15, Parks, Recreation, and Open Space
- Section 3.18, Cumulative Impacts

These sections include mitigation measures that would reduce or eliminate effects on children's health and safety. Implementation of these mitigation measures are discussed in Table 3.12-C-6 and Table 3.12-C-7. The full text of each mitigation measure that is applicable to the Palmdale to Burbank Project Section is provided in *Appendix 3.1-C, Standardized Mitigation Measures*, of the Palmdale to Burbank Project Section Draft EIR/EIS.

## 6 REFERENCES

- California High-Speed Rail Authority and Federal Railroad Administration (Authority and FRA). 2005. *Final Program Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Proposed California High-Speed Train System*. Available at: [http://www.cahighspeedrail.ca.gov/Statewide\\_Program\\_Environmental\\_Reports\\_EIR\\_EIS.aspx](http://www.cahighspeedrail.ca.gov/Statewide_Program_Environmental_Reports_EIR_EIS.aspx). Sacramento, CA, and Washington, DC. August 2005.
- California High-Speed Rail Authority (Authority). 2019a. *Palmdale to Burbank Project Section: Air Quality Technical Report*.
- \_\_\_\_\_. 2019b. *Palmdale to Burbank Project Section: Community Impact Analysis*.
- \_\_\_\_\_. 2019c. *Palmdale to Burbank Project Section: Transportation Technical Report*.

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