VTA's BART Silicon Valley—Phase II Extension Project

Section 4(f)/6(f) Technical Report

Prepared for:

Santa Clara Valley Transportation Authority
Federal Transit Administration

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E.1 Introduction

This Errata reflects the modifications to the *Section 4(f)/6(f) Technical Report* that may have resulted from comments received during the public review of the Supplemental Environmental Impact Statement (SEIS) and Subsequent Environmental Impact Report (SEIR) for the BART Silicon Valley Phase II Extension (Phase II) Project or that were required for purposes of clarifications. Changes to the *Section 4(f)/6(f) Technical Report* are shown in ~~strikeout~~ text for deletions and in underline text for additions.

These modifications do not alter the conclusions of the environmental analysis such that new significant environmental impacts have been identified, nor do they constitute significant new information. The modifications are provided by chapter and indicated with the page number from the *Section 4(f)/6(f) Technical Report* that they would replace. This Errata is intended to be used in conjunction with the *Section 4(f)/6(f) Technical Report*.

E.2 Chapter/Section Changes

E.2.1 Global Changes to the Report

Two station names from the Phase I Extension have been renamed: Berryessa Station (or Berryessa BART Station) is now Berryessa/North San Jose Station. Milpitas BART Station is officially the Milpitas Station.

E.2.2 Changes to Chapter 2, *Project Description*

The revised Chapter 2, *Project Description*, is provided below.

E.2.3 Changes to Chapter 3.2.1, *Parks and Recreation Areas*

Table 3-1 has been updated as follows to clarify that the tunnel passes under the trails mentioned in Map ID P1, P2 and P16. This clarification does not change the conclusions presented in this technical report with regards to these parks and recreational resources.

Table 0-1: Potential Section 4(f) Properties (Parks and Recreation Areas) (Revised)

Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P1	Lower Silver Creek Trail (Proposed)[a]	**Size**: 6.5 miles (Proposed) **Features**: Planned trail extension along the culverted Lower Silver Creek **Agency with Jurisdiction**: San Jose Department of Parks, Recreation, and Neighborhood Services	Planned from Coyote Creek to Jackson Avenue along Lower Silver Creek	~~BART Extension crosses proposed trail alignment~~ BART Extension tunnel crosses under proposed planned trail alignment	Yes (Planned)
P2	Five Wounds Trail (Proposed)[b]	**Size**: 2.2 miles (Proposed) **Features**: Planned trail to link Berryessa/North San Jose ~~BART~~ Station to the Lower Silver Creek Trail and Coyote Creek Trail **Agency with Jurisdiction**: San Jose Department of Parks, Recreation, and Neighborhood Services	Planned between William Street and Taylor Street	~~Project crosses proposed trail alignment~~ BART Extension tunnel crosses under proposed planned trail alignment	Yes (Planned)
P3	Hacienda Park	**Size**: 0.25 acre **Features**: Grassy open space for picnicking **Agency with Jurisdiction**: San Jose Department of Parks, Recreation, and Neighborhood Services	Approximately 360 West Court, San Jose, CA 95116	Adjacent	Yes
P4	Roosevelt Park	**Size**: 11 acres **Features**: Skate park, basketball court, lighted softball field, handball courts, playground, picnic areas **Agency with Jurisdiction**: San Jose Department of Parks, Recreation, and Neighborhood Services	901 Santa Clara Street	BART Extension tunnel crosses under park	Yes
P5	Coyote Creek Trail (Proposed)[c]	**Size**: 18.7 miles (Proposed) **Features**: Planned trail extension from Berryessa/North San Jose Station ~~BART~~ to Santa Clara Street Station **Agency with Jurisdiction**: San Jose Department of Parks, Recreation, and Neighborhood Services	From Highway 237 to Anderson County Park	BART Extension tunnel crosses under proposed trail alignment	Yes (Planned)

Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P6	Watson Park	**Size**: 26.6 acres **Features**: Soccer field, playground equipment, dog play areas **Agency with Jurisdiction**: San Jose Department of Parks, Recreation, and Neighborhood Services	Jackson Avenue and 22nd Street	800 feet	Yes
P7	City Hall Plaza	**Size**: 0.9 acre **Features**: Outdoor event space. Events by permit only. With a total capacity of 2,688 persons, the plaza consists of an East and a West Plaza as well as a bamboo courtyard. **Agency with Jurisdiction**: City of San Jose	San Jose City Hall	Adjacent	No – City Hall Plaza's primary purpose was designed and is used as an outdoor public space as part of the City Hall campus. Event use is occasional and recreation is not the primary purpose of the plaza.
P8	Plaza de Cesar Chavez	**Size**: 2.3 acre **Features**: Picnic benches, lawns, fountain, small stage **Agency with Jurisdiction**: San Jose Department of Parks, Recreation, and Neighborhood Services	Market Street/Park Avenue	970 feet	Yes
P9	St. James Park	**Size**: 6.8 acres **Features**: Picnic areas, exercise course, playgrounds, sweeping lawns, and walking paths **Agency with Jurisdiction**: San Jose Department of Parks, Recreation, and Neighborhood Services	St. John Street/1st Street	625 feet	Yes
P10	Horace Mann Elementary School Playfields	**Size**: 0.7 acre (Playfields only) **Features**: Grass field and basketball court **Agency with Jurisdiction**: San Jose Unified School District	55 North 7th Street, San Jose	Adjacent	Yes – Joint use agreement with San Jose Department of Parks, Recreation, and Neighborhood Services
P11	Almaden Entrance Triangle	**Size**: 0.25 acre **Features**: Open space with lawn and sculptural art **Agency with Jurisdiction**: City of San Jose	Santa Clara Street/Almaden Boulevard	Adjacent	No – This is an incidental greenspace and recreation is not primary purpose.

Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P12	McEnery Park	**Size**: 7.0 acres **Features**: Children's play area, sculptural art, fountains, landscaping **Agency with Jurisdiction**: Guadalupe River Park Conservancy/ City of San Jose Department of Parks, Recreation, and Neighborhood Services	San Fernando Street east of the Guadalupe River	700 feet	Yes
P13	Guadalupe River Park and Trail	**Size**:3-mile Parkway, 9-mile trail **Features**: Part of the Guadalupe River Parkway chain that runs along the Guadalupe River. The Guadalupe River Park includes public art, play areas, gardens, and picnic areas. The Guadalupe River Trail (Downtown portion) is part of the Guadalupe River Trail network and is a paved trail for bicycling and walking activities. The trail runs through the Guadalupe River Park and continues south beyond Highway 280. **Agency with Jurisdiction:** Guadalupe River Park Conservancy/City of San Jose Department of Parks, Recreation, and Neighborhood Services	Guadalupe River Park is located between Taylor Street and Santa Clara Street along the Guadalupe River. Trail extends from Gold Street to Virginia Street along the Guadalupe River	Guadalupe River Park is located 230 feet from the BART Extension alignment. BART Extension tunnel crosses under the Guadalupe River Trail.	Yes
P14	San Fernando Station Plaza	**Size**: 0.7 acre **Features**: Landscaping, incidental green space described by City as a Park use, public art **Agency with Jurisdiction**: Santa Clara Valley Transportation Authority	San Fernando Street/Gifford Avenue	430 feet	Yes
P15	Arena Green	**Size**: 7.0 acres **Features**: Part of the Guadalupe River Park. Playground equipment, carousel, sculpture art, and recreational trails. Children's Carousel operates year-round Tuesday–Sunday, 10 a.m.–5 p.m. **Agency with Jurisdiction:** Guadalupe River Park Conservancy/ City of San Jose Department of Parks, Recreation, and Neighborhood Services	Between Santa Clara and Julian Streets, across Autumn Street from the HP Pavilion	250 feet	Yes

Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P16	Los Gatos Creek Trail (Proposed)[d]	**Size**: Approximately 0.6 mile **Features**: Proposed extension of the Los Gatos Creek Trail known as Reach 5. **Agency with Jurisdiction:** City of San Jose Department of Parks, Recreation, and Neighborhood Services	Proposed extension from San Carlos Street to Guadalupe River Park	~~BART Extension crosses the trail corridor~~ BART Extension tunnel crosses under proposed planned trail alignment.	Yes – (Planned)
P17	Cahill Park	**Size**: 3.7 acres **Features**: Neighborhood park containing small basketball court and two playground areas **Agency with Jurisdiction:** City of San Jose Department of Parks, Recreation and Neighborhood Services	San Fernando Street/Bush Street	350 feet	Yes
P18	Theodore Lenzen Park	**Size**: 0.5 acre **Features**: Playground equipment, picnic tables, open space **Agency with Jurisdiction**: City of San Jose Department of Parks, Recreation, and Neighborhood Services	Lenzen Avenue/ Stockton Avenue	BART alignment tunnel crosses under park	Yes
P19	Newhall Park	**Size**: 1.6 acres **Features**: Children's playground, lawn, and picnic areas **Agency with Jurisdiction**: City of San Jose Department of Parks, Recreation, and Neighborhood Services	Newhall Street/ Campbell Avenue	400 feet	Yes
P20	Coleman Soccer Fields (Proposed)	**Size**: 12.2 acres **Features**: Planned soccer field complex **Agency with Jurisdiction**: City of San Jose Department of Parks, Recreation, and Neighborhood Services	Coleman Avenue and Brokaw Road (Approximate)	Adjacent to maintenance facility	Yes (Planned)
P21	The Forge Garden	**Size**: 0.5 acre **Features**: Educational garden and campus green space. **Agency with Jurisdiction:** Santa Clara University	500 El Camino Real, Santa Clara	900 feet	No – Privately owned facility, the primary purpose of which is as an educational facility.

Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P22	Larry J. Marsalli Park	**Size**: 7.0 acres **Features**: Open space, lighted softball field, and children's playground equipment. **Agency with Jurisdiction**: City of Santa Clara Parks and Recreation Department	Portola Avenue to Lafayette Street	600 feet from maintenance facility	Yes

Source: Google Earth Pro 2015; City of San Jose 2008, 2015.
Websites: ROEM Corp., City of San Jose, City of Santa Clara, Guadalupe River Park Conservancy, Newhall Neighborhood Association.
[a] The Lower Silver Creek Trail is a partially developed planned trail. The partially developed portion of the trail is outside the study area of the BART Extension, but the remaining planned portions of the trail are contained in the Lower Silver Creek Master Plan, which was approved in December 2007.
[b] Five Wounds Trail (Proposed) would follow a former railway alignment through eastern downtown San Jose. In 2010, the community developed a conceptual plan for this trail. No further studies have been completed.
[c] Coyote Creek Trail (Proposed) would extend north and south along Coyote Creek through the City of San Jose. A planning document for this segment – *Coyote Creek Trail, Story Road to Lower Silver Creek Master Plan* – was released in 2008. Final design of this segment is currently ongoing, and no construction commencement date has been identified.
[d] The proposed Reach 5 of the Los Gatos Creek Trail would extend north from the existing Los Gatos Creek Trail to intersect with the Guadalupe Creek Trail at Santa Clara Street. A planning document for this segment – *Los Gatos Creek Trail Reach 5 Master Plan* – was released in 2008. Final design of this segment is currently ongoing, and no construction commencement date has been identified.
Note: Please see the *Section 4(f)/6(f) Technical Report* (ICF ~~2016~~ 2017) for additional details on each resource described in the table.

E.2.4 Changes to Chapter 3.2.2, *Cultural Resources*

In 2003, historic properties were identified and evaluated as required under Section 106 of the NHPA in the 2003 HRER prepared by JRP. In 2016, JRP prepared a *Supplemental Built Environment Survey Report* to evaluate additional properties that were not considered in the 2003 study. These two reports identified a total of ~~29~~ 32 historic properties within the APE that were listed in or determined eligible for listing in the NRHP. On October 28, 2016, the SHPO agreed with the eligibility determinations in the 2016 *Supplemental Built Environment Survey Report* and concurred that FTA and VTA's historic resources identification efforts to date were appropriate for the Undertaking. Since the SHPO concurred on the APE, the Project was further modified. Minor refinements included the slight shifting of some tunnel alignments for the Single- and Twin-Bore Option, redesign of stations, and reduction of tunnel depth at some locations for the Single-Bore Option. Only some of the design modifications required changes to the APE for historic architectural resources. An addendum to the *Supplemental Built Environment Survey Report* was prepared in 2017 to address these modifications/refinements.

Table 0-2 details the ~~29~~ 32 NRHP-listed and eligible properties identified within the APE for the BART Extension, all of which are protected under Section 4(f). Appendix A provides the architectural APE map and depicts the location of each property listed in Table 0-2.

Table 0-2: Historic Properties Listed in or Determined Eligible for Listing in the NRHP (Revised)

Map Reference	APN	Street Address	Year Built	NRHP Eligible or Listed? (NRHP Criteria)	Approximate Distance from BART alignment/feature
C-25	467-08-007 467-08-009 467-08-014	1375–1401 Santa Clara Street	1916–1960	Eligible (A, C)	105 feet
C-26	467-10-043	1191 Santa Clara Street	1949	Eligible (A, C)	30 feet
C-27	467-10-046	1169 (1167) Santa Clara Street	1888	Eligible (C)	30 feet
D-03	467-57-082	227–247 Santa Clara Street	1928	Eligible (A, C)	15 feet
E-08*	467-23-035	142–150 Santa Clara Street	1913	Listed (A, C)	15 feet
E-09*	467-23-036	138 Santa Clara Street	1905	Listed (A, C)	15 feet
E-10*	467-23-038	124–126 Santa Clara Street	1900	Listed (A, C)	15 feet
E-11*	467-23-039	114–118 Santa Clara Street	1920	Listed (A, C)	15 feet
E-12*	467-23-089	100 Santa Clara Street	1912	Listed (A, C)	15 feet
E-13*	467-22-149	96 Santa Clara Street[a]	ca. 1883	Listed (A, C)	15 feet
E-14*	467-22-148	52 Santa Clara Street	1900	Listed (A, C)	15 feet
E-15	467-21-028	19 North 2nd Street	1925	Eligible (C)	75 feet
E-18*	467-22-041 467-22-042	42–48 Santa Clara Street	1930s	Listed (A, C)	15 feet
E-19*	467-22-158	36–40 Santa Clara Street	1869	Listed (A, C)	15 feet
E-20	467-54-001 through 467-54-034	22 North 1st Street[b]	1926	Eligible (A, C)	100 feet
E-21*	467-62-001 467-62-007	8–14 South 1st Street	1926	Listed (A, C)	15 feet

Map Reference	APN	Street Address	Year Built	NRHP Eligible or Listed? (NRHP Criteria)	Approximate Distance from BART alignment/feature
	through 467-62-020				
E-22	259-40-038	34 West Santa Clara Street	ca. 1880 1910s 1920s	Eligible (A, C)	15 feet
E-23	259-34-018	81 West Santa Clara Street	1926	Eligible (C)	15 feet
E-24	259-34-046	101 West Santa Clara Street	1942	Eligible (A, C)	15 feet
E-25	259-38-128	374 West Santa Clara Street	1934	Eligible (A, C)	BART alignment crosses under historic property
E-27	467-20-078	30 North 3rd Street	ca. 1903	Eligible (C)	125 feet
E-33	261-33-047	734 The Alameda	1930	Assumed[d] Eligible (A, C)	BART alignment crosses under historic property
F-34	261-33-048	88 Bush Street	Ca. 1915-1947	Assumed[d] Eligible (A, C)	BART alignment crosses under historic property
F-35	261-010-068	865 The Alameda	1930	Assumed[d] Eligible (C)	BART alignment crosses under historic property
E-35[c]	259-35-05	151–155 West Santa Clara Street	ca. 1884 1930 ca. 1970	Eligible (A, B, C)	15 feet
E-36	259-35-035	161–167 West Santa Clara Street	1883	Eligible (B, C)	15 feet
F-13	261-34-020	Cahill Station and Santa Clara / Alameda Underpass	1935	Listed (C)	BART alignment crosses under historic property
F-14	261-33-020	848 The Alameda	ca. 1884	Eligible (C)	75 feet
F-15	261-01-074	176 North Morrison Avenue	ca. 1898	Eligible (C)	BART alignment crosses under historic property
F-22	261-01-063	179-181 Rhodes Court	ca. 1948	Eligible (C)	BART alignment crosses under historic property
I-01	230-06-031 230-06-032 230-06-050 230-06-051	1 Railroad Avenue (Santa Clara Station)	1863–1864 1877	Listed (A, C)	160 feet
I-02	230-06-040	Benton And Railroad (Santa Clara	1904 1927	Eligible (C)	160 feet

Map Reference	APN	Street Address	Year Built	NRHP Eligible or Listed? (NRHP Criteria)	Approximate Distance from BART alignment/feature
		Tower)			

Source: ~~JRP Historical Consulting, LLC, 2016.~~ JRP 2016 (SBESR) and JRP 2017 (Addendum to the SBESR)

Notes:

* Contributor to the San Jose Downtown Commercial District, which was listed in the NRHP in 1983.

[a] This property is also known as 82 Santa Clara Street.

[b] This property is also known as 28 North First Street.

[c] The legal parcel includes three buildings. The Farmers Union Building at 151–155 Santa Clara Street was previously determined eligible for listing in the NRHP and California Register of Historic Resources, and the current study agrees with the previous determination. The "Old Mill" building at 25–29 North San Pedro Street and the San Pedro Square Properties Building at 35 North San Pedro Street were evaluated for the first time during the present study and found not eligible for listing in the NRHP.

[d] For these properties, FTA is assuming eligibility to the NRHP for the purposes of this project only. No SHPO consultation on the NRHP eligibility of these properties has taken place to date.

E.2.5 Changes to Chapter 4.1.2. Historic Properties

As described in the draft *Finding of Effect* (FOE) document, BART Extension improvements related to the construction of station facilities and streetscape improvements would be developed in the vicinity of historic properties that are protected under Section 4(f).

However, no portion of an historic site would be permanently incorporated into the BART Extension. As shown in Table ~~8-2~~ 3-2, the BART Extension alignment would run below and have tunnel easements from ~~three~~ several historic properties: 374 Santa Clara Street (Map Reference E-25), 734 The Alameda (Map Reference E-33), 88 Bush Street (Map Reference F-34), 865 The Alameda (Map Reference F-35), Cahill Station and Santa Clara / Alameda Underpass (Map Reference F-13), 176 North Morrison Avenue (Map Reference F-15), and 179–181 Rhodes Court (Map Reference F-22). Section 4(f) applies to tunnel construction and associated activities only if they would substantially impair the historic values of a historic site. There is no potential for adverse effects on any of the historic properties where tunnels would be constructed below them; therefore, no use would result.

In addition, rail tiebacks associated with the Twin-Bore and Single-Bore Options would be constructed below various historic properties at the Downtown San Jose Station (East and West Options). Tieback anchors are long metal rods or bundled tendons drilled and grouted into the ground to brace construction support walls and adjacent property and/or structures during excavation of underground facilities. Tiebacks may remain in the ground after completion of construction. The tiebacks are estimated to be up to 110 feet in length with the last 50 feet farthest away from the trench secured in place. Tiebacks are typically spaced at 4 to 6 feet on center horizontally and 5 to 8 feet on center vertically. Tieback installation could start at approximately 3 feet below-grade. The tiebacks pose no potential for adverse effects on the historic structures

Although construction activities would take place in the vicinity of historic properties, and in some cases adjacent to or underneath historic properties, these activities would not result in the destruction, damage, or physical alteration of any of the historic properties listed above. ~~While cut-and-cover station excavation may expose historical buildings to excessive vibration, Mitigation Measures NV-CNST-P through NV-CNST-S would ensure that no adverse effect related to construction period vibration would occur.~~ To avoid any direct adverse effect to historic properties under Section 106, pre-construction surveys of all historic properties adjacent to cut-and-cover construction areas, as described in the *Finding of Effects* (JRP Historical Consulting 2017), will be conducted to identify historic properties that may have these sub-sidewalk features within the public ROW. A qualified structural engineer, in consultation with an architectural historian or historic architect who meets Secretary of the Interior's (SOI) Professional Qualification Standards (36 C.F.R. 61), will design the removal of the sub-surface features in a manner that will not cause more than cosmetic damage to historic buildings. The structural designs will be reviewed by an architectural historian or historic architect for consistency with SOI Standards. Implementation of this treatment will avoid direct adverse effects to historic properties that are immediately adjacent to the cut-and-cover construction for the tunnel alignment (Map References D-03, E-08, E-09, E-10, E-11, E-12, E-13, E-14, E-18, E-19, E-21, E-22, E-23. E-24, and E-27).

FTA has consulted with the California State Historic Preservation Officer (SHPO) in accordance with 36 C.F.R. 800 and the regulation implementing Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f) as amended regarding the project's potential to affect historic properties. FTA has prepared a Draft Programmatic Agreement pursuant to 36 C.F.R. 800.4(b)(2) and 800.14(b). Various avoidance and minimization measures for architectural historic properties have been developed to avoid adverse impacts on historic properties and are included in the Draft Programmatic Agreement for the treatment of cultural resources for the Project, and the *Finding of Effects* (JRP Historical Consulting 2017). Implementation of these measures during the design, construction, and post-construction phases of the project would avoid indirect adverse effects on historic properties from the construction of the BART Extension Alternative. These measures will be summarized in a *Programmatic Agreement Status Report* summarizing the ongoing protection of historic properties; the report will be submitted to FTA and SHPO on an annual basis. While cut-and-cover station excavation may expose historical buildings to excessive vibration, these measures would ensure that no adverse effect related to construction period vibration would occur.

There is no potential for use to result from temporary occupancy of any of the ~~29~~ 32 identified built environment historic properties. Construction activities associated with the BART Extension would not alter, directly or indirectly, any of the characteristics that qualify the historic properties identified in this section for protection under Section 4(f). All construction activities, including use of the proposed CSA, would be carried out consistent with the Draft PA and ARTP.

Aboveground elements of the BART Extension include tunnel portals, ventilation structures, station entrances, parking garages, signage, intersection improvements, system facilities such as traction power substations, and a maintenance facility. The Draft FOE, analyzed the potential for effects related to changes in character or integrity for each historic property and found that no adverse effect would result from the BART Extension. Of the ~~29~~32 historic properties identified, only one, the Church of Five Wounds (Map Reference C-25), is considered to have an inherent quiet quality. However, at the location of this historic church, the predicted operational noise level would not exceed 25 dBA, a level less than the FTA threshold of 40 dBA for institutional buildings and historic buildings with an indoor use that involves meditation and study (i.e., a church or school) (Wilson Ihrig ~~2016~~ 2017: 4-18, 4-35; FTA 2006:3-7, 2-8, and 8-3). All other historic properties, which consist of commercial, transportation, industrial, and residential resources, do not have an inherent quiet quality that is part of their historic character or significance. Therefore, the BART Extension would not result in a constructive use of any historic properties related to noise effects.

According to the FTA Guidance Manual, operational (ground-borne) vibration primarily causes human annoyance or interference with use of equipment sensitive to vibration and damage to historic buildings from vibration from train operation is "unlikely, except when the track will be very close to the structure." In these cases, ~~t~~the FTA Guidance Manual directs using the construction vibration threshold—0.12 inch/second peak particle velocity (PPV) or, alternatively 90 vibration velocity decibels (VdB) from the PPV limits—for those structures. Twin-Bore and Single-Bore Option operational vibration levels at all ~~29~~ 32 historic properties would be below these thresholds 90 VdB, thus operational vibration effects are not anticipated to result in a constructive use of any historic properties. See Table 4-1 for Section 4(f) use determinations for Built Environment Historic Properties.

Table 0-3: Built Environment Historic Properties Section 4(f) Use Determinations (Revised)

Map Reference	APN	Street Address	Section 4(f) Use Determination
C-25	467-08-007 467-08-009 467-08-014	1375–1401 Santa Clara Street	No Use
C-26	467-10-043	1191 Santa Clara Street	No Use
C-27	467-10-046	1169 (1167) Santa Clara Street	No Use
D-03	467-57-082	227-247 Santa Clara Street	No Use
E-08*	467-23-035	142-150 Santa Clara Street	No Use
E-09*	467-23-036	138 Santa Clara Street	No Use
E-10*	467-23-038	124–126 Santa Clara Street	No Use
E-11*	467-23-039	114–118 Santa Clara Street	No Use
E-12*	467-23-089	100 Santa Clara Street	No Use
E-13*	467-22-149	96 Santa Clara Street	No Use
E-14*	467-22-148	52 Santa Clara Street	No Use

Map Reference	APN	Street Address	Section 4(f) Use Determination
E-15	467-21-028	19 East 2nd Street	No Use
E-18*	467-22-041 467-22-042	42–48 Santa Clara Street	No Use
E-19*	467-22-158	36–40 Santa Clara Street	No Use
E-20	467-54-001 through 467-54-034	22 North 1st Street	No Use
E-21*	467-62-001 467-62-007 through 467-62-020	8–14 South 1st Street	No Use
E-22	259-40-038	34 Santa Clara Street	No Use
E-23	259-34-018	81 Santa Clara Street	No Use
E-24	259-34-046	101 Santa Clara Street	No Use
E-25	259-38-128	374 Santa Clara Street	No Use
E-35	259-35-05	151–155 Santa Clara Street	No Use
E-27	467-20-078	30 North 3rd Street	No Use
E-33	261-33-047	734 The Alameda	No Use
F-34	261-33-048	88 Bush Street	No Use
F-35	261-010-068	865 The Alameda	No Use
E-36	259-35-035	161–167 Santa Clara Street	No Use
F-08	261-33-025	49 Wilson Avenue	No Use
F-13	261-34-020	Cahill Station and Santa Clara / Alameda Underpass	No Use
F-14	261-33-020	848 The Alameda	No Use
F-15	261-01-074	176 North Morrison Avenue	No Use
I-01	230-06-031 230-06-032 230-06-050 230-06-051	1 Railroad Avenue (Santa Clara Station)	No Use
I-02	230-06-040	Benton And Railroad (Santa Clara Tower)	No Use

* Contributor to the San Jose Downtown Commercial District, which was listed in the National Register of Historic Places in 1983.

Chapter 2
Project Description

The Phase II Project consists of an approximately six-mile extension of the BART system from the terminus of VTA's BART Silicon Valley—Berryessa Extension Project (Phase I) from San Jose to Santa Clara (see Figure 1). Phase I is currently under construction and scheduled to be operational in ~~late 2017~~2018. The Phase II Project would include approximately five miles of subway tunnel from Berryessa/North San Jose Station, continuing through downtown San Jose, and terminating at grade near the Santa Clara Caltrain Station (see Figure 2). In addition, four passenger stations are proposed. Passenger service on the Phase II Project is scheduled to begin in 2025/2026.

There are two construction methods proposed for the five-mile-long tunnel portion of the BART extension—the Twin-Bore and Single-Bore Options—between the East and West Tunnel Portals. Under the Twin-Bore Option, two twin-bore tunnels would be excavated with one track in each. Each tunnel bore would have an outer diameter of approximately 20 feet. The depth of the tunnel would be between 10 and 75 feet below ground surface. The crown, or top, of the tunnel of the Twin-Bore Option would be, on average, 40 feet below the surface. Under the Single-Bore Option, one large-diameter tunnel bore would be excavated, which would contain both northbound and southbound tracks. The tunnel bore would have an outer diameter of approximately 45 feet. The crown, or top, of the tunnel of the Single-Bore Option would be, on average, 70 feet below the surface.

2.1 Alignment and Station Features by City

2.1.1 City of San Jose

2.1.1.1 Connection to Phase I Berryessa Extension

The BART extension would begin where the Phase I tail tracks end. The at-grade Phase I tail tracks would be partially removed to allow for construction of the bored tunnels, East Tunnel Portal, and supporting facilities.

The alignment would transition from a retained-fill configuration east of U.S. 101 and south of Mabury Road near the end of the Phase I alignment into a retained-cut configuration and enter the East Tunnel Portal near~~just north of~~ Las Plumas Avenue.

South of the portal, the alignment would pass beneath North Marburg Way, then approximately 25 feet below the creek bed of Lower Silver Creek for the Twin-Bore Option, or approximately 30 feet for the Single-Bore Option, just to the east of U.S. 101, then curve under U.S. 101 south of the McKee Road overpass, and enter Alum Rock/28th Street Station.

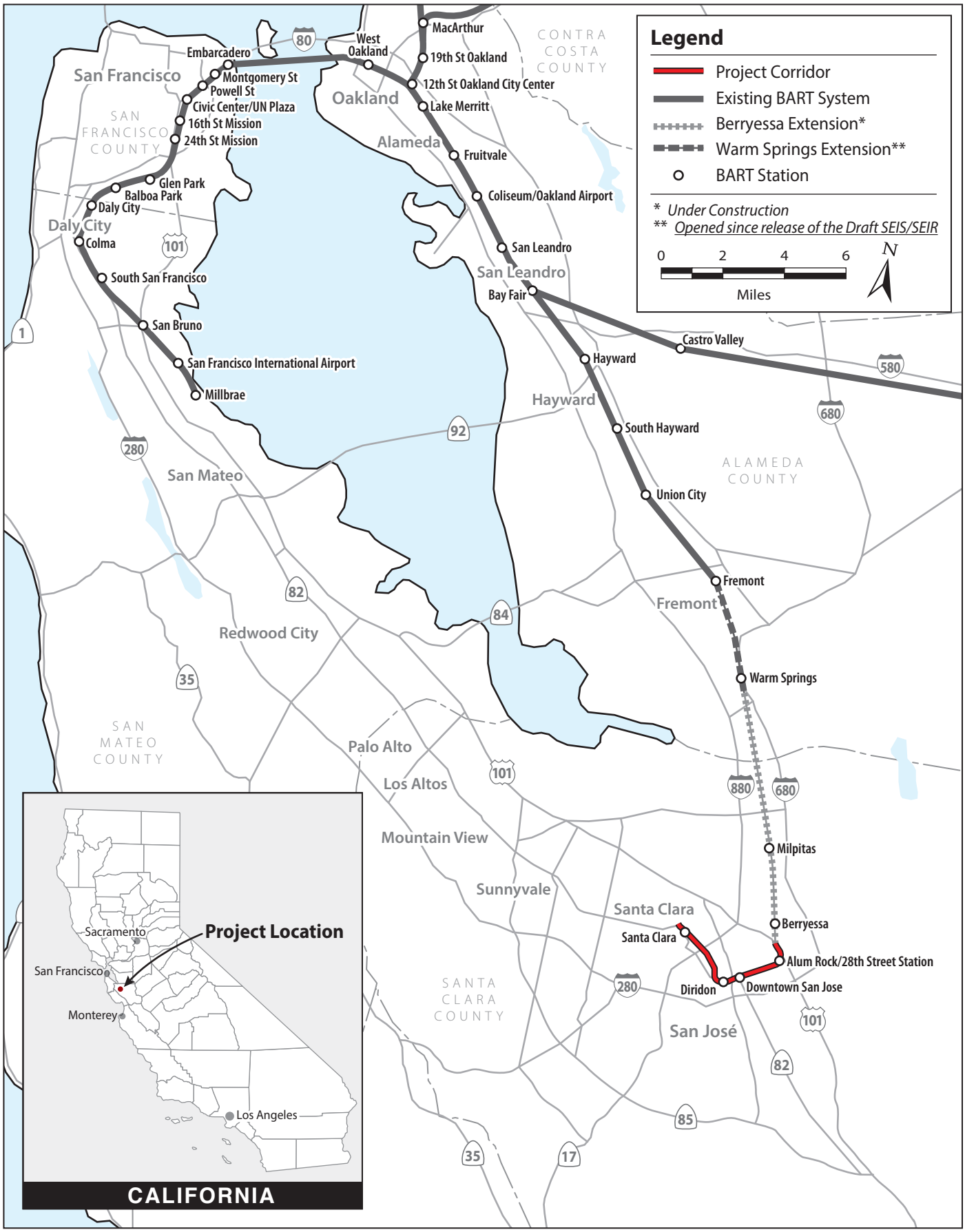
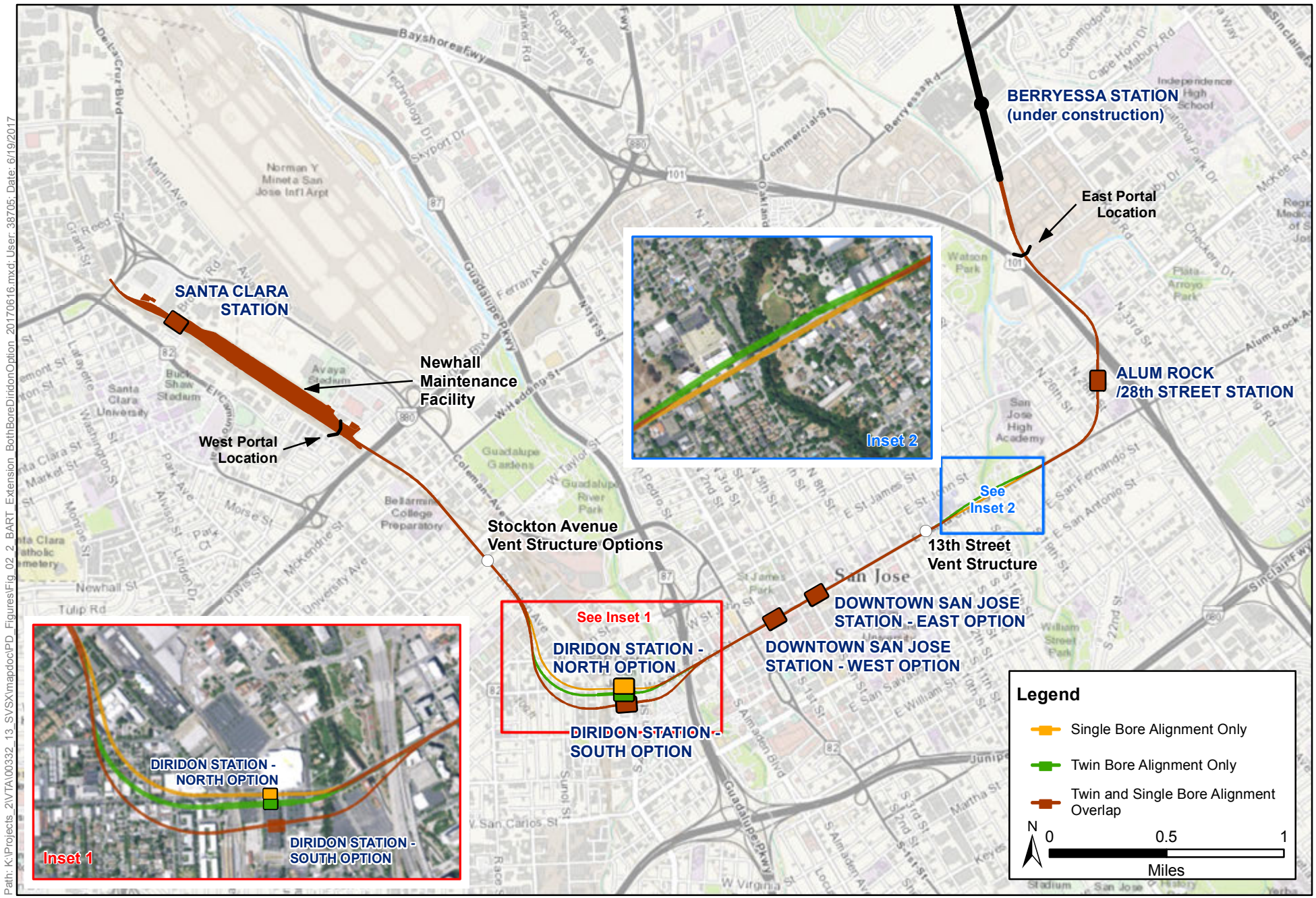


Figure 1
Regional Location (Revised)
VTA's BART Silicon Valley–Phase II Extension Project



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Source: Station and Track, VTA 2014; Basemap, ESRI 2015

Figure 2
BART Extension Alternative (~~Revised~~)
VTA's BART Silicon Valley – Phase II Extension Project

2.1.1.2 Alum Rock/28th Street Station

Alum Rock/28th Street Station would be located between U.S. 101 and North 28th Street and between McKee Road and Santa Clara Street. The station would be underground with street-level entrance portals with elevators, escalators, and stairs covered by canopy structures. In general, each station would have a minimum of two entrances. Under the Single-Bore Option, an underground concourse level would span between the two entrances adjacent to the tunnel. A parking structure of up to seven levels would accommodate BART park-and-ride demand with 1,200 parking spaces. The station would include systems facilities both above and below ground.

From Alum Rock/28th Street Station, the alignment would curve under North 28th Street, North 27th Street, and North 26th Street before aligning under Santa Clara Street. The alignment would continue under the Santa Clara Street right-of-way (ROW) until the alignment approaches Coyote Creek.

2.1.1.3 Tunnel Alignment near Coyote Creek

For the Twin-Bore Option, the alignment would transition north of Santa Clara Street beginning just west of 22nd Street and pass approximately 20 feet beneath the creekbed of Coyote Creek to the north of Santa Clara Street and avoid the Coyote Creek/Santa Clara Street bridge foundations. The alignment would transition back into the Santa Clara Street ROW near 13th Street, west of Coyote Creek. However, for the Single-Bore Option, the alignment would continue directly under Santa Clara Street and pass approximately 55 feet beneath the creekbed of Coyote Creek and approximately 20 feet below the existing bridge foundations.

2.1.1.4 13th Street Ventilation Structure

A systems facility site would be located at the northwest corner of Santa Clara and 13th Streets. This site would include a tunnel ventilation structure, which would be an aboveground structure with an associated ventilation shaft.

2.1.1.5 Downtown San Jose Station

There are two station location options for the Downtown San Jose Station: the Downtown San Jose Station East Option and the Downtown San Jose Station West Option, as described in detail below. The alignment for this area would be the same irrespective of the station option.

The station would consist of boarding platform levels and systems facilities aboveground and within the tunnel beneath Santa Clara Street, as well as entrances at street level. In general, each station would have a minimum of two entrances. Elevators, escalators, and stairs that provide pedestrian access to the ~~mezzanine~~concourse would be at station portal entrances. Escalators and stairs would be covered by canopy structures. The station would not have

dedicated park-and-ride facilities. Under either Downtown San Jose Station Option, streetscape improvements, guided by San Jose's Master Streetscape Plan, would be provided along Santa Clara Street to create a pedestrian corridor. For the East Option, streetscape improvements would be between 7th and 1st Streets; for the West Option, streetscape improvements would be between 4th and Market Streets.

Downtown San Jose Station East Option

The alignment would continue beneath Santa Clara Street to the Downtown San Jose Station East Option. Under the Twin-Bore Option, crossover tracks would be located east of the Downtown San Jose Station between 7th and 5th Streets (within the cut-and-cover box). Under the Single-Bore Option, the crossover tracks would be located east of the station ~~between 9th and 5th Streets~~within the limits of 8th and 13th Streets.

Downtown San Jose Station West Option

The alignment would continue beneath Santa Clara Street to the Downtown San Jose Station West Option. Crossover tracks for the Twin-Bore Option would be located east of the Downtown San Jose Station between 2nd and 4th Streets (within the cut-and-cover box). Under the Single-Bore Option, the crossover tracks would be located east of the station ~~between 7th and 2nd~~ within the limits of 8th and 13th Streets.

2.1.1.6 Tunnel Alignment into Diridon Station

There are two station location options at Diridon Station: the Diridon Station South Option and the Diridon Station North Option, as described in detail below. The alignment into Diridon Station varies between the North and South Options and between the Twin-Bore and Single-Bore Tunnel Options as described below.

Tunnel Alignment into Diridon Station South Option

The alignment would continue beneath Santa Clara Street from the Downtown San Jose Station and shift south beginning just west of South ~~Alamaden~~Almaden Boulevard to pass between the SR 87 bridge foundations. For the Twin-Bore Option, the alignment would pass 45~~40~~ feet below the riverbed of the Guadalupe River, pass beneath ~~and~~ a retaining wall west of the river, and ~~over 20~~25 feet below the creekbed of Los Gatos Creek. For the Single-Bore Option, the alignment would pass approximately 50 feet below the riverbed of the Guadalupe River, pass under the retaining wall, and approximately 35 feet below the creekbed of Los Gatos Creek. After passing under Los Gatos Creek, the alignment for both options would enter the Diridon Station between Los Gatos Creek and Autumn Street.

Tunnel Alignment east of Diridon Station North Option

Under the Twin-Bore Option, the alignment would continue beneath Santa Clara Street ~~from the Downtown San Jose Station and shift south beginning just west of South Almaden Boulevard to pass between the SR 87 bridge foundations. The alignment would then pass~~

~~45~~ then continue approximately 50 feet below the riverbed of the Guadalupe River and ~~a retaining wall, then veer back north to a location just south of and adjacent to Santa Clara Street. The alignment passes 25~~ 30 feet below the creekbed of Los Gatos Creek. After passing under Los Gatos Creek, the alignment would enter Diridon Station ~~under~~ between Autumn and Montgomery Streets and directly south of Santa Clara Street. The Diridon Station North Option is closer to Santa Clara Street in comparison to the South Option.

Under the Single-Bore Option, the alignment would continue and remain beneath Santa Clara Street, and continue 45~~50~~ feet below the riverbed of the Guadalupe River and 40~~50~~ feet below the creekbed of Los Gatos Creek. ~~After passing under Los Gatos Creek, the alignment would shift north and enter Diridon Station~~ The boarding platforms, with the Single-Bore tunnel, would be located between ~~Autumn and~~ Montgomery and White Streets~~, directly south of Santa Clara Street~~. The Diridon Station North Option is closer to Santa Clara Street in comparison to the South Option.

2.1.1.7 Diridon Station

There are two station location options for the Diridon Station: the Diridon Station South Option and the Diridon Station North Option. The alignment varies by station location. Diridon Station would be generally located between Los Gatos Creek to the east, the San Jose Diridon Caltrain Station to the west, Santa Clara Street to the north, and West San Fernando Street to the south. The South Option would be located midway between Santa Clara Street and Stover Street. The North Option would be located adjacent to, and just south of, Santa Clara Street.

The station would consist of a boarding platform level, a ~~mezzanine~~ concourse level, and entrances at street-level portals. Under the Single-Bore Option, an underground concourse level would span between the two entrances adjacent to the tunnel. The station would have a minimum of two entrances. Entrances would have elevators, escalators, and stairs covered by canopy structures. Systems facilities would be located aboveground and underground at each end of the station.

~~An~~ The existing VTA bus transit center would be reconfigured for better access and circulation to accommodate projected bus and shuttle transfers to and from the BART station. The reconfiguration would be compatible/consistent with the Diridon Transportation Facilities Master Plan's design of the area. Kiss-and-ride facilities would be located along Cahill Street. No park-and-ride parking would be provided at this station.

Tunnel Alignment West of Diridon Station North Option

For the South Option, west of the station, the alignment for both the Twin-Bore and Single-Bore Options would continue beneath the Diridon Caltrain Station train tracks and White Street. The alignment would then turn towards the north, crossing under The Alameda at Cleaves Avenue and under West Julian Street at Morrison Avenue before aligning under Stockton Avenue.

Under the Diridon Station North Option and Twin-Bore Option, west of the station, the alignment would continue ~~beneath the Diridon Caltrain Station train tracks and~~ under White and Bush Streets south of The Alameda. The alignment would then turn towards the north, crossing under The Alameda at ~~Wilson Avenue~~ Sunol Street and under West Julian Street at Morrison Avenue~~Cleaves Street~~ before aligning under Stockton Avenue.

Under the Diridon Station North Option and Single-Bore Option, west of the station, the alignment would continue under ~~White and Bush Streets south of~~ Santa Clara Street/The Alameda. The alignment would then turn towards the north at Wilson Avenue, crossing under Rhodes Court~~The Alameda at Sunol Street~~ and under West Julian Street ~~at Morrison Avenue~~ before aligning under Stockton Avenue.

2.1.1.8 Tunnel Alignment Along Stockton Avenue

Around Pershing Avenue, all of the options—the Twin-Bore and Single-Bore Options and the Diridon Station South and North Options—converge back onto the same alignment under Stockton Avenue.

2.1.1.9 Stockton Avenue Ventilation Structure

On the east side of Stockton Avenue between Schiele Avenue and West Taylor Street, there are three alternate locations for a systems facility site that would house a tunnel ventilation structure, which would be an aboveground structure with an associated ventilation shaft.

2.1.1.10 Tunnel Alignment near I-880

The alignment would continue north and cross under the Caltrain tracks then under~~and~~ Hedding Street. The alignment would continue on the east side of the Caltrain tracks and cross under Interstate (I-) 880 before ascending and exiting the West Tunnel Portal near Newhall Street.

2.1.2 City of Santa Clara

The BART Extension Alternative in Santa Clara would consist of the Newhall Maintenance Facility, system facilities, storage tracks for approximately 200 BART revenue vehicles (passenger cars), the Santa Clara Station, and tail track. The San Jose/Santa Clara boundary is located approximately midway through the Newhall Maintenance Facility.

2.1.2.1 Newhall Maintenance Facility

The Newhall Maintenance Facility is approximately 40 acres, would begin north of the West Tunnel Portal at Newhall Street in San Jose, and extend to Brokaw Road near the Santa Clara Station in Santa Clara. A single tail track would extend north from the Santa Clara Station and cross under the De La Cruz Boulevard overpass and terminate on the north side of the overpass. The maintenance facility would serve two purposes: (1) general maintenance, running repairs, and storage of up to 200 BART revenue vehicles and (2) general

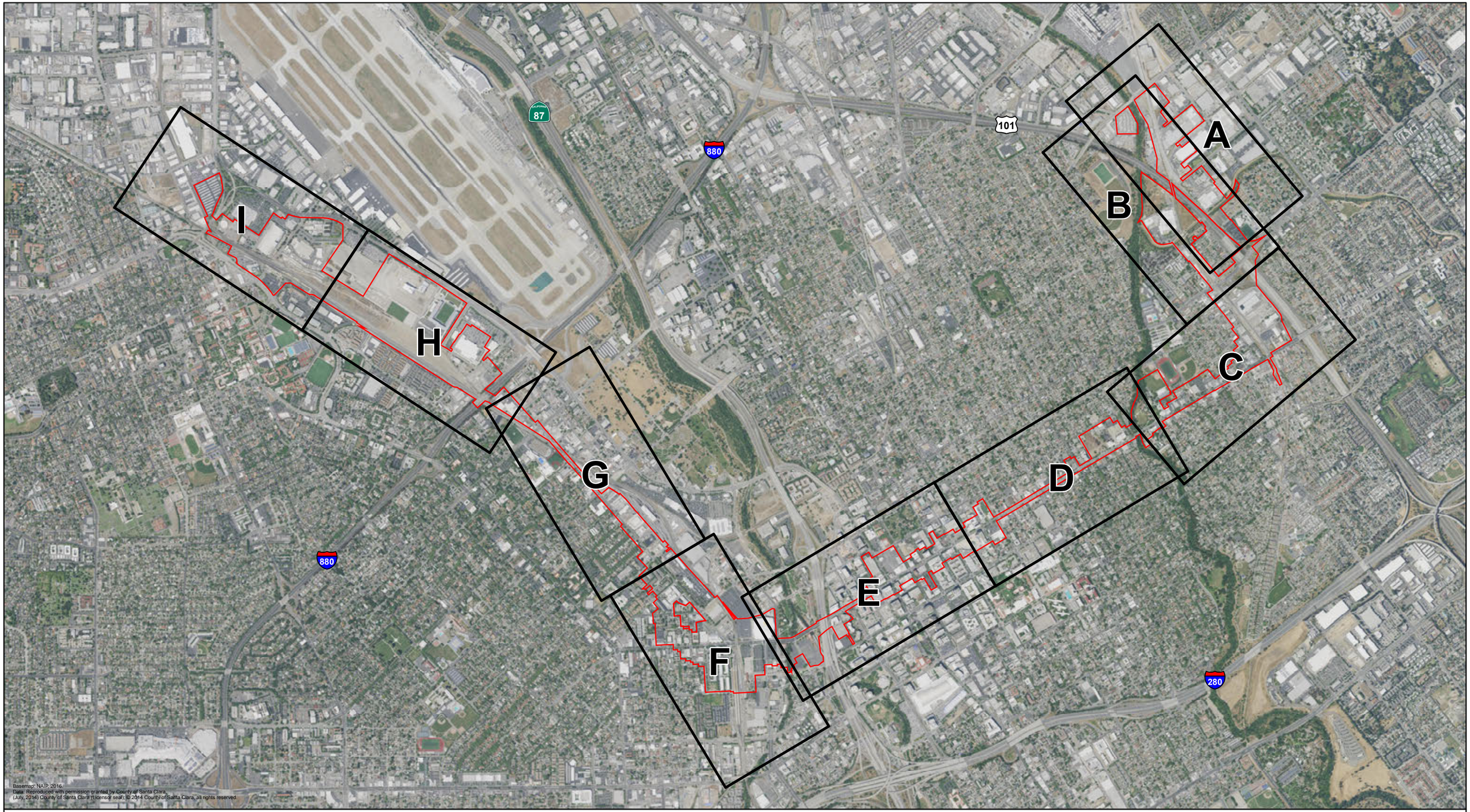
maintenance of non-revenue vehicles. The facility would also include maintenance and engineering offices and a yard control tower. Several buildings and numerous transfer and storage tracks would be constructed.

2.1.2.2 Santa Clara Station

The closest streets to the Santa Clara Station would be El Camino Real to the southwest, De La Cruz Boulevard to the northwest, and Coleman Avenue to the northeast near the intersection of Brokaw Road. The station would be at grade, centered at the west end of Brokaw Road, and would contain an at-grade boarding platform with a ~~mezzanine~~concourse one level below. Access to the ~~mezzanine~~concourse would be provided via elevators, escalators, and stairs covered by canopy structures. An approximately 240-foot-long pedestrian tunnel would connect from the ~~mezzanine~~concourse level of the BART station to the Santa Clara Caltrain plaza, and an approximately 175-foot-long pedestrian tunnel would connect from the ~~mezzanine~~concourse level to a new BART plaza near Brokaw Road. Kiss-and-ride, bus, and shuttle loading areas would be provided on Brokaw Road.

A parking structure of up to five levels would be located north of Brokaw Road and east of the Caltrain tracks within the station area and would accommodate 500 BART park-and-ride parking spaces in addition to public facilities on the site.

An approximately 150-foot-high radio tower and an associated equipment shelter would be located within the systems site.



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Architectural APE

Map Sheet

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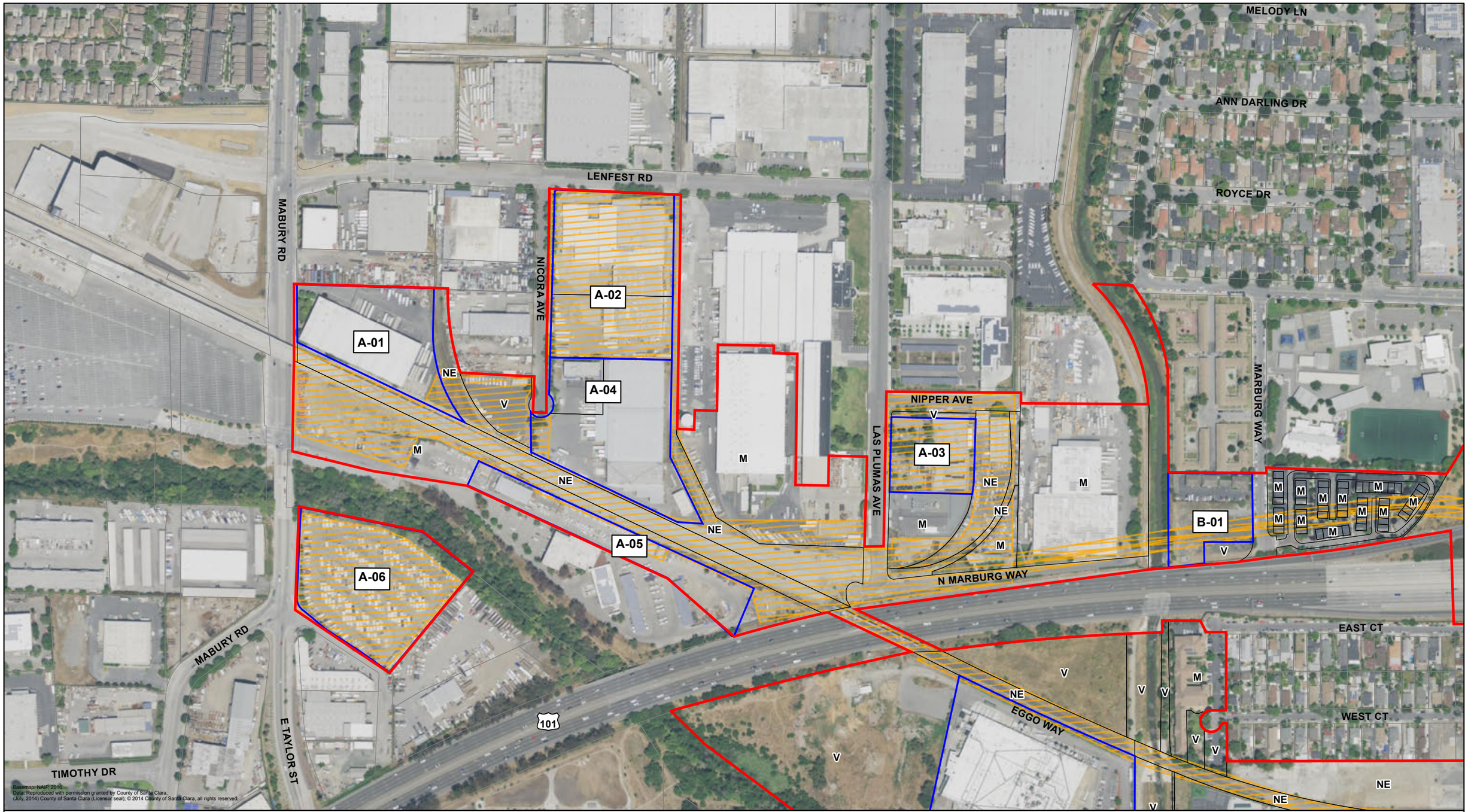

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Architectural APE

Historic District

Project Footprint

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Eligible for or listed in the NRHP and CRHR as per current survey

A-01 Map Reference Number (Eligible)
Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER

A-01 Map Reference Number (CEQA only)
Historical Resource for the purposes of CEQA only

A-01 Map Reference Number (Not Eligible)
Not eligible for listing in NRHP or CRHR as per current survey

Architectural APE: Sheet A

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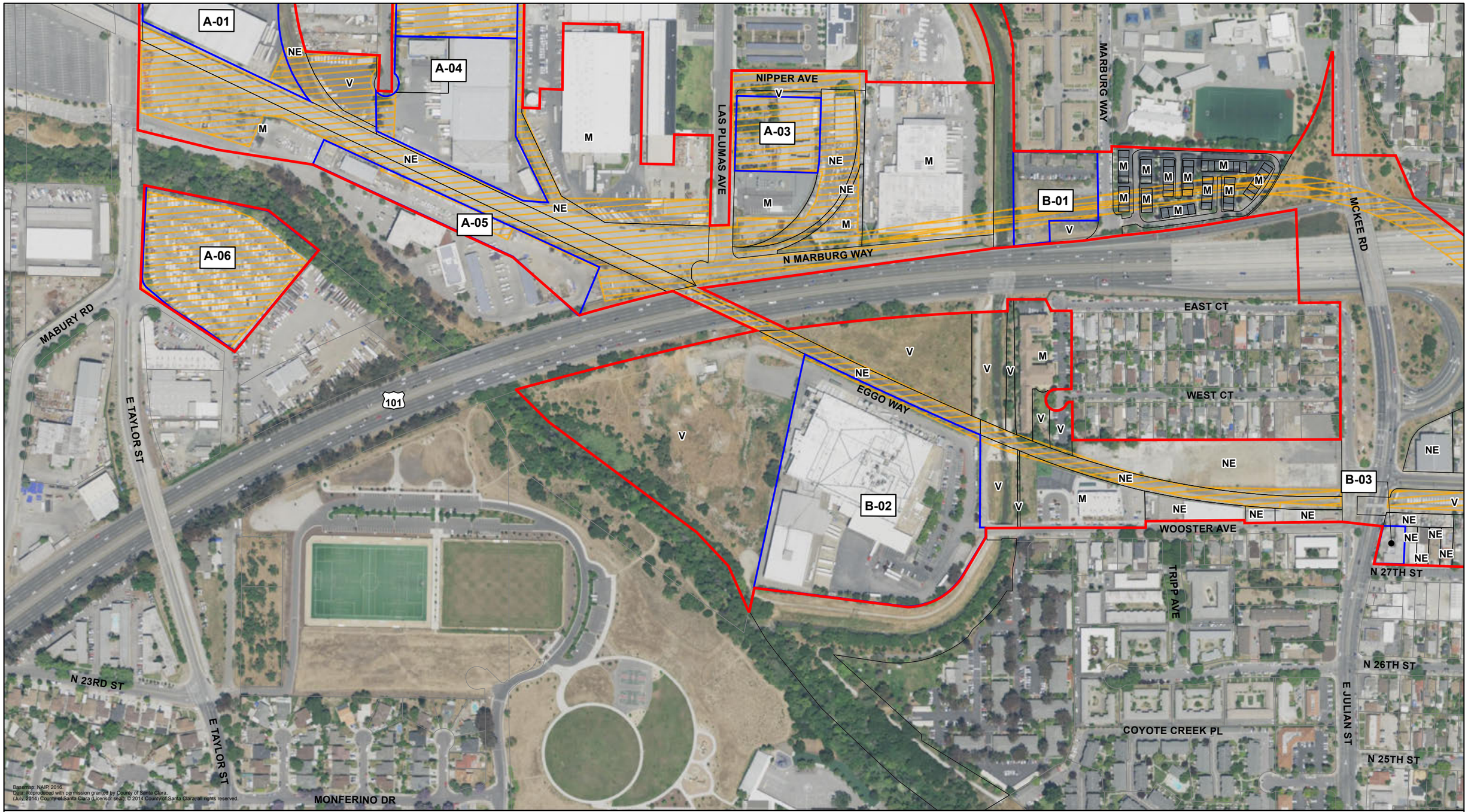
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)



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Architectural APE

Historic District

Project Footprint

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Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER

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Historical Resource for the purposes of CEQA only

B-01 Map Reference Number (Not Eligible)
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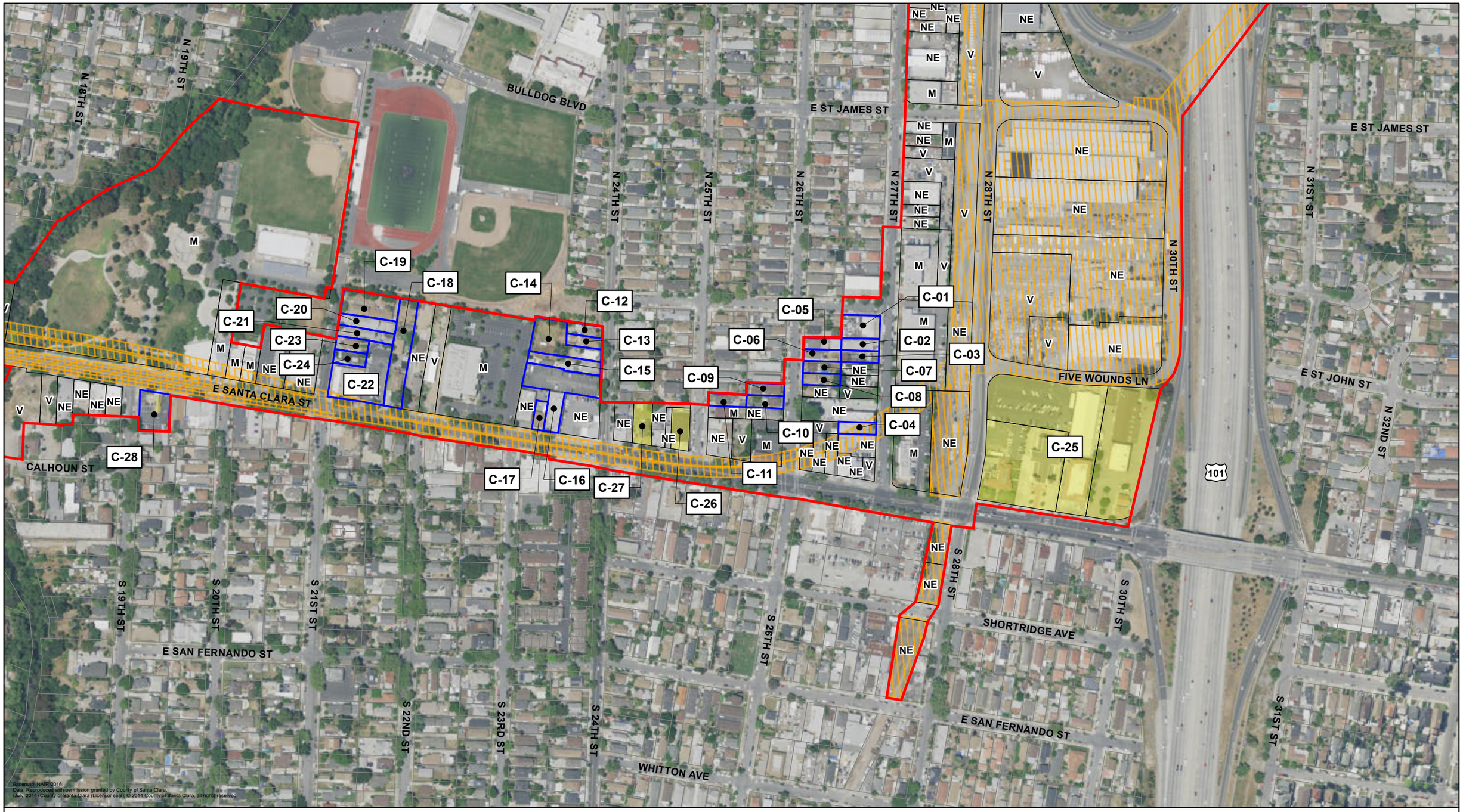
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)



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Architectural APE

Historic District

Project Footprint

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Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER

C-01 Map Reference Number (CEQA only)
Historical Resource for the purposes of CEQA only

C-01 Map Reference Number (Not Eligible)
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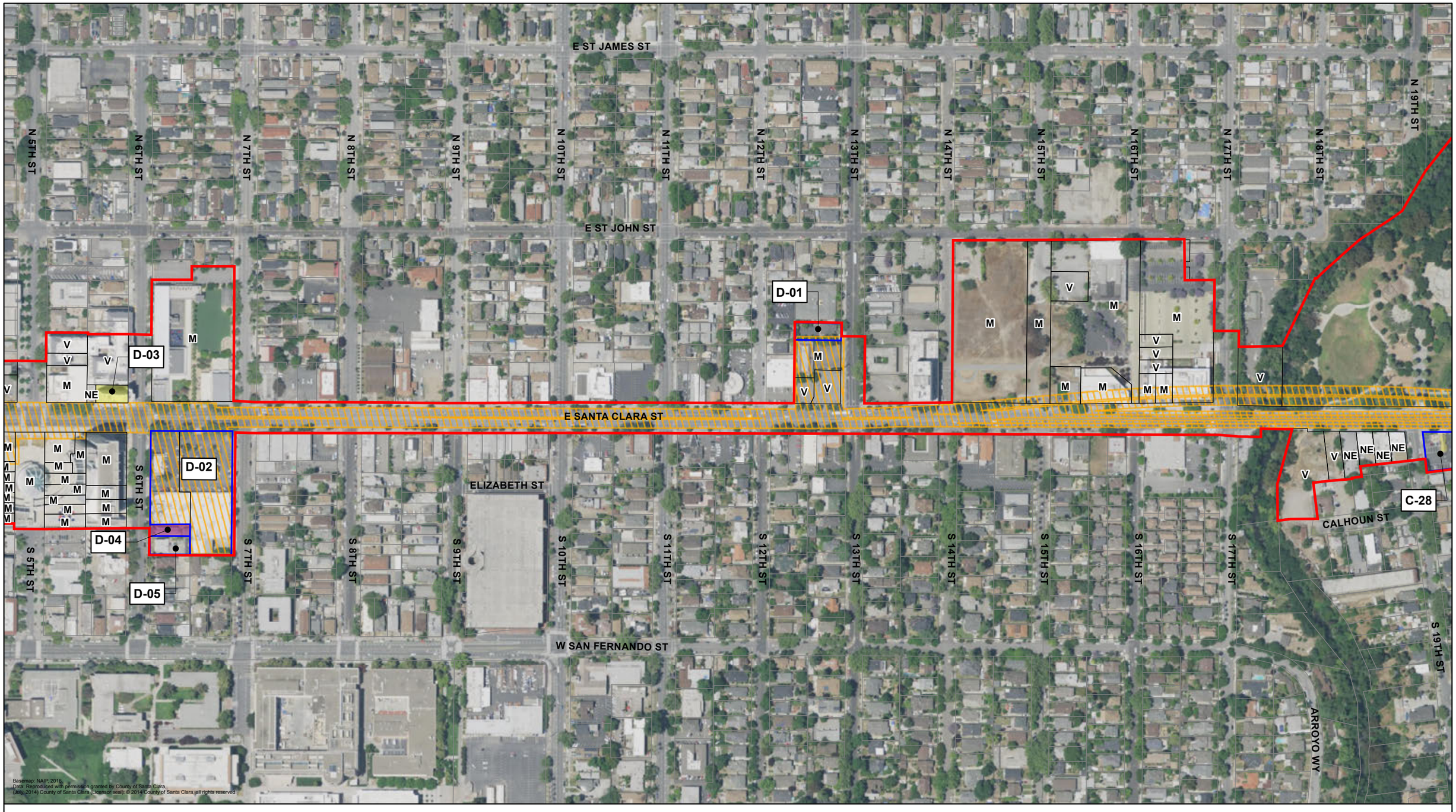
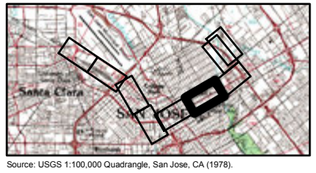
Architectural APE: Sheet C

V = Vacant
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)

Architectural APE: Sheet D





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- Architectural APE
- Historic District
- Project Footprint

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- D-01 — Map Reference Number (Eligible) Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER
- D-01 — Map Reference Number (CEQA only) Historical Resource for the purposes of CEQA only
- D-01 — Map Reference Number (Not Eligible) Not eligible for listing in NRHP or CRHR as per current survey

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M = Modern (built after 1975)
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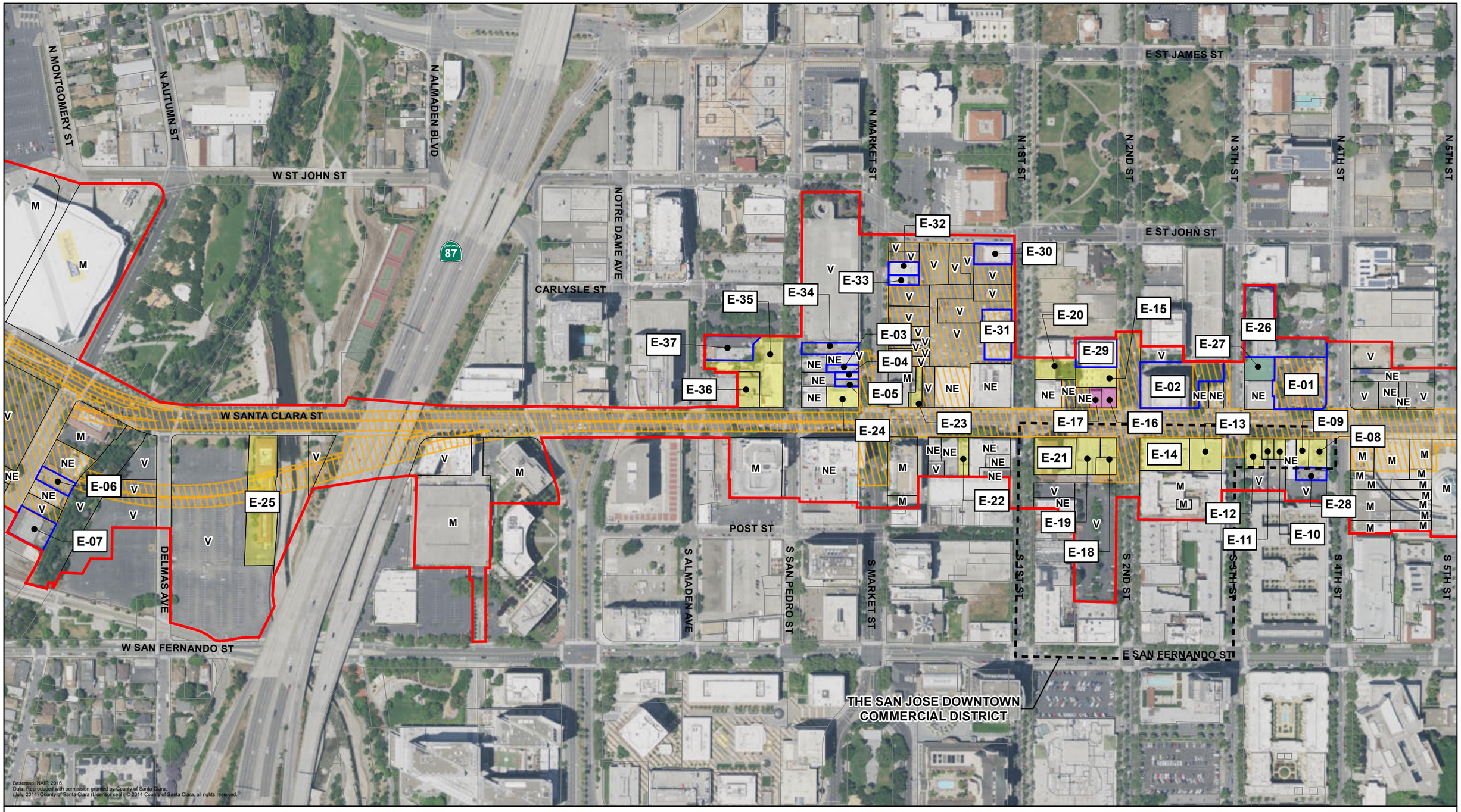

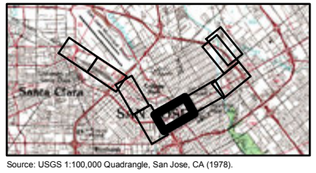

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Historic District

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E-01 Map Reference Number (CEQA only)
Historical Resource for the purposes of CEQA only

E-01 Map Reference Number (Not Eligible)
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Architectural APE: Sheet E

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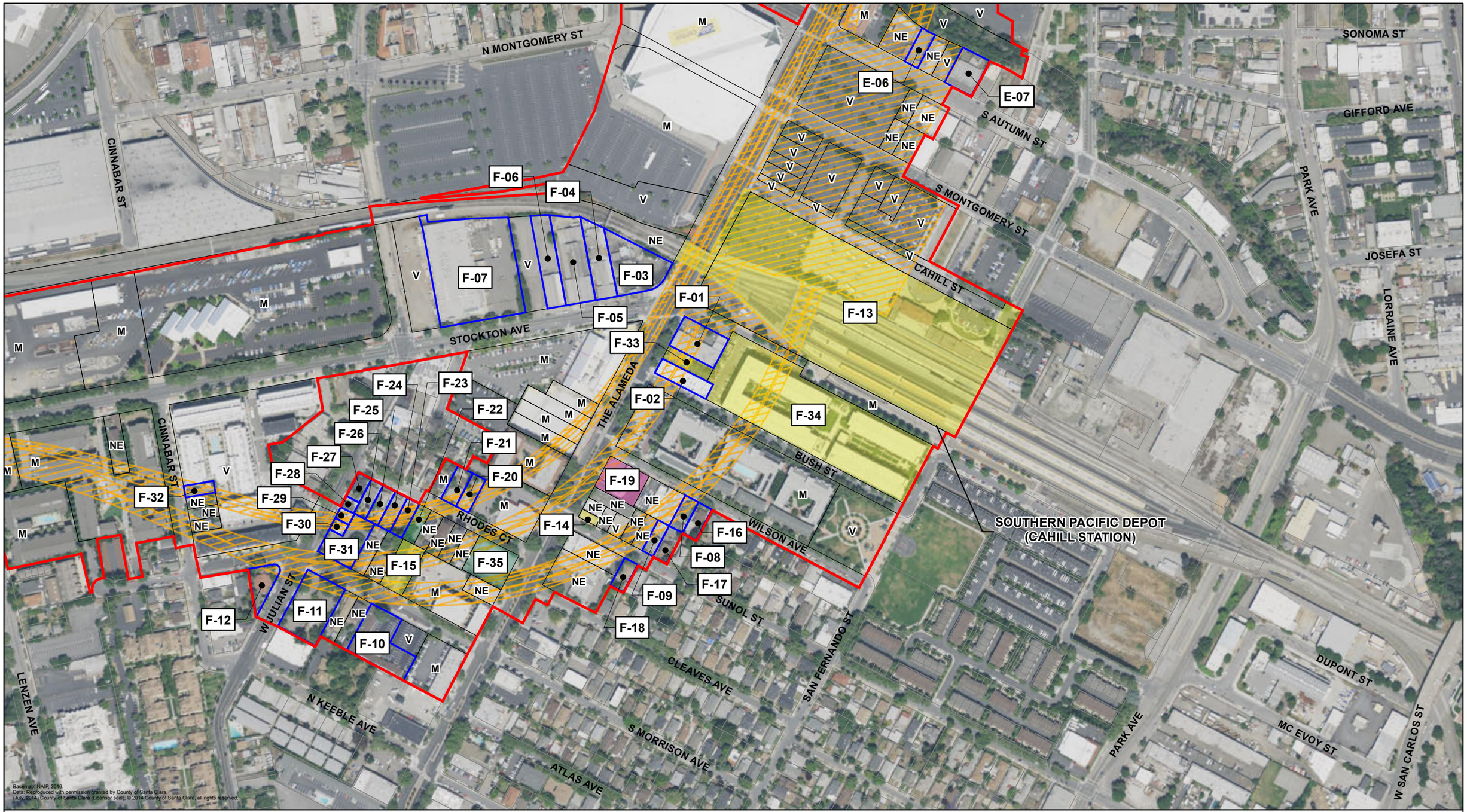
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)

Architectural APE: Sheet F



Source: USGS 1:100,000 Quadrangle, San Jose, CA (1978).

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- Architectural APE
- Historic District
- Project Footprint

- F-01 — Map Reference Number (Eligible): Eligible for or listed in the NRHP and CRHR as per current survey
- F-01 — Map Reference Number (Eligible): Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER
- F-01 — Map Reference Number (CEQA only): Historical Resource for the purposes of CEQA only
- F-01 — Map Reference Number (Not Eligible): Not eligible for listing in NRHP or CRHR as per current survey

V = Vacant
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)

WALNUT ST
COLEMAN AVE
SEYMOUR ST
W TAYLOR ST
EMORY ST
ASBURY ST
UNIVERSITY AVE
W HEDDING ST
MCKENDRIE ST
CHESTNUT ST
STOCKTON AVE
G-01
G-02
G-03
G-04
G-05
G-06
G-07
G-08
G-09
G-10
G-11
G-12
G-13
G-14
G-15
NE
M
LAUREL ST
ELM ST
HOOVER AVE
VILLA AVE
SCHIELE AVE
HARDING AVE
PERSHING AVE
LENZEN AVE

Basemap: NAIP, 2016.
Data: Reproduced with permission granted by County of Santa Clara (July, 2014) County of Santa Clara (Licensor seal). © 2014 County of Santa Clara, all rights reserved.

Source: USGS 1:100,000 Quadrangle, San Jose, CA (1978).

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Feet

Architectural APE
Historic District
Project Footprint

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G-01 Map Reference Number (Eligible)
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G-01 Map Reference Number (CEQA only)
Historical Resource for the purposes of CEQA only

G-01 Map Reference Number (Not Eligible)
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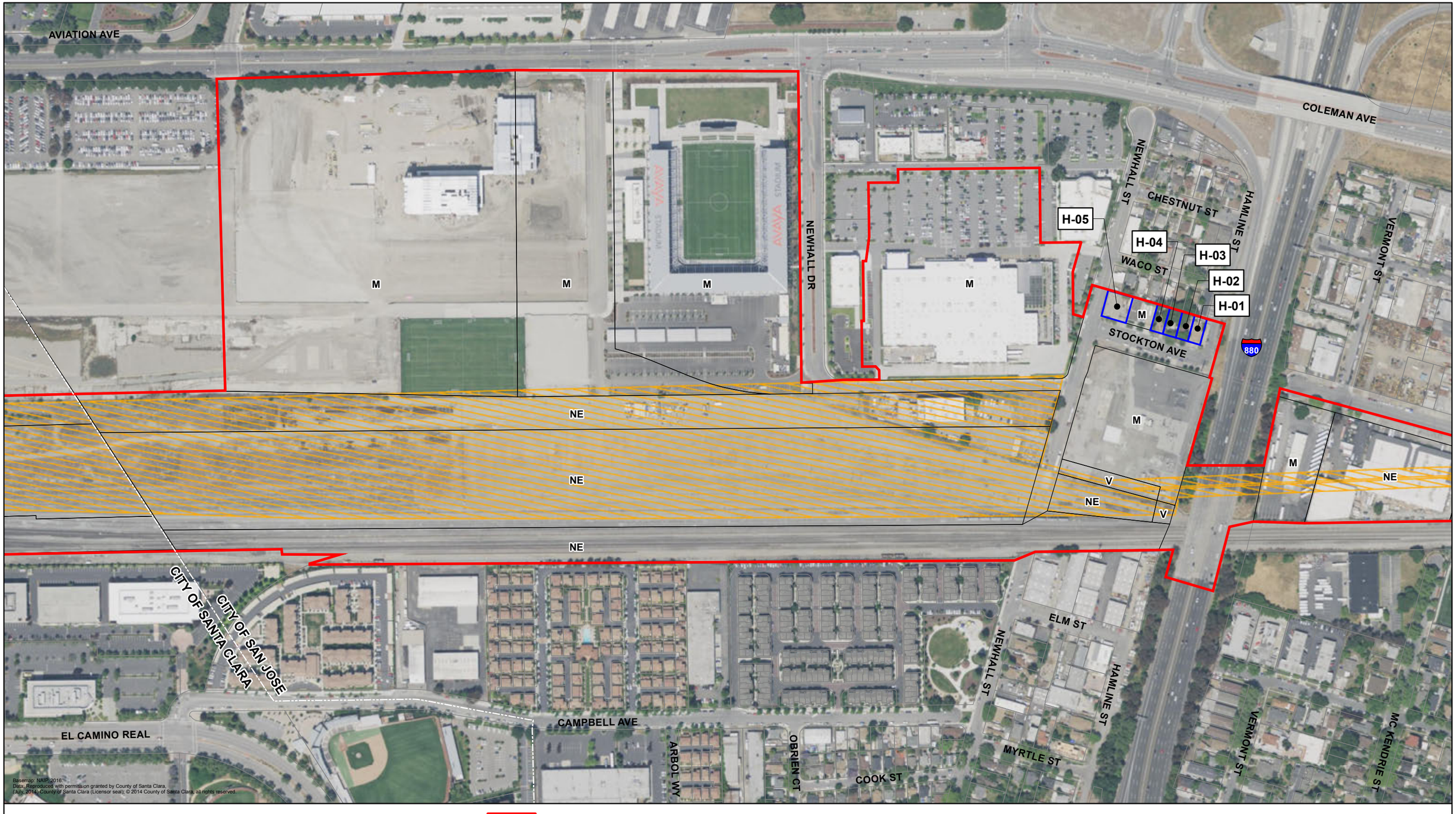

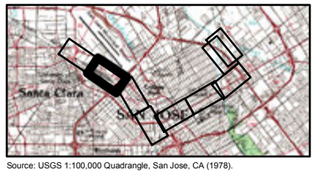

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Architectural APE

Historic District

Project Footprint

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Historical Resource for the purposes of CEQA only

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Architectural APE: Sheet H

V = Vacant
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)

REED ST
COLEMAN AVE
BROKAW RD
CITY OF SAN JOSE
CITY OF SANTA CLARA
PARKER ST
REED ST
GRANT ST
LAFAYETTE ST
REEVE ST
EL CAMINO REAL
DE LA CRUZ BLVD
LEWIS ST
THE ALAMEDA
HARRISON ST
FREMONT ST
SHERMAN ST
BENTON ST
RAILROAD AVE
RAILROAD AVE
SANTA CLARA STATION
I-01
I-02
I-03
M
NE
V

Source: USGS 1:100,000 Quadrangle, San Jose, CA (1978).

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Architectural APE

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Architectural APE: Sheet I

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VTA's BART Silicon Valley—Phase II Extension Project

Section 4(f)/6(f) Technical Report

Prepared for:

Santa Clara Valley Transportation Authority
Federal Transit Administration

Prepared by:

ICF International
75 E. Santa Clara Street, Suite 300
San Jose, CA 95113
Contact: Peter Feldman
213.312.1773

November 2016

ICF International. 2016. VTA's BART Silicon Valley—Phase II Extension Project. Section 4(f)/6(f) Technical Report. November. San Jose, CA. Prepared for the Santa Clara Valley Transportation Authority, San Jose, CA

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Appendices

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Acronyms and Abbreviations

APE	Area of Potential Effects
BART	Bay Area Rapid Transit
BART Extension	Santa Clara Valley Transportation Authority's Bay Area Rapid Transit Silicon Valley—Phase II Extension Project
CFR	Code of Federal Regulations
CSAs	construction staging areas
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
I-880	Interstate 880
LWCF	Land and Water Conservation Fund
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PG&E	Pacific Gas & Electric
ROW	right-of-way
SHPO	State Historic Preservation Office
SR	State Route
U.S. 101	U.S. Highway 101
U.S. DOT	United States Department of Transportation
UPRR	Union Pacific Railroad
USC	U.S. Code
VTA	Valley Transportation Authority

Chapter 1
Overview of Section 4(f)

Section 4(f) of the Department of Transportation Act of 1966, codified at U.S. Code (USC), Title 49, Section 303, states that under United States government policy, "special effort should be made to preserve the natural beauty of the countryside and public park and recreational lands, wildlife and waterfowl refuges, and historic sites." If a federal transportation project would result in conversion or other transportation use of public parks, recreational lands, wildlife and waterfowl refuges, or historic sites, the Secretary of the Department of Transportation cannot approve the project unless "special effort" is made to avoid the resource. If no prudent and feasible alternatives to the use of a Section 4(f) resource exist, an analysis aimed at determining the alternative with the least harm to Section 4(f) resources is required. To determine whether Section 4(f) protection applies to lands potentially affected by a federal transportation project, two prerequisites are considered: (1) the project must involve a resource that is protected under the provisions of Section 4(f), and (2) there must be a use of that resource.

As defined in Code of Federal Regulations (CFR), Title 23, Section 774.17[1], resources subject to Section 4(f) consideration include publicly owned lands that are considered part of a public park; a recreational area of national, state, or local significance; a wildlife or waterfowl refuge; or a historic site of national, state, or local significance, whether publicly or privately owned.

As defined in 23 CFR 774.17, the "use" of a protected Section 4(f) resource occurs when any of the following conditions are met.

- Land is permanently incorporated into a transportation facility.
- There is a temporary occupancy of land that is adverse in terms of the preservationist purposes of Section 4(f).
- There is no permanent incorporation of land, but the proximity of a transportation facility results in impacts so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired (i.e., *constructive use*).

[1] 49 USC 303 is the code (law) passed by the U.S. Congress in 1966 that serves as the basis for the United States Department of Transportation (U.S. DOT) to develop the rules for implementing the law which is defined in 23 CFR 774.17.

1.1 Section 4(f) Applicability

A park or recreation area qualifies for protection under Section 4(f) if it (1) is publicly owned at the time at which the *use* occurs, (2) is open to the general public, (3) is being used for recreation, and (4) is considered significant by the authority with jurisdiction.

In order for a cultural resource to be protected by Section 4(f), it must be listed in, or eligible for listing in, the National Register of Historic Places (NRHP). A historic site eligible for, or listed in, the NRHP may qualify for protection under Section 4(f), and as such the Federal Transit Administration (FTA) must determine whether the site or a portion thereof would be permanently or temporarily incorporated into the project. Even if a project does not permanently or temporarily incorporate a historic property but still causes an adverse effect, the proximity impacts must be evaluated to determine whether those impacts would substantially impair the features or attributes that contribute to the NRHP eligibility of the historic site. While the statutory requirements of Section 106 of the National Historic Preservation Act (NHPA) and Section 4(f) are similar, if a proposed action results in an *adverse effect* under Section 106, there would not automatically be a Section 4(f) use absent a separate analysis and determination by the FTA.

Section 4(f) does not apply to an archaeological site if it is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place.

1.2 Section 4(f) Use Definition

1.2.1 Direct Use

A direct use of a Section 4(f) resource takes place when property is permanently incorporated into a proposed transportation project (23 CFR 774.17[1]). This may occur as a result of partial or full acquisition of a fee simple interest, permanent easements, or temporary easements that exceed the regulatory limits noted below (FHWA, 2012). Because a substantial portion of the BART Extension would consist of construction of a tunnel that would run below several Section 4(f) resources, Twin-Bore and Single-Bore Options tunneling effects and the potential for direct use must be considered. As described in FHWA's Section 4(f) Policy Paper, Section 4(f) applies to the act of tunneling under a Section 4(f) resource only if the tunneling would result in any of the following.

1. Disturbs archaeological sites that are on or eligible for the NRHP which warrant preservation in place.
2. Causes disruption that would permanently harm the purposes for which the park, recreation area, or wildlife or waterfowl refuge was established.
3. Substantially impairs the historic values of a historic site.

Otherwise does not meet the exception for temporary occupancy (addressed below).

1.2.2 Temporary Occupancy

A *temporary occupancy* occurs when land from a Section 4(f) resource is occupied temporarily (i.e., during construction). As defined under 23 CFR 774.17, a use would occur when a temporary occupancy is adverse in terms of the statute's preservation purpose (i.e., the attributes of the resource that qualify it for Section 4[f] consideration). Under 23 CFR 774.13[d], a temporary occupancy of a property does not constitute a use of a Section 4(f) resource when the conditions for an exception to the requirement for Section 4(f) approval, listed below, are satisfied.

- The occupancy must be temporary (i.e., shorter than the period of construction) and not involve a change in ownership of the property.
- The scope of work must be minor, with only minimal changes to the protected resource.
- There must be no permanent adverse physical effects on the protected resource and no temporary or permanent interference with the activities or purpose of the resource.
- The property must be fully restored to a condition that at least equals the condition that existed prior to the project.
- There must be documented agreement by the appropriate officials having jurisdiction over the resource regarding the foregoing requirements.

1.2.3 Constructive Use

A constructive use of a Section 4(f) resource happens when a transportation project does not permanently incorporate land from the resource, but the proximity of the project results in impacts (i.e., noise, vibration, visual, access, and/or ecological impacts) so severe that the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) are substantially impaired (23 CFR 774.15). Substantial impairment occurs only if the protected activities, features, or attributes of the resource are substantially diminished.

This determination is made through the following practices.

- Identification of the current activities, features, or attributes of the resource that may be sensitive to proximity impacts.
- Analysis of the potential proximity impacts on the resource.
- Consultation with the appropriate officials with jurisdiction over the resource.

Federal Highway Administration (FHWA)/FTA Section 4(f) regulations stipulate that when a project's impacts in the vicinity of Section 4(f) resources are so severe that the resources' activities, features, attributes, or activities qualifying the property for protection under Section 4(f) are substantially impaired, then a feasible and prudent avoidance alternative must be considered by means of a Section 4(f) evaluation, even if the project does not actually intrude into the Section 4(f) property. Such impacts constitute constructive use of the property and may include these examples as defined in 23 CFR 774.15(e).

- The projected noise level increase attributable to a proposed project substantially interferes with the use and enjoyment of a resource protected by Section 4(f), such as enjoyment of a historic property where a quiet setting is a generally recognized characteristic.
- The proximity of a proposed project substantially impairs aesthetic features or attributes of a resource protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the resource. An example of substantial impairment to visual or aesthetic qualities would be the location of a proposed transportation facility in such proximity that it obstructs or eliminates the primary views of an architecturally significant historical building, or detracts from the setting of a park or historic site which derives its value in substantial part from its setting.
- A proposed project results in a restriction of access to the Section 4(f) resource, which substantially diminishes or eliminates the utility or function of the resource.
- The vibration impact from construction or operation of the project substantially impairs the use of a Section 4(f) property, such as projected vibration levels that are great enough to physically damage a historic building or substantially diminish the utility of the building, unless the damage is repaired and fully restored consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties (i.e., the integrity of the contributing features must be returned to a condition which is substantially similar to that which existed prior to the project).

1.2.4 *De Minimis* Impact

A *de minimis* impact determination is a Section 4(f) approval wherein a project may use a Section 4(f) resource, but the impact is so minor that, after taking into account any measures to minimize harm (such as avoidance, minimization, mitigation or enhancement measures), the impact is determined to result in either of the following.

- For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact determination may be made if a transportation project will not adversely affect the activities, features, and attributes qualifying the property for protection under Section 4(f) after mitigation.
- For a historic site, a *de minimis* impact determination may be made only if, in accordance with the Section 106 process of the NHPA and written concurrence from the State Historic Preservation Office (SHPO), it is found that the transportation program or project will have no effect or no adverse effect on historic properties.

In addition, to make a *de minimis* impact determination for a park, recreation, wildlife, or waterfowl refuge, there must be a public notice and opportunity for public review and comment and written concurrence received from the officials with jurisdiction over the property. For historic properties, FTA must inform the consulting officials (i.e., SHPO) of its intent to make a *de minimis* impact determination. All other agency coordination and public

involvement requirements for *de minimis* impact findings for historic properties is satisfied through the Section 106 process.

Chapter 2
Project Description

The Phase II Project consists of an approximately six-mile extension of the BART system from the terminus of VTA's BART Silicon Valley—Berryessa Extension Project (Phase I) from San Jose to Santa Clara (see Figure 1). Phase I is currently under construction and scheduled to be operational in late 2017. The Phase II Project would include approximately five miles of subway tunnel from Berryessa Station, continuing through downtown San Jose, and terminating at grade near the Santa Clara Caltrain Station (see Figure 2). In addition, four passenger stations are proposed. Passenger service on the Phase II Project is scheduled to begin in 2025/2026.

There are two construction methods proposed for the five-mile-long tunnel portion of the BART Extension—the Twin-Bore and Single-Bore Options—between the East and West Tunnel Portals. Under the Twin-Bore Option, two twin-bore tunnels would be excavated with one track in each. Each tunnel bore would have an outer diameter of approximately 20 feet. The depth of the tunnel would be between 10 and 75 feet below ground surface. The crown, or top, of the tunnel of the Twin-Bore Option would be, on average, 40 feet below the surface. Under the Single-Bore Option, one large-diameter tunnel bore would be excavated which would contain both northbound and southbound tracks. The tunnel bore would have an outer diameter of approximately 45 feet. The crown, or top, of the tunnel of the Single-Bore Option would be, on average, 70 feet below the surface.

1.1 Alignment and Station Features by City

1.1.1 City of San Jose

1.1.1.1 Connection to Phase I Berryessa Extension

The BART Extension would begin where the Phase I tail tracks end. The at-grade Phase I tail tracks would be partially removed to allow for construction of the bored tunnels, East Tunnel Portal, and supporting facilities.

The alignment would transition from a retained-fill configuration east of U.S. 101 and south of Mabury Road near the end of the Phase I alignment into a retained-cut configuration and enter the East Tunnel Portal just north of Las Plumas Avenue.

South of the portal, the alignment would pass beneath North Marburg Way, then approximately 25 feet below the creek bed of Lower Silver Creek for the Twin-Bore Option, or approximately 30 feet for the Single-Bore Option, just to the east of U.S. 101, then curve under U.S. 101 south of the McKee Road overpass, and enter Alum Rock/28th Street Station.

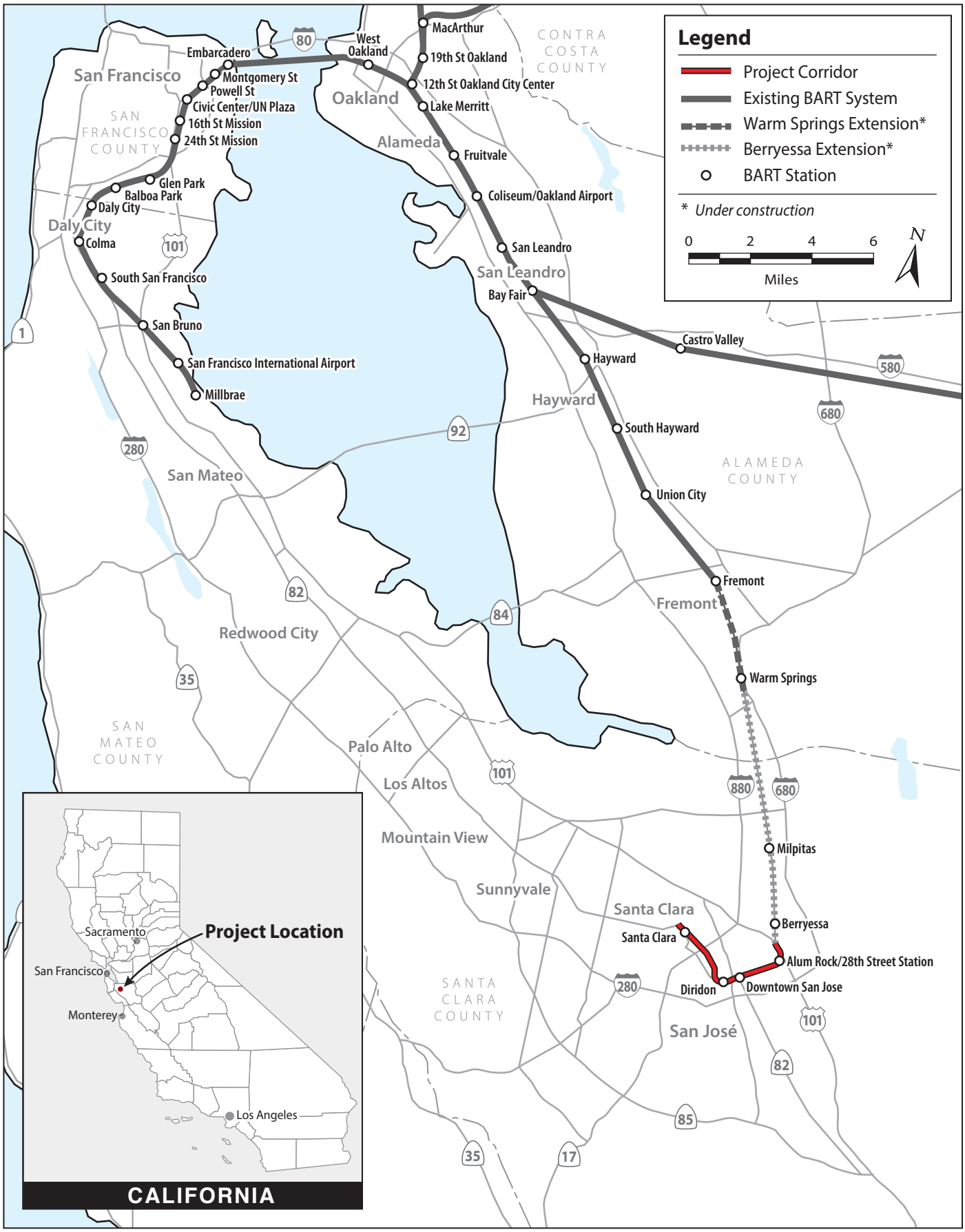
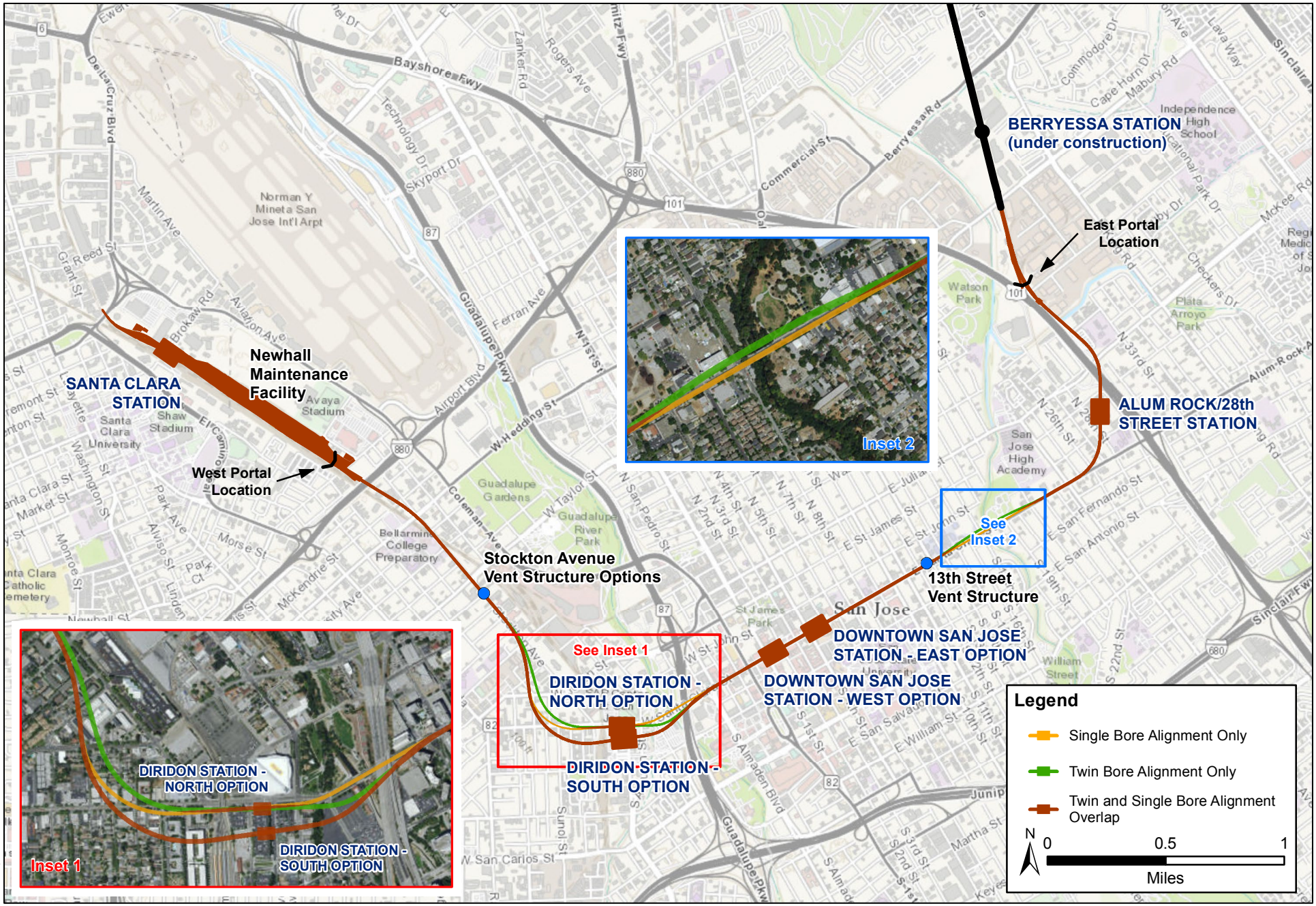


Figure 1
Regional Location
VTA's BART Silicon Valley–Phase II Extension Project



Source: Station and Track, VTA 2014; Basemap, ESRI 2015

Figure 2
BART Extension
VTA's BART Silicon Valley – Phase II Extension Project

1.1.1.2 Alum Rock/28th Street Station

Alum Rock/28th Street Station would be located between U.S. 101 and North 28th Street and between McKee Road and Santa Clara Street. The station would be underground with street-level entrance portals with elevators, escalators, and stairs covered by canopy structures. In general, each station would have a minimum of two entrances. A parking structure of up to seven levels would accommodate BART park-and-ride demand with 1,200 parking spaces. The station would include systems facilities both above and below ground.

From Alum Rock/28th Street Station, the alignment would curve under North 28th Street, North 27th Street, and North 26th Street before aligning under Santa Clara Street. The alignment would continue under the Santa Clara Street right-of-way (ROW) until the alignment approaches Coyote Creek.

1.1.1.3 Tunnel Alignment near Coyote Creek

For the Twin-Bore Option, the alignment would transition north of Santa Clara Street beginning just west of 22nd Street and pass approximately 20 feet beneath the creekbed of Coyote Creek to the north of Santa Clara Street and avoid the Coyote Creek/Santa Clara Street bridge foundations. The alignment would transition back into the Santa Clara Street ROW near 13th Street, west of Coyote Creek. However, for the Single-Bore Option, the alignment would continue directly under Santa Clara Street and pass approximately 55 feet beneath the creekbed of Coyote Creek and approximately 20 feet below the existing bridge foundations.

1.1.1.4 13th Street Ventilation Structure

A systems facility site would be located at the northwest corner of Santa Clara and 13th Streets. This site would include a tunnel ventilation structure, which would be an aboveground structure with an associated ventilation shaft.

1.1.1.5 Downtown San Jose Station

There are two station location options for the Downtown San Jose Station: the Downtown San Jose Station East Option and the Downtown San Jose Station West Option, as described in detail below. The alignment for this area would be the same irrespective of the station option.

The station would consist of boarding platform levels and systems facilities aboveground and within the tunnel beneath Santa Clara Street, as well as entrances at street level. In general, each station would have a minimum of two entrances. Elevators, escalators, and stairs that provide pedestrian access to the mezzanine would be at station portal entrances. Escalators and stairs would be covered by canopy structures. The station would not have dedicated park-and-ride facilities. Under either Downtown San Jose Station Option, streetscape improvements, guided by San Jose's Master Streetscape Plan, would be provided along Santa Clara Street to create a pedestrian corridor. For the East Option, streetscape improvements

would be between 7th and 1st Streets; for the West Option, streetscape improvements would be between 4th and Market Streets.

Downtown San Jose Station East Option

The alignment would continue beneath Santa Clara Street to the Downtown San Jose Station East Option. Under the Twin-Bore Option, crossover tracks would be located east of the Downtown San Jose Station between 7th and 5th Streets (within the cut-and-cover box). Under the Single-Bore Option, the crossover tracks would be located east of the station between 9th and 5th Streets.

Downtown San Jose Station West Option

The alignment would continue beneath Santa Clara Street to the Downtown San Jose Station West Option. Crossover tracks for the Twin-Bore Option would be located east of the Downtown San Jose Station between 2nd and 4th Streets (within the cut-and-cover box). Under the Single-Bore Option, the crossover tracks would be located east of the station between 7th and 2nd Streets.

1.1.1.6 Tunnel Alignment into Diridon Station

There are two station location options at Diridon Station: the Diridon Station South Option and the Diridon Station North Option, as described in detail below. The alignment into Diridon Station varies between the North and South Options and between the Twin-Bore and Single-Bore Tunnel Options as described below.

Tunnel Alignment into Diridon Station South Option

The alignment would continue beneath Santa Clara Street from the Downtown San Jose Station and shift south beginning just west of South Alamaden Boulevard to pass between the SR 87 bridge foundations. For the Twin-Bore Option, the alignment would pass 40 feet below the riverbed of the Guadalupe River and a retaining wall west of the river, and over 20 feet below the creekbed of Los Gatos Creek. For the Single-Bore Option, the alignment would pass 50 feet below the riverbed of the Guadalupe River, the retaining wall, and the creekbed of Los Gatos Creek. After passing under Los Gatos Creek, the alignment for both options would enter the Diridon Station between Los Gatos Creek and Autumn Street.

Tunnel Alignment East of Diridon Station North Option

Under the Twin-Bore Option, the alignment would continue beneath Santa Clara Street from the Downtown San Jose Station and shift south beginning just west of South Almaden Boulevard to pass between the SR 87 bridge foundations. The alignment would then pass 45 feet below the riverbed of the Guadalupe River and a retaining wall, then veer back north to a location just south of and adjacent to Santa Clara Street. The alignment passes 25 feet below the creekbed of Los Gatos Creek. After passing under Los Gatos Creek, the alignment would enter Diridon Station under Autumn Street and directly south of Santa Clara Street. The

Diridon Station North Option is closer to Santa Clara Street in comparison to the South Option.

Under the Single-Bore Option, the alignment would continue beneath Santa Clara Street, continue 50 feet below the riverbed of the Guadalupe River and 50 feet below the creekbed of Los Gatos Creek. After passing under Los Gatos Creek, the alignment would shift north and enter Diridon Station between Autumn and Montgomery Streets, directly south of Santa Clara Street. The Diridon Station North Option is closer to Santa Clara Street in comparison to the South Option.

1.1.1.7 Diridon Station

There are two station location options for the Diridon Station: the Diridon Station South Option and the Diridon Station North Option. The alignment varies by station location. Diridon Station would be generally located between Los Gatos Creek to the east, the San Jose Diridon Caltrain Station to the west, Santa Clara Street to the north, and West San Fernando Street to the south. The South Option would be located midway between Santa Clara Street and Stover Street. The North Option would be located adjacent to, and just south of, Santa Clara Street.

The station would consist of a boarding platform level, a mezzanine level, and entrances at street-level portals. The station would have a minimum of two entrances. Entrances would have elevators, escalators, and stairs covered by canopy structures. Systems facilities would be located aboveground and underground at each end of the station.

An existing VTA bus transit center would be reconfigured for better access and circulation to accommodate projected bus and shuttle transfers to and from the BART station. Kiss-and-ride facilities would be located along Cahill Street. No park-and-ride parking would be provided at this station.

Tunnel Alignment West of Diridon Station North Option

For the South Option, west of the station, the alignment for both the Twin-Bore and Single-Bore Options would continue beneath the Diridon Caltrain Station train tracks and White Street. The alignment would then turn towards the north, crossing under The Alameda at Cleaves Avenue and under West Julian Street at Morrison Avenue before aligning under Stockton Avenue.

Under the Diridon Station North Option and Twin-Bore Option, west of the station, the alignment would continue beneath the Diridon Caltrain Station train tracks and White Street. The alignment would then turn towards the north, crossing under The Alameda at Wilson Avenue and under West Julian Street at Cleaves Street before aligning under Stockton Avenue.

Under the Diridon Station North Option and Single-Bore Option, west of the station, the alignment would continue under White and Bush Streets south of The Alameda. The

alignment would then turn towards the north, crossing under The Alameda at Sunol Street and under West Julian Street at Morrison Avenue before aligning under Stockton Avenue.

1.1.1.8 Tunnel Alignment along Stockton Avenue

Around Pershing Avenue, all of the options—the Twin-Bore and Single-Bore Options and the Diridon Station South and North Options—converge back onto the same alignment under Stockton Avenue.

1.1.1.9 Stockton Avenue Ventilation Structure

On the east side of Stockton Avenue between Schiele Avenue and West Taylor Street, there are three alternate locations for a systems facility site that would house a tunnel ventilation structure, which would be an aboveground structure with an associated ventilation shaft.

1.1.1.10 Tunnel Alignment near I-880

The alignment would continue north and cross under the Caltrain tracks and Hedding Street. The alignment would continue on the east side of the Caltrain tracks and cross under Interstate (I-) 880 before ascending and exiting the West Tunnel Portal near Newhall Street.

1.1.2 City of Santa Clara

The BART Extension in Santa Clara would consist of the Newhall Maintenance Facility, system facilities, storage tracks for approximately 200 BART revenue vehicles (passenger cars), the Santa Clara Station, and tail track. The San Jose/Santa Clara boundary is located approximately midway through the Newhall Maintenance Facility.

1.1.2.1 Newhall Maintenance Facility

The Newhall Maintenance Facility would begin north of the West Tunnel Portal at Newhall Street in San Jose and extend to Brokaw Road near the Santa Clara Station in Santa Clara. A single tail track would extend north from the Santa Clara Station and cross under the De La Cruz Boulevard overpass and terminate on the north side of the overpass. The maintenance facility would serve two purposes: (1) general maintenance, running repairs, and storage of up to 200 BART revenue vehicles and (2) general maintenance of non-revenue vehicles. The facility would also include maintenance and engineering offices and a yard control tower. Several buildings and numerous transfer and storage tracks would be constructed.

1.1.2.2 Santa Clara Station

The closest streets to the Santa Clara Station would be El Camino Real to the southwest, De La Cruz Boulevard to the northwest, and Coleman Avenue to the northeast near the intersection of Brokaw Road. The station would be at grade, centered at the west end of Brokaw Road, and would contain an at-grade boarding platform with a mezzanine one level below. Access to the mezzanine would be provided via elevators, escalators, and stairs

covered by canopy structures. An approximately 240-foot-long pedestrian tunnel would connect from the mezzanine level of the BART station to the Santa Clara Caltrain plaza, and an approximately 175-foot-long pedestrian tunnel would connect from the mezzanine level to a new BART plaza near Brokaw Road. Kiss-and-ride, bus, and shuttle loading areas would be provided on Brokaw Road.

A parking structure of up to five levels would be located north of Brokaw Road and east of the Caltrain tracks within the station area and would accommodate 500 BART park-and-ride parking spaces in addition to public facilities on the site.

An approximately 150-foot-high radio tower and an associated equipment shelter would be located within the systems site.

Chapter 3
Resources Evaluated Relative to the Requirements of Section 4(f)

3.1 Study Area

The study area as defined below identifies the Section 4(f) properties considered for evaluation. For this analysis, park and recreational areas are evaluated using a different study area than the cultural resources analysis because the evaluation of cultural resources as defined in Section 106 requires a definition of an Area of Potential Effects (APE), which differs slightly from the study area selected for parks and recreational areas.

3.1.1 Public Parks and Recreational Areas

The study area for public parks and recreation areas is 1,000 feet on either side of the BART alignment, stations, and facilities. Generally, a 1,000-foot area around the BART alignment, stations, and facilities captures all parks and recreational areas that would be directly or indirectly affected by the BART Extension as well as those requiring tunnel easements.

3.1.2 Cultural Resources

The study area for historic sites (henceforth referred to as "historic properties") is the APE developed in accordance with 36 CFR 800.4(a)(1). The APE is the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties or archaeological sites. Two APEs were developed, one for built environment architectural resources and one for archaeological resources. Appendices A and B depict the architectural and archaeological APEs, respectively, as well as the historic properties identified in accordance with 36 CFR 800.

3.1.3 Consultation with the Officials with Jurisdiction

Consultation with the Cities of San Jose and Santa Clara was initiated in October 2015 to identify parks and recreation facilities under their jurisdiction. Consultation efforts consisted primarily of email correspondence and follow-up telephone conversations with San Jose Department of Parks, Recreation, and Neighborhood Services staff. Through this consultation effort, the Cities of San Jose and Santa Clara provided information regarding facilities under their respective jurisdictions. These lists were used to identify Section 4(f) resources within the study area.

With regard to cultural resources, consultation with the SHPO is ongoing. FTA and VTA consulted the SHPO regarding the delineation of the archaeological and architectural APE and the eligibility determinations of the resources identified within the APE. Meetings with the SHPO were held on October 30, 2003, January 26, 2009, December 17, 2009, in 2013,

and on January 17, 2014, February 29, 2016, May 5, 2016, and June 8, 2016. On April 6, 2016, the SHPO concurred with the delineation of the APE. The SHPO concurred on the delineation of the revised APEs on October 28, 2016 (Polanco 2016). The SHPO concurred with the eligibility determinations of the 2003 *Historic Resources Evaluation Report* (HRER) prepared by JRP Historical Consulting, LLC (JRP) within letters dated June 9, 2003, and July 9, 2003 (Mellon 2003a and 2003b). In the same concurrence letter dated October 28, 2016 (Polanco 2016), the SHPO also agreed with the eligibility determinations in JRP's 2016 *Supplemental Built Environment Survey Report* and agreed that FTA and VTA's historic resources identification efforts to date were appropriate for the Undertaking.

3.2 Description of Section 4(f) Properties

3.2.1 Parks and Recreation Areas

Table 3-1 provides a list of the 22 park and recreational resources within the study area. This includes 11 existing parks, one existing educational garden, four planned trails, one school playfield, one planned recreational facility, and four other public spaces. Of these 22 properties, 19 existing and planned facilities are considered to be protected under Section 4(f) or would be protected under Section 4(f) once developed. The three properties not considered protected were privately owned (and thus not open to the public) or their primary purpose was not recreation. Table 3-1 also provides an overview of each resource's location relative to the BART Extension, ownership, features, attributes, and significance. The locations of these potential Section 4(f) properties are depicted in Figure 3.

Table 3-1: Potential Section 4(f) Properties (Parks and Recreation Areas)

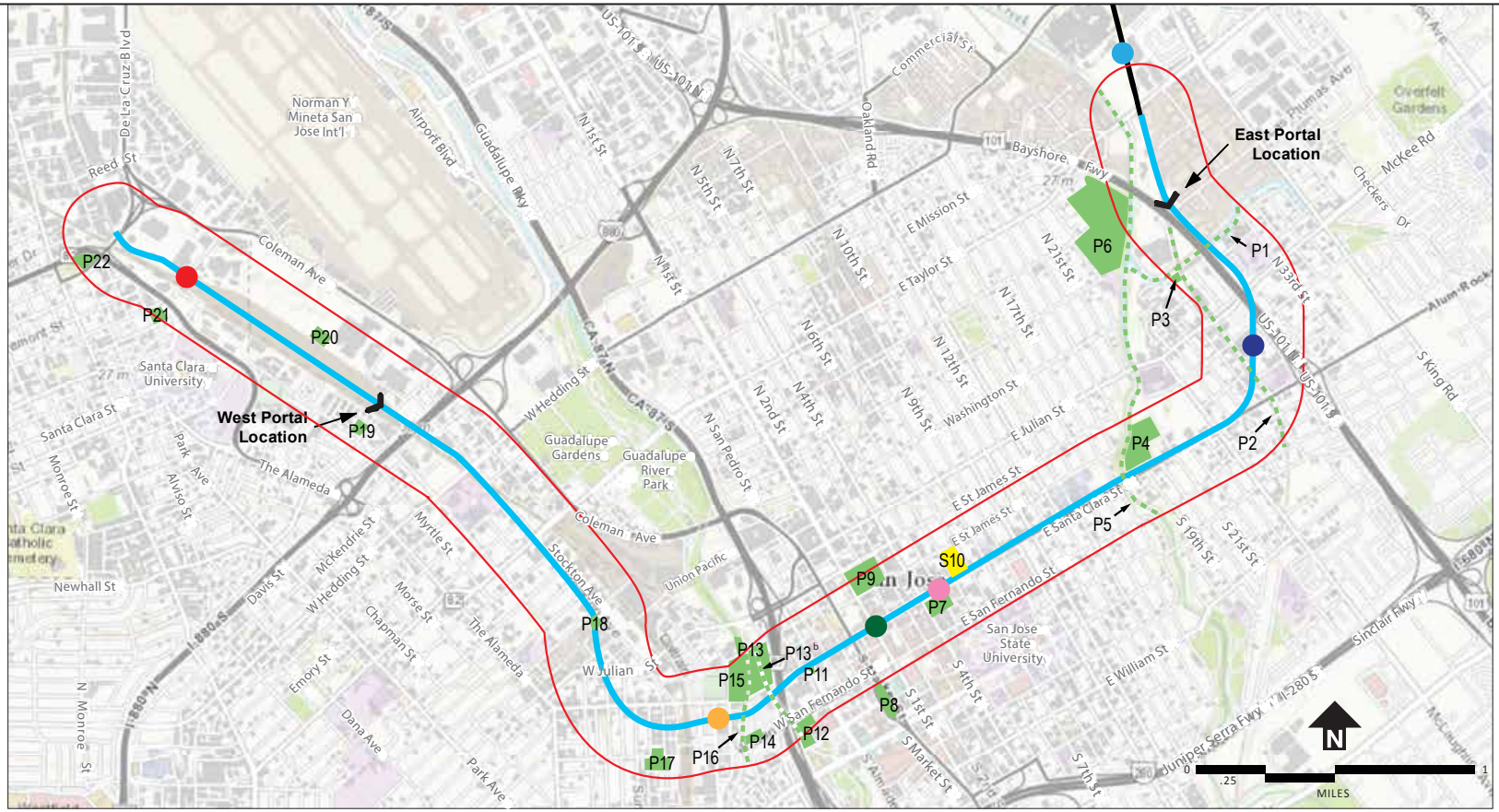
Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P1	Lower Silver Creek Trail (Proposed)	**Size**: 6.5 miles (Proposed) **Features**: Planned trail extension along the culverted Lower Silver Creek **Agency with Jurisdiction**: San José Department of Parks, Recreation, and Neighborhood Services	Planned from Coyote Creek to Jackson Avenue along Lower Silver Creek	BART Extension crosses proposed trail alignment	Yes (Planned)
P2	Five Wounds Trail (Proposed)	**Size**: 2.2 miles (Proposed) **Features**: Planned trail to link Berryessa BART Station to the Lower Silver Creek Trail and Coyote Creek Trail **Agency with Jurisdiction**: San José Department of Parks, Recreation, and Neighborhood Services	Planned between William Street and Taylor Street	Project crosses proposed trail alignment	Yes (Planned)

Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P3	Hacienda Creek Park	**Size**: 0.25 acre **Features**: Grassy open space for picnicking **Agency with Jurisdiction**: Private	Approximately 360 West Court, San Jose, CA 95116	900 feet	Yes
P4	Roosevelt Park	**Size**: 11 acres **Features**: Skate park, basketball court, lighted softball field, handball courts, playground, picnic areas **Agency with Jurisdiction**: San José Department of Parks, Recreation, and Neighborhood Services	901 Santa Clara Street	BART alignment crosses under park	Yes
P5	Coyote Creek Trail (Proposed)	**Size**: 18.7 miles (Proposed) **Features**: Planned trail extension from Berryessa BART Station to Santa Clara Street BRT Station **Agency with Jurisdiction**: San José Department of Parks, Recreation, and Neighborhood Services	From Highway 237 to Anderson County Park	BART Extension crosses under proposed trail alignment	Yes (Planned)
P6	Watson Park	**Size**: 26.6 acres **Features**: Soccer field, playground equipment, dog play area **Agency with Jurisdiction**: San José Department of Parks, Recreation, and Neighborhood Services	Jackson Avenue and 22nd Street	800 feet	Yes
P7	City Hall Plaza	**Size**: 0.9 acre **Features**: Outdoor event space. Events by permit only. With a total capacity of 2,688 persons, the plaza consists of an East and a West Plaza as well as a bamboo courtyard. **Agency with Jurisdiction**: City of San José	San Jose City Hall	Adjacent	No – City Hall Plaza's primary purpose was designed and is used as an outdoor public space as part of the City Hall campus. Event use is occasional and recreation is not the primary purpose of the plaza.

Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P8	Plaza de Cesar Chavez	**Size**: 2.3 acre **Features**: Picnic benches, lawns, fountain, small stage **Agency with Jurisdiction**: San José Department of Parks, Recreation, and Neighborhood Services	Market Street/Park Avenue	970 feet	Yes
P9	St. James Park	**Size**: 6.8 acres **Features**: Picnic areas, exercise course, playgrounds, sweeping lawns, and walking paths **Agency with Jurisdiction**: San José Department of Parks, Recreation, and Neighborhood Services	St. John Street/1st Street	625 feet	Yes
S10	Horace Mann Elementary School Playfields	**Size**: 0.7 acre (Playfields only) **Features**: Grass field and basketball court **Agency with Jurisdiction**: San Jose Unified School District	55 North 7th Street, San Jose	Adjacent	Yes – Joint use agreement with San Jose Department of Parks, Recreation, and Neighborhood Services
P11	Almaden Entrance Triangle	**Size**: 0.25 acre **Features**: Open space with lawn and sculptural art **Agency with Jurisdiction**: City of San Jose	Santa Clara Street/Almaden Boulevard	Adjacent	No – This is an incidental greenspace and recreation is not primary purpose.
P12	McEnery Park	**Size**: 7.0 acres **Features**: Children's play area, sculptural art, fountains, landscaping **Agency with Jurisdiction**: Guadalupe River Park Conservancy/ City of San Jose Department of Parks, Recreation, and Neighborhood Services	San Fernando Street east of the Guadalupe River	700 feet	Yes

Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P13	Guadalupe River Park & Trail	**Size**:3-mile Parkway, 9-mile trail **Features**: Part of the Guadalupe River Parkway chain that runs along the Guadalupe River. The Guadalupe River Park includes public art, play areas, gardens, and picnic areas. The Guadalupe River Trail (Downtown portion) is part of the Guadalupe River Trail network and is a paved trail for bicycling and walking activities. The trail runs through the Guadalupe River Park and continues south beyond Highway 280. **Agency with Jurisdiction:** Guadalupe River Park Conservancy/ City of San Jose Department of Parks, Recreation, and Neighborhood Services	Guadalupe River Park is located Between Taylor Street and Santa Clara Street along the Guadalupe River. Trail extends from Gold Street to Virginia Street along the Guadalupe River.	Guadalupe River Park is located 230 feet from the BART Extension alignment. The BART Extension crosses under the Guadalupe River Trail.	Yes
P14	San Fernando Station Plaza	**Size**: 0.7 acre **Features**: Landscaping, incidental green space, public art **Agency with Jurisdiction**: Santa Clara Valley Transportation Authority	San Fernando Street/Gifford Avenue	430 feet	Yes
P15	Arena Green	**Size**: 7.0 acres **Features**: Part of the Guadalupe River Park. Playground equipment, carousel, sculpture art, and recreational trails. Children's Carousel operates year-round Tuesday–Sunday, 10 a.m.–5 p.m. **Agency with Jurisdiction:** Guadalupe River Park Conservancy/ City of San Jose Department of Parks, Recreation, and Neighborhood Services	Between Santa Clara and Julian Streets, across Autumn Street from the HP Pavilion	250 feet	Yes
P16	Los Gatos Creek Trail (Proposed)	**Size**: Approximately 0.6 mile **Features**: Proposed extension of the Los Gatos Creek Trail known as Reach 5 **Agency with Jurisdiction:** City of San Jose Department of Parks, Recreation, and Neighborhood Services	Proposed extension from San Carlos Street to Guadalupe River Park	BART Extension crosses the trail corridor	Yes – (Planned)

Map ID	Name	Description	Address/ Location	Approximate Distance from Corridor	Section 4(f) Resource?
P17	Cahill Park	**Size**: 3.7 acres **Features**: Neighborhood park containing small basketball court and two playground areas **Agency with Jurisdiction:** City of San Jose Department of Parks, Recreation and Neighborhood Services	San Fernando Street/ Bush Street	350 feet	Yes
P18	Theodore Lenzen Park	**Size**: 0.5 acre **Features**: Playground equipment, picnic tables, open space **Agency with Jurisdiction**: City of San Jose Department of Parks, Recreation, and Neighborhood Services	Lenzen Avenue/ Stockton Avenue	BART alignment crosses under park	Yes
P19	Newhall Park	**Size**: 1.6 acres **Features**: Children's playground, lawn, and picnic areas **Agency with Jurisdiction**: Newhall Neighborhood Association	Newhall Street/ Campbell Avenue	400 feet	Yes
P20	Coleman Soccer Fields (Proposed)	**Size**: 12.2 acres **Features**: Planned soccer field complex **Agency with Jurisdiction**: City of San Jose Department of Parks, Recreation, and Neighborhood Services	Coleman Avenue and Brokaw Road (Approximate)	Adjacent to maintenance facility	Yes (Planned)
P21	The Forge Garden	**Size**: 0.5 acre **Features**: Educational garden and campus green space **Agency with Jurisdiction:** Santa Clara University	500 El Camino Real, Santa Clara	900 feet	No – Privately owned facility the primary purpose of which is as an educational facility.
P22	Larry J. Marsalli Park	**Size**: 7.0 acres **Features**: Open space, lighted softball field, and children's playground equipment **Agency with Jurisdiction**: City of Santa Clara Parks and Recreation Department	Portola Avenue to Lafayette Street	600 feet from maintenance facility	Yes
Source: Google Earth Pro 2015; City of San Jose, 2008, 2015. Websites: ROEM Corp., City of San José, City of Santa Clara, Guadalupe River Park Conservancy, Newhall Neighborhood Association.					



Source: ESRI, 2015. Google Maps, 2015

Legend

- Study Area
- BART Extension Alternative
- Berryessa Extension (under construction)
- Proposed Trail
- Berryessa Station (under construction)
- Alum Rock Station
- Downtown San Jose Station - East Option
- Downtown San Jose Station - West Option
- Diridon Station (North and South Options)
- Santa Clara Station
- Park
- School

Park and Recreation Facility	Map Icon
Lower Silver Creek Trail (Proposed) *	P1
Five Wounds Trail (Proposed) *	P2
Hacienda Park	P3
Roosevelt Park	P4
Coyote Creek Trail (Proposed)*	P5
Watson Park	P6
City Hall Plaza	P7
Plaza de Cesar Chavez	P8
St. James Park	P9
Horace Mann Elementary School	S10
Almaden Entrance Triangle Park	P11
McEnery Park	P12
Guadalupe River Park & Trail * [b]	P13

Park and Recreation Facility	Map Icon
San Fernando Station Plaza	P14
Arena Green	P15
Los Gatos Creek Trail (Proposed)	P16
Cahill Park	P17
Theodore Lenzen Park	P18
Newhall Park	P19
Coleman Soccer Fields	P20
The Forge Garden	P21
Larry J. Marsalli Park	P22

* Feature depicted shows those portions within the Study Area

Graphics ... 00332.13 (6-23-2016)

Figure 3
Park and Recreational Facilities within 1,000 feet of BART Extension
VTA's BART Silicon Valley–Phase II Extension Project

3.2.2 Cultural Resources

In 2003, historic properties were identified and evaluated as required under Section 106 of the NHPA in the 2003 HRER prepared by JRP. In 2016, JRP prepared a *Supplemental Built Environment Survey Report* o evaluate additional properties that were not considered in the 2003 study. These two reports identified a total of 29 historic properties within the APE that were listed in or determined eligible for listing in the NRHP. On October 28, 2016, the SHPO agreed with the eligibility determinations in the 2016 *Supplemental Built Environment Survey Report* and concurred that FTA and VTA's historic resources identification efforts to date were appropriate for the Undertaking. Table 3-2 details the 29 NRHP-listed and eligible properties identified within the APE for the BART Extension, all of which are protected under Section 4(f). Appendix A provides the architectural APE map and depicts the location of each property listed in Table 3-2.

Table 3-2: Historic Properties Listed in or Determined Eligible for Listing in the NRHP

Map Reference	APN	Street Address	Year Built	NRHP Eligible or Listed? (NRHP Criteria)	Approximate Distance from BART alignment/feature
C-25	467-08-007 467-08-009 467-08-014	1375–1401 Santa Clara Street	1916–1960	Eligible (A, C)	105 feet
C-26	467-10-043	1191 Santa Clara Street	1949	Eligible (A, C)	30 feet
C-27	467-10-046	1169 (1167) Santa Clara Street	1888	Eligible (C)	30 feet
D-03	467-57-082	227–247 Santa Clara Street	1928	Eligible (A, C)	15 feet
E-08*	467-23-035	142–150 Santa Clara Street	1913	Listed (A, C)	15 feet
E-09*	467-23-036	138 Santa Clara Street	1905	Listed (A, C)	15 feet
E-10*	467-23-038	124–126 Santa Clara Street	1900	Listed (A, C)	15 feet
E-11*	467-23-039	114–118 Santa Clara Street	1920	Listed (A, C)	15 feet
E-12*	467-23-089	100 Santa Clara Street	1912	Listed (A, C)	15 feet
E-13*	467-22-149	96 Santa Clara Street[a]	ca. 1883	Listed (A, C)	15 feet
E-14*	467-22-148	52 Santa Clara Street	1900	Listed (A, C)	15 feet
E-15	467-21-028	19 North 2nd Street	1925	Eligible (C)	75 feet

Map Reference	APN	Street Address	Year Built	NRHP Eligible or Listed? (NRHP Criteria)	Approximate Distance from BART alignment/feature
E-18*	467-22-041 467-22-042	42–48 Santa Clara Street	1930s	Listed (A, C)	15 feet
E-19*	467-22-158	36–40 Santa Clara Street	1869	Listed (A, C)	15 feet
E-20	467-54-001 through 467-54-034	22 North 1st Street[b]	1926	Eligible (A, C)	100 feet
E-21*	467-62-001 467-62-007 through 467-62-020	8–14 South 1st Street	1926	Listed (A, C)	15 feet
E-22	259-40-038	34 West Santa Clara Street	ca. 1880 1910s 1920s	Eligible (A, C)	15 feet
E-23	259-34-018	81 West Santa Clara Street	1926	Eligible (C)	15 feet
E-24	259-34-046	101 West Santa Clara Street	1942	Eligible (A, C)	15 feet
E-25	259-38-128	374 West Santa Clara Street	1934	Eligible (A, C)	BART alignment crosses under historic property
E-27	467-20-078	30 North 3rd Street	ca. 1903	Eligible (C)	125 feet
E-35[c]	259-35-05	151–155 West Santa Clara Street	ca. 1884 1930 ca. 1970	Eligible (A, B, C)	15 feet
E-36	259-35-035	161–167 West Santa Clara Street	1883	Eligible (B, C)	15 feet
F-13	261-34-020	Cahill Station and Santa Clara / Alameda Underpass	1935	Listed (C)	BART alignment crosses under historic property
F-14	261-33-020	848 The Alameda	ca. 1884	Eligible (C)	75 feet
F-15	261-01-074	176 North Morrison Avenue	ca. 1898	Eligible (C)	BART alignment crosses under historic property
F-22	261-01-063	179-181 Rhodes Court	ca. 1948	Eligible (C)	BART alignment crosses under historic property
I-01	230-06-031 230-06-032 230-06-050 230-06-051	1 Railroad Avenue (Santa Clara Station)	1863–1864 1877	Listed (A, C)	160 feet

Map Reference	APN	Street Address	Year Built	NRHP Eligible or Listed? (NRHP Criteria)	Approximate Distance from BART alignment/feature
I-02	230-06-040	Benton And Railroad (Santa Clara Tower)	1904 1927	Eligible (C)	160 feet

Source: JRP Historical Consulting, LLC, 2016.
Notes:
* Contributor to the San Jose Downtown Commercial District, which was listed in the NRHP in 1983.
[a] This property is also known as 82 Santa Clara Street.
[b] This property is also known as 28 North First Street.
[c] The legal parcel includes three buildings. The Farmers Union Building at 151–155 Santa Clara Street was previously determined eligible for listing in the NRHP and California Register of Historic Resources, and the current study agrees with the previous determination. The "Old Mill" building at 25–29 North San Pedro Street and the San Pedro Square Properties Building at 35 North San Pedro Street were evaluated for the first time during the present study and found not eligible for listing in the NRHP.

In addition to the historic structures identified above, archaeological sites eligible for listing or listed in the NRHP also come under the purview of Section 4(f). A *Finding of Effects* report, dated December 2016, was prepared to determine whether the BART Extension would adversely affect any archaeological resources that are present along the corridor (JRP, ICF, and Far Western 2016). The records search indicated that only one known archaeological site (CA-SCL-363H) is located within the archaeological APE, and it is eligible for listing in the NRHP under Criteria A and D. Accordingly, portions of this site may warrant preservation in place, and the site would be considered a Section 4(f) protected resource. However, if CA-SCL-363H is important chiefly because of what can be learned by data recovery, then according to 23 CFR 774.13(b), this site would be exempt from consideration as a Section 4(f) resource. For the purposes of this analysis, it is assumed that this site warrants preservation in place and is thus considered a Section 4(f) protected historic site. Appendix B contains the archaeological APE map and depicts the general location of CA-SCL-363H.

In addition to the known archaeological resource, CA-SCL-363H, *VTA's BART Silicon Valley—Phase II Extension Project Archaeological Resources Technical Report* (Far Western 2016) identified numerous locations within the APE where archaeological resources may be expected. Because these sites are yet undiscovered or otherwise unknown, their protection under Section 4(f) cannot be determined, and it is not feasible to test all areas of potential buried site sensitivity at this time. Therefore, a Draft Programmatic Agreement (PA) has been prepared for the identification and evaluation of archaeological resources in phases prior to construction of the project and treatment of archaeological resources and burials in the event that such resources are discovered during construction activities. The Draft PA includes an outline for an Archaeological Resources Treatment Plan (ARTP) that

will be prepared. The ARTP will describe archaeological procedures, notification and consultation requirements, professional qualifications requirements, and procedures for the disposition of artifacts if any are discovered. On October 28, 2016, the SHPO concurred that FTA and VTA's historic resources identification efforts to date were appropriate for the Undertaking, and the development of a Programmatic Agreement and Treatment Plan to address the phased archaeological identification efforts was appropriate (Polanco 2016).

Chapter 4
Section 4(f) Applicability Analysis

4.1 Effects on Section 4(f) Resources

This section discusses parks, recreational facilities, and historic properties found within or adjacent to the alignment that do not trigger Section 4(f) protection either because (1) the BART Extension would not permanently use the property and does not hinder the preservation of the property, or (2) the proximity impacts would not result in constructive use.

Of the 22 Section 4(f) resources listed in Table 3-1, only 17 have been determined to be protected under Section 4(f). Hacienda Creek Park (P3), City Hall Plaza (P7), Almaden Entrance Triangle (P11), Newhall Park (P19), and the Forge Garden (P21) do not qualify for Section 4(f) protection because they are either privately owned facilities, are not open to the public, or they are not primarily intended for recreational use. No further analysis for these five facilities is required.

The proposed Twin-Bore Option would construct tunnels at a depth that would range from 40–50 feet below the ground surface of the parks or trail resources listed above while the Single-Bore Option would construct tunnels at a depth that would range from 70–90 feet below the ground surface of the park or trail resources listed above. At such a depth, surface disruptions related to construction and operation of the tunnel are not anticipated at any of the Section 4(f) properties, and no harm to the purposes of these properties would result. As described above under Section 1.2.1, *Direct Use*, the requirements of Section 4(f) apply to tunneling activities only if such activities cause disruptions that would permanently harm the purposes for which a park or recreation area were established. Therefore, there is no potential for use to result from the Twin-Bore or Single-Bore Options constructing tunnels below parks or recreational resources.

No surface disturbance or other disruption to the aboveground elements of any of the Section 4(f) resources described below would result from construction or operation of the tunnel portions of the BART Extension. Aboveground elements of the BART Extension would include CSAs, connection to the Phase I BART tail tracks, tunnel portals, mid-tunnel ventilation structures, aboveground station facilities including parking structures, the Newhall Maintenance Facility, or other ancillary support facilities. In those areas where aboveground elements would be sited in the vicinity of a Section 4(f) cultural resource, proximity impacts would be minor (e.g., minimal increases in noise and vibration, and visual changes) and would not pose impacts that are so severe that the protected activities, features, or attributes that would qualify the resource for protection under Section 4(f) would be substantially impaired. The following describes the BART Extension's potential to result in

use for each Section 4(f) resource identified in the study area relative to the above- and below-ground aspects of the extension.

4.1.1 Public Parks and Recreational Areas

P1 Lower Silver Creek Trail (Planned)

Direct Use

The Twin-Bore Option and the Single-Bore Option tunnels would be constructed below the alignment of the Lower Silver Creek Trail extension. The subway tunnel would be constructed approximately 35 feet below grade, and the trail would be developed at the surface. No surface impacts related to the tunnel would occur within the trail corridor. Permanent tunnel easements below the trail would be acquired by VTA. While these easements would grant VTA the right to construct and operate subway tunnels below the trail, these easements would not impose restrictions on the trail's owner such that the property could not be used for its intended purpose or otherwise grant future right of access to VTA, such as for the purposes of routine maintenance. Accordingly, the land would not be considered permanently incorporated into the BART Extension. Therefore, no direct use would occur.

Temporary Occupancy

The VTA-owned railroad ROW would be used as a CSA. This ROW crosses Lower Silver Creek (including the proposed trail corridor) in an existing bridge over the creek. Therefore, if the trail is developed prior to commencing construction of the BART Extension, the CSA would be grade-separated from the proposed trail. Construction activities within the CSA on the VTA-owned bridge over the creek (and proposed trail) would consist of materials storage, which would be temporary in nature and last only through construction, and would not involve the change in ownership of the trail. If the trail is developed prior to commencing construction of the BART Extension, trail users would see materials storage and construction equipment from the trail, but construction equipment would not be placed within the trail. The trail would not be altered. All safety measures would be undertaken to ensure that the trail and trail users would be protected from activities at the CSA. Materials storage within the CSA would not cause permanent adverse physical effects on the future trail and would not cause temporary or permanent interference with the activities or purpose of the resource. Coordination, between VTA and the San Jose Department of Parks, Recreation, and Neighborhood Services would be conducted to ensure that proposed construction activities would not affect the regular use of the trail. In addition, VTA would provide public notification of construction work within the CSA above the trail. Therefore, temporary occupancy would not result in a use of the trail.

Constructive Use

Because the BART Extension would operate approximately 35 feet below the trail at this location, no proximity impacts (i.e., noise, vibration, visual, and access) would occur, and the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) would not be substantially impaired; therefore, no constructive use under Section 4(f) would occur.

Conclusion

No Section 4(f) use of the proposed Lower Silver Creek Trail would result from the BART Extension.

P2 Five Wounds Trail (Planned)

Direct Use

Five Wounds Trail is proposed to be developed along an inactive railroad ROW owned by VTA. The Five Wounds Trail is in the early conceptual stages, and there are currently no City studies or master plans developed for this trail and funding has not been identified. The City and VTA have been and will continue to coordinate the development of the proposed Five Wounds Trail. As part of this coordination effort, the development of the trail would be programmed to take place following the construction schedule of the BART Extension. Therefore, the railroad ROW proposed for development into the Five Wounds Trail would remain under VTA ownership through the construction schedule of the BART Extension, and there would be no potential for direct use of the trail.

Temporary Occupancy

VTA intends to use the railroad ROW as a CSA to support the construction of the BART Extension. As described above, the proposed Five Wounds Trail would not be developed prior to the construction of the BART Extension. Therefore, although the area proposed for the development of the trail would be used as a CSA during construction of the BART Extension, this would not constitute a temporary occupancy as the trail would not be developed, and the property would remain under VTA ownership until the BART Extension is complete. There would be no potential for use to result from temporary occupancy.

Constructive Use

Upon completion of construction, the BART Extension would operate approximately 35 feet below the proposed Five Wounds Trail. Accordingly, once the trail is constructed and operating, proximity impacts (i.e., noise, vibration, visual, and access) related to operation of the BART Extension are not anticipated. No constructive use would result from the BART Extension.

Conclusion

No Section 4(f) use of the proposed Five Wounds Trail would result from the BART Extension.

P3 Hacienda Creek Park

Direct Use

Hacienda Creek Park is located approximately 900 feet west of the proposed BART Extension alignment. No property from the park would be incorporated into the BART Extension. Therefore, no direct use would result.

Temporary Occupancy

No construction activities, including staging or construction access, would be required at the park and there are no CSAs in close proximity to the park. The activities and function of the park would not be affected during construction.

Constructive Use

The park is located approximately 900 feet from the BART Extension alignment. Given this distance, and considering that the BART Extension would be operated entirely underground, there is no potential for proximity impacts (i.e., noise, vibration, visual, and access) to result from operation of the BART Extension. No constructive use would result from the BART Extension.

Conclusion

No Section 4(f) use of Hacienda Creek Park would result from the BART Extension.

P4 Roosevelt Park

Direct Use

The BART alignment would cross under a portion (approximately 800 feet) of Roosevelt Park in a tunnel approximately 45 feet underground under both the Twin-Bore and Single-Bore Options. As described previously, tunneling below a park resource would only constitute a use if it causes disruption that would permanently harm the purposes for which the park, recreation, or wildlife or waterfowl refuge was established. No surface disturbance or other disruption to the aboveground elements of the park would result from construction or operation of the BART Extension. Permanent tunnel easements below Roosevelt Park would be acquired by VTA. Although these easements would grant VTA the right to construct and operate subway tunnels below the park, they would not impose restrictions on the park's owner such that the property could not be used for its intended purpose or otherwise grant future right of access to VTA, such as for the purposes of routine maintenance. Accordingly, the land would not be considered permanently incorporated into the BART Extension; therefore, no direct use would occur.

Temporary Occupancy

No construction activities, including staging or construction access, would be required at the park. The park activities and function would not be affected during construction. Therefore, temporary occupancy would not result in a use of the park.

Constructive Use

The proposed BART Extension would operate entirely underground in the vicinity of Roosevelt Park and no disturbance to the use, attributes, or features of the park would result. Accordingly, no proximity impacts (i.e., noise, vibration, visual, and access) on the park would occur as a result of the BART Extension; therefore, no constructive use under Section 4(f) would occur.

Conclusion

No Section 4(f) use of Roosevelt Park would result from the BART Extension.

P5 Coyote Creek Trail (Planned)

Direct Use

As with the Lower Silver Creek Trail, both the Twin-Bore and Single-Bore Options would be constructed in an underground tunnel approximately 50 feet beneath the alignment of the Coyote Creek Trail extension, which would be along the western edge of Roosevelt Park just north of Santa Clara Street. No surface impacts would occur within the trail corridor. Tunnel easements would be acquired below the property. Although these easements would grant VTA the right to construct and operate subway tunnels below the trail, they would not impose restrictions on the trail's owner such that the property could not be used for its intended purpose or otherwise grant future right of access to VTA, such as for the purposes of routine maintenance. Accordingly, the land would not be considered permanently incorporated into the BART Extension. Therefore, no direct use would occur.

Temporary Occupancy

No construction activities including staging or construction access would be required at the planned trail. The trail activities and function would not be affected during construction. Therefore, temporary occupancy would not result in a use of the trail.

Constructive Use

The proposed BART Extension would operate entirely underground in the vicinity of proposed Coyote Creek Trail and no disturbance to the use, attributes, or features of the trail would result. Accordingly, no proximity impacts (i.e., noise, vibration, visual, and access) on the trail would occur as a result of the BART Extension; therefore, no constructive use under Section 4(f) would occur.

Conclusion

No Section 4(f) use of the proposed Coyote Creek Trail would result from the BART Extension.

P6 Watson Park

Direct Use

Watson Park is located approximately 600 feet west of the proposed East Tunnel Portal with substantial urban development including Highway 101 separating the park from the BART Extension. No land from the park would be incorporated into the BART Extension; therefore, there is no potential for direct use.

Temporary Occupancy

No CSAs or other construction activities would take place within the park boundaries. Accordingly, no temporary occupancy would occur and there is no potential for use to result from construction of the BART Extension.

Constructive Use

Given the distance of 600 feet between the BART Extension and Watson Park, and considering that the park is already located in a highly urbanized area and close to a major thoroughfare (Highway 101), any proximity impacts associated with the BART Extension would not result in effects that may limit or otherwise disturb the regular use of the park. No constructive use would result from the BART Extension.

Conclusion

No Section 4(f) use of the Watson Park would result from the BART Extension.

P7 City Hall Plaza

As discussed in Table 3-1, City Hall Plaza does not qualify for Section 4(f) protection as recreation is not the primary purpose of this space. No further discussion of this resource is necessary.

P8 Plaza de Cesar Chavez

Direct Use

Plaza de Cesar Chavez is located approximately 970 feet south of the alignment and the Downtown San Jose Station West Option. The BART Extension would be in a tunnel at this location. No property from the plaza would be incorporated into the BART Extension; therefore, no direct use would result.

Temporary Occupancy

No CSAs or other construction activities would take place within the plaza boundaries. Accordingly, no temporary occupancy would occur, and there is no potential for use to result from construction of the BART Extension.

Constructive Use

The plaza is located approximately 970 feet from the BART Extension. Given this distance, and considering that the BART Extension would be operated underground at this location, there is no potential for proximity impacts (i.e., noise, vibration, visual, and access) to result from operation. No constructive use would result from the BART Extension.

Conclusion

No Section 4(f) use of the Plaza de Cesar Chavez would result from the BART Extension.

P9 St. James Park

Direct Use

St. James Park is located approximately 625 feet north of the alignment and the Downtown San Jose Station West Option. No property from the park would be incorporated into the BART Extension. Accordingly, no direct use would occur.

Temporary Occupancy

No construction activities would occur within the park; therefore, there is no potential for temporary occupancy of the park. The nearest construction staging site would be a surface parking lot 230 feet away from the park. Accordingly, there is no potential for use to result from temporary occupancy.

Constructive Use

The park is located approximately 625 feet from the BART Extension. Given this distance, and considering that the BART Extension would be operated underground at this location, there is no potential for proximity impacts (i.e., noise, vibration, visual, and access) to result from operation of the BART Extension. No disturbance to the use, attributes, or features of the park would result from the BART Extension. No constructive use would result from the BART Extension.

Conclusion

No Section 4(f) use of the St. James Park would result from the BART Extension.

S10 Horace Mann Elementary School Playfields

Direct Use

Horace Mann Elementary School is located north of the Downtown San Jose East Station Option, and the proposed subway tunnel would be constructed beneath Santa Clara Street, which is fronted by the elementary school. No property from the playfields would be incorporated into the BART Extension. Therefore, no direct use would result.

Temporary Occupancy

No construction activities, including staging or construction access, would be required at the school playfields. There is potential for increase in temporary noise due to a CSA sited across the street from the school. However, construction sites are typical of this urban area, and because the playfields are used for active recreation, any temporary increase in noise would not affect activities at the playfields. The activities and function of the fields would not be affected during construction.

Constructive Use

Nearby aboveground elements of the BART Extension would include station entrances, signage, and intersection improvements. Such elements would not result in proximity impacts on the playfields that would affect the regular use of the fields such there would be any potential for constructive use.

Conclusion

There is no potential for use of the Horace Mann Elementary School Playfields.

P11 Almaden Entrance Triangle

As discussed in Table 3-1, Almaden Entrance Triangle is an incidental greenspace and recreation is not its primary purpose; therefore, it does not qualify for Section 4(f) protection. No further discussion of this resource is necessary.

P12 McEnery Park

Direct Use

McEnery Park is located approximately 700 feet south of a subway tunnel. No property from the park would be incorporated into the BART Extension; therefore, there is no potential for direct use.

Temporary Occupancy

No construction activities would occur at the park. The nearest CSA is located under State Route (SR) 87, approximately 700 feet to the north of the park. Accordingly, there is no potential for temporary occupancy, nor would a use result from construction activities.

Constructive Use

The park is located approximately 700 feet from the BART Extension. Given this distance, and considering that the BART Extension would be operated underground at this location, there is no potential for proximity impacts (i.e., noise, vibration, visual, and access) to result from operation of the BART Extension. No disturbance to the use, attributes, or features of the park would result from the BART Extension. No constructive use would result from the BART Extension.

Conclusion

No Section 4(f) use of the McEnery Park would result from the BART Extension.

P13 Guadalupe River Park & Trail

Direct Use

Under both the Twin-Bore and Single-Bore Options, a BART Extension subway tunnel would be constructed underground, approximately 230 feet south of the Guadalupe River Park property, and would cross approximately 40 feet below the Guadalupe River Trail, which continues from the Guadalupe River Park south, winding under SR 87 down to Virginia Street. No property from either the park or the trail would be acquired or otherwise incorporated into the BART Extension. Tunnel easements below the trail would be acquired by VTA. Although these easements would grant VTA the right to construct and operate subway tunnels below the trail, they would not impose restrictions on the trail's owner such that the property could not be used for its intended purpose or otherwise grant future right of access to VTA, such as for the purposes of routine maintenance. Accordingly, the trail land would not be considered permanently incorporated into the BART Extension; therefore, no direct use would occur.

Temporary Occupancy

A CSA is proposed below SR 87 adjacent to, and east of, the segment of the Guadalupe River Trail located south of Santa Clara Street and approximately 90 feet southeast of the park. Activities within this CSA would include equipment and materials storage to support construction of the Downtown San Jose and Diridon Stations. No construction equipment would be stored within the park or trail, and no construction activities, including staging or construction access, would be required at the park or trail. The park/trail activities and function would not be affected during construction. No temporary occupancy would result, and there is no potential for use.

Constructive Use

The proposed BART Extension would operate entirely underground in the vicinity of the Guadalupe River Park and Trail, and no disturbance to the use, attributes, or features of the park or trail would result from the BART Extension. Accordingly, no proximity impacts (i.e.,

noise, vibration, visual, access) on the park or trail would occur as a result of the BART Extension; therefore, no constructive use under Section 4(f) would occur.

Conclusion

No Section 4(f) use of Guadalupe River Park & Trail would result from the BART Extension.

P14 San Fernando Station Plaza

Direct Use

The San Fernando Station Plaza is located approximately 430 feet from the proposed tunnel alignment and approximately 320 feet from the Diridon Station. No land from the San Fernando Station Plaza would be incorporated into the BART Extension; therefore, no direct use would result.

Temporary Occupancy

No construction activities are proposed within the San Fernando Station Plaza. The Diridon Station parking lots would be used as a CSA where intensive construction activities and substantial equipment storage would be present during construction. However, construction activities are not anticipated to conflict with the regular use of the plaza or otherwise affect the use, features, or attributes of the plaza such that there would be any potential for use. No temporary occupancy would occur, and there is no potential for use.

Constructive Use

Upon completion of construction, the BART Extension operations would occur underground with minimal aboveground facilities at the Diridon Station. The BART Extension alignment is approximately 430 feet from the plaza, and the Diridon Station is approximately 320 feet from the plaza. Accordingly, proximity impacts (i.e. noise, vibration, visual, and access) would not be experienced given the distance of the BART Extension from the plaza and the fact that the BART Extension would be underground. No constructive use would occur.

Conclusion

No Section 4(f) use of the San Fernando Station Plaza would result from the BART Extension.

P15 Arena Green

Direct Use

Arena Green is located approximately 250 feet from the BART Extension subway tunnel alignment and on the opposite side of Santa Clara Street from the Diridon Station. No land from the park would be incorporated into the BART Extension. Therefore, no direct use would result from the BART Extension.

Temporary Occupancy

No construction activities would occur at the park. The nearest proposed CSA is located across Santa Clara Street approximately 90 feet to the south of the park at the existing Diridon Caltrain Station. Construction activities within the Diridon CSA would include materials and equipment storage, drying and storage of tunnel muck prior to hauling away from the site, the cut-and-cover excavation of the underground station, construction of the systems facilities located adjacent to Los Gatos Creek, and construction of the aboveground station entrance portals at the east and west ends of the station. Construction activities in this area would last up to 8 years during the various phases of construction. Cahill, Montgomery, and Autumn Streets would be closed at different times during construction within the footprint of the CSA to allow for construction of the cut-and-cover underground station. Though intensive construction activities would occur within the CSA, they are not anticipated to conflict with the regular use of the park or otherwise affect the use, features, or attributes of the park such that there would be any potential for use. The land of Arena Green would not be occupied at any point during construction. Accordingly, there is no potential for temporary occupancy, nor would a use result from construction activities.

Constructive Use

Upon completion of construction, the BART Extension operations would occur underground with minimal aboveground facilities at the Diridon Station. The BART Extension alignment is approximately 250 feet from the park and the Diridon Station is approximately 90 feet from the park. Proximity impacts (i.e. noise, vibration, visual, and access) would not be experienced given the distance of the BART Extension from the Arena Green and the fact that the BART Extension would be located underground. No constructive use would occur.

Conclusion

No Section 4(f) use of the Arena Green would result from the BART Extension.

P16 Los Gatos Creek Trail (Planned)

Direct Use

Under both the Twin-Bore and Single-Bore Options, the BART Extension subway tunnel would be constructed below the proposed alignment of the Los Gatos Creek Trail. The subway tunnel would be constructed approximately 35 feet below grade, and the proposed trail would be developed at the surface. No surface impacts related to the tunnel would occur within the trail corridor. Permanent tunnel easements below the trail would be acquired by VTA. Although these easements would grant VTA the right to construct and operate subway tunnels below the trail, they would not impose restrictions on the trail's owner such that the property could not be used for its intended purpose or otherwise grant future right of access to VTA, such as for the purposes of routine maintenance. Accordingly, the land would not be considered permanently incorporated into the BART Extension. Therefore, no direct use would occur.

Temporary Occupancy

The proposed trail ROW would not be used for construction activities. However, the proposed trail alignment is adjacent to the Diridon Station CSA. Construction activities within the Diridon Station CSA would include materials and equipment storage, drying and storage of tunnel muck prior to hauling away from the site, the cut-and-cover excavation of the underground station, construction of the systems facilities located adjacent to Los Gatos Creek, and construction of the aboveground station entrance portals at the east and west ends of the station. Construction activities in this area would last up to 8 years during the various phases of construction. Cahill, Montgomery, and Autumn Streets would be closed at different times during construction within the footprint of the CSA to allow for construction of the cut-and-cover underground station. Though construction activities and substantial equipment storage would occur during construction, construction activities are not anticipated to conflict with the regular use of the proposed trail if it is constructed and in use prior to construction of the BART Extension. In addition, VTA would coordinate with the City to ensure that construction activities do not affect the regular use of the trail. If the trail has been constructed and is in use prior to the construction of the BART Extension, VTA would provide public notification of construction work near the trail. Therefore, no temporary occupancy would result from the BART Extension and no use of the trail would occur.

Constructive Use

Because the BART Extension would operate underground, and the aboveground systems facilities and station entrance portals would not cause noise or vibration impacts on the trail, no proximity impacts (i.e., noise, vibration, visual, and access) would occur, and the protected activities, features, or attributes that qualify the resource for protection under Section 4(f) would not be substantially impaired; therefore, no constructive use under Section 4(f) would occur.

Conclusion

No Section 4(f) use of the Los Gatos Creek Trail would result from the BART Extension

P17 Cahill Park

Direct Use

Cahill Park is located approximately 350 feet south of the BART Extension subway tunnel alignment. No property from the park would be incorporated into the BART Extension; therefore, there is no potential for direct use.

Temporary Occupancy

No construction activities would occur at the park. The nearest CSA is the Diridon Station CSA approximately 600 feet to the east of the park. Accordingly, there is no potential for temporary occupancy, nor would a use result from construction activities.

Constructive Use

The park is located approximately 350 feet from the BART Extension alignment. Given this distance, and considering that the BART Extension would be operated entirely underground, there is no potential for proximity impacts (i.e., noise, vibration, visual, and access) to result from operation of the BART Extension. No constructive use would result from the BART Extension.

Conclusion

No Section 4(f) use of the Cahill Park would result from the BART Extension.

P18 Theodore Lenzen Park

Direct Use

Under both the Twin-Bore and Single-Bore Options, the BART alignment would cross under a portion of Theodore Lenzen Park in a tunnel, approximately 45 feet underground. As described above, tunneling below a park resource would only constitute a use if it causes disruption that would permanently harm the purposes for which the park, recreation, or wildlife or waterfowl refuge was established. No surface disturbance or other disruption to the aboveground elements of the park would result from construction or operation of the BART Extension. Permanent tunnel easements below the park would be acquired by VTA. Although these easements would grant VTA the right to construct and operate subway tunnels below the park, they would not impose restrictions on the park's owner such that the property could not be used for its intended purpose or otherwise grant future right of access to VTA, such as for the purposes of routine maintenance. Accordingly, the land would not be considered permanently incorporated into the BART Extension; therefore, no direct use would occur.

Temporary Occupancy

No construction activities, including staging or construction access, would be required at the park. The park activities and function would not be affected during construction. Therefore, temporary occupancy would not result in a use of the trail.

Constructive Use

The BART Extension would operate entirely underground in the vicinity of Theodore Lenzen Park, and no disturbance to the use, attributes, or features of the park would result from the BART Extension. Accordingly, no proximity impacts (i.e., noise, vibration, visual, and access) on the park would occur as a result of the BART Extension; therefore, no constructive use under Section 4(f) would occur.

Conclusion

No Section 4(f) use of Theodore Lenzen Park would result from the BART Extension.

P19 Newhall Park

Direct Use

Newhall Park is located approximately 350 feet south of the BART Extension subway tunnel alignment. No property from the park would be incorporated into the BART Extension; therefore, there is no potential for direct use.

Temporary Occupancy

No construction activities would occur at the park. The nearest CSA would be located at the proposed Newhall Maintenance Facility site, approximately 390 feet to the north. Accordingly, there is no potential for temporary occupancy, nor would a use result from construction activities.

Constructive Use

Newhall Park is located approximately 390 feet south of the proposed Newhall Maintenance Facility and crossover tracks. Given that there are existing rail operations within 400 feet of the park, and existing multi-family residential structures separate the park from the proposed maintenance facility, views from Newhall Park would not be affected. Noise increases are anticipated to be minor given the distance, intervening buildings, and existing rail operations within the proposed maintenance facility site. Therefore, proximity impacts on Newhall Park resulting from BART Extension operations are not anticipated to be of a severity that would adversely affect the attributes, features, or regular use of the park. No constructive use would result from operations of the BART Extension

Conclusion

No Section 4(f) use of the Newhall Park would result from the BART Extension.

P20 Coleman Soccer Fields (Planned)

Direct Use

The proposed Coleman Soccer Fields would be located adjacent to the Newhall Maintenance Facility; however, land from the proposed soccer fields would not be incorporated into the BART Extension. Therefore, no direct use would result from the BART Extension.

In addition, the City is considering a different location at Coleman Avenue and Hedding Street for the soccer fields (Giwargis 2016). The proposed soccer facility was originally planned to be complete in 2012; however, the soccer complex has not been constructed and in January 2016, the City of San Jose deferred the award of a construction contract for the proposed soccer complex (City of San Jose 2016). This move would result in the soccer fields being sited even farther from the BART Extension.

Temporary Occupancy

The area proposed for the Newhall Maintenance Facility would also serve as a CSA. The CSA would not occupy the area demarcated for the proposed soccer fields. If the soccer fields are developed prior to construction of the BART Extension, there would be intensive construction activities near and adjacent to the fields. However, no construction activities would take place on the proposed fields, and it is not anticipated that construction would affect the use, activities, or features of the soccer fields. No temporary occupancy would occur, and there would be no use.

Constructive Use

Proximity impacts on the proposed soccer fields would be related to operation of the Newhall Maintenance Facility and would include intermittent noise generated from the moving trains, wash facilities, outdoor maintenance activities, and warning signals. As described in the 2007 Supplemental Environmental Impact Report prepared for the BART Extension, noise generated from these activities would be similar to, or less than, the noise generated from existing train equipment associated with Amtrak, UPRR freight, Caltrain, and Capitol Corridor railroad operations already operating on the mainline tracks (VTA 2007). A *Noise and Vibration Technical Report* prepared in 2016 by Wilson Ihrig confirms this finding (Ihrig 2016). Because the soccer fields are a proposed facility, they were not identified as a sensitive receptor nor were they analyzed in the noise and vibration analysis; however, based on the noise analysis conducted for the BART Extension, one sensitive receptor is in proximity to the potential Coleman Soccer Fields site, the Candlewood Suites Hotel along the west side of the existing rail tracks. This use is expected to experience a future daily exposure (Ldn) noise level of 67 A-weighted decibels (dBA). This anticipated noise level represents an increase of 2 dBA, which is considered a moderate noise impact. According to the Initial Study prepared for the Coleman Soccer Fields, although the proposed soccer fields would include recreational uses, the soccer activities on the proposed fields are not considered noise-sensitive (City of San Jose 2010). Accordingly, noise generated from operation of the Newhall Maintenance Facility would not present impacts on the proposed soccer fields that are so severe that the protected activities, features, or attributes that would qualify the facility for protection under Section 4(f) would be substantially impaired. In addition, as described above, the proposed soccer fields may be developed on a different site that is farther from the BART Extension than is currently proposed. No constructive use would result.

Conclusion

No Section 4(f) use of Coleman Soccer Fields would result from the BART Extension.

P21 The Forge Garden

As discussed in Table 3-1, The Forge Garden is a privately owned facility; therefore, it does not qualify for Section 4(f) protection. No further discussion of this resource is necessary.

P22 Larry J. Marsalli Park

Direct Use

Larry J. Marsalli Park is located approximately 600 feet from the Newhall Maintenance Facility. No land from the park would be incorporated into the BART Extension; therefore, no direct use would occur.

Temporary Occupancy

No construction activities would take place within the park, and no temporary occupancy would occur. Therefore, there is no potential for use to result from temporary occupancy.

Constructive Use

Proximity impacts associated with the operation of the BART Extension would have little or no effect on the use of the park given the distance from the Newhall Maintenance Facility and existing urban uses such as The Alameda and the existing Amtrak, UPRR freight, Caltrain, and Capitol Corridor railroad operations. The maintenance operations at the proposed Newhall Maintenance Facility would not pose effects that would result in the impairment of the protected activities, features, or attributes of the park. No constructive use would result.

Conclusion

No Section 4(f) use of Larry J. Marsalli Park would result from the BART Extension.

4.1.2 Historic Properties

As described in the draft *Finding of Effect* (FOE) document, BART Extension improvements related to the construction of station facilities and streetscape improvements would be developed in the vicinity of historic properties that are protected under Section 4(f).

However, no portion of an historic site would be permanently incorporated into the BART Extension. As shown in Table 8-2, the BART Extension alignment would run below and have tunnel easements from three historic properties: 374 Santa Clara Street (Map Reference E-25), 176 North Morrison Avenue (Map Reference F-15), and 179–181 Rhodes Court (Map Reference F-22). Section 4(f) applies to tunnel construction and associated activities only if they would substantially impair the historic values of a historic site. There is no potential for adverse effects on any of the historic properties where tunnels would be constructed below them; therefore, no use would result.

In addition, rail tiebacks associated with the Twin-Bore and Single-Bore Options would be constructed below various historic properties at the Downtown San Jose Station (East and West Options). Tieback anchors are long metal rods or bundled tendons drilled and grouted into the ground to brace construction support walls and adjacent property and/or structures during excavation of underground facilities. Tiebacks may remain in the ground after completion of construction. The tiebacks are estimated to be up to 110 feet in length with the

last 50 feet farthest away from the trench secured in place. Tiebacks are typically spaced at 4 to 6 feet on center horizontally and 5 to 8 feet on center vertically. Tieback installation could start at approximately 3 feet below-grade. The tiebacks pose no potential for adverse effects on the historic structures

Although construction activities would take place in the vicinity of historic properties, and in some cases adjacent to or underneath historic properties, these activities would not result in the destruction, damage, or physical alteration of any of the historic properties listed above. While cut-and-cover station excavation may expose historical buildings to excessive vibration, Mitigation Measures NV-CNST-P through NV-CNST-S would ensure that no adverse effect related to construction period vibration would occur. There is no potential for use to result from temporary occupancy of any of the 29 identified built environment historic properties. Construction activities associated with the BART Extension would not alter, directly or indirectly, any of the characteristics that qualify the historic properties identified in this section for protection under Section 4(f). All construction activities, including use of the proposed CSA, would be carried out consistent with the Draft PA and ARTP.

Aboveground elements of the BART Extension include tunnel portals, ventilation structures, station entrances, parking garages, signage, intersection improvements, system facilities such as traction power substations, and a maintenance facility. The Draft FOE, analyzed the potential for effects related to changes in character or integrity for each historic property and found that no adverse effect would result from the BART Extension. Of the 29 historic properties identified, only one, the Church of Five Wounds (Map Reference C-25), is considered to have an inherent quiet quality. However, at the location of this historic church, the predicted operational noise level would not exceed 25 dBA, a level less than the FTA threshold of 40 dBA for institutional buildings and historic buildings with an indoor use that involves meditation and study (i.e., a church or school) (Wilson Ihrig 2016: 4-18, 4-35; FTA 2006:3-7, 2-8, and 8-3). All other historic properties, which consist of commercial, transportation, industrial, and residential resources, do not have an inherent quiet quality that is part of their historic character or significance. Therefore, the BART Extension would not result in a constructive use of any historic properties related to noise effects.

According to the FTA Guidance Manual, operational (ground-borne) vibration primarily causes human annoyance or interference with use of equipment sensitive to vibration and damage to historic buildings from vibration from train operation is “unlikely, except when the track will be very close to the structure.” In these cases, the FTA Guidance Manual directs using the construction vibration threshold—0.12 inch/second peak particle velocity (PPV) or, alternatively 90 vibration velocity decibels (VdB) from the PPV limits—for those structures. Twin-Bore and Single-Bore Option operational vibration levels at all 29 historic properties would be below 90 VdB, thus operational vibration effects are not anticipated to result in a constructive use of any historic properties.

Table 4-1: Built Environment Historic Properties Section 4(f) Use Determinations

Map Reference	APN	Street Address	Section 4(f) Use Determination
C-25	467-08-007 467-08-009 467-08-014	1375–1401 Santa Clara Street	No Use
C-26	467-10-043	1191 Santa Clara Street	No Use
C-27	467-10-046	1169 (1167) Santa Clara Street	No Use
D-03	467-57-082	227-247 Santa Clara Street	No Use
E-08*	467-23-035	142-150 Santa Clara Street	No Use
E-09*	467-23-036	138 Santa Clara Street	No Use
E-10*	467-23-038	124–126 Santa Clara Street	No Use
E-11*	467-23-039	114–118 Santa Clara Street	No Use
E-12*	467-23-089	100 Santa Clara Street	No Use
E-13*	467-22-149	96 Santa Clara Street	No Use
E-14*	467-22-148	52 Santa Clara Street	No Use
E-15	467-21-028	19 East 2nd Street	No Use
E-18*	467-22-041 467-22-042	42–48 Santa Clara Street	No Use
E-19*	467-22-158	36–40 Santa Clara Street	No Use
E-20	467-54-001 through 467-54-034	22 North 1st Street	No Use
E-21*	467-62-001 467-62-007 through 467-62-020	8–14 South 1st Street	No Use
E-22	259-40-038	34 Santa Clara Street	No Use
E-23	259-34-018	81 Santa Clara Street	No Use
E-24	259-34-046	101 Santa Clara Street	No Use
E-25	259-38-128	374 Santa Clara Street	No Use
E-35	259-35-05	151–155 Santa Clara Street	No Use
E-27	467-20-078	30 North 3rd Street	No Use
E-36	259-35-035	161–167 Santa Clara Street	No Use
F-08	261-33-025	49 Wilson Avenue	No Use
F-13	261-34-020	Cahill Station and Santa Clara / Alameda Underpass	No Use
F-14	261-33-020	848 The Alameda	No Use
F-15	261-01-074	176 North Morrison Avenue	No Use

Map Reference	APN	Street Address	Section 4(f) Use Determination
I-01	230-06-031 230-06-032 230-06-050 230-06-051	1 Railroad Avenue (Santa Clara Station)	No Use
I-02	230-06-040	Benton And Railroad (Santa Clara Tower)	No Use

* Contributor to the San Jose Downtown Commercial District, which was listed in the National Register of Historic Places in 1983.

CA-SCL-363H

The archaeological APE map, located in Appendix B, depicts the location of CA-SCL-363H according to the records search. As described above, CA-SCL-363H is the only known archaeological site within the BART Extension's APE. This site is eligible for listing in the NRHP under Criteria A and D, which qualifies the site for Section 4(f) protection.

Direct Use

The draft FOE states that the construction and operation of the BART Extension would not result in adverse effects on CA-SCL-363H because none of the elements of the resource that contribute to its eligibility would be disturbed as a result of tunnel boring. The Twin-Bore Option tunnels would be constructed approximately 40 feet below ground level while the Single-Bore Option tunnel would be constructed approximately 70 feet below ground level. The depth of the proposed tunnel (under both Twin-Bore and Single-Bore Options) would be well below the depth of any potential deposits associated with CA-SCL-363H, and there is no potential for the partial removal of, physical destruction of, or damage to the historic site under Section 4(f). The draft FOE prepared for the BART Extension has preliminarily concluded that there is no potential for adverse effects on historic properties including the one known archaeological historic property, CA-SCL-363H, within the APE. However, construction of the BART Extension may adversely affect as-yet unidentified archaeological sites eligible for the NRHP. FTA and VTA have therefore chosen to conduct the identification and evaluation of potential historic properties, and the resolution of any adverse effects on historic properties within the APE, in phases pursuant to 36 CFR 800.4(b)(2) and 36 CFR 800.5(a)(3), subsequent to the approval of the Undertaking. Therefore, a Draft PA has been prepared, which includes an outline for an ARTP. The preparation and implementation of the PA and ARTP are identified as Mitigation Measure CUL-CNST-A. Due to access constraints posed by existing urban development, final identification and evaluation of historic properties would occur subsequent to FTA's signing the Record of Decision and prior to the commencement of construction for the project. Applying the stipulations of the Draft PA, any undiscovered archaeological resources that are encountered during construction would be evaluated for NRHP eligibility and, if found eligible for the NRHP, would be require evaluation for use under Section 4(f) if preservation in place is warranted. Consistent with 23 CFR 774.9 (e), in such cases of late discovery of

archaeological resources, the level of investment already made would be considered in any associated avoidance alternatives evaluation.

Temporary Occupancy

A CSA would be located within a paved, non-contributing part of CA-SCL-363H. No ground disturbance or excavation is proposed within the CSA; therefore, the temporary occupancy of the non-contributing portion of CA-SCL-363H does not pose any potential for a Section 4(f) use as there is no potential to disturb archaeological remains. All construction activities, including use of the proposed CSA, would be carried out consistent with the PA and ARTP.

Constructive Use

As described above, Twin-Bore and Single-Bore Option operational vibration levels would be below 90 VdB, thus operational vibration effects are not anticipated to result in a constructive use of any historic properties.

Conclusion

The BART Extension would not alter, directly or indirectly, any of the characteristics of the historic site that qualifies it for protection under Section 4(f). No use would result from the BART Extension.

4.2 Conclusion

No land from any existing or planned park or recreation resource would be permanently incorporated into the BART Extension. As described above, the tunneling activities below three existing park/recreational Section 4(f) properties and three planned Section 4(f) trail properties would not result in a use because it would not disrupt or permanently harm the purposes for which these resources were established as no surface impacts would occur. Acquisition of permanent tunnel easements below these Section 4(f) properties would not be considered a use because these easements would not limit the regular use or development of the properties by their owners or otherwise incorporate Section 4(f) land into a transportation facility.

Construction activities would not take place within any parks or recreation facilities. A CSA is proposed within the proposed corridor of one planned trail, the Five Wounds Trail. However, VTA owns the property proposed for the trail and would coordinate the BART Extension construction with the development of the trail so that construction would take place prior to development of the planned trail. The CSA proposed under SR 87 is within the defined boundary of one archaeological historic site, CA-SCL-363H; however, it is not anticipated that the activities proposed within the CSA would result in the physical harm of any archaeological remains such that it would constitute a use. There is no potential for temporary occupancy of any other Section 4(f) resource. Construction activities do not pose any potential use of any Section 4(f) resources.

Given that the BART Extension would operate underground in the vicinity of a majority of the Section 4(f) resources described in this technical report, proximity impacts are not anticipated throughout a majority of the study area. In those areas where aboveground elements (e.g. tunnel portals, maintenance facilities, ventilation structures, aboveground station facilities) would be sited in the vicinity of a Section 4(f) resource, proximity impacts would be minor and consistent with existing rail uses such as Amtrak, UPRR freight, Caltrain, and Capitol Corridor operations. Proximity impacts associated with aboveground elements of the BART Extension would not pose impacts that are so severe that the protected activities, features, or attributes that would qualify the facility for protection under Section 4(f) would be substantially impaired. Therefore, no constructive use would occur at any Section 4(f) resources. The draft FOE prepared for the BART Extension has preliminarily concluded that there is no potential for adverse effects on historic properties. Thus, there is no potential for use of any known historic properties protected under Section 4(f). No use of Section 4(f) property would result from the BART Extension.

Chapter 5
Section 6(f) Considerations

Section 6(f)(3) of the Land and Water Conservation Fund Act (LWCF) (16 USC 460l-4) contains provisions to protect federal investments in park and recreational resources and the quality of those assisted resources. The law recognizes the likelihood that changes in land use or development may make park use of some areas purchased with LWCF funds obsolete over time, particularly in rapidly changing urban areas, and provides for conversion to other use pursuant to certain specific conditions.

> Section 6(f)(3): No property acquired or developed with assistance under this section shall, without the approval of the Secretary, be converted to other than public outdoor recreation uses. The Secretary shall approve such conversion only if he finds it to be in accord with the then existing comprehensive statewide outdoor recreation plan and only upon such conditions as he deems necessary to assure the substitution of other recreation properties of at least equal fair market value and of reasonably equivalent usefulness and location.

This requirement applies to all parks and other sites that have been the subject of LWCF grants of any type and includes acquisition of park land and development or rehabilitation of park facilities.

A review of the LWCF listing of grants for Santa Clara County has revealed that the Guadalupe River Park and St. James Park have been developed using LWCF grants. As described above, land from these two resources would not be incorporated into the BART Extension, converted, or otherwise affected by the BART Extension. Although the BART Extension would construct a subway tunnel below the Guadalupe River Park Trail, no surface disturbance would result, and federal investments in these parks would not be affected in any way by the BART Extension. Therefore, there would be no conversion of any LWCF-funded recreational areas to a non-recreational use. Consequently, Section 6(f) would not apply.

Chapter 6
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Chapter 7
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Appendix A

Architectural APE Map

Figure A.1-INDEX. Architectural APE

Architectural APE

Map Sheet

N

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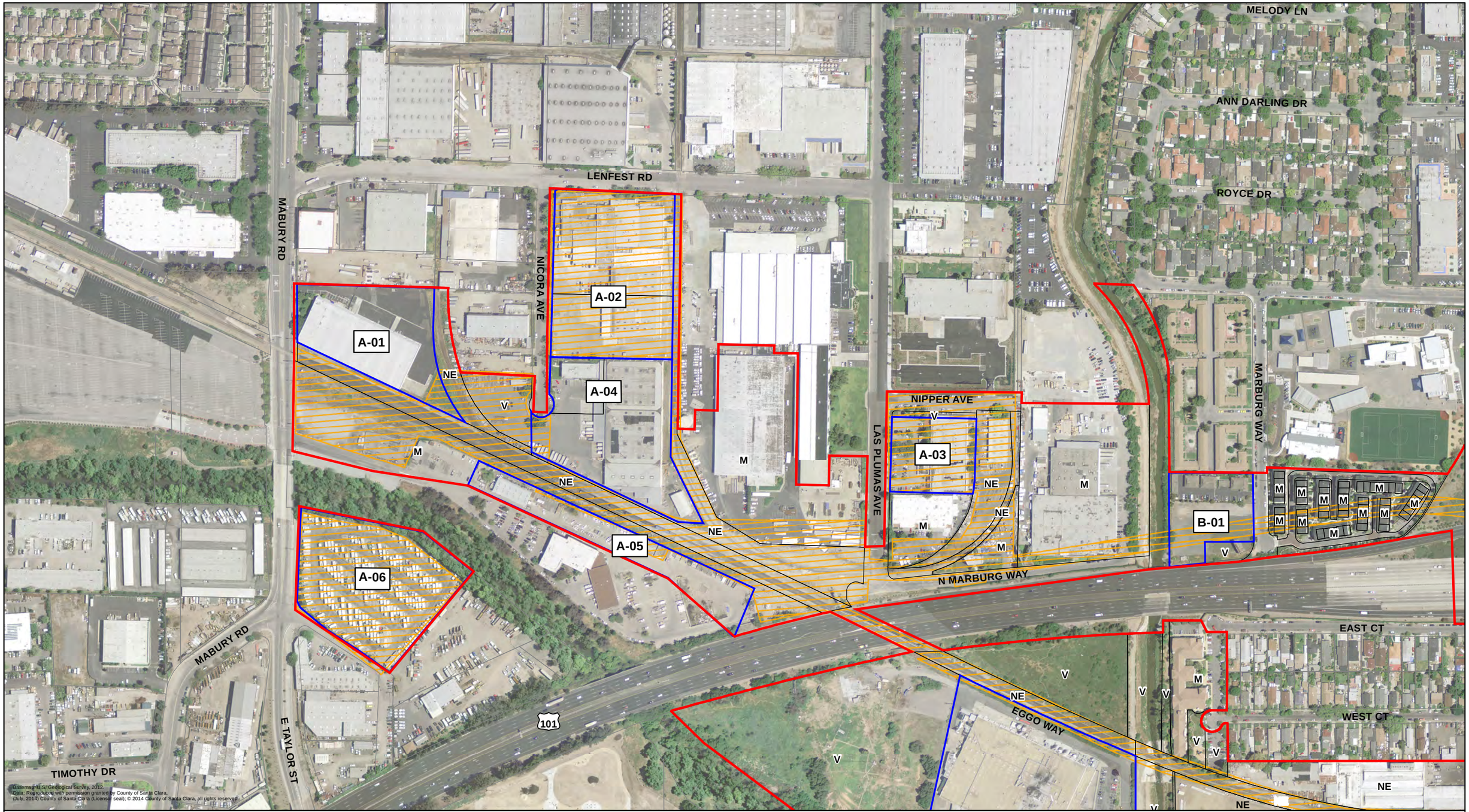
Feet



Source: USGS 1:100,000 Quadrangle, San Jose, CA (1978).

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Architectural APE

Historic District

Project Footprint

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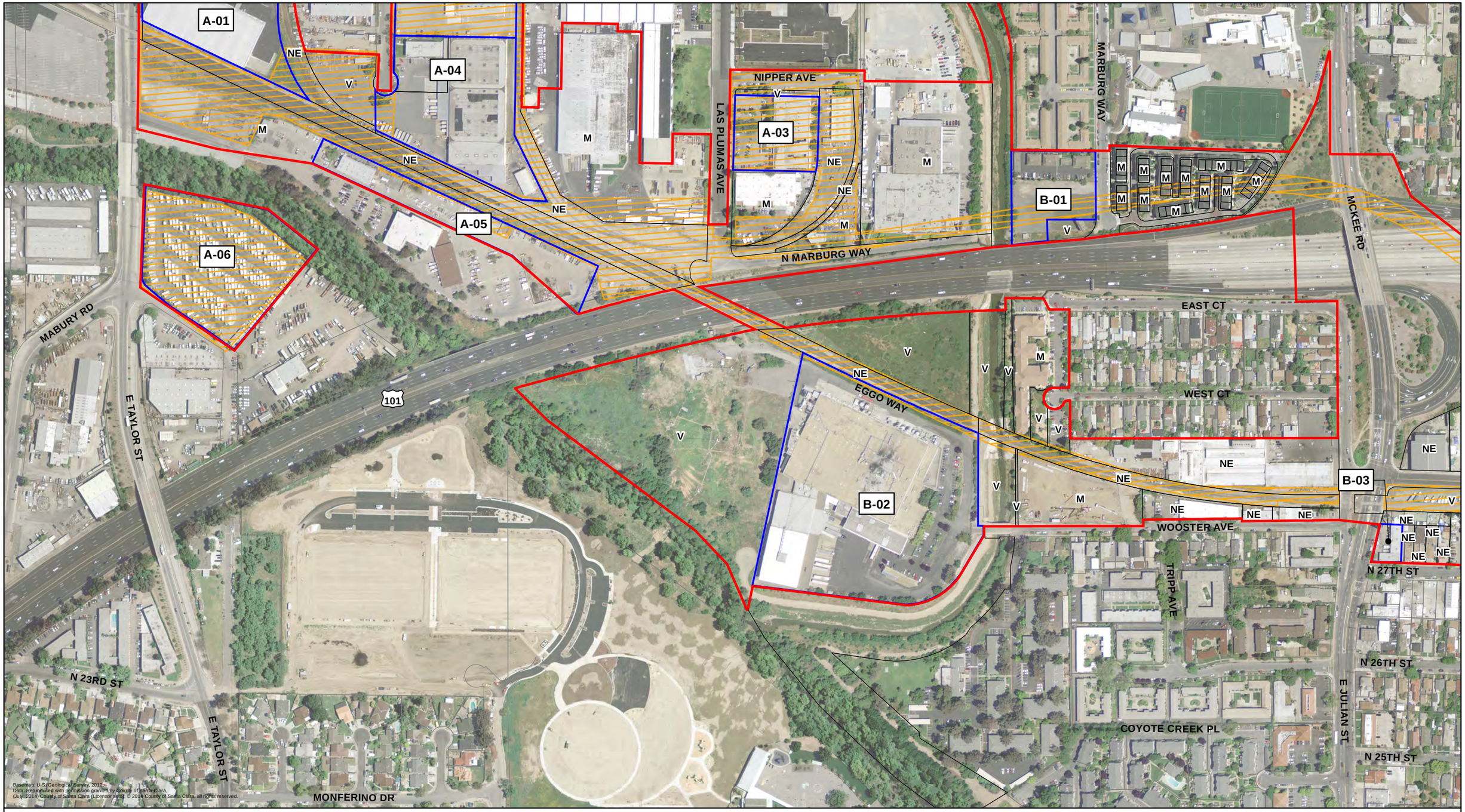
A-01 Map Reference Number (Eligible) Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER

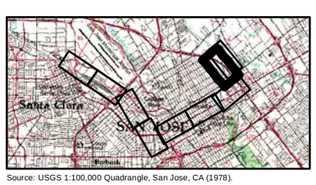
A-01 Map Reference Number (CEQA only) Historical Resource for the purposes of CEQA only

A-01 Map Reference Number (Not Eligible) Not eligible for listing in NRHP or CRHR as per current survey

V = Vacant
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)

Figure A.1-A. Architectural APE





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Architectural APE

Historic District

Project Footprint

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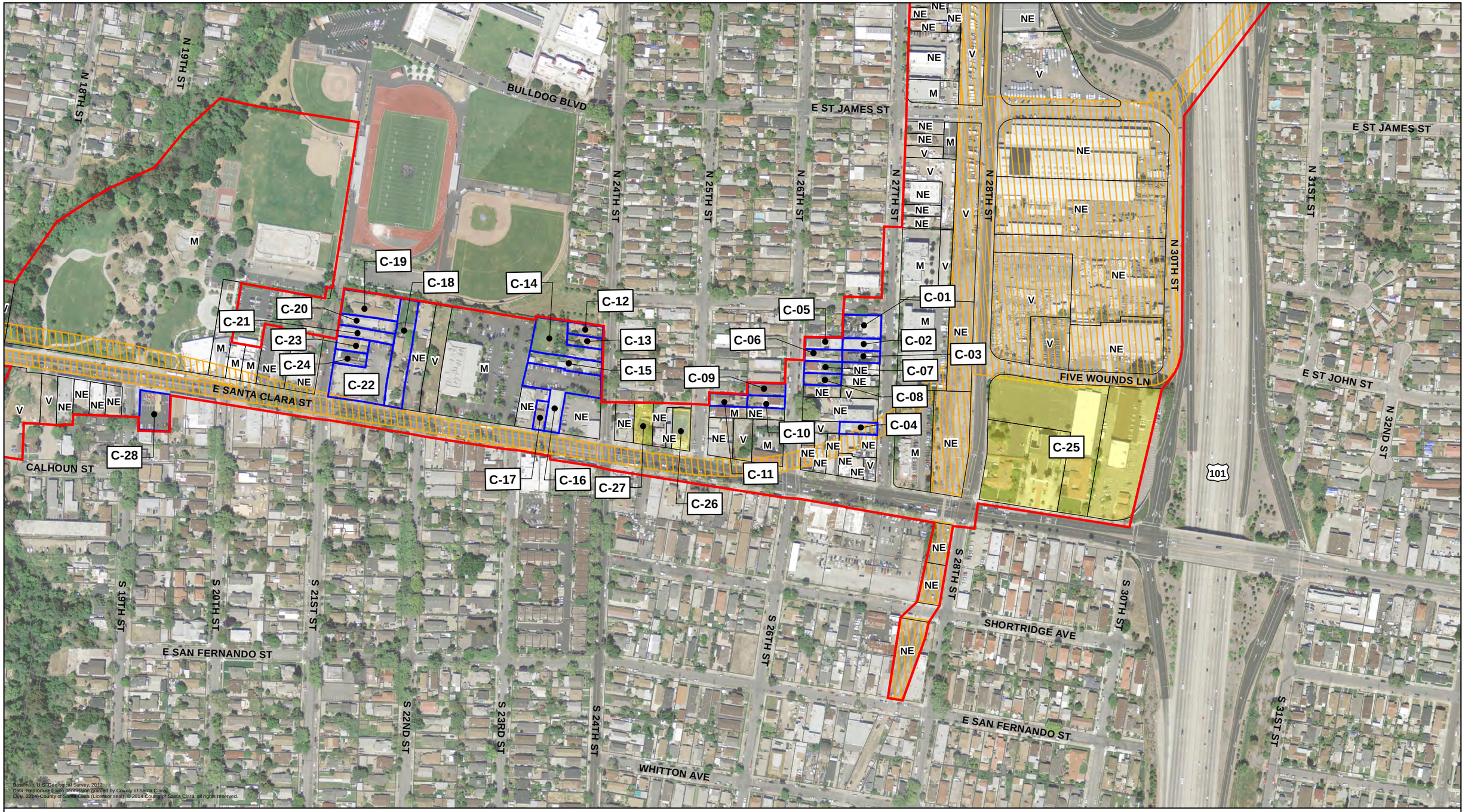
B-01 Map Reference Number (Eligible)
Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER

B-01 Map Reference Number (CEQA only)
Historical Resource for the purposes of CEQA only

B-01 Map Reference Number (Not Eligible)
Not eligible for listing in NRHP or CRHR as per current survey

V = Vacant
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)

Figure A.1-B. Architectural APE



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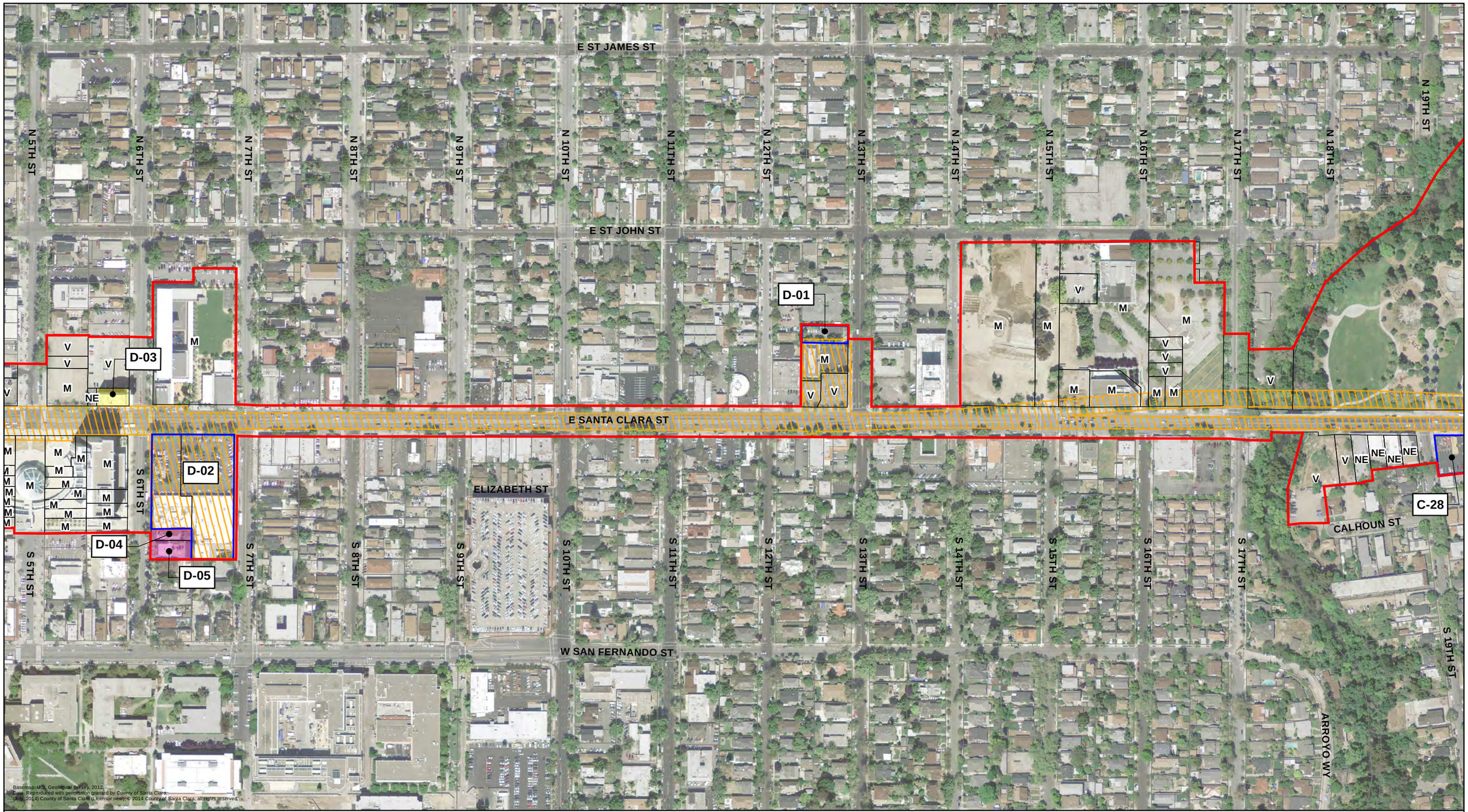

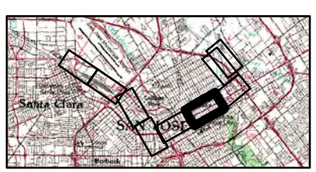

Source: USGS 1:100,000 Quadrangle, San Jose, CA (1978).

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Architectural APE

Historic District

Project Footprint

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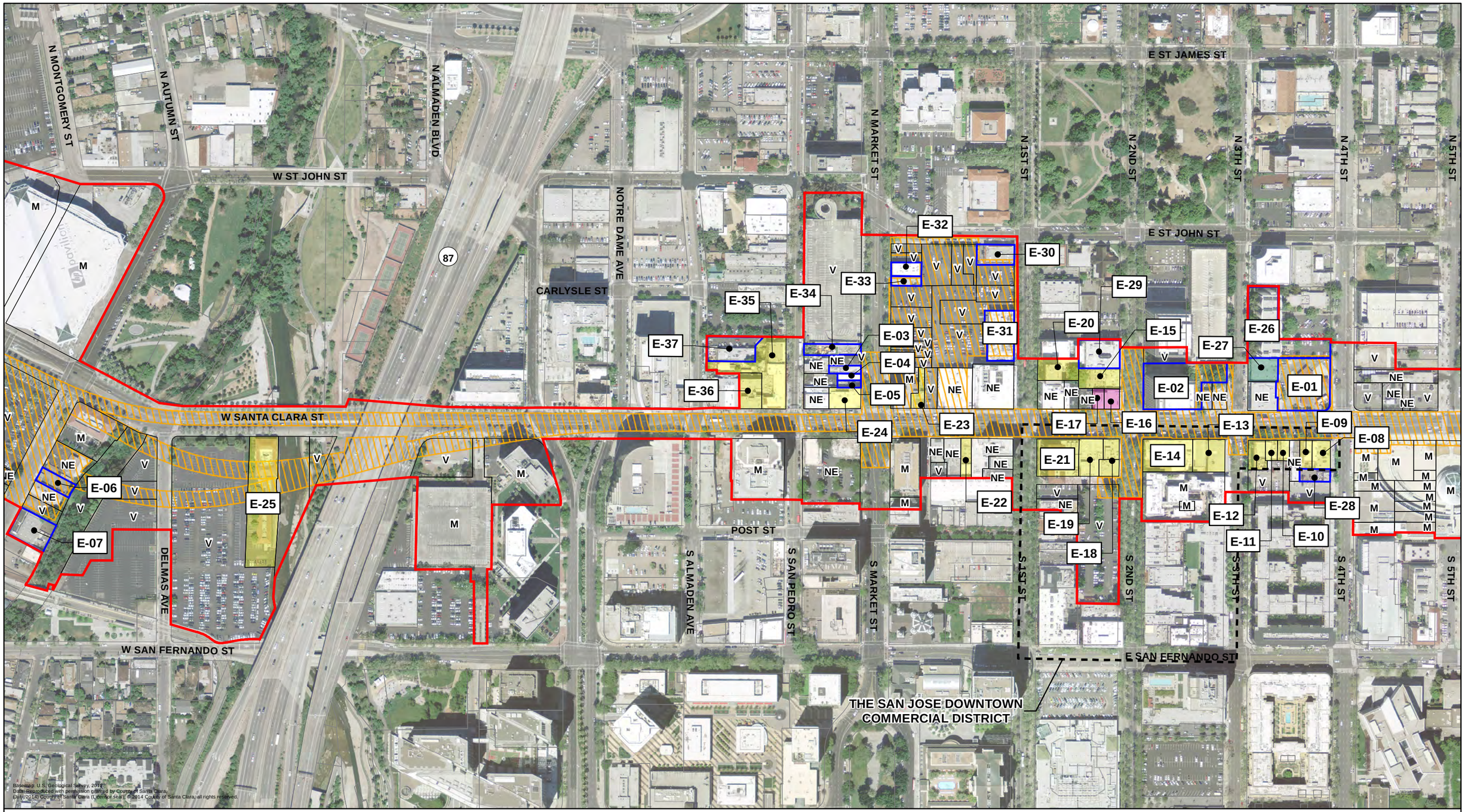
D-01 Map Reference Number (Eligible)
Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER

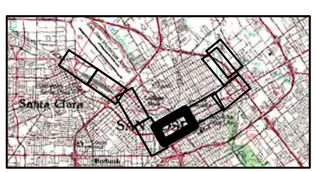
D-01 Map Reference Number (CEQA only)
Historical Resource for the purposes of CEQA only

D-01 Map Reference Number (Not Eligible)
Not eligible for listing in NRHP or CRHR as per current survey

Figure A.1-D. Architectural APE

V = Vacant
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)





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Architectural APE

Historic District

Project Footprint

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E-01 Map Reference Number (Eligible) Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER

E-01 Map Reference Number (CEQA only) Historical Resource for the purposes of CEQA only

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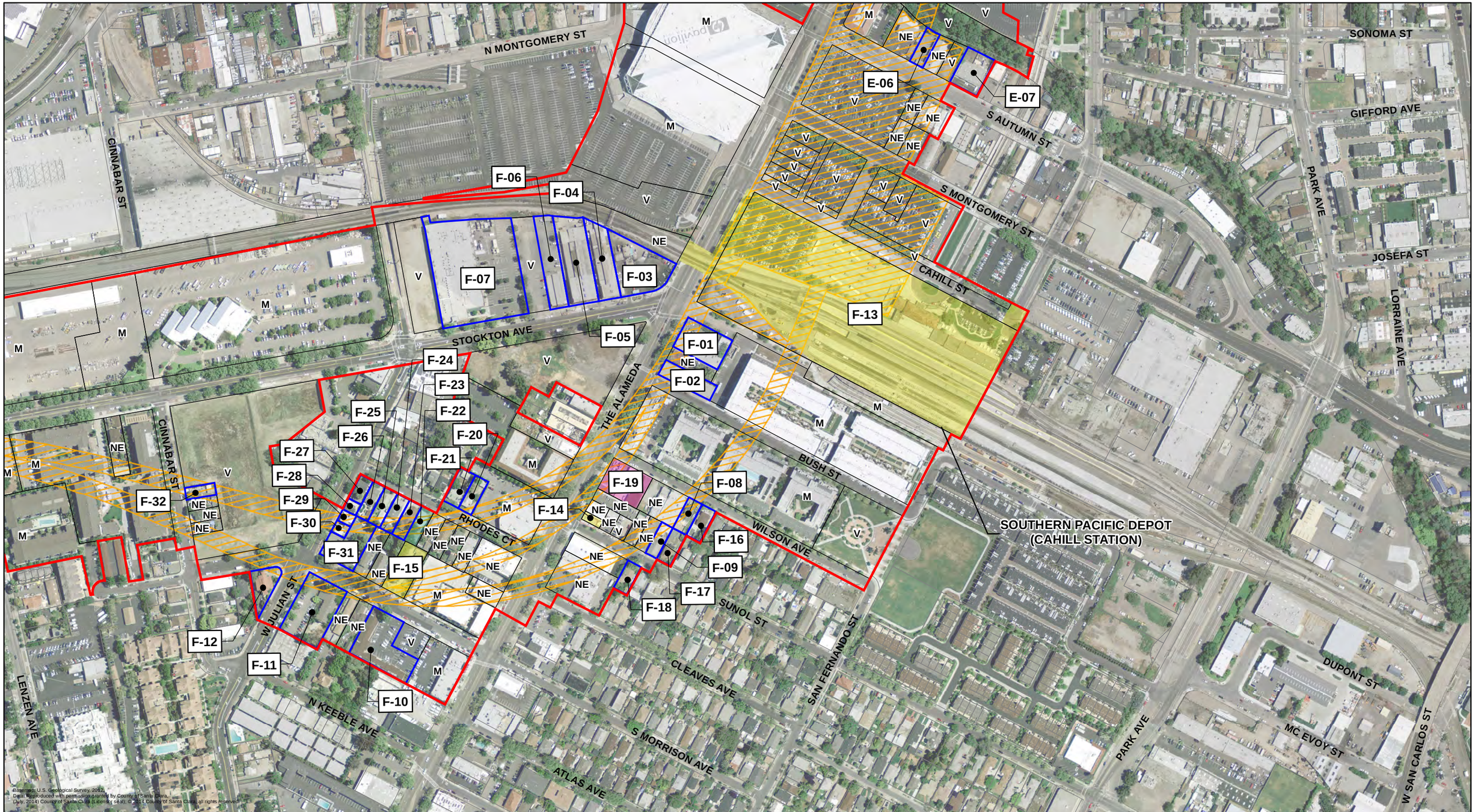
Figure A.1-E. Architectural APE



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Architectural APE

Historic District

Project Footprint

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Eligible for or listed in the NRHP and CRHR as per current survey

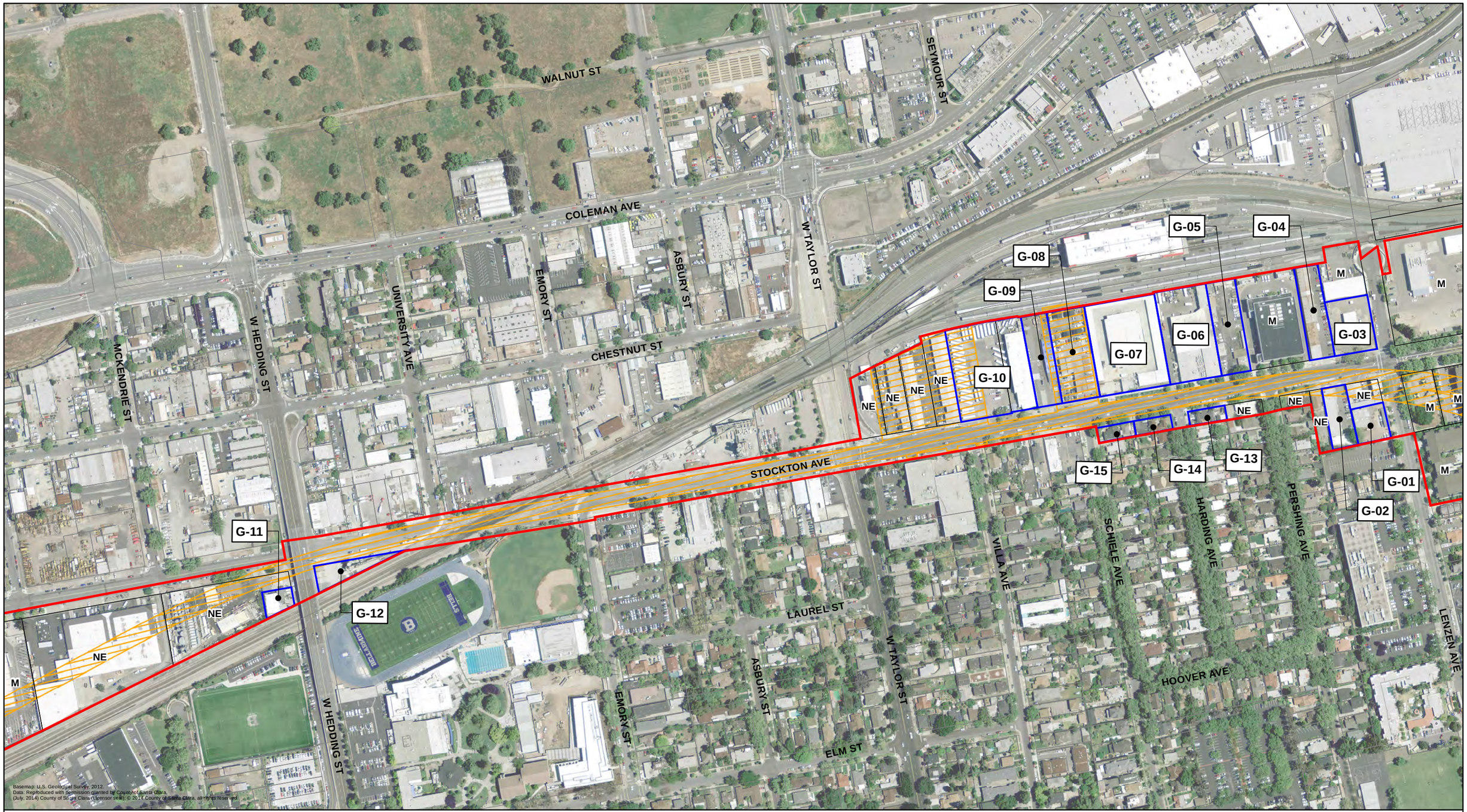
F-01 Map Reference Number (Eligible)
Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER

F-01 Map Reference Number (CEQA only)
Historical Resource for the purposes of CEQA only

F-01 Map Reference Number (Not Eligible)
Not eligible for listing in NRHP or CRHR as per current survey

V = Vacant
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)

Figure A.1-F. Architectural APE



Source: USGS 1:100,000 Quadrangle, San Jose, CA (1978).

0 500 1,000
Feet

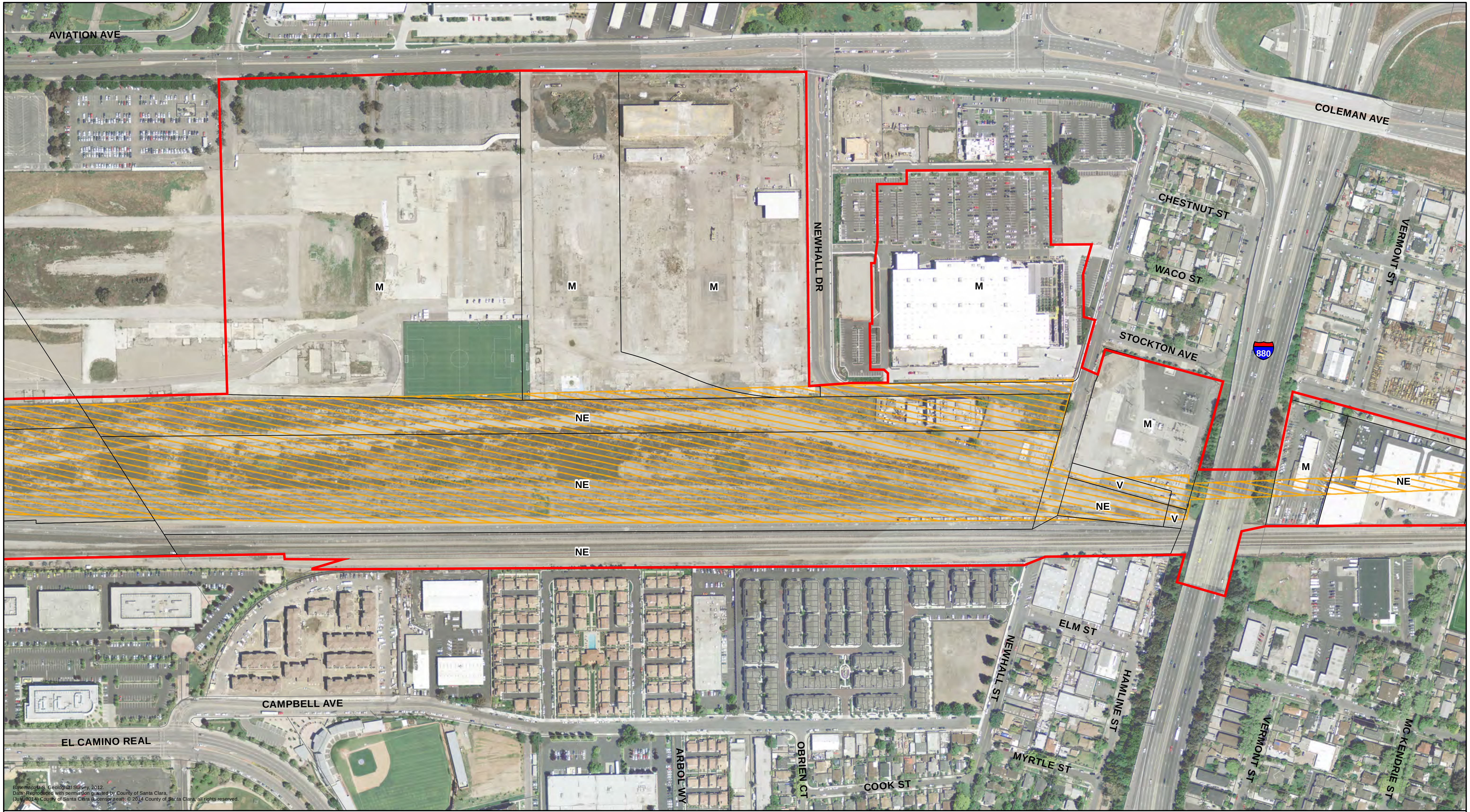
- Architectural APE
- Historic District
- Project Footprint

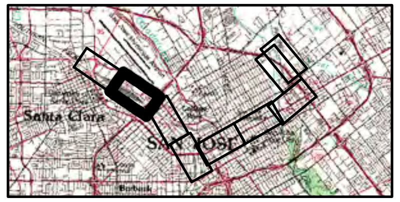
- G-01 — Map Reference Number (Eligible) Eligible for or listed in the NRHP and CRHR as per current survey
- G-01 — Map Reference Number (Eligible) Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER
- G-01 — Map Reference Number (CEQA only) Historical Resource for the purposes of CEQA only
- G-01 — Map Reference Number (Not Eligible) Not eligible for listing in NRHP or CRHR as per current survey

Figure A.1-G. Architectural APE

V = Vacant
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)

Figure A.1-H. Architectural APE





Source: USGS 1:100,000 Quadrangle, San Jose, CA (1978).

0 500 1,000

Feet

- Architectural APE
- Historic District
- Project Footprint

- H-01 Map Reference Number (Eligible) Eligible for or listed in the NRHP and CRHR as per current survey
- H-01 Map Reference Number (Eligible) Previously determined eligible for or listed in the NRHP and CRHR per 2003 HRER
- H-01 Map Reference Number (CEQA only) Historical Resource for the purposes of CEQA only
- H-01 Map Reference Number (Not Eligible) Not eligible for listing in NRHP or CRHR as per current survey

V = Vacant
M = Modern (built after 1975)
NE = Previously Determined Not Eligible with SHPO Concurrence (2003)

Figure A.1-I. Architectural APE

Appendix B

Archaeological APE Map

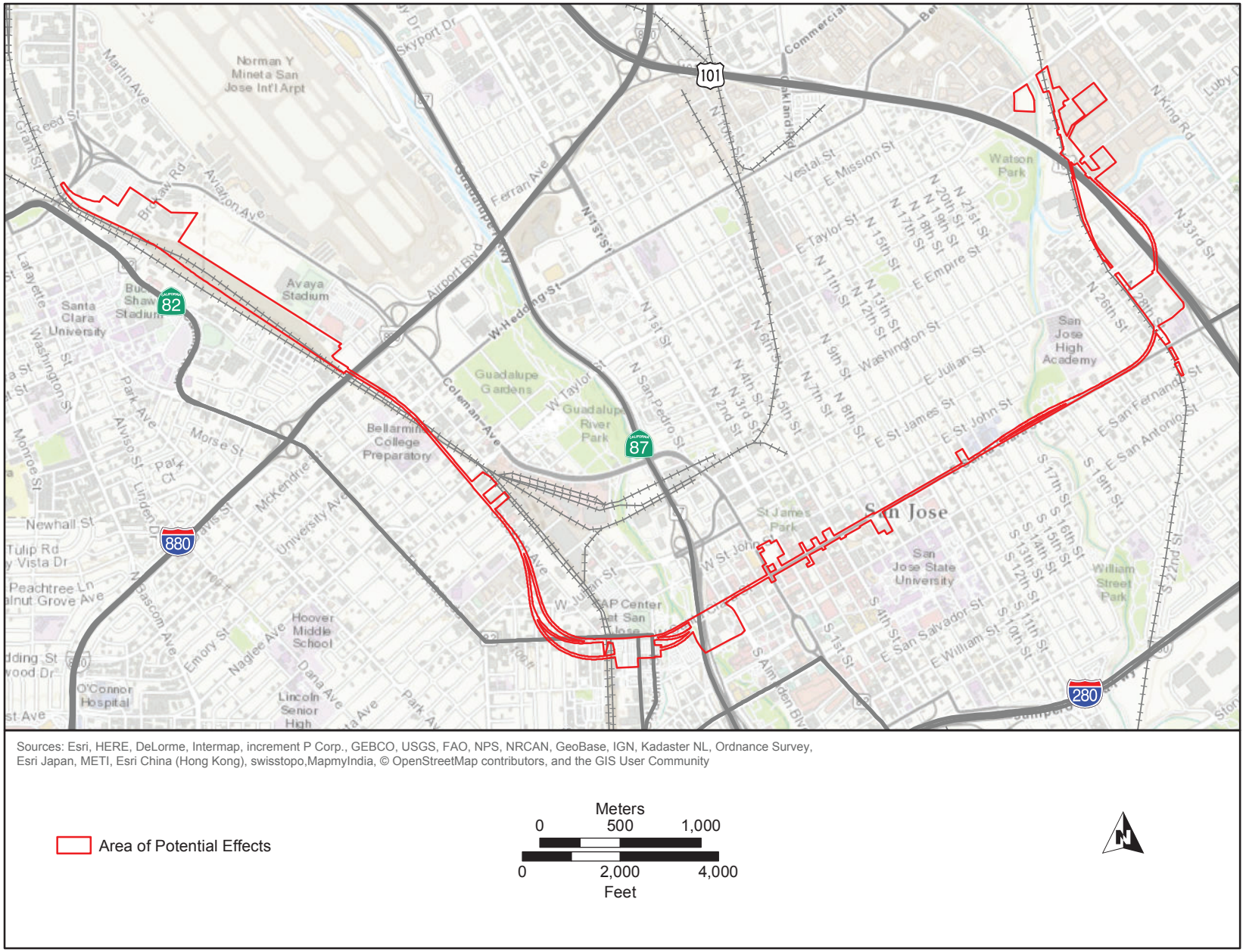
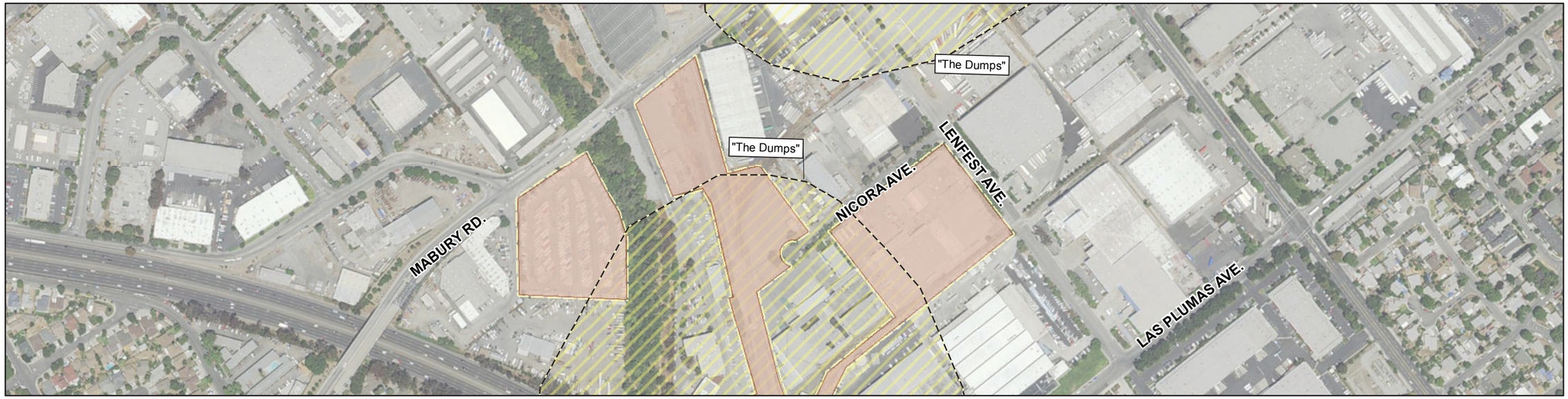
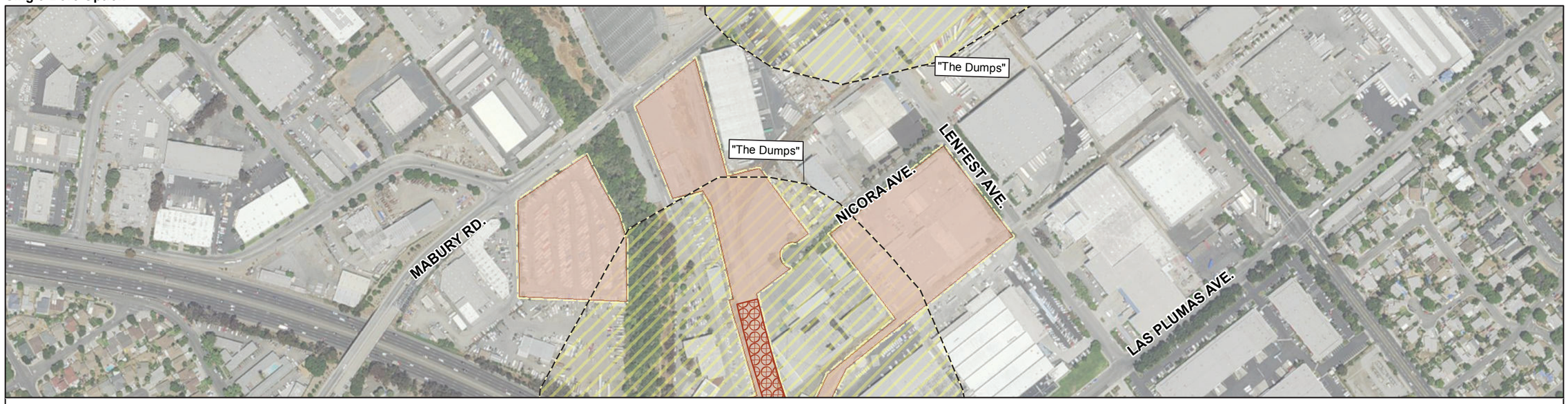


Figure B.2. Archaeological Area of Potential Effects.

Twin-Bore Option



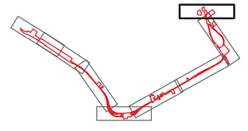
Single-Bore Option



Area of Potential Effects *
"The Dumps"

Tunnel Elements
Retained Cut
Construction Staging Area

Feet
0 200 400 600 800
0 100 200 300
Meters



* - Buffered by 3 meters for cartographic clarity

Figure B.2-A. Archaeological Area of Potential Effects Showing Construction Detail (1 of 8).

Twin-Bore Option

Single-Bore Option

Potential Archaeological Sites
Area of Potential Effects *
"The Dumps"

* - Buffered by 3 meters for cartographic clarity

Tunnel Elements
Cut and Cover
Retained Cut
Single Tunnel
Construction Staging Area
Stations, Parking, System Facilities

Feet
0 200 400 600 800
0 100 200 300
Meters

Figure B.2-B. Archaeological Area of Potential Effects Showing Construction Detail (2 of 8).

Twin-Bore Option

Single-Bore Option

Potential Archaeological Sites
Area of Potential Effects *

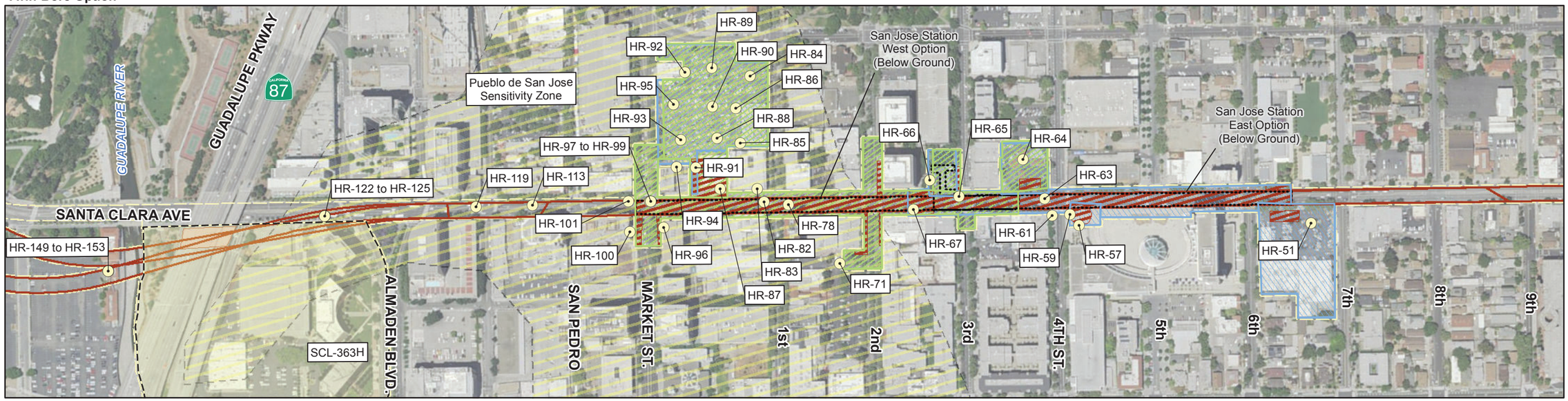
Tunnel Elements
Cut and Cover
Single Tunnel
Construction Staging Area
Stations, Parking, Systems Facilities

Feet
0 200 400 600 800
0 100 200 300
Meters

* - Buffered by 3 meters for cartographic clarity

Figure B.2-C. Archaeological Area of Potential Effects Showing Construction Detail (3 of 8).

Twin-Bore Option



Single-Bore Option

Potential Archaeological Sites
Area of Potential Effects *
Archaeological Site
Pueblo de San Jose Sensitivity Zone

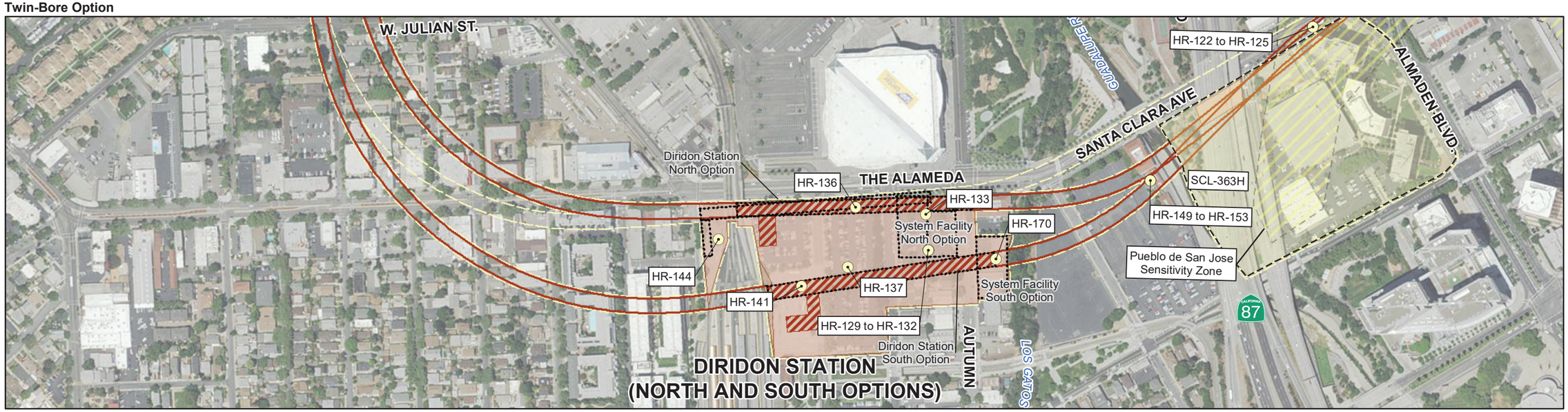
* - Buffered by 3 meters for cartographic clarity

Tunnel Elements
Cut and Cover
Single Tunnel
Construction Staging Area
Construction Staging Area (San Jose West Station)
Construction Staging Area (San Jose East Station)
Stations, Parking, System Facilities

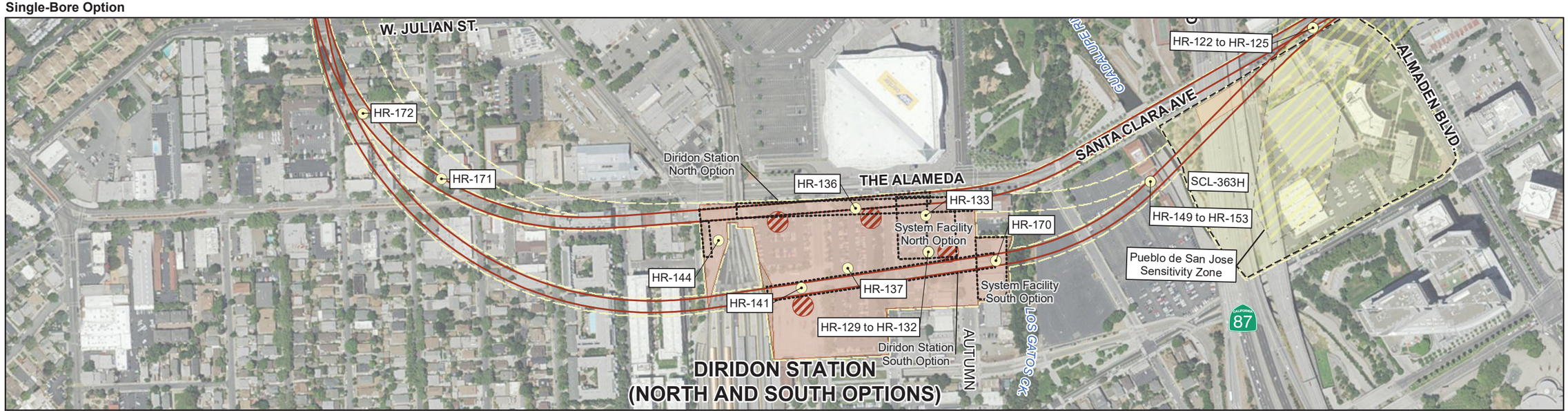
Feet
0 200 400 600 800
0 100 200 300
Meters

Figure B.2-D. Archaeological Area of Potential Effects Showing Construction Detail (4 of 8).

Twin-Bore Option



Single-Bore Option



Potential Archaeological Sites
Area of Potential Effects *
Archaeological Site
Pueblo de San Jose Sensitivity Zone

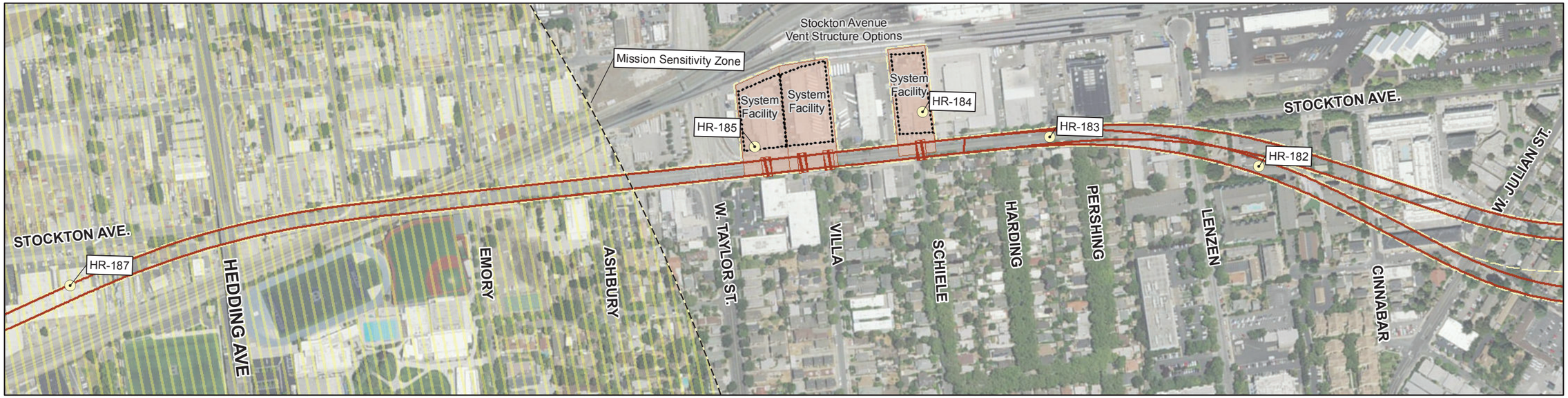
* - Buffered by 3 meters for cartographic clarity

Tunnel Elements
Cut and Cover
Single Tunnel
Construction Staging Area
Stations, Parking, Systems Facilities

Feet
0 200 400 600 800
0 100 200 300
Meters

Figure B.2-E. Archaeological Area of Potential Effects Showing Construction Detail (5 of 8).

Twin-Bore Option



Single-Bore Option

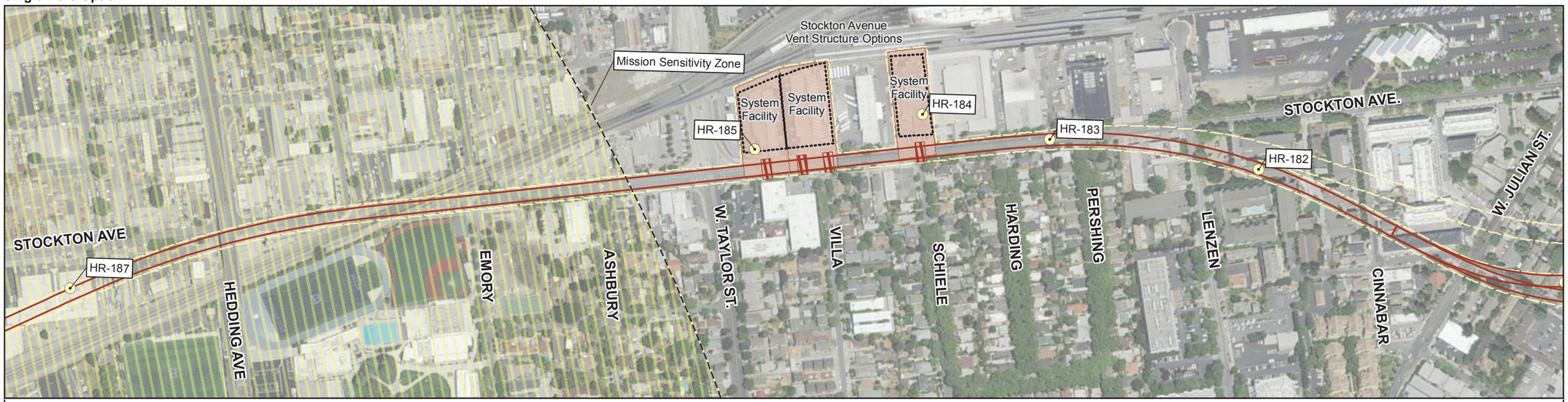
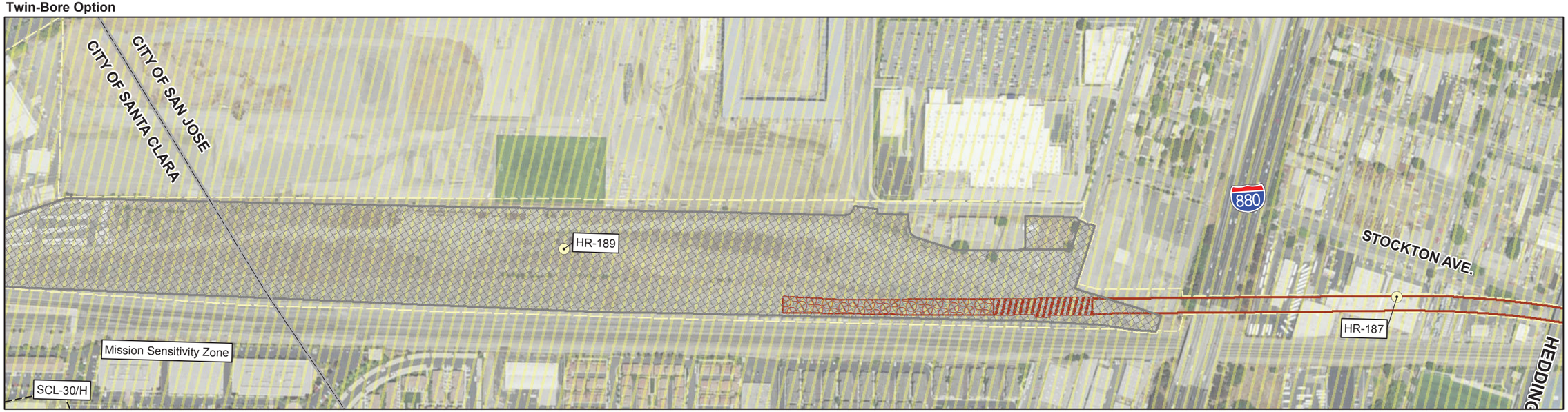
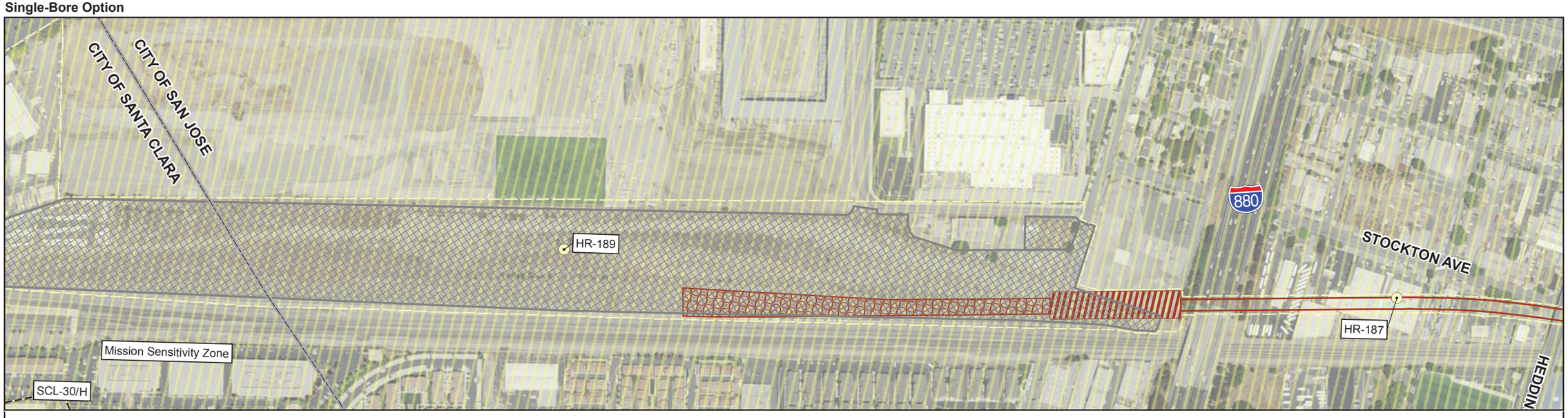


Figure B.2-F. Archaeological Area of Potential Effects Showing Construction Detail (6 of 8).

Twin-Bore Option



Single-Bore Option



Potential Archaeological Sites
Area of Potential Effects *
Archaeological Site
Mission Sensitivity Zone

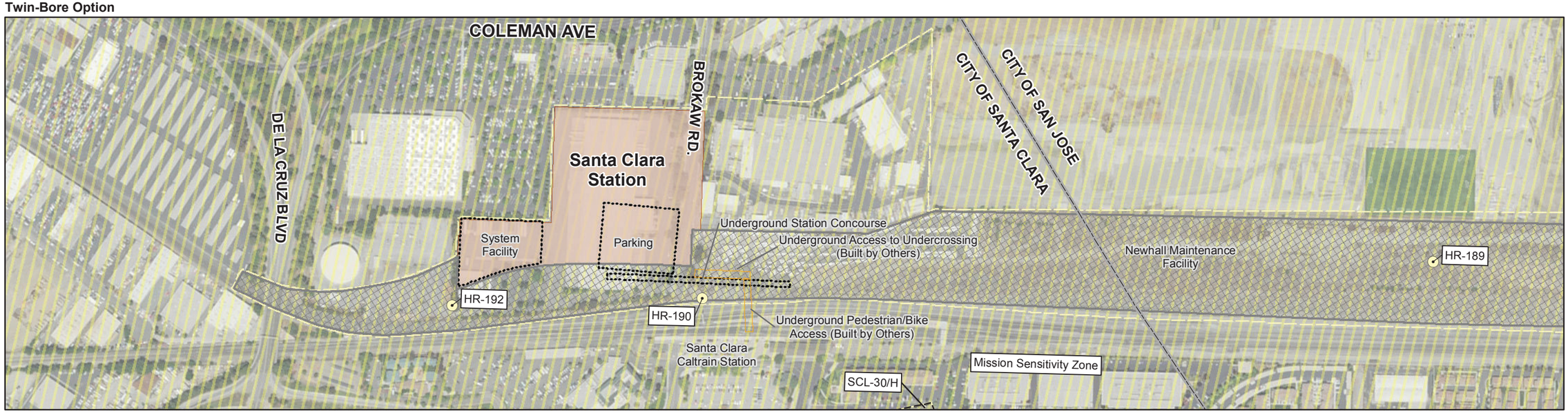
Tunnel Elements
Cut and Cover
Retained Cut
Single Tunnel
Newhall Maintenance Facility

Feet
0 200 400 600 800
0 100 200 300
Meters

* - Buffered by 3 meters for cartographic clarity

Figure B.2-G. Archaeological Area of Potential Effects Showing Construction Detail (7 of 8).

Twin-Bore Option



Single-Bore Option

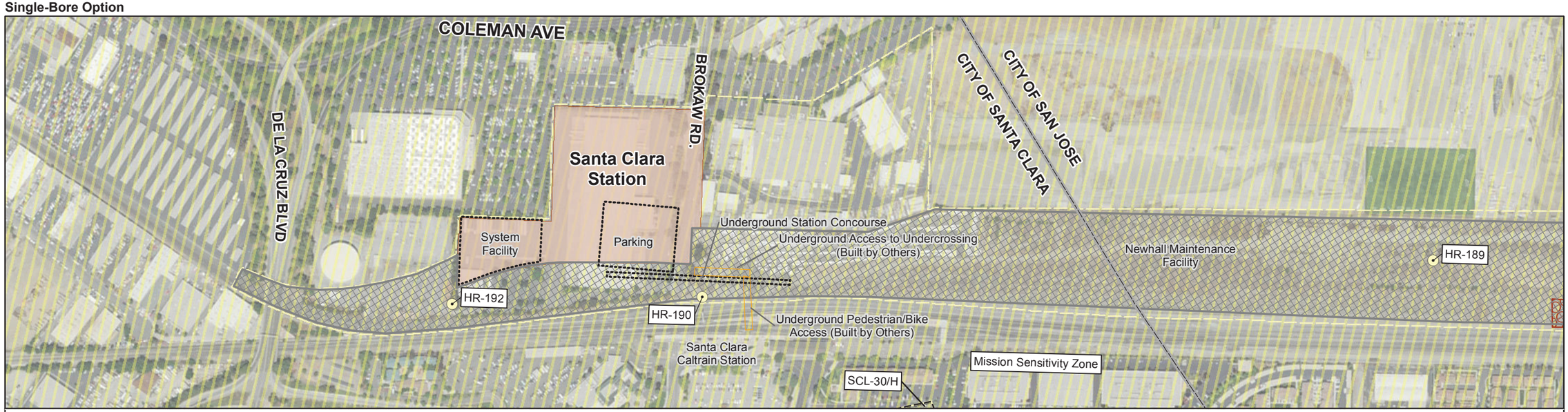


Figure B.2-H. Archaeological Area of Potential Effects Showing Construction Detail (8 of 8).