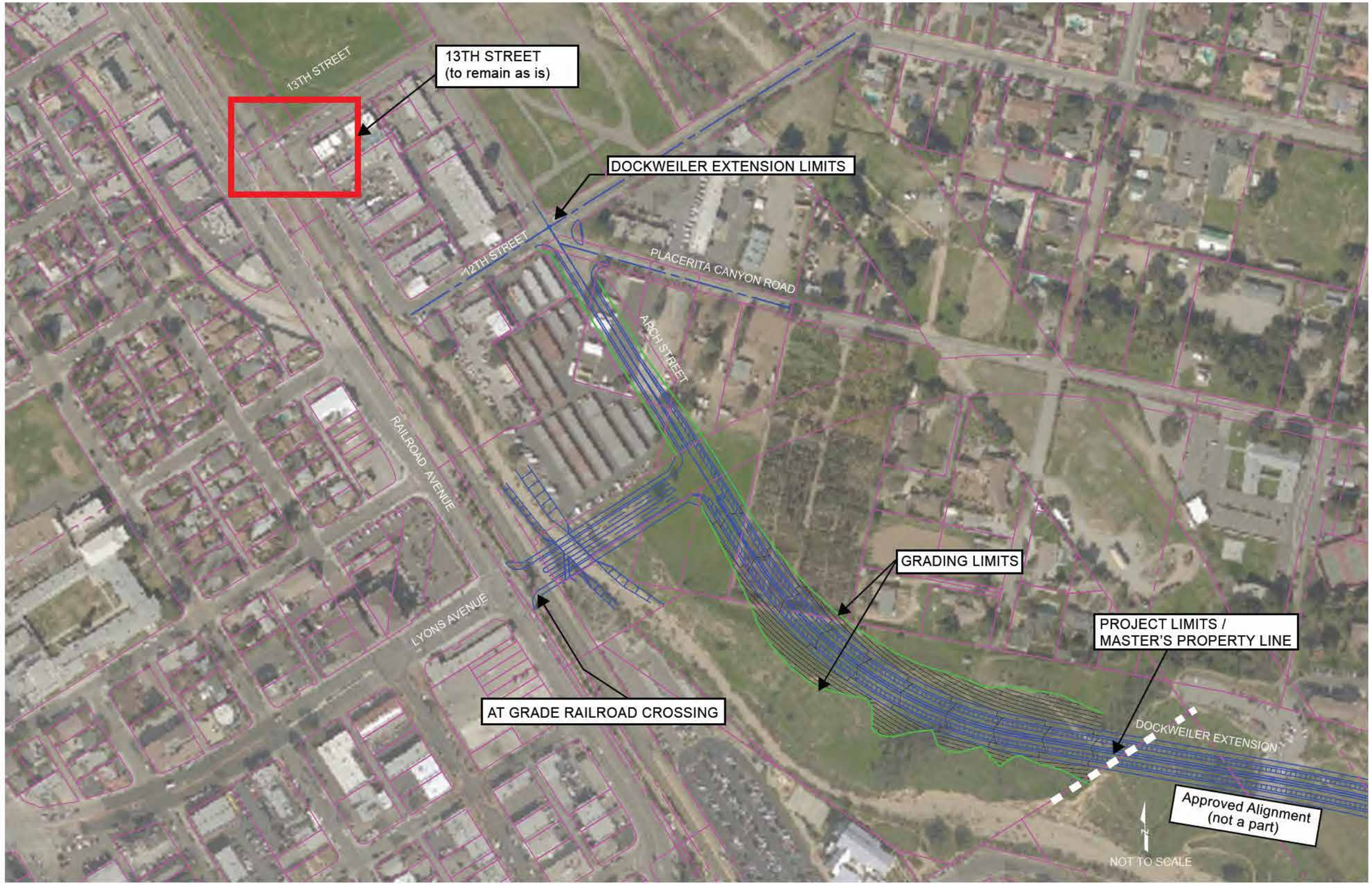
6. PROJECT ALTERNATIVES
3. ALTERNATIVE 1 (PROPOSED ALIGNMENT WITH THE 13TH STREET RAIL CROSSING)

Similar to the Proposed Project, the Alternative 1 Project would involve the development of the proposed roadway alignment and associated infrastructure, which would include a new at-grade crossing and a secondary east-west arterial roadway connecting Lyons Avenue to the proposed Dockweiler Drive extension that would connect Dockweiler Drive to a new five-leg intersection at the Arch Street/12th Street/Placerita Canyon intersection. The Alternative 1 Project differs from the Proposed Project by leaving the existing at-grade crossing at the intersection of 13th Street and Railroad Avenue as is instead of removing the crossing, as proposed by the Proposed Project. The proposed alignment of Dockweiler Drive under Alternative 1 is illustrated in Figure 6.3-1. Figure 6.2-2 provides an aerial photograph depicting the existing configuration of the at-grade railroad crossing at 13th Street and Railroad Avenue, which will remain in its current configuration without any future improvements.

Similar to the Proposed Project, the intersection of Arch Street, 12th Street, Placerita Canyon and Dockweiler Drive would be improved with one of three intersection design configurations. For an illustration of the proposed design configurations, see Figure 2-11, Option A - 5-Legged Intersection (Option A), Figure 2-12 - Option B – Traffic Circle, and Figure 2-13 – Option C - 3-Legged Intersection, respectively, in Section 2.0, Project Description.[1]

[1] *It should be noted that Figures 2-11, 2-12 and 2-13 are referred to for purposes of illustrating the three potential intersection configurations at the Arch Street/12th Street/Placerita Canyon/Dockweiler Drive intersection. Those figures show the closure of the 13th Street railroad crossing and intersection at Railroad Avenue, which would be retained in its current configuration under Alternative 1.*



Source: David Evans and Associates, May 2017.

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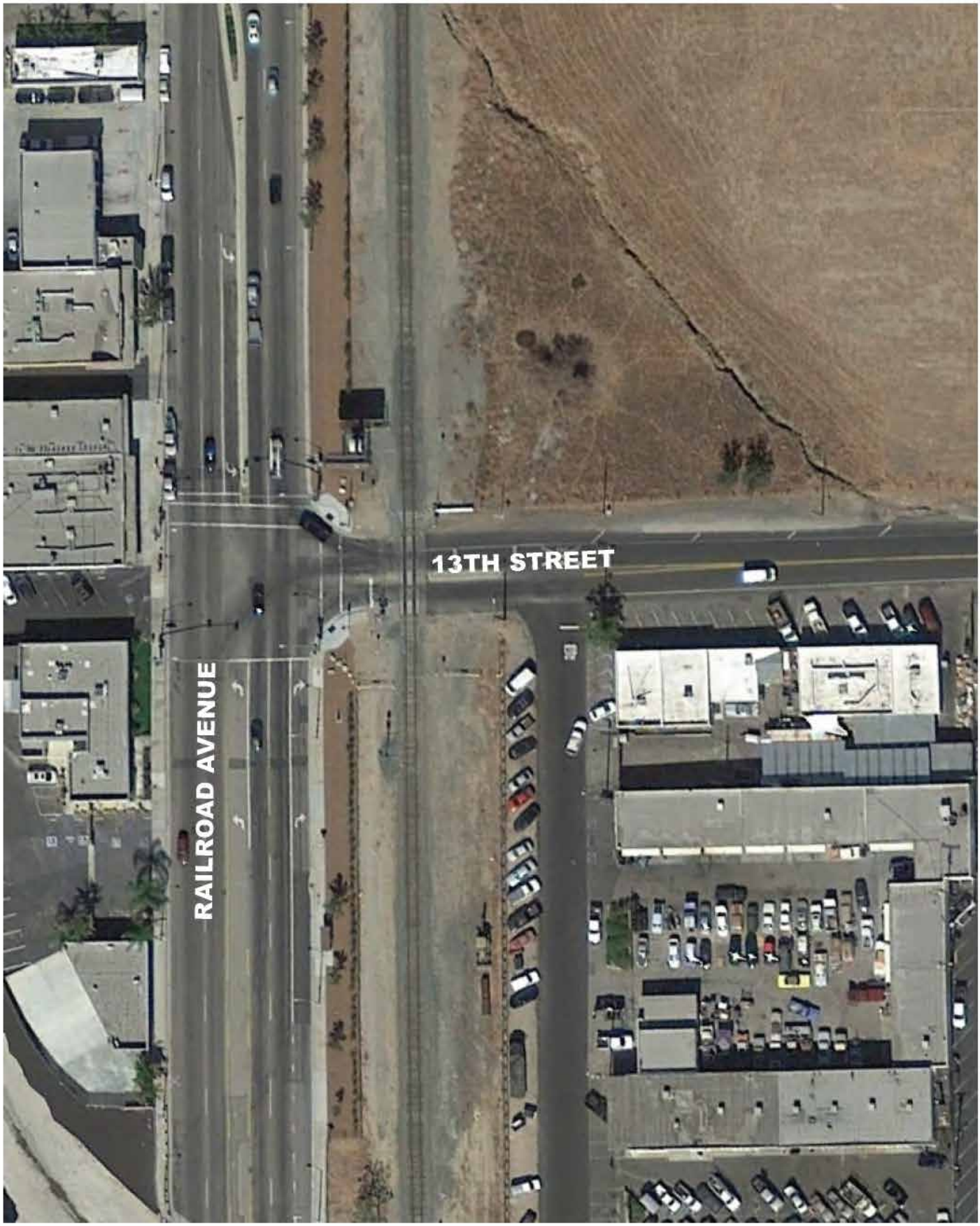
Figure 6.3-1
Alternative 1 Project



Source: Google Earch, 2017.

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Figure 6.3-2
13th Street and Railroad Avenue Existing Conditions (To Remain)

ENVIRONMENTAL ANALYSIS

Aesthetics

Temporary Construction Impacts

The Alternative 1 Project would similarly impact existing views and aesthetic character of the area by grading, stockpiles or debris and soil, building materials and construction equipment, all of which could occupy the field of view of passing motorists, pedestrians and nearby residents. The construction site would continue to be visible from the residential properties on Aden Avenue and from passing motorists on Lyons Avenue, Railroad Avenue, Market and Race Streets, and at the Arch Street/12th Street/Placerita Canyon intersection with the development of the Alternative 1 Project. Thus, the existing visual character of the approximate 5-acre Project Site would be adversely impacted throughout the duration of the construction period. Therefore, impacts related to aesthetic character of the area during construction would be the same as compared to the Proposed Project, where impacts would be considered significant but temporary. Implementation of Mitigation Measure 4.1-1 would also be recommended for the Alternative 1 Project.

Long Term Operational Impacts

Upon completion of the Alternative 1 Project the aesthetic character of the Project Site and its immediate surroundings would be permanently altered. Views of the intersection at Lyons Avenue and Railroad Avenue will be altered, as the Proposed Project includes re-profiling the intersection of Lyons Avenue and Railroad Avenue to allow the construction of a new SCRRA/Union Pacific railroad at-grade crossing east of Railroad Avenue and the addition of a new bridge crossing Newhall Creek. Views of the intersection of Lyons Avenue and Railroad Avenue and the hillside on the southeast portion of the Project Site will be altered by grading for the proposed roadway alignment. Views of the Project Site at the intersection of Railroad Avenue and 13th Street would be similar to existing views of the intersection, since the Alternative 1 Project includes the improvement of the at-grade railroad crossing. Like the Proposed Project, the roadway extension would be developed in accordance with the City's roadway standards and design guidelines to ensure the graded hillsides, medians, and walkways are landscaped in a manner that maintains the visual aesthetic quality and character of the City's roadway infrastructure. Therefore, impacts related to long-term operation would be the same as compared to the Proposed Project, which would have a less than significant impact.

Similar to the Proposed Project, Alternative 1 would require an oak tree permit for the loss of two oak trees that are located within the proposed grading limits and right-of-way alignment and a Hillside Review Permit for the grading of an existing hillside. Approval of the Oak Tree Permit and Hillside Review Permit would reduce aesthetic impacts to less than significant levels.

Alteration of A Significant Ridgeline

Similar to the Proposed Project, construction of the proposed roadway alignment under Alternative 1 will permanently alter a significant ridgeline as designated in the City of Santa Clarita General Plan. However, as noted in Section 4.1, Aesthetics, the eastern segment of the Dockweiler alignment was previously approved under a separate project entitlement for The Master's University in 2009, which included a Ridgeline Alteration Permit for the eastern segment of this ridgeline.[2] As part of the approved entitlements for The Master's University Master Plan in 2009, the irreversible grading and re-contouring of the ridgeline was approved to the western limit of the Master's University Campus. As shown in Figure 4.1-1, the grading limits of the Proposed Project would retain the gradual elevation profile of the base of the ridgeline leading to the Master's University Campus. Limited views of the altered portion of the ridgeline within the Proposed Project limits would be partially visible from the public rights-of-way along Market Street and Race Street to the south of the Project Site. As a project design feature the grading plan incorporates landform grading practices to blend the manufactured slopes and required drainage benches into the natural topography to the maximum extent feasible. Plant materials will be utilized to protect slopes from slippage and soil erosion and minimize the visual effects of grading and construction on a hillside area. With incorporation of the project design features to develop and improve a new roadway extension that is consistent with the City's roadway design standards, the Proposed Project would result in a less than significant impact with respect to the loss of an aesthetic natural feature. Therefore, impacts related to the loss of a significant ridgeline would be the same as compared to the less than significant impact anticipated for the Proposed Project. With approval of a Hillside Review Permit, aesthetic impacts associated with the grading of Alternative 1 would be reduced to less than significant levels.

Visual Character

Similar to the Proposed Project, the Alternative 1 Project would not introduce buildings or development that would block existing views or substantially degrade the visual character of the existing site. The Alternative 1 Project also includes pedestrian, equestrian, and bicycle improvements to Dockweiler Drive that would include wide sidewalks, Class II bike lanes on each side, and a multi-purpose trail on the east side. Class II bike routes will provide a striped lane for one-way bike travel and will be marked with signs and pavement striping. Multi-purpose trails are to be unpaved and will be available for equestrian, hiking, and mountain bike use. These project features would increase accessibility to scenic natural resources including the Newhall Creek and surrounding ridgelines and mountains. Therefore, impacts related to visual character would be less than significant.

Roadway Light and Glare

Ambient nighttime lighting for the Alternative 1 Project would be similar to that of the Proposed Project. The Alternative 1 Project would introduce nighttime lighting to the Project Area, which will include pole-mounted street lights at intersections, bollards along Dockweiler Drive, flashing safety lighting for the proposed at-grade crossing, and would contribute to additional light and glare from the headlights of

[2] *Ibid.*

vehicles utilizing the roadway. Lighting associated with the Alternative 1 Project uses is not anticipated to substantially impact any surrounding sensitive uses as the street lights would be installed with downward directional fixtures and would not create light trespass onto any adjacent properties. Light emanating from the Alternative 1 Project would be a relatively low-level indirect source of light illuminating the roadway and pedestrian walkways and would not adversely impact other properties in the immediate area. Additionally, the steep terrain and orientation of the southeastern portion of the Project Site would shield vehicle headlights, signage lighting and street lights from impacting the residential properties within the Placerita Canyon community to the east and along Market and Race Streets to the west. Overall, the Alternative 1 Project would be expected to slightly increase ambient lighting in the area, but compliance with the design standards and requirements established in the Santa Clarita Municipal Code Section 17.51.050 would mitigate lighting impacts to a less than significant level. Therefore, impacts related to roadway light and glare would be less than significant.

Air Quality

Construction

Construction of the Alternative 1 Project would occur over an approximately 12-month timeframe and would involve clearing, grading, excavation, trenching, and asphalt paving. Similar to the Proposed Project, construction of the Alternative 1 Project would require 4,990 cubic yards (cy) of cut, 2,760 cy of fill, and 2,230 cy of soil export associated with grading and excavation. Sources of emissions during construction include: stationary and mobile uses of construction equipment, construction vehicles (heavy-duty construction vehicles and worker vehicles), and energy use. Additionally, earthwork and construction activities would generate fugitive dust emissions. These construction-related emissions and their associated air quality impacts would be short-term in nature and limited only to the period when construction activity is actively taking place. The Alternative 1 Project's construction emissions would be below SCAQMD's significance thresholds for all criteria pollutants. Therefore, the Alternative 1 regional construction air quality emissions would be less than significant.

AQMP Consistency

The Alternative 1 Project would not exceed the AQMD's significance thresholds for regional construction emissions and thus would not increase the frequency or severity of existing air quality violations or cause or contribute to new air quality violations within the Basin. The Alternative 1 Project is consistent with the AQMP and would not interfere with attainment of air quality levels identified in the AQMP. Similar to the Proposed Project, the Alternative 1 Project would help reduce congestion and vehicles per miles travelled by providing sidewalks and bicycle lanes and by providing direct access from the residential area and Master's University area to the Jan Heidt Newhall Metrolink Station and Old Town Newhall. The Alternative 1 Project encourages alternative modes of transportation other than motor vehicles and would be consistent with the goals and objectives of the AQMP to reduce vehicle emissions throughout the Basin.

Localized Construction Emissions

Similar to the Proposed Project, the Alternative 1 Project would result in significant localized air emissions in close proximity to residential land uses within 100 meters of the Project Site on a temporary and intermittent basis during construction. Localized NOx and CO emissions would be below the significance thresholds at all sensitive receptor locations. However, localized thresholds would be exceeded for PM10 and PM2.5 emissions at two locations: (1) the single family residential land uses located immediately north of the Project Site (within a proximity of 100 meters) and (2) the residential land uses within 100 meters south of the Project Site in the vicinity of Market Street and Race Street. Localized emissions would be below the stated thresholds for any land use located further than 100 meters from the Project Site. Therefore, notwithstanding implementation of mitigation measures 4.2-1 through 4.2-4, localized air quality impacts resulting from construction activities would be considered significant and unavoidable.

Operational Emissions

Although the Alternative 1 Project would not directly generate any new vehicle trips, it would result in changes to the traffic circulation in the vicinity and would alter the average daily traffic volumes and peak hour traffic volumes at local intersections. A CO hotspot analysis was conducted for the Proposed Project, and as the Alternative 1 Project is within the same envelope as the Proposed Project, it was found that, under worst-case conditions, future CO concentrations at each intersection would not exceed the state 1-hour and 8-hour standards with or without the development of the Proposed Project. Therefore, no significant project-related impact would occur relative to future carbon monoxide concentrations of the Alternative 1 Project. The Alternative 1 Project would have a less than significant impact with respect to this criterion.

Biological Resources

Habitat Modification

Vegetation

The Alternative 1 Project Site grading plans for the roadway extension of Lyons Avenue to Dockweliler drive to the south, and Arch Street to the north, would be identical to the Proposed Project. The grading plans indicate that within the Project Site 2.32 acres of vegetation would be removed (100 percent of the vegetation resources present). Of the vegetation communities impacted Disturbed California Sagebrush-California Buckwheat Scrub is the dominant plant community present by area and approximately 0.63 acre of this habitat would be lost through site grading and project implementation. The loss of 2.32 acres of vegetation is considered adverse; although, due to the Site's disturbance history, its small size, the lack of sensitive plant communities, the lack of structure for wildlife, and high percentage of invasive and non-native plant species generally associated with disturbed areas, impacts associated with the loss of 2.32 acres of vegetation present on-site is considered less than significant. Similar to the Proposed Project, this alternative would require the removal of two oak trees, which would be considered a significant impact under both the City of Santa Clarita and CEQA. Replacement oak trees would be planted in the

number necessary to comply with the requirements stipulated in the Oak Tree Permit issued by the City. With approval of the required oak tree permits, and implementation of Mitigation Measure 4.3-7, impacts upon the loss or pruning of any oak tree would be reduced to less than significant levels.

Wildlife

Similar to the Proposed Project, construction activity and grading operations of the Project Site for the Alternative 1 Project would disturb and/or threaten the survival of common wildlife species present on-site. It is expected that species of low mobility, particularly small mammals, amphibians, and reptiles, would be lost during site preparation, grading, and construction. Site grading and project implementation would eliminate approximately 2.32 acres of natural habitat present on-site, and would result in an incremental reduction in native wildlife species abundance and diversity. However, due to nearby urban development and the associated human disturbance, field investigations indicate wildlife diversity and abundance on the Project Site is relatively low. Most the species of mammals, birds, and reptiles observed on-site or thought to occur on-site are relatively common. Project implementation is not expected to cause current wildlife population of common species on or adjacent to the Project Site to drop below self-sustaining levels. Therefore, impacts to common wildlife species are not considered significant.

Project-related activities associated with site preparation and construction could result in the direct loss of individuals of one special-status wildlife species (the silvery legless lizard) and of active nests or the abandonment of active nests by adult birds should grading occur during nesting season. The loss of a California species of special concern and active bird nests would be a considered significant without mitigation. Implementation of mitigation measures 4.3-2 and 4.3-3 would reduce impacts to the silvery legless lizard and nesting birds to a less than significant level.

Federally Protected Wetlands

Based on field investigations, two CDFW jurisdictional features occur within the Project Site, the Newhall Creek and a small ephemeral drainage that is a tributary to Newhall Creek. There is also a small area of narrow-leaf willow thicket, which probably does not qualify as a Federally jurisdictional wetland. The Alternative 1 Project would result in both temporary and permanent impacts to the areas of the Newhall Creek and its associated tributary and are classified as “riverine and related permanent water, with continuous flow at least seasonally.” With the implementation of MM 4.3-3, impacts to jurisdictional resources would be reduced to a less than significant level.

Wildlife Movement and Corridors

The Project Site for Alternative 1 is generally surrounded on three sides by development and road networks. However, Newhall Creek does extend through the Site and provides passage through developed areas between the Santa Clarita River and the Angeles National Forest to the southeast and is considered a part of a wildlife movement or migration corridor. To limit impacts to wildlife movement, four 25-foot wide and 8-foot deep openings in a concrete box bridge with 80-foot wide soft base and 2:1 protected side slopes is proposed where the proposed roadway extension crosses Newhall Creek. As designed, this bridge would not result in any barrier to wildlife movement and would serve to protect Newhall Creek as

a functioning wildlife movement corridor. The Alternative 1 Project as proposed would not result in significant impacts to wildlife movement.

Construction Activity

Construction-related activities, particularly site clearing, grading, and the implementation of the road surface, could have adverse effects on plant and wildlife habitat, and together, would be considered a significant impact. Implementation of Mitigation Measure 4.3-4 would reduce these construction-related impacts to a less than significant level.

Operation

Increase in Populations of Non-Native Species

Non-native plants and wildlife are expected to increase on-site, because these species are more adapt to urban environments and can out-compete native species. Historical and ongoing development in the vicinity of the Project Site has already supported continual and ongoing increase and proliferation of non-native plant and wildlife species in the vicinity of the Project Site. Development of the Alternative 1 Project is not expected to substantially increase the distribution of non-native plants and wildlife. With compliance to the mitigation measure 4.3-5, Project impacts would be less than significant.

Increased Light and Glare

It is anticipated that nighttime lighting would increase in areas adjacent to the Project Site, which can disturb breeding and foraging behavior, movement, and can potentially alter breeding cycles of birds, mammals, and nocturnal invertebrates. Because of surrounding development around the Project Site, nearby natural areas already receive some nighttime lighting. The Alternative 1 Project would increase light and glare effects near to the Newhall Creek corridor. Implementation of mitigation measure 4.3-6 would decrease this impact to a less than significant level.

Stormwater and Urban Runoff

Similar to the Proposed Project, it is expected that stormwater runoff from the Alternative 1 Project would be limited to pavement runoff during periodic storm events. It is reasonable to assume runoff could substantially affect special-status species potentially occurring downstream from the Project Site (i.e. Newhall Creek), incrementally diminish habitat, and degrade the quality of the environment. With the compliance to City's standard stormwater requirements and required design criteria, impacts to Newhall Creek resulting from Stormwater runoff would be less than significant.

Cultural Resources

Cultural and Historic Resources

No cultural or historic habitable structures are located on-site, and as such, the Alternative 1 Project would not have the potential to adversely impact any historic or cultural resources.

Archaeological Resources

No known archeological sites are identified within the Project Site for the Alternative 1 Project. While, portions of the Project Site are improved with roadways, the Alternative 1 Project will consist of earthwork activities, such as grading and excavation, in areas that are currently undeveloped. Construction-related earthwork activities may result in the accidental discovery of prehistoric or historic archaeological resources or Native American burial sites. Implementation of mitigation measures 4.4-1 will reduce impacts to a less than significant level.

Paleontological Resources

The records search conducted by the Vertebrate Paleontology Department of the Natural History Museum of Los Angeles County yielded no known fossil localities within the Project Site. The closest vertebrate fossil localities are from the Saugus Formation, located directly north of the Proposed Project Site. While it is possible that fossilized materials may be discovered during site preparation and construction, specifically grading and excavation activities, precautionary measures set forth in mitigation measure 4.4-2 would reduce any potential adverse impacts to paleontological resources to a less than significant level.

Tribal Cultural Resources

Similar to the Proposed Project, Alternative 1 would not have a direct impact upon known tribal cultural resources. Nevertheless, provisions for the identification and evaluation of accidentally discovered archeological resources would be implemented in accordance with mitigation measure 4.4-1. With the incorporation of mitigation measure 4.4-1, impacts upon tribal resources would be less than significant.

Geology And Soils

The Project Site is underlain by Saugus Formation, Pacoima Formation, Quaternary alluvium and artificial fill and has historic high groundwater elevations greater than 50 feet in depth. The Project Site is located in the State of California Seismic Hazard Zone map for the Newhall Quadrangle. Hazards related to seismic-related ground failures (including ground rupture and liquefaction) are considered low.

All slopes should be evaluated by the Project Geotechnical engineer at the planning and design stages. The hillside area of the site is designated on the State of California Seismic Hazard Zone Map to have earthquake-induced slope instability. No landslides have been mapped on the Project Site. Remedial measures will be required where ascending or descending cut slopes are not stable as determined by geologic or geotechnical stability analyses. The potential for earthquake-induced slope failures is considered low provided that future geologic and geotechnical evaluations and recommendations for slope stability is incorporated into design and construction.

Additionally, specific recommendations for design and construction should be provided to address soil stability, including: hydro-compression, expansive soils, rippability, the handling of oversized material, soil corrosivity, shirking and bulking of materials, and the handling of the need for retaining wall.

No oil wells have been drilled on or immediately adjacent to the Project Site. If any undocumented oil wells are encountered during future construction operations at the site, their location(s) should be surveyed and the current well conditions evaluated. Water wells have been drilled in the vicinity of the proposed road alignments. If one of these water well is within the proposed road alignment, or if a water well is encountered during future construction operations at the site, the location should be surveyed and the potential impacts to well conditions should be evaluated. The implementation of mitigation measure 4.5-1 would insure that potential Alternative 1 Project impacts would be reduced to a less than significant level.

Hydrology And Water Quality

Construction

During the construction phase, the typical pollutants that affect surface water quality are: sediment from soil erosion, petroleum products (gasoline, diesel, kerosene, oil and grease), hydrocarbons from asphalt paving, construction equipment leaks, paints and solvents, detergents, fertilizers, and pesticides. Similar to the Proposed Project, the Alternative 1 Project would be required to prepare and implement a SWPPP prior to earthwork activities that will put best management practices and erosion control measures to prevent pollution in stormwater discharge. All project construction activities would comply with the City's grading permit regulations, which require the implementation of grading and dust control measures, including a wet weather erosion control plan if construction occurs during rainy season, as well as inspections to ensure that sedimentation and erosion is minimized. Therefore, through compliance with NPDES requirements and City grading regulations, the Alternative 1 Project's construction impacts related to water quality would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. Construction-related impacts to hydrology and water quality would therefore be less than significant.

Operation

Once the Alternative 1 Project has been constructed, urban runoff could include the aforementioned contaminants, trace metals, landscape maintenance debris, dry product spills, and "nuisance flows" from landscape irrigation during the dry-season. In accordance with NPDES requirements, the Project Applicant would be required to have a Project-specific SUSMP in place during the operational life of the Project to address the management of runoff from the proposed roadway extension. The SUSMP would include site design, source control, low-impact development, and best management practices. Therefore, implementation of the storm water quality plan would reduce water quality impacts during the Alternative 1 Project's operation to less than significant.

Inundation and Flooding

A post-Project hydraulic model was analyzed for the Proposed Project to understand the impacts of inundation and flooding. The result of the post-Project hydraulic model indicate that the proposed bridge and channel improvements can accommodate the Capital Flood and will not create any flood hazard for the adjacent railroad and proposed street improvements. Riprap and vegetation linings are recommended

for the high and moderate shear zones, respectively. As the Alternative 1 Project is generally the same as the Proposed Project, with respect to the roadway extension from Lyons Avenue to Dockweiler Drive to the south and Arch Street to the north, the same aforementioned conclusions and recommendations are applicable to the Alternative 1 Project.

Land Use And Planning

Implementation of the Alternative 1 Project would not disrupt or physically divide an established community. Monument signage will properly guide traffic and identify the entrance to the Placerita Canyon community as a residential community with no through access. Additionally, similar to the Proposed Project, the Alternative 1 Project will provide increased pedestrian and vehicular access in the area.

The Alternative 1 Project would not conflict with any applicable land use plans, policies, or regulations, including: the Regional Transportation Plan / Sustainable Communities Strategy, City of Santa Clarita Municipal Code, City of Santa Clarita General Plan (including the Circulation Element), the Placerita Canyon Special Standards District and North Newhall Area, Old Town Newhall Specific Plan, and the Compass Blueprint Concept Plan. As such, implementation of Project Alternative 1 would create a less than significant impact with regards to land use and planning.

Similar to the Proposed Project, Alternative 1 would require an oak tree permit for the loss of two oak trees that are located within the proposed grading limits and right-of-way alignment and a Hillside Review Permit for the grading of an existing hillside. Approval of the Oak Tree Permit and Hillside Review Permit would reduce land use impacts to less than significant levels.

Noise

Construction

Similar to the Proposed Project, construction of the Alternative 1 Project would require the use of heavy equipment for ground clearing, site grading, and roadway construction. Several pieces of construction equipment operating simultaneously would generate a noise level of approximately 94.6 dBA. The estimated construction noise levels impacting sensitive receptors are expected to exceed the City's daytime noise standards for residential uses (see Table 4.8-8). The construction noise levels would therefore constitute a significant impact.

Operational

Similar to the Proposed Project, the Alternative 1 Project is anticipated to alter roadway traffic volumes as the Alternative 1 Project would create a new roadway segment connecting Lyons Avenue to Dockweiler Drive. Locations in the vicinity of the Project Site could experience slight changes in noise levels as a result of the change in traffic patterns. The changes in future noise levels along the study-area roadway segments in the project vicinity are for the Proposed Project's near term (Year 2019) impacts would increase local noise levels by a maximum of 2.7 dBA CNEL (at the location of Dockweiler Drive

(between Sierra Highway and Valle del Oro). This increase would be inaudible/imperceptible to most people and would not exceed the identified thresholds of significance. At all other roadway segments, the resulting noise levels are anticipated to decrease. As such the Alternative 1 Project's potential to generate a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project would be less than significant.

The Future (2019) With Project noise levels on the new roadway segment from Lyons Avenue to Valle del Oro are expected to be 63.3 dBA (CNEL) within 50 feet of the centerline of the roadway. The resulting noise levels at the three identified sensitive receptors would be below 52.9 dBA. Thus, the anticipated with project noise levels at all off-site receptor locations would be within the "normally acceptable" range of noise for residential areas. Therefore, the Alternative 1 Project's noise impacts would be less than significant.

Transportation and Traffic

Alternative 1 to the Proposed Project utilizes the City of Santa Clarita's General Plan proposed alignment for Dockweiler Drive, which identifies the connection of Dockweiler Drive to extend to Arch Street. The Alternative 1 Project would extend Lyons Avenue from its existing terminus at Railroad Avenue, eastward to Dockweiler Drive to provide a T-intersection. Included in the Alternative 1 is re-profiling the intersection of Lyons Avenue and Railroad Avenue to allow the construction of a new SCRA/UP railroad grade crossing east of Railroad Avenue. Alternative 1 is illustrated in Figure 6.3-1. Alternative 1 differs from the Proposed Project by retaining the existing railroad crossing at 13th Street instead of removing it.

The following section addresses Alternative 1 Project's impact on transportation and traffic based on the Traffic Study titled, *Traffic Impact Analysis: Dockweiler Drive Alignment Project, Santa Clarita, CA*, prepared by David Evans and Associates, dated August 8, 2017. The complete Traffic Study is included in Appendix H to this Draft EIR.

Opening Year (2019) Conditions With Alternative 1 Project

The Santa Clarita Valley Consolidated Traffic Model (SCVCTM) for Interim Year provided traffic volumes for the Project Year 2019 with the Alternative 1 Project Condition. The model plots outlined the distribution of future traffic with the construction of the Alternative 1 Project. The Project Year 2019 Alternative 1 study intersections are provided in Figure 6.3-3, and the volumes provided in Figure 6.3-4.

The analysis for the intersection of Arch Street/Dockweiler Drive and 12th Street/Placerita Canyon Road was conducted as a 5-leg all way stop controlled intersection. The analysis for the intersection of Lyons Avenue and Dockweiler Drive was conducted as a signalized intersection. Unlike the Proposed Project, the intersection of Railroad Avenue and 13th Street would continue to operate.

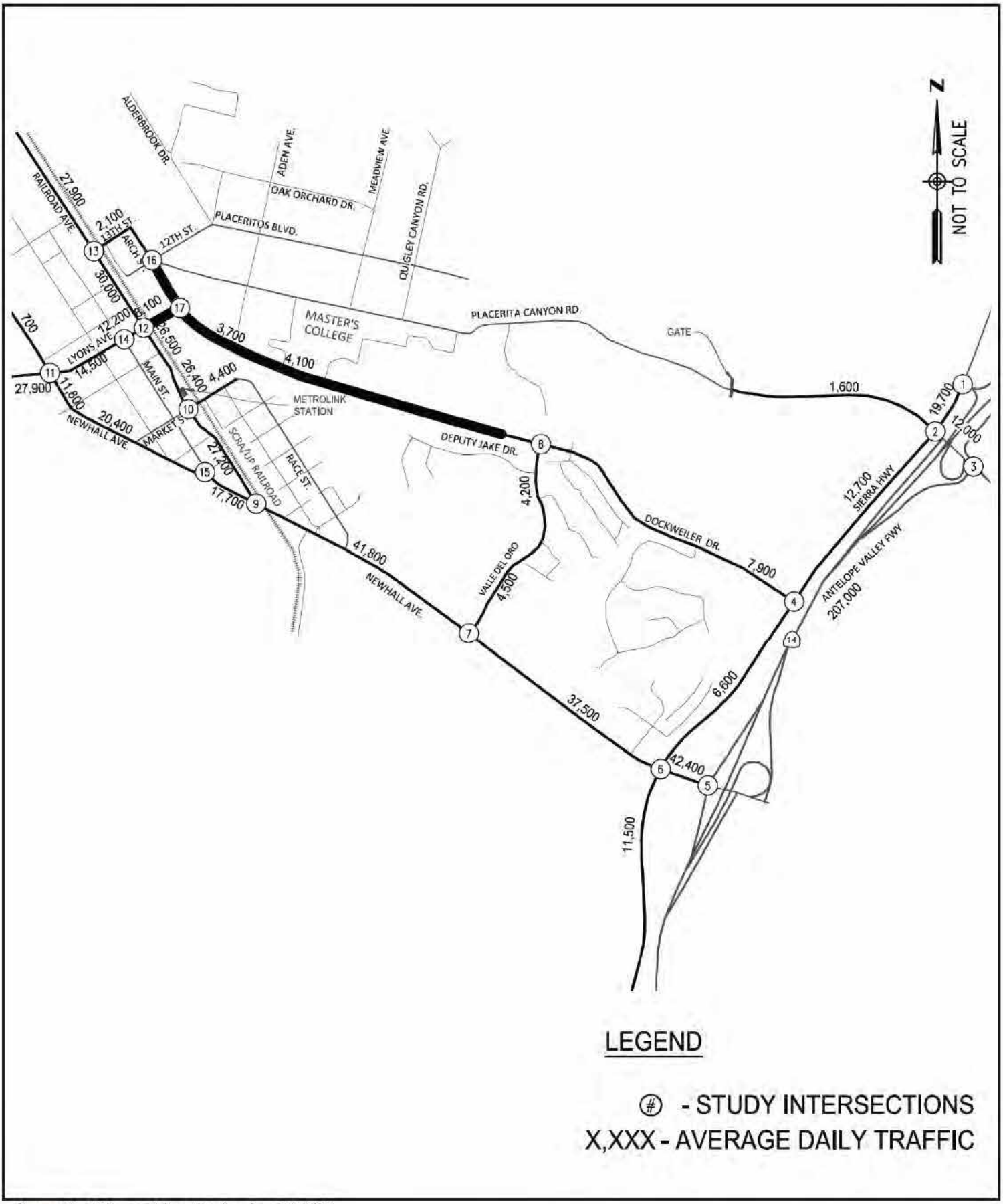
The intersections were analyzed using the capacity analysis methodology. The analysis was conducted with the Project Year 2019 with Alternative 1 Project existing and mitigated study intersection geometrics illustrated in Figure 6.3-5. The LOS for the study intersections presented in Table 6.3-1 represents the LOS for the critical movement. This is typically the stop controlled left turn from the minor street.

As presented in Table 6.3-1 under Year 2019 with Alternative 1 Condition, most of the study intersections are anticipated to continue to operate at LOS E or better. Like the Proposed Project, the same four intersections are anticipated to operate at LOS F, they are: Sierra Highway and SR-14 Southbound Ramps, Sierra Highway and Placerita Canyon Road, SR-14 Northbound Ramps and Placerita Canyon Road, SR-14 Southbound Ramps and Newhall Avenue. The same mitigation measures presented for the Proposed Project would generally be necessary to accommodate the anticipated Year 2019 traffic and reduce potential impacts for the Alternative 1 Project.

Table 6.3-1
Intersection Capacity Analysis – Year 2019 with Alternative 1 Project Condition

Intersection	AM		PM	
	Delay [a]	LOS [b]	Delay [a]	LOS [b]
1. Sierra Highway and SR-14 Southbound Ramps [c]	75.1	F	99.99 [e]	F
Mitigation (Traffic Signal and Lane Modification)	16.6	B	22.3	C
2. Sierra Highway and Placerita Canyon Road	26.6	C	100.0 [e]	F
Mitigation (Lane Modification)	22.8	C	48.8	D
3. SR-14 Northbound Ramps and Placerita Canyon Road [c]	12.9	B	99.99 [e]	F
Mitigation (Traffic Signal)	14.8	B	14.7	B
4. Sierra Highway and Dockweiler Drive	15.5	B	12.1	B
5. SR-14 Southbound Ramps and Newhall Avenue [c]	99.99 [e]	F	99.99 [e]	F
Mitigation (Traffic Signal and Lane Modification)	5.6	A	5.1	A
6. Sierra Highway and Newhall Avenue	27.2	C	29.4	C
7. Valle Del Oro and Newhall Avenue	15.8	B	12.4	B
8. Valle Del Oro and Dockweiler Drive [c]	12.8	B	15.8	C
9. Railroad Avenue and Newhall Avenue	21.3	C	23.1	C
10. Railroad Avenue and Market Street	26.7	C	18.0	B
11. Newhall Avenue and Lyons Avenue	50.0	D	59.2	E
Mitigation (Lane Modification)	29.4	C	33.4	C
12. Railroad Avenue and Lyons Avenue	31.3	C	33.7	C
13. Railroad Avenue and 13th Street	11.6	B	14.2	B
14. Main Street and Lyons Avenue	18.4	B	16.4	B
15. Main Street and Newhall Avenue [d]	21.8	C	18.2	C
16. Arch Street/Dockweiler, 12th Street, Placerita Canyon Road [c]	8.5	A	8.9	A
17. Lyons Avenue and Dockweiler Drive	21.7	C	25.4	C

Notes:
[a] *Delay – In Seconds*
[b] *LOS – Level of Service*
[c] *Un-Signalized Intersection*
[d] *Roundabout Intersection*
[e] *99.99 – Intersection Delay Exceeds Level of Service Standard*
Source: David Evans and Associates, Traffic Impact Analysis: Dockweiler Drive Alignment Project, Santa Clarita, CA, August 8, 2017.



Source: David Evans and Associates Inc, August 8, 2017.

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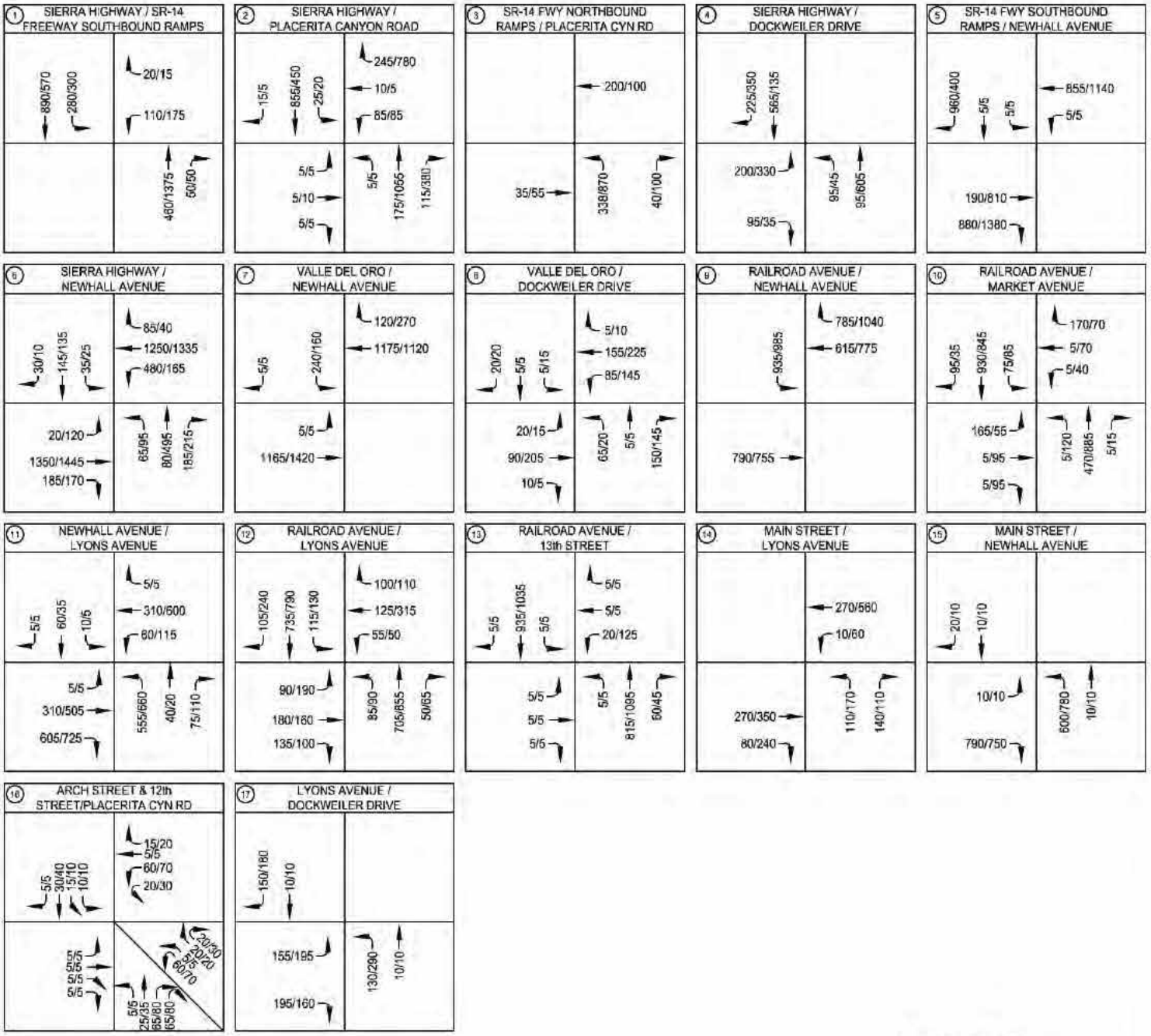
Figure 6.3-3
Project Year 2019 Alternative 1 Study Intersections



LEGEND

(#) - STUDY INTERSECTIONS

XX/XX - AM/PM PEAK HOUR VOLUMES

Source: David Evans and Associates Inc, August 8, 2017.

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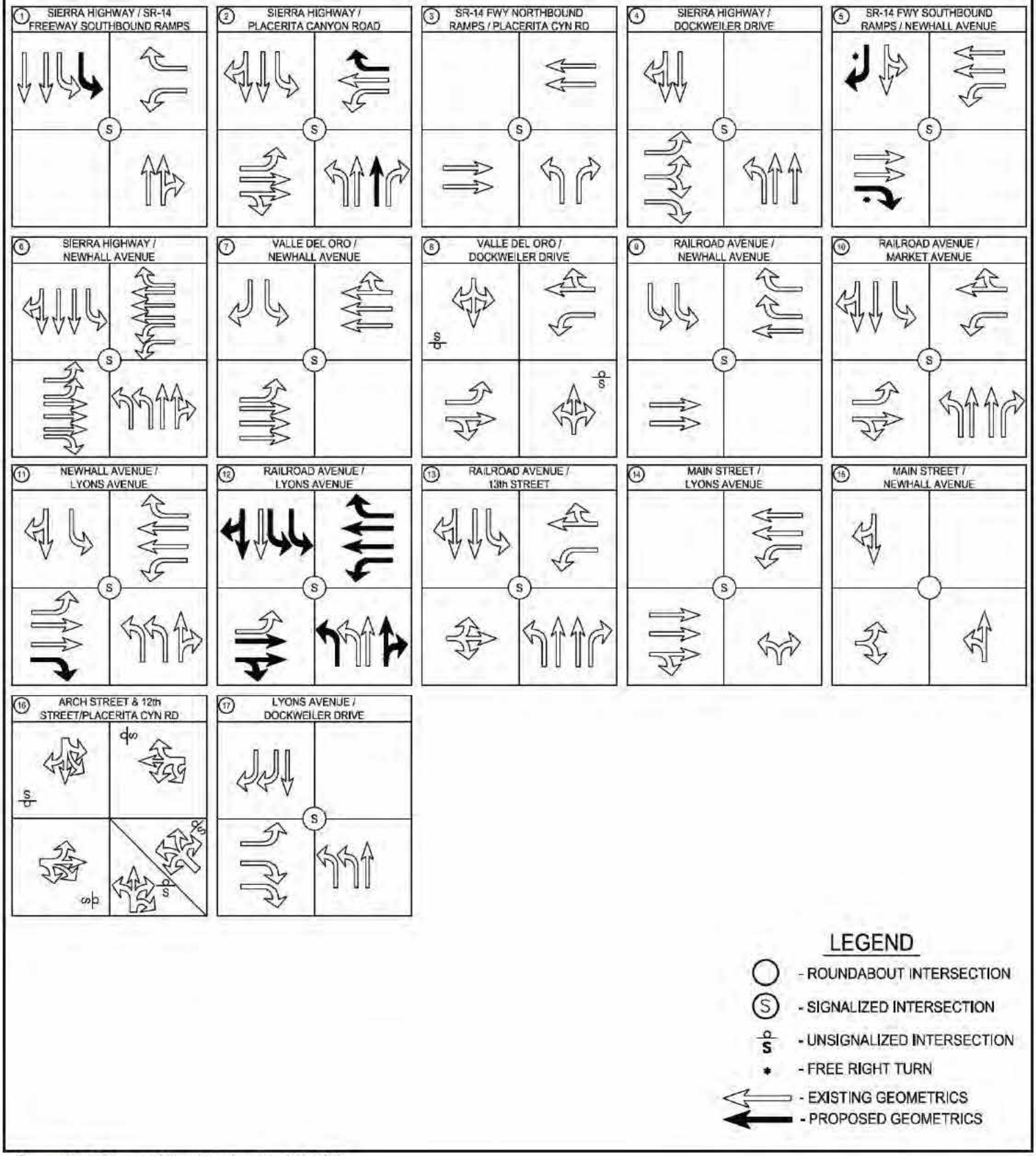
Figure 6.3-4
Project Year 2019 Alternative 1 Traffic Volumes



Source: David Evans and Associates Inc, August 8, 2017.

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Figure 6.3-5
Project Year 2019 Alternative 1 Intersection Configurations

With mitigation, the Sierra Highway and SR-14 Southbound Ramp intersection (Study Intersection 1) levels of service will increase from LOS F to LOS B and LOS C during the AM and PM peak hours, respectively. With mitigation, the Sierra Highway and Placerita Canyon Road intersection (Study Intersection 2) level of service will remain the same at LOS C during the AM peak hour and would increase from LOS F to LOS D during the PM peak hour. With mitigation, the SR-14 Northbound Ramps and Placerita Canyon Road intersection (Study Intersection 3) level of service will remain the same at LOS B during the AM peak hour and would increase from LOS F to LOS B during the PM peak hour. With mitigation, the SR-14 Southbound Ramps and Newhall Avenue intersection (Study Intersection 5) levels of service will increase to LOS A from LOS F during both AM and PM peak hours. With the implementation of the mitigation measures summarized in Section 4.9, Traffic and Traffic, Alternative 1 Project's impacts during the 2019 build-out year would also be less than significant. However, Alternative1 would not require implementation of mitigation measures 4.9-5 and 4.9-10, as compared to the Proposed Project. Therefore, the Proposed Project and the Alternative 1 Project would both result in a less than significant impact after mitigation.

Future (2035) Conditions With Alternative 1 Project

The Santa Clarita Valley Consolidated Traffic Model (SCVCTM) for Build-Out Year provided traffic volumes for the Future Year 2035 with Alternative 1 Condition. The model plots outlined the distribution of future traffic with the construction of the Alternative 1 Project. The analysis of Alternative 1 utilizes the traffic volume projections for the City of Santa Clarita's traffic model together with the existing traffic flow data. The traffic projections are based on the General Plan Buildout. Like the Proposed Project, the buildout includes construction of future roadways Dockweiler Drive between Railroad Avenue and Valle Del Oro, Magic Mountain Parkway from Railroad Avenue to Via Princessa, Via Princessa between Claibourne Lane and Sheldon Avenue, and Santa Clarita Parkway. This also includes the proposed conceptual development of the North Newhall area (809 dwelling unit plus an approximate 11-acre commercial land use). The Future Year 2035 Alternative 1 study intersections are provided in Figure 6.3-6 and the volumes are provided in Figure 6.3-7.

The intersections were analyzed using the capacity analysis methodology. The analysis was conducted with the Future Year 2035 Alternative 1 Project Condition existing and mitigated study intersection geometrics illustrated in Figure 6.3-8. The LOS for the study intersections presented in Table 6.3-2 represents the LOS for the critical movement. This is typically the stop controlled left turn from the minor street.

As presented in Table 6.3-2 under Future Year 2035 with Alternative 1 Project Condition, several of the study intersections are anticipated to operate at LOS F. There are four intersections that are anticipated to operate at LOS F, they are: Sierra Highway and Placerita Canyon Road, Sierra Highway and Newhall Avenue, Valle Del Oro and Dockweiler Drive, and Main Street and Newhall Avenue. Similar to the Proposed Project, mitigation measures are necessary to accommodate the anticipated Future Year 2035 traffic and reduce potential Alternative 1 Project impacts.

With mitigation, the Sierra Highway and Placerita Canyon Road intersection (Study Intersection 2) levels of service will increase to LOS D during both AM and PM peak hours. With mitigation, the Sierra Highway and Newhall Avenue intersection (Study Intersection 6) levels of service will increase from LOS E to LOS D during the AM peak hour and LOS F to LOS D during the PM peak hour. With mitigation, the Valle Del Oro and Dockweiler Drive intersection (Study Intersection 8) levels of service will increase to LOS C and LOS D during the AM and PM peak hours, respectively. With mitigation, the Main Street and Newhall Avenue intersection (Study Intersection 15) levels of service will increase from LOS F to LOS B during the AM peak hour and LOS E to LOS A during the PM peak hour. With the implementation of the mitigation measures identified in Section 4.9, Transportation and Traffic, the Alternative 1 Project's impacts during the 2035 year will be less than significant. Therefore, the Proposed Project and the Alternative 1 Project would both result in a less than significant impact after mitigation.

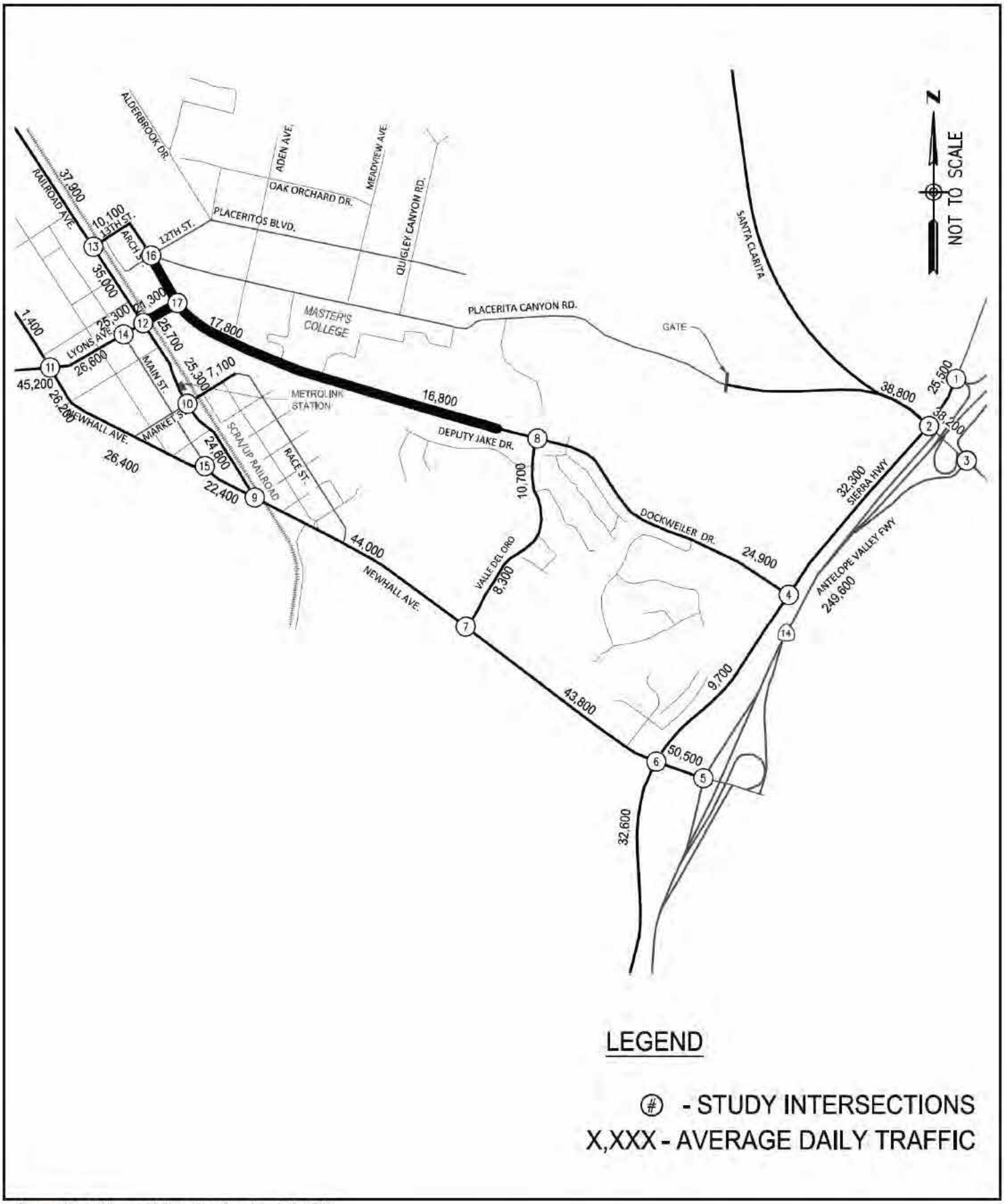
Table 6.3-2
Intersection Capacity Analysis – Year 2035 with Alternative 1 Project Condition

Intersection	AM		PM	
	Delay [a]	LOS [b]	Delay [a]	LOS [b]
1. Sierra Highway and SR-14 Southbound Ramps [c]	41.4	D	44.3	D
2. Sierra Highway and Placerita Canyon Road	99.99 [e]	F	99.99 [e]	F
Mitigation (Lane Modification)	39.0	D	40.7	D
3. SR-14 Northbound Ramps and Placerita Canyon Road [c]	23.9	C	58.3	E
4. Sierra Highway and Dockweiler Drive	18.8	B	69.5	E
5. SR-14 Southbound Ramps and Newhall Avenue [c]	6.4	A	6.3	A
6. Sierra Highway and Newhall Avenue	61.8	E	99.99 [e]	F
Mitigation (Lane Modification)	53.6	D	39.1	D
7. Valle Del Oro and Newhall Avenue	16.0	B	14.7	B
8. Valle Del Oro and Dockweiler Drive [c]	99.99 [e]	F	99.99 [e]	F
Mitigation (Traffic Signal and Lane Modification)	22.7	C	39.6	D
9. Railroad Avenue and Newhall Avenue	19.0	B	24.1	C
10. Railroad Avenue and Market Street	26.4	C	20.6	C
11. Newhall Avenue and Lyons Avenue	39.5	D	56.1	E
12. Railroad Avenue and Lyons Avenue	37.8	D	47.9	D
13. Railroad Avenue and 13th Street	21.3	C	44.4	D
14. Main Street and Lyons Avenue	16.8	B	17.4	B
15. Main Street and Newhall Avenue [d]	57.5	F	48.2	E
Mitigation (Lane Modification)	10.8	B	9.0	A
16. Arch Street/Dockweiler, 12th Street, Placerita Canyon Road [c]	8.3	A	8.6	A
17. Lyons Avenue and Dockweiler Drive	21.7	C	25.8	C

Notes:

[a] *Delay – In Seconds*
[b] *LOS – Level of Service*
[c] *Un-Signalized Intersection*
[d] *Roundabout Intersection*
[e] *99.99 – Intersection Delay Exceeds Level of Service Standard*

Source: David Evans and Associates, Traffic Impact Analysis: Dockweiler Drive Alignment Project, Santa Clarita, CA, August 8, 2017.



Source: David Evans and Associates Inc, August 8, 2017.

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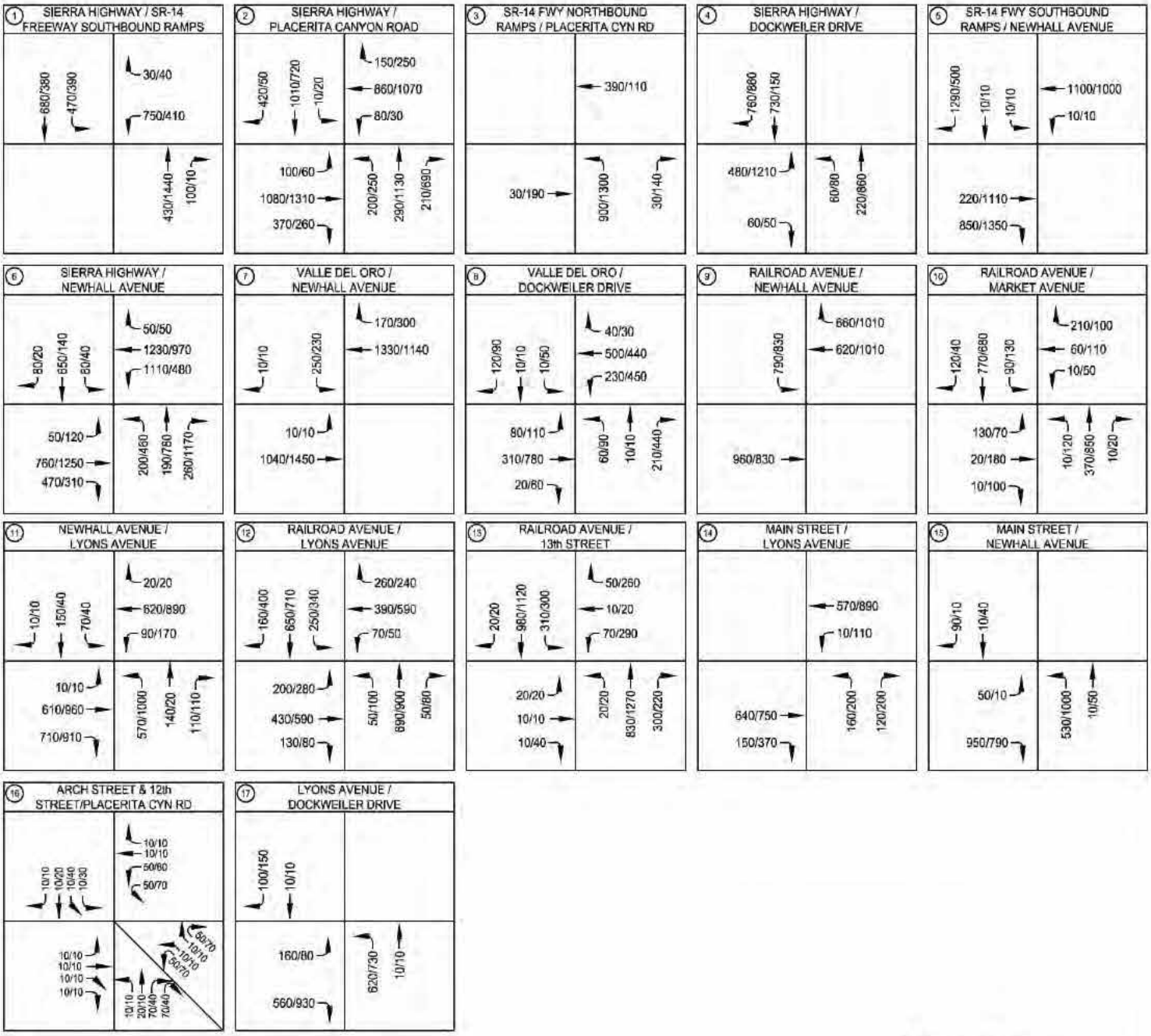
Figure 6.3-6
Project Year 2035 Alternative 1 Study Intersections



LEGEND

(#) - STUDY INTERSECTIONS

XX/XX - AM/PM PEAK HOUR VOLUMES

Source: David Evans and Associates Inc, August 8, 2017.

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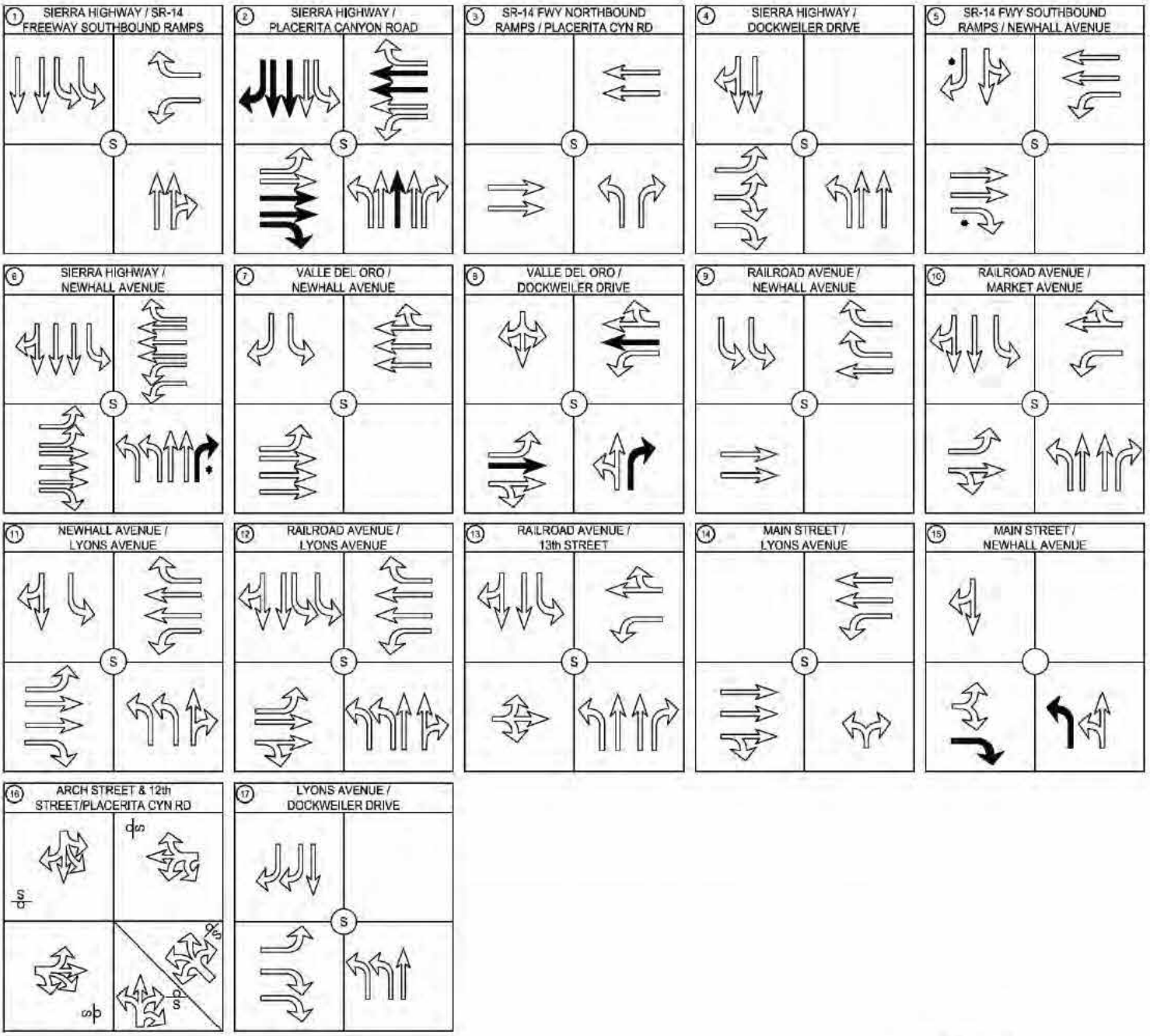
Figure 6.3-7
Project Year 2035 Alternative 1 Traffic Volumes



Source: David Evans and Associates Inc, August 8, 2017.

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Figure 6.3-8
Project Year 2035 Alternative 1 Intersection Configurations

Railroad Crossing Analysis

Similar to the Proposed Project, a comparison of the No Build scenario, the Proposed Project scenario, and the Alternative 1 Project scenario for Daily, AM and PM Peak hour traffic volumes were compiled for the Year 2019 and 2035 conditions as presented in Table 6.3-3 and Table 6.3-4, respectively. Existing conditions remain the same as reported in Section 4.9, Transportation and Traffic. As presented in Table 6.3-3 under Alternative 1 Year 2019, the total average daily railroad crossings is anticipated to be higher under the No Build Condition as compared to the Proposed Project and Alternative 1. Alternative 1 total average daily railroad crossings would result in 3,230 fewer crossings than the No Build condition but would result in 2,340 more railroad crossings than the Proposed Project condition. As presented in Table 6.3-4 under Alternative 1 Year 2035, the total average daily traffic is anticipated to be highest for the Alternative 1 condition as compared to the Proposed Project and No Build Scenario. Alternative 1 total average daily railroad crossings would result in 5,370 more crossings than the No Build condition and 2,510 more railroad crossings as compared to the Proposed Project condition. Accordingly, Alternative 1 would not be preferable over the Proposed Project with respect to minimizing railroad crossings.

Bicycle and Pedestrian Facilities

Similar to the Proposed Project, the Alternative 1 would comply with Santa Clarita's circulation goals and enhancing the circulation system by providing bicycle lanes and accessibility to bicycle paths that are fundamental for a comprehensive transportation network.

Table 6.3-3
Railroad Crossing Analysis –Year 2019 Condition

Year 2019		1	2	3	4	Total
		13th Street	Lyons Avenue	Market Street	Newhall Avenue	
No Build	ADT [a]	10,850	N/A [c]	4,410	47,550	**62,810**
	AM [b]	955		185	3,370	**4,510**
	PM [b]	1,050		375	3,860	**5,285**
Proposed Project	ADT [a]	N/A [c]	8,060	4,390	44,790	**57,240**
	AM [b]		620	185	3,115	**3,920**
	PM [b]		840	370	3,580	**4,790**
Alternative 1	ADT [a]	2,130	8,110	4,430	44,910	**59,580**
	AM [b]	105	625	190	3,130	**4,050**
	PM [b]	190	840	375	3,560	**4,965**

Notes:

[a] *ADT – Average Daily Traffic*
[b] *AUTO – Peak Hour Auto Traffic (Both Directions)*
[c] *N/A – Railroad Crossing Not Applicable to the Condition*

Source: David Evans and Associates, Traffic Impact Analysis: Dockweiler Drive Alignment Project, Santa Clarita, CA, August 8, 2017.

Table 6.3-4
Railroad Crossing Analysis – Future Year 2035 Condition

Year 2035		1	2	3	4	Total
		13th Street	Lyons Avenue	Market Street	Newhall Avenue	
No Build	ADT [a]	16,940	N/A [c]	6,920	56,300	**80,160**
	AM [b]	1,170		325	3,735	**5,230**
	PM [b]	1,525		575	4,605	**6,705**
Proposed Project	ADT [a]	N/A [c]	28,870	7,050	47,100	**83,020**
	AM [b]		1,880	330	3,015	**5,225**
	PM [b]		2,495	590	3,695	**6,780**
Alternative 1	ADT [a]	10,150	21,270	7,060	47,050	**85,530**
	AM [b]	625	1,435	320	3,025	**5,405**
	PM [b]	865	1,885	600	3,680	**7,030**

Notes:

[a] *ADT – Average Daily Traffic*
[b] *AUTO – Peak Hour Auto Traffic (Both Directions)*
[c] *N/A – Railroad Crossing Not Applicable to the Condition*

Source: David Evans and Associates, Traffic Impact Analysis: Dockweiler Drive Alignment Project, Santa Clarita, CA, August 8, 2017.

MITIGATION MEASURES (ALTERNATIVE 1)

Year 2019 Project Mitigation Measures

6.3-1 Dockweiler Drive extension: Construct to full Secondary Highway Pavement width, from Aden Avenue to west of Valle Del Oro, providing two lanes eastbound (uphill) and one lane westbound (downhill), as necessary. May be striped for parking lane on both sides of roadway in interim condition. Class II Bike lanes and Pedestrian Sidewalks to be provided.

6.3-2 Railroad Avenue (North-South) and Lyons Avenue (East-West): Construct the railroad crossing and improve the intersection. The intersection improvements will include widening the northbound direction to accommodate an additional left turn lane and convert a through lane to a shared through-right lane and southbound direction to accommodate and additional left turn lane and convert the right turn lane to a shared through-right turn lane. The north and southbound directions will include two left turn lanes, a through lane, and a shared through-right turn lane. The eastbound direction will provide a left turn lane, a through lane, and a shared through-right turn lane. The westbound direction will provide a left turn lane, two through lanes and a right turn lane.

6.3-3 Arch Street (north leg) / Dockweiler Drive (south leg) / 12th Street (east and west legs) / Placerita Canyon Road (southeast leg): Convert intersection to a 5-leg all way stop controlled intersection including Dockweiler Drive as the 5th. Arch Street will include a shared left-through-right lane

accommodating left turning movements to the west leg (12th Street) and Placerita Canyon Road. Dockweiler Drive will include a shared left-through right lane accommodating right turning movements to Placerita Canyon Road and the west leg (12th Street). The east leg (12th Street) will include a shared left-through-right lane accommodating left turning movements to Placerita Canyon Road and Dockweiler Drive. The west leg (12th Street) will include a shared left-through-right lane accommodating right turning movements to Dockweiler Drive and Placerita Canyon Road. Placerita Canyon Road will include a shared left-right lane accommodating left turning movements to Dockweiler Drive and west leg (12th Street) and right turning movements to the east leg (12th Street) and Arch Street.

6.3-4 Lyons Avenue (North-South) and Dockweiler Drive (East-West): Extend Lyons Avenue to intersect with Dockweiler Drive as a signalized T-intersection. The northbound direction will include a left turn lane and a through lane. The southbound direction will include a through and a right turn lane. The eastbound direction will include a left turn lane and a right turn lane.

Year 2019 Regional Mitigation Measures

6.3-5 Sierra Highway (North-South) and SR-14 Freeway Southbound Ramps (East-West): Install a traffic signal and provide an additional southbound left turn lane. The northbound direction will include a through lane, and a shared through-right turn lane. The southbound direction will include two left turn lanes, and two through lanes. The eastbound direction will include a left turn lane and a right turn lane.

6.3-6 Sierra Highway (North-South) and Placerita Canyon Road (East-West): Lane modifications to provide an exclusive right turn westbound lane and right turn northbound lane. The northbound direction will include a left turn lane, two through lanes, and a right turn lane. The south and eastbound directions will include a left turn lane, a through lane, and a shared through-right turn lane. The westbound direction will include a left turn lane, a through lane, and a right turn lane.

6.3-7 SR-14 Freeway Northbound Ramps (North-South) and Placerita Canyon Road (East-West): Install a traffic signal. The northbound direction will include a left turn lane and a right turn lane. The east and westbound directions will include two through lanes.

6.3-8 SR-14 Freeway Southbound Ramps (North-South) and Newhall Avenue (East-West): Intersection modifications include converting the east and southbound right turn lanes to free right turns and signalizing the intersection. The eastbound direction will include two through lanes and a free right turn lane. The southbound direction will include a shared through-left turn lane and a free right turn lane. The westbound direction will include a left turn lane and two through lanes.

Year 2035 Project Mitigation Measures

6.3-9 Valle Del Oro (North-South) and Dockweiler Drive (East-West): Install a traffic signal. The Intersection modifications include signalizing the intersection and widening the east and west bound direction to accommodate an additional through lane and widening the northbound

direction to accommodate an exclusive right turn lane. The northbound direction will include a shared left-through lane and a right turn lane. The southbound direction will include a shared left-through-right turn lane. The east and westbound directions will include a left turn lane, a through, and a shared through-right turn lane.

Year 2035 Regional Mitigation Measures

6.3-10 Sierra Highway (North-South) and Placerita Canyon Road (East-West): The Intersection modifications include widening to accommodate lane modifications to all approaches. Widen the northbound direction to accommodate an additional through lane. Widen the east and southbound directions to accommodate two additional through lanes and restripe the shared through-right lane to a right turn only lane. Widen the westbound direction to accommodate two additional through lanes. The north, east, south, and westbound direction will include a left turn lane, three through lanes, and a right turn lane.

6.3-11 Sierra Highway (North-South) and Newhall Avenue (East-West): Intersection modifications include converting the northbound through-right turn lane to a through lane and widening to accommodate a free right turn. The northbound direction will include two left turn lanes, two through lanes, and a free right turn. The southbound direction will include a left turn lane, two through lanes, and a shared through-right turn lane. The east and westbound directions will include two left turn lane, three through lanes, and a right turn lane.

6.3-12 Main Street (north leg) / Newhall Avenue (south leg) / Newhall Avenue (west leg): Widen the south leg to accommodate a left turn lane and the west leg to accommodate a right turn lane. Newhall Avenue (south leg) will include a left turn lane and a shared left-through lane. Main Street will include a shared right-through lane. Newhall Avenue (east leg) will include a shared left-right lane and a right turn lane.