

5. Environmental Analysis

5.15 TRANSPORTATION

This section of the draft environmental impact report (DEIR) evaluates the potential for implementation of the Laguna Niguel City Center Mixed Use project (proposed project) to result in transportation impacts in the City of Laguna Niguel (City). The analysis in this section is based in part on the following technical report(s):

- *Traffic Impact Analysis Laguna Niguel City Center Project*, Linscott, Law & Greenspan, March, 9, 2022.
- *VMT Impact Analysis for the Laguna Niguel City Center Project*, Linscott, Law & Greenspan, August 30, 2021.

Complete copies of these studies are in the technical appendices to this Draft EIR (Appendix L).

5.15.1 Environmental Setting

5.15.1.1 REGULATORY BACKGROUND

State

California Department of Transportation

Caltrans is the primary state agency responsible for transportation issues. One of its duties is the construction and maintenance of the state highway system. Caltrans approves the planning, design, and construction of improvements for all state-controlled facilities. Caltrans is the owner/operator for Pacific Coast Highway and I-5 in the study area. For projects that may physically affect facilities under its administration, Caltrans requires encroachment permits before any construction work may be undertaken. For projects that would not physically affect facilities, but may influence traffic flow and levels of services at such facilities, Caltrans may recommend measures to mitigate the traffic impacts of such projects.

Senate Bill 743

On September 27, 2013, Senate Bill (SB) 743 was signed into law. The legislature found that with the adoption of the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the state had signaled its commitment to encourage land use and transportation planning decisions and investments that reduce vehicle miles traveled and thereby contribute to the reduction of greenhouse gas emissions, as required by the California Global Warming Solutions Act of 2006 (Assembly Bill 32).

SB 743 started a process that fundamentally changes transportation impact analysis as part of CEQA compliance. Changes include the elimination of auto delay, LOS, and similar measures of vehicular capacity or traffic congestion as the basis for determining significant impacts. As part of the new CEQA Guidelines, the new criteria were designed to promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. The Office of Planning and Research (OPR) developed alternative metrics and thresholds based on Vehicle Miles Traveled (VMT). The guidelines were certified by the Secretary of the Natural Resources Agency in December 2018, and automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, could not be considered a significant impact on the environment. Agencies had until July 1, 2020, to adopt new VMT-based criteria.

5. Environmental Analysis

TRANSPORTATION

The City's VMT-based significance criteria and methodology are detailed in the City's Transportation Assessment Guidelines, dated November 2020.

California Fire Code

The 2019 California Fire Code (California Code of Regulations Title 24, Part 9) sets requirements pertaining to fire safety and life safety, including for building materials and methods, fire protection systems in buildings, emergency access to buildings, and handling and storage of hazardous materials.

Regional

Orange County Fire Authority Fire Prevention Guidelines

The Orange County Fire Authority's (OCFA's) guideline for "Fire Master Plan for Commercial and Residential Development" (Guideline B-09) is a general guideline pertaining to the creation and maintenance of fire department access roadways, access walkways to and around buildings, and hydrant quantity and placement as required by the 2019 California Fire and Building Codes and as amended by local ordinance.

Local

Laguna Niguel General Plan - Circulation Element

The General Plan Circulation Element identifies transportation conditions in the City, including roadway configuration and capacities. In addition, the element identifies issues and opportunities, goals, policies, and actions related to circulation in the City. Please refer to Table 5.10-2 for a description of the Circulation Element policies and project consistency with these policies.

Laguna Niguel Municipal Code

The Laguna Niguel Municipal Code identifies land use categories, development standards, and other general provisions that ensure consistency between the Laguna Niguel General Plan and proposed development projects. The following provisions focus on transportation and traffic:

- **Title 7, Division 2, Article 2 (Standard Plans and Specifications).** Prescribes standard specifications for public works construction, including roadways, signals, lighting, and pavement markers.
- **Title 7, Division 3 (Improvement, Construction and Repair of Streets).** Regulations for excavation, filling, and obstruction of highways and the requirements for obtaining permits or a bond in lieu thereof to dig into, fill, or remove portions of City roadways.
- **Title 7, Division 4 (Traffic Ordinance).** Details development standards and regulations related to turning movements; vehicle size, weight, and load; bicycle, pedestrian, and skateboard facilities; on-street stopping, standing, and parking regulations; abandoned vehicles; and temporary street closures.
- **Title 11, Division 3 (Fire Protection and Explosives).** Adopts the 2019 California Fire Code by reference except such portions as are added, deleted, modified, or amended by the Municipal Code.

5. Environmental Analysis TRANSPORTATION

The Laguna Niguel Municipal Code also identifies the following provisions focus on reduction of trips and Transportation Demand Management strategies:

- **Section 9-1-101 (Transportation Demand Management Policy).** New commercial, industrial, mixed-use development must promote use of alternate transportation modes, provide facilities necessary to encourage alternate methods of transportation, utilize existing local mechanisms and procedures for project review and permit processing to achieve reductions in vehicle trips, and promote coordinated implementation of strategies on a countywide basis to reduce transportation demand.

5.15.1.2 METHODOLOGY

Traffic Impact Analysis

As noted above, CEQA no longer considers auto delay or traffic congestion a potentially significant environmental impact. The Laguna Niguel General Plan, however, does include level of service (LOS) standards for traffic. A summary of the TIA analysis as it relates to General Plan consistency is included in Section 5.10, *Land Use and Planning*. Additionally, the LOS analysis is included in the TIA and presented in this EIR for informational purposes.

VMT Analysis

The City's Transportation Assessment Guidelines states that projects do not require a VMT analysis if they meet at least one of the following VMT screening criteria for land use projects:

- Small projects, that is, projects that would generate less than 500 vehicle trips per day
- Redevelopment projects
- Projects in a low VMT area
- Projects in transit priority areas
- Locally serving land use projects, which include less than 50,000 square feet of the following uses:
 - Libraries
 - Civic centers
 - Police/fire station
 - Community centers
 - Other locally serving civic uses
 - Public schools
 - Private schools with less than 120 students
 - Community colleges with less than 400 students
 - Daycare centers

5. Environmental Analysis

TRANSPORTATION

- Urgent care facilities
- Walk-in medical clinics
- Auto repair/tire shops
- Gas service station
- Gyms/health clubs
- Fitness studios
- Locally serving hotels (non-destination hotels)
- Locally serving assembly uses (places of worship, community organizations)
- Affordable housing projects

Low VMT areas and transit priority areas in the City are shown in Figure 5.15-1, *Laguna Niguel Low VMT Areas and Transit Priority Areas*. If a project does not screen out, a VMT analysis is required.

The City's guidelines establish different thresholds based on a project's land use category. For mixed-use projects, both the residential and nonresidential components of the project are analyzed separately. However, VMT reduction benefits due to internally captured trips and potentially other considerations that reduce VMT could be accounted for in the analysis.

For residential projects, a significant transportation impact would occur if the project's home-based VMT per capita exceeds the base year citywide average VMT per capita. For nonresidential projects, a significant transportation impact would occur if the project's employment VMT per employee exceeds the base year citywide average VMT per employee.

The citywide average VMT per capita and VMT per employee values are determined using the base year, 2016, Orange County Transportation Analysis Model (OCTAM) statistics. Ensuring land use development projects reduce VMT rates to be at or below the current base year citywide average will result in an overall decrease in citywide VMT and greenhouse gas emissions (Laguna Niguel 2020).

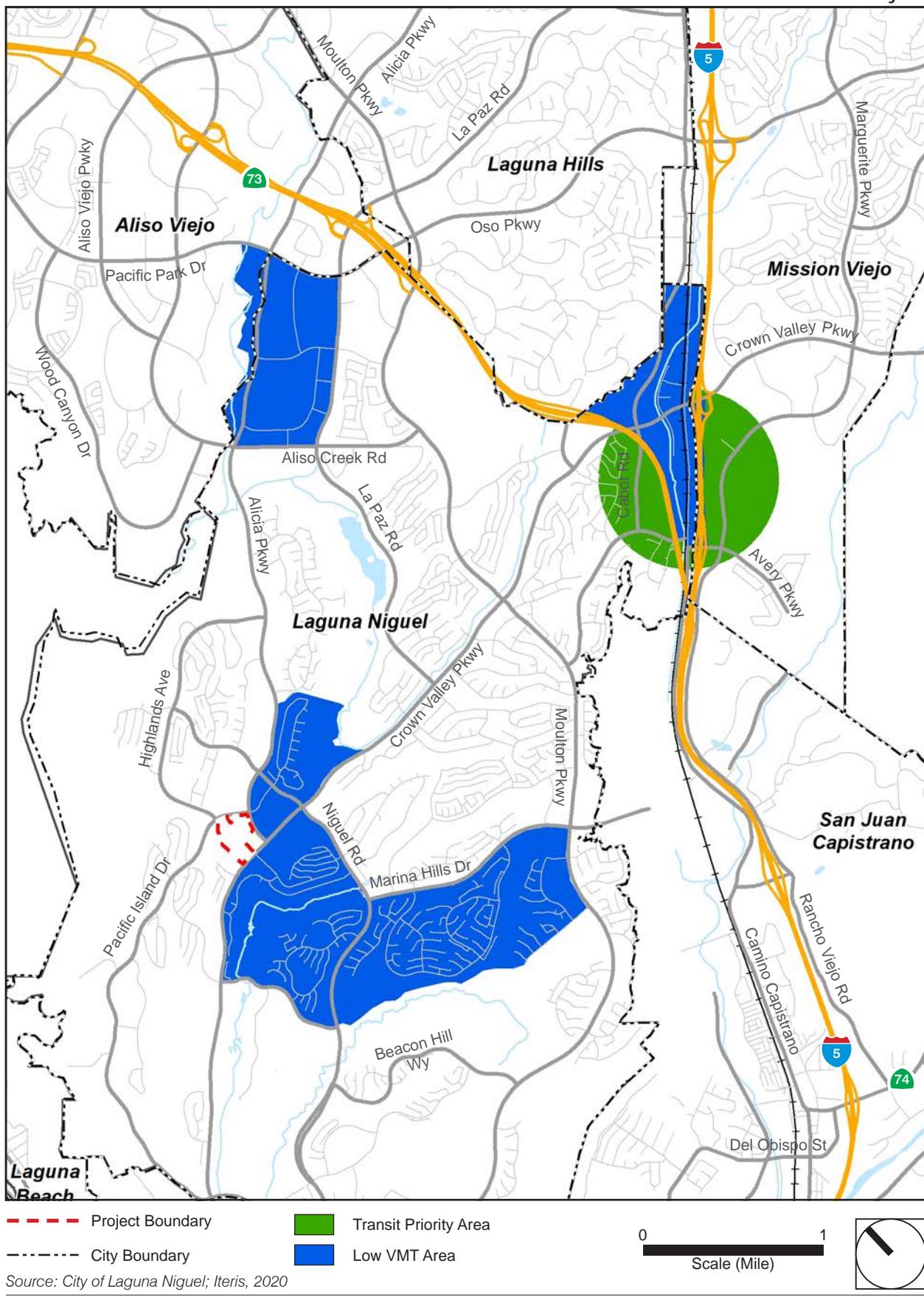
5.15.1.3 EXISTING CONDITIONS

Surrounding Roadway Arterials

The areawide roadway network surrounding the project site is shown in Figure 5.15-1. The primary arterials bordering the project site are described below.

- **Crown Valley Parkway** is a six-lane Major Arterial with a speed limit of 45 miles per hour (mph), bike lanes in each direction, and sidewalks on both sides of the street near the study location. It provides access to the San Joaquin Hills Transportation Corridor, or SR-73, via Greenfield Drive, and to the San Diego Freeway (I-5) approximately three miles north of the project site. It also connects to the Pacific Coast Highway (SR-1), approximately three miles south of the project site.

Figure 5.15-1 - Laguna Niguel Low VMT Areas and Transit Priority Areas
5. Environmental Analysis



Source: City of Laguna Niguel; Iteris, 2020

5. Environmental Analysis

TRANSPORTATION

This page intentionally left blank.

5. Environmental Analysis TRANSPORTATION

- **Alicia Parkway** is a six-lane Major Arterial with a speed limit of 40 mph, bike lanes in each direction, and sidewalks on both sides of the street near the study location. It provides access to SR-73 via Aliso Creek Road and to I-5 approximately three miles north of the project site. Alicia Parkway terminates at Crown Valley Parkway at the northeast corner of the project site.
- **Pacific Island Drive** is a four-lane Primary Arterial with a speed limit of 45 mph, bike lanes in each direction, and sidewalks on both sides of the street near the study location. North of Alicia Parkway it transitions to a two-lane collector with a center two-way left-turn lane and changes names to Ivy Glenn Drive. There are no bike lanes on Ivy Glenn Drive. To the south, Pacific Island Drive changes names to Camino Del Avion at Crown Valley Parkway, where it continues as a four-lane divided roadway without bike lanes.

Transit Service

The Orange County Transportation Authority (OCTA) provides local bus service in the vicinity of the project site. Currently, OCTA provides service to the study area via two bus routes—Routes 85 and 87. The bus stops closest to the project site are at the corner of Alicia Parkway and Pacific Island Drive (see Figure 5.15-2, *Pedestrian, Bicycle, and Public Transit Routes*). A sheltered bus stop is along the east side of Crown Valley Parkway, just north of Alicia Parkway, and an unsheltered bus stop is along the west side of Alicia Parkway, just south of Pacific Island Drive.

OCTA Route 85 travels primarily in a north-south direction along Crown Valley Parkway and provides service from Mission Viejo to Laguna Niguel. It originates at Mustang Run in Mission Viejo, travels via Marguerite Parkway and Crown Valley Parkway to an endpoint in Laguna Niguel at Niguel Road. Route 85 operates Monday to Friday from 5:35 am to 10:04 pm. There is no weekend service.

OCTA Route 87 travels generally in a north-south direction along Alicia Parkway and provides service from Rancho Santa Margarita to Laguna Niguel. It originates in Rancho Santa Margarita and travels via Alicia Parkway to an endpoint in Laguna Niguel at Crown Valley Parkway. Route 87 operates Monday to Friday from 5:59 am to 7:43 pm. There is no weekend service.

The Laguna Niguel / Mission Viejo Metrolink station is on Forbes Road just south of Crown Valley Parkway. The station is about three miles northeast of the project site and can be accessed by using OCTA Route 85 from the bus stop at the Crown Valley Parkway and Alicia Parkway intersection to the bus stop at the Crown Valley Parkway and Forbes Road intersection, followed by a half-mile walk to the Metrolink station. It takes approximately 34 minutes to travel between the Metrolink station and the project site via bus, including walk time.

Bicycle and Pedestrian Facilities

The existing pedestrian and bicycle facilities along the project frontage connect the project site to various nearby residential, commercial, and recreational uses. The City recognizes that bicycle and pedestrian travel are an important component of the City's circulation system and encourages bicycle and pedestrian travel as alternative

5. Environmental Analysis

TRANSPORTATION

forms of transportation. Figure 5.15-2 shows the bicycle and pedestrian facilities in the vicinity of the project site.

Each of the roadways surrounding the project site (Pacific Island Drive, Crown Valley Parkway, and Alicia Parkway) is configured with Class II bike lanes. Class II is defined as a restricted lane within the right-of-way of a paved roadway for the exclusive or semi-exclusive use of bicycles. Each of these roadways is also fully improved with sidewalks and has marked crosswalks and pedestrian signals at each of the signalized intersections.

5.15.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines and the City's CEQA Manual, a project would normally have a significant effect on the environment if the project would:

- T-1 Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- T-2 Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b).
- T-3 Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- T-4 Result in inadequate emergency access.

The City relies on the questions included in Appendix G as the thresholds of significance for assessing impacts on transportation, as augmented below.

The City adopted Transportation Assessment Guidelines (November 2020) include procedures and thresholds for both VMT analysis and Level of Service (LOS) Traffic Impact Studies. Projects subject to the Transportation Assessment Guidelines are required to have VMT and LOS studies prepared by a qualified traffic/transportation engineer. As specified in the City's Transportation Assessment Guidelines, the City requires LOS analysis for projects outside of CEQA, but as part of the project review and entitlement process.

Pursuant to SB 743 and CEQA Guidelines Section 15064.3, the reduction in LOS standards from a project is no longer defined as a valid CEQA impact and VMT is defined as the most appropriate measure of transportation impacts. The City's Transportation Assessment Guidelines establish procedures, methodology, and thresholds of significance for assessing VMT impacts.

The Laguna Niguel General Plan includes LOS policy standards for intersections within the City. Because General Plan consistency is often analyzed pursuant to CEQA, and consistency with LOS standards is not a determination of a significant impact, projects should be analyzed to determine if consistency with General Plan LOS standards would lead to the construction of traffic improvements, the construction of which would result in an impact to the environment. This is consistent with the following guidance from the Office of Planning and Research.

Figure 5.15-2 - Pedestrian, Bicycle, and Public Transit Routes
5. Environmental Analysis



Source: Linscott, Law & Greenspan Engineers, 2021

0 300
Scale (Feet)



PlaceWorks

5. Environmental Analysis

TRANSPORTATION

This page intentionally left blank.

5. Environmental Analysis TRANSPORTATION

“Even if a general plan contains an LOS standard and a project is found to exceed that standard, that conflict should not be analyzed under CEQA. CEQA is focused on planning conflicts that lead to environmental impacts. (The Highway 68 Coalition v. County of Monterey (2017) 14 Cal.App.5th 883; see, e.g., Appendix G, IX(b) [asking whether the project will “Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?”].) Auto delay, on its own, is no longer an environmental impact under CEQA. (See Pub. Resources Code, § 21099(b)(2).)”

Notwithstanding this guidance, project changes to LOS at an intersection(s) that result in a potential safety impact or hazardous condition should also be analyzed pursuant to CEQA.

5.15.3 Plans, Programs, and Policies

PPP T-1 The proposed project’s construction activities will be conducted in accordance with the provision of traffic-control devices in compliance with the California Manual for Uniform Traffic Control Devices (MUTCD) to ensure traffic safety on public streets, highways, pedestrian walkways, and bikeways.

PPP-T-2 The proposed project’s construction contractor will be required to comply with all City of Laguna Niguel standard conditions pertaining to construction including work hours, traffic control plan, haul route, and access. Where possible, construction related trips will be restricted to off-peak hours.

PPP-T-3 The proposed project’s construction contractor will be required to obtain an oversized-vehicle transportation permit, if necessary, from Caltrans.

PPP-T-4 The proposed project will implement fire protection requirements as detailed in Title 11, Division 3, of the City’s Municipal Code and the Orange County Fire Authority Fire Prevention Guidelines.

5.15.4 Environmental Impacts

5.15.4.1 IMPACT ANALYSIS

It is anticipated that the proposed project would be built in a single phase spanning approximately 36 months for demolition and construction. To evaluate transportation impacts from the proposed project, two time frames were analyzed: Baseline Year 2016, which is the baseline year for the OCTAM model, to evaluate potential impacts in the near term; and Cumulative Year 2045, which combines long-range General Plan buildout conditions—with cumulative projects—and background traffic growth. The VMT analysis is based on traffic conditions for these scenarios:

- **Baseline Year 2016.** Pursuant to the City’s Transportation Guidelines, citywide average VMT per capita and VMT per employee values are determined using the Baseline Year 2016 OCTAM modeling statistics. The base 2016 scenario was updated with the project land uses to calculate project VMT and then compared to the City’s VMT significance criteria.

5. Environmental Analysis

TRANSPORTATION

- **Cumulative Year 2045.** Because the proposed project requires a General Plan Amendment, a Cumulative Year 2045 VMT analysis was also conducted. OCTAM's socioeconomic database for the future (2045) scenario was updated with the project land uses to calculate project VMT. Cumulative Year 2045 scenario VMT rates were then compared with the City's significance criteria.

Impact 5.15-1: The proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. [Threshold T-1]

Operational Impacts VMT

The proposed project consists of 275 apartments, 81,451 square feet of offices, 34,340 square feet of retail, and 42,770 square feet of restaurant uses. As part of the proposed project the existing, approximately 14,400-square-foot library would be demolished and replaced with a larger, approximately 16,290-square-foot library. Most of the project site is currently undeveloped. Special events, including festivals, movie screenings, concerts, and farmers markets would typically be held on weekends. Small events held weekly could include yoga in the park with approximately 20 people; medium events held monthly could include movies in the park with approximately 100 people; and larger events held quarterly could include craft festivals or larger-scale food and wine events or even community-based seasonal events.

The proposed project is not in a low VMT area or a transit priority area (see Figure 5.15-1, *Laguna Niguel Low VMT Areas and Transit Priority Areas*). Additionally, the proposed project is neither an affordable housing project, nor could it be classified as a redevelopment. Most of the proposed project's land uses do not fall under the locally serving land uses listed in the Transportation Assessment Guidelines, and the proposed project exceeds the screening threshold of 50,000 square feet. Thus, the proposed project could not be screened out as a locally serving land use project. Also, since the proposed project's estimated daily trip generation is greater than 500, it does not meet the City's screening criteria for Small Projects. Therefore, the project could not be screened out of VMT analysis.

The proposed project's residential and nonresidential components were analyzed separately to identify whether any of the project components would have a significant VMT impact. Table 5.15-1, *Baseline Year 2016 Project and Citywide VMT*, shows the project's residential and nonresidential VMT for the base year scenario and corresponding City average. As shown in Table 5.15-1, both the residential and nonresidential components of the proposed project are estimated to generate a lower rate of VMT than the citywide average, and therefore would not result in a significant impact.

5. Environmental Analysis

TRANSPORTATION

Table 5.15-1 Baseline Year 2016 Project and Citywide Average VMT

Project Component	Citywide Average VMT/capita ¹	Project VMT/capita ²	Percentage Difference
Residential	24.9	15.6	-37.4
Nonresidential	24.0	20.2	-15.8

Source: LL&G, August 2021.

¹ The citywide average VMT per capita and VMT per employee values are determined using the base year, 2016, Orange County Transportation Analysis Model (OCTAM) statistics.² OCTAM's socioeconomic database for base year (2016) scenario were updated with the project land uses to calculate project VMT.

A cumulative VMT analysis was performed to assess the proposed project's VMT performance under the cumulative scenario (Year 2045). Table 5.15-2, *Cumulative Year 2045 Project and Citywide Average VMT*, shows the proposed project's residential and nonresidential VMT under the cumulative scenario. As shown in the table, the project would not have any significant impact under the cumulative scenario.

Table 5.15-2 Cumulative Year 2045 Project and Citywide Average VMT

Project Component	Citywide Average VMT/capita ¹	Project VMT/capita ²	Percentage Difference
Residential	24.9	15.2	-39.0
Nonresidential	24.0	20.9	-12.9

Source: LL&G, August 2021.

¹ The citywide average VMT per capita and VMT per employee values are determined using the base year, 2016, Orange County Transportation Analysis Model (OCTAM) statistics.² OCTAM's socioeconomic database for future (2045) scenario were updated with the project land uses to calculate project VMT. Year 2045 statistics include buildout conditions with inclusion of cumulative projects combined with background traffic growth.

The Transportation Guidelines allow VMT analyses to count internally captured trips for mixed-use projects as reductions in VMT. The analysis for the proposed project does not account for internally captured trips and is therefore conservative.

Multimodal Transportation

The project area is served by bus service and pedestrian and bicycle facilities that would provide transportation alternatives to the automobile (see Figure 5.15-2). Table 5.10-2 in Section 5.10, *Land Use and Planning*, summarizes the project's consistency with Laguna Niguel General Plan and Circulation Element policies. The Circulation Element includes one policy related to alternative transportation: Policy 3.1 states, "Encourage new development which facilitates transit services, provides for non-automobile circulation and minimizes vehicle miles traveled." It is the intent of the proposed project to provide future residents and visitors of the project area the opportunity to visit a number of stores, services, and/or restaurants before leaving the area, which would minimize VMT compared to a single-use development. Furthermore, as a mixed-use project, residents of the proposed project would be able to access the mix of on-site retailers, restaurants, services, and other project amenities without having to use an automobile. The proposed project also includes enhancements to bicycle lanes within the vicinity of the project site. Therefore, the proposed project would comply with Policy 3.1.

5. Environmental Analysis

TRANSPORTATION

As shown on Figure 5.15-2, each of the roadways surrounding the project site (Pacific Island Drive, Crown Valley Parkway, and Alicia Parkway) is configured with Class II bike lanes. Each of these roadways is also fully improved with sidewalks and has marked crosswalks and pedestrian signals at signalized intersections. The proposed project would protect the existing sidewalk along the project site's frontage, and if necessary, repair or reconstruct sidewalks along the frontage per the City's request. Additionally, the existing and proposed pedestrian network in the project vicinity connect directly to the existing Civic Center. The project's internal circulation plan includes pedestrian and multiuse walkways and corridors in and out of open space areas, connecting the Daily Needs Retail, Retail Village Core, Creative Office Space, Town Green, and Residential Village. As designed, walkways between the proposed structures would create a pedestrian-oriented environment by breaking up large blocks, providing more convenient connectivity throughout the project site, and shortening the walking distance to destinations.

The project site is also served by OCTA Routes 85 and 87. The bus stops closest to the project site are at the corner of Alicia Parkway and Pacific Island Drive (see Figure 5.15-2).

The proposed project includes enhancements to bicycle lanes and pedestrian crosswalks within the vicinity of the project site and would be consistent with the Circulation Element's goals and policies related to encouraging new development with alternative transportation features (i.e., transit, bicycle, and pedestrian facilities). Also, the proposed project would not substantially affect overall pedestrian circulation or the operations of nearby sidewalks or crosswalks or introduce features that would adversely affect circulation in the vicinity of the site. Project access would not displace a bus stop or decrease the performance or safety of a sidewalk, crosswalk, or bikeway. Therefore, the proposed project would not affect the use of alternative modes of transportation or conflict with policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

Level of Significance Before Mitigation: Less than Significant.

Impact 5.15-2: The proposed project would not conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b). [Threshold T-2]

The VMT impact analysis was conducted according to the City's Transportation Assessment Guidelines. The findings indicate that both the residential and nonresidential components of the proposed project are expected to generate lower VMT rates than the established VMT significance thresholds under Baseline Year 2016 conditions and Cumulative Year 2045 conditions (see Tables 5.15-1 and 5.15-2). This is due to the mixed-use and regionally connected nature of the proposed project. The proposed project is also locally serving in that it provides more options for residents to live and work locally and encourages diverse housing and transportation options that reduce VMT. Additionally, the proposed project has multimodal amenities that enhance mobility and regional connectivity with multimodal connections that extend local access to regional networks for alternative modes of travel.

Level of Significance Before Mitigation: Less than Significant.

Impact 5.15-3: The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). [Threshold T-3]

5. Environmental Analysis TRANSPORTATION

The project includes the following roadway improvements, which were considered in the TIA and with such improvements the project would achieve the City's LOS standards. These improvements along with project site access, traffic signals, queuing, and sight distance considerations would minimize potential transportation-related hazards.

- **Alicia Parkway at Pacific Island Drive/Ivy Glenn Drive.** Extend the northbound left-turn pocket 65 feet to provide at a minimum a total storage of 225 feet. This would require the removal of 65 feet of the existing raised median.
- **Alicia Parkway at Project Driveway No. 1/Town Center Drive.** Install a five-phase traffic signal with protective left-turn phasing on Alicia Parkway and stripe crosswalks on all four legs, inclusive of preemption for emergency vehicles and interconnection to adjacent signal. Restripe the eastbound approach (internal to Project site) to provide an exclusive eastbound left-turn lane.
- **Crown Valley Parkway at Alicia Parkway.** Extend the dual northbound left-turn lanes 30 feet each to provide at a minimum a total storage of 205 feet per lane (410 feet total for both lanes). This would require the removal of 30 feet of the existing raised median.
- **Crown Valley Parkway at Project Driveway No. 2/Hillhurst Drive.** Widen and restripe Crown Valley Parkway to provide an exclusive southbound right turn deceleration lane. Modify the existing traffic signal to convert the 5-phase traffic signal to a 6-phase traffic signal in order to provide split phasing in the east-west direction along Project Driveway No. 2/Hillhurst Drive. Extend the northbound left turn pocket 100 feet to provide at a minimum a total storage of 190 feet. This would require the removal of 100 feet of the existing raised median.

Project Access Driveways

The project site is accessed by existing driveways on Crown Valley Parkway, Alicia Parkway, and Pacific Island Drive (see Figure 5.15-3, *Project Site Access Design Features*). An analysis of site access has been prepared using a traffic simulation model and established engineering procedures to review queuing and to ensure that adequate sight distance is provided.

- Primary vehicular and pedestrian access to the site is provided from an existing signalized intersection at Crown Valley Parkway and Hillhurst Drive/Civic Center Plaza. This driveway also serves as the primary vehicular and pedestrian access way for the Laguna Niguel City Hall. Hillhurst Drive provides access to single-family homes. An existing northbound left-turn pocket along Crown Valley Parkway provides access for northbound vehicles turning into the project site.
- A secondary access point would be from an existing unsignalized intersection at Alicia Parkway and Town Center Drive. Opposite the driveway is a private street (Town Center Drive) that provides access to a commercial center. An existing northbound left-turn pocket along Alicia Parkway provides access for northbound vehicles turning into the project site. This intersection is planned to be signalized with development of the proposed project.

5. Environmental Analysis

TRANSPORTATION

- Additional existing access points are off of Pacific Island Drive, to the east and west of Fire Station No 5. The two existing driveways along Pacific Island Drive are unsignalized. The westerly driveway along Pacific Island Drive is a three-leg intersection, and the easterly driveway is generally opposite the existing driveway to a commercial center (i.e., four-leg intersection). An existing two-way left-turn lane along Pacific Island Drive between the two driveways provides access for westbound vehicles turning into the westerly project driveway. Modifications are planned to Pacific Island Drive at Project Driveway No. 4 to restrict northbound (outbound) left turn movements onto Pacific Island Drive from the Project site and to restrict southbound (outbound) left turn movements onto Pacific Island Drive from the commercial center across from Driveway No. 4. These driveways are planned to remain unsignalized.

Traffic Signal Warrants

Traffic signal warrants were calculated and compared to thresholds detailed in Section 4C-04 Warrant 3, Peak Hour, of the California MUTCD (2014 edition). This method provides an indication of whether peak-hour traffic conditions or peak-hour traffic volume levels are or would be sufficient to justify installation of a traffic signal.

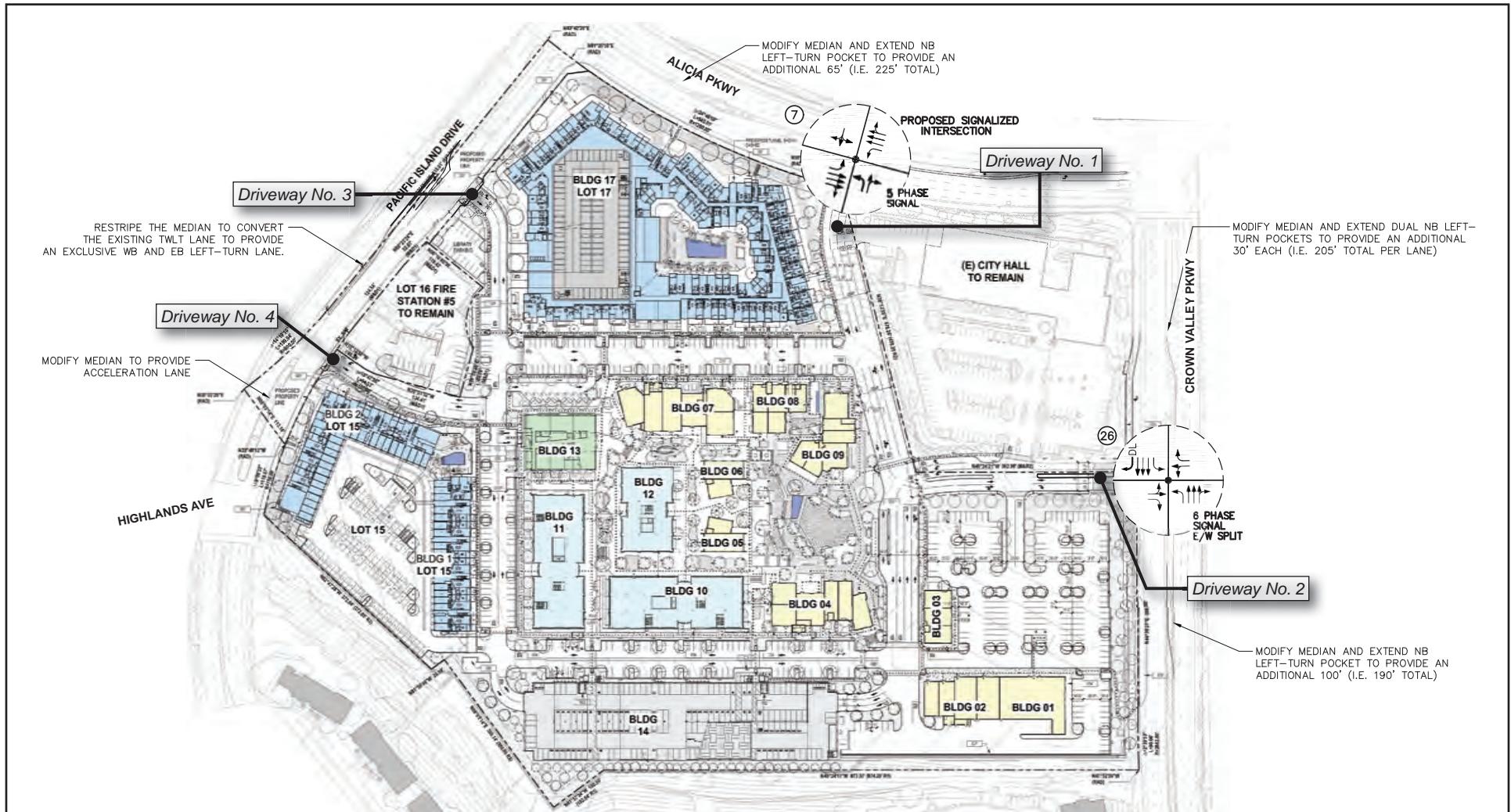
The results of the peak-hour traffic signal warrant analysis for Existing and Existing Plus Project traffic conditions for the intersection of Alicia Parkway at Town Center Drive showed traffic conditions that would exceed the peak hour vehicle delay thresholds of Warrant #3. Based on the results of the traffic signal warrant analysis, a five-phase traffic signal would be installed with protective left-turn phasing.

Sight Distance at Project Driveway Intersections

At intersections and project driveways, a substantially clear line of sight must be maintained between the driver of a vehicle waiting at the crossroad and the driver of an approaching vehicle. Sight distance is the continuous length of roadway visible to the user. A sight distance evaluation was not performed at the project driveways along Alicia Parkway and Crown Valley Parkway because both of these driveways are currently or proposed to be controlled with traffic signals with completion of the proposed project. Traffic signals create protected movements for vehicles turning onto the major roadway, eliminating the concern for adequate lines of sight. However, a field review of existing conditions on Alicia Parkway and Crown Valley Parkway indicates that the existing lines of sight are adequate at these two driveways.

The sight distance evaluation is based on the criteria and procedures in Caltrans' Highway Design Manual (HDM). Stopping sight distance was utilized for the evaluation. Stopping sight distance is defined in the Caltrans HDM as the distance required by the driver of a vehicle, traveling at a given speed, to maneuver their vehicle and avoid an object without radically altering their speed. Based on the criteria in Table 201.1 of the Caltrans HDM and a posted speed limit of 45 mph along Pacific Island Drive, a stopping sight distance of 360 feet is required for the two project driveways.

Figure 5.15-3 - Project Site Access Design Features
5. Environmental Analysis



0 250
Scale (Feet)



Source: Linscott, Law & Greenspan Engineers, 2022

PlaceWorks

5. Environmental Analysis

TRANSPORTATION

This page intentionally left blank.

5. Environmental Analysis TRANSPORTATION

The sight distance evaluation at Project Driveways No. 3 and No. 4 indicated that the sight lines at these intersections are expected to be adequate provided obstructions are minimized. A field review of existing conditions west of both driveways indicates that obstructions such as landscaping/street trees would need to be removed to provide adequate sight distance. In addition, any future landscaping and/or hardscapes (e.g., monument signs) should be designed so that a driver's clear line of sight is not obstructed.

Queuing Analysis for Project Access Locations

The traffic study for the proposed project included an analysis of peak hour stacking/storage lengths for the four project access points to determine whether traffic would “spill back” to the intersections of Alicia Parkway at Pacific Island Drive/Ivy Glenn Drive and Crown Valley Parkway at Alicia Parkway with the installation of a traffic signal at the intersection of Alicia Parkway at Town Center Drive.

A queuing evaluation was prepared for the following intersection:

1. Alicia Parkway at Pacific Island Drive/Ivy Glenn Drive
2. Alicia Parkway at Town Center Drive
3. Crown Valley Parkway at Alicia Parkway
4. Crown Valley Parkway at Hillhurst Drive
5. Project driveway No. 3 at Pacific Island Drive
6. Project driveway No. 4 at Pacific Island Drive

The queuing evaluation was conducted based on Year 2025 Cumulative Plus Project and Year 2040 Buildout Plus Project peak hour traffic volumes and used the Synchro 10.0/SimTraffic 95th percentile delay methodology. The evaluation showed that adequate storage is provided at all six locations under Year 2025 Cumulative Plus Project and Year 2040 Buildout Plus Project traffic conditions. To provide adequate storage at the northbound left-turn lane for the Crown Valley Parkway at Project Driveway No. 2/Hillhurst Drive, the following design feature was included to account for queuing impacts:

- **Crown Valley Parkway at Project Driveway No. 2/Hillhurst Drive.** Widen and restripe Crown Valley Parkway to provide an exclusive southbound right turn deceleration lane. Modify the existing traffic signal to convert the 5-phase traffic signal to a 6-phase traffic signal in order to provide split phasing in the east-west direction along Project Driveway No. 2/Hillhurst Drive. Extend the northbound left turn pocket 100 feet to provide at a minimum a total storage of 190 feet. This would require the removal of 100 feet of the existing raised median.

The proposed project would also:

- **Alicia Parkway at Pacific Island Drive/Ivy Glenn Drive.** Extend the northbound left-turn pocket 65 feet to provide at a minimum a total storage of 225 feet. This would require the removal of 65 feet of the existing raised median.

5. Environmental Analysis

TRANSPORTATION

- **Alicia Parkway at Project Driveway No. 1/Town Center Drive.** Install a five-phase traffic signal with protective left-turn phasing on Alicia Parkway and stripe crosswalks on all four legs, inclusive of preemption for emergency vehicles and interconnection to adjacent signal. Restripe the eastbound approach (internal to Project site) to provide an exclusive eastbound left-turn lane.
- **Crown Valley Parkway at Alicia Parkway.** Extend the dual northbound left-turn lanes 30 feet each to provide at a minimum a total storage of 205 feet per lane (410 feet total for both lanes). This would require the removal of 30 feet of the existing raised median.

Pedestrian Access

Primary pedestrian access into the site would be from the same four points of vehicular entrance—Crown Valley Parkway, Alicia Parkway, and both entrances from Pacific Island Drive. As shown on Figure 5.15-3, each of the roadways surrounding the project site (Pacific Island Drive, Crown Valley Parkway, and Alicia Parkway) is fully improved with sidewalks and has marked crosswalks and pedestrian signals at signalized intersections. The project includes enhancements to pedestrian crosswalks in the vicinity of the project site. The proposed project would protect the existing sidewalk along the project site's frontage, and if necessary, repair or reconstruct sidewalks along the frontage per the City's request. Also, the proposed project would not substantially affect overall pedestrian circulation or the operations of nearby sidewalks or crosswalks or introduce features that would adversely affect pedestrian circulation in the vicinity of the site.

In summary, the proposed project has been designed to address potentially hazardous conditions. With the project access design features and circulation improvements, adequate site access and circulation would be provided, and the development of the site would not substantially increase hazards or incompatible uses.

Level of Significance Before Mitigation: Less Than Significant.

Impact 5.15-4: The proposed project would not result in inadequate emergency access. [Threshold T-4]

Development of the proposed project would be required to incorporate all applicable design and safety requirements from the most current adopted fire codes, building codes, and nationally recognized fire and life safety standards, such as those outlined in Section 11-3 of the City's Municipal Code, which incorporates by reference the 2019 California Fire Code. The proposed project would also be required to provide adequate access for emergency vehicles per the California Fire Code. The City would be responsible for reviewing project compliance with related codes and standards prior to issuance of building permits.

Additionally, during the building plan check and development review process, the City would coordinate with OCFA and the Orange County Sheriff's Department (OCSD) to ensure that the necessary fire prevention and emergency response features are incorporated into the proposed project, and that adequate circulation and access (e.g., adequate turning radii for fire trucks) is provided in the traffic and circulation components of the proposed project.

Construction activities would be conducted in accordance with the California Manual on Uniform Traffic Control Devices (MUTCD) to ensure traffic safety on public streets, highways, pedestrian walkways, and

5. Environmental Analysis TRANSPORTATION

bikeways. Construction contractors would be required to comply with all City standard conditions pertaining to construction including work hours, traffic control plan, haul route, and access. Where possible, construction related trips would be restricted to off-peak hours. Construction activities associated with the proposed project, including staging and stockpiling, would occur within the project boundaries and not on any major arterials or highways that could be used during potential emergency situations.

Additionally, storage of construction materials and construction equipment—such as construction office trailers, cranes, storage containers, and trailers detached from vehicles—is prohibited on City property, including City streets, without a permit. Project construction and operation would comply with City requirements regarding storage on City property, including City streets. Construction material and equipment would be staged or stored on-site and would not interfere with emergency access to or evacuation from surrounding properties.

During project operation, Pacific Island Drive, Crown Valley Parkway, and Alicia Parkway would remain available as major evacuation routes. No policy or procedural changes to an existing risk management plan, emergency response plan, or evacuation plan would be required due to project implementation.

Level of Significance Before Mitigation: With the implementation of PPP T-1 through PPP T-4, Impact 5.15-4 would be less than significant.

5.15.5 Cumulative Impacts

The analyses for Impacts 5.15-1 and 5.15-2 include the analyses of VMT for cumulative conditions.

Table 5.15-2 shows the VMT/capita for the proposed project based on future 2045 conditions. It is based on the future roadway system, cumulative projects and background traffic growth. As shown, the proposed project's cumulative VMT for residential and nonresidential uses would be 39.0 and 12.9 percent less than the significance thresholds.

Additionally, site access would be adequately designed and would not combine with other area traffic impacts to result in significant impacts. The proposed improvements to the transportation system would also not combine with other area traffic impacts. The proposed project has no impacts on pedestrian safety and therefore would not result in an overall, cumulative impact. Furthermore, the project and other cumulative projects would be required to comply with laws and regulations governing emergency access as described in Section 5.15.1.1. Therefore, cumulative impacts from past, present, and reasonably foreseeable future projects related to transportation would be less than significant after regulatory compliance.

5.15.6 Level of Significance Before Mitigation

Impacts 5.15-1, 5.15-2, and 5.15-3 are less than significant.

With the implementation of PPP T-1 through T-4 Impact 5.15-4 would be less than significant.

5.15.7 Mitigation Measures

No mitigation measures are required.

5. Environmental Analysis

TRANSPORTATION

5.15.8 Level of Significance After Mitigation

Impacts would be less than significant and no mitigation measures are required.

5.15.9 References

City of Laguna Niguel. November 2020. Transportation Assessment Guidelines.

<https://www.cityoflagunaniguel.org/DocumentCenter/View/19702/PH1-Vehicles-Miles-Traveled-VMT-Thresholds-Senate-Bill-743>.