4.11 TRANSPORTATION

This section analyzes the existing and planned transportation and circulation conditions for the proposed Tirador Residential Development Project (proposed project) and the surrounding area, and identifies circulation impacts that may result during, or subsequent to, the development of the proposed project. The analysis contained in this section is based on the *Traffic Impact Analysis for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (TIA) (LSA, February 2020), which is provided in Appendix H of this Environmental Impact Report (EIR).

4.11.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. Two of the comment letters included comments related to Transportation. The letter from the California Department of Transportation (Caltrans) received on December 6, 2019 requested preparation of a Traffic Impact Study to analyze potential short-term and long-term impacts to the State Highway System, including Interstate 5 (I-5) and State Route 74 (SR-74). The letter from the Orange County Transportation Authority (OCTA) received on December 6, 2019, requested that the TIA prepared for the proposed project be consistent with the latest *Orange County Congestion Management Program* (CMP) (OCTA November 2019).

4.11.2 Methodology

The TIA prepared for the project is consistent with the objectives and requirements of City of San Juan Capistrano Administrative Policy No. 310 (revised 1998), the City's General Plan Circulation and Growth Management Elements (1999), the Orange County CMP (2019), and applicable provisions of the California Environmental Quality Act (CEQA), including disclosure of project impacts in both existing and cumulative horizon years. The scope of work, including the project study area, was reviewed and approved by the City's Traffic Engineer. As shown in Table 4.11.A, the study area analyzed in the project TIA includes the following 19 intersections and 11 roadway segments:

Table 4.11.A: Study Area Intersections and Roadways

Intersections	Roadway Segments
1. Rancho Viejo Road/Junipero Serra Road	1. Rancho Viejo Road between Junipero Serra Road and Ortega Highway
2. I-5 northbound ramps/Junipero Serra Road	2. Ortega Highway between La Novia Avenue and Rancho Viejo Road (CMP Monitoring Location)
3. I-5 southbound ramps/Junipero Serra Road	3. Ortega Highway between Rancho Viejo Road and I-5 Northbound Ramps (CMP Monitoring Location)
4. Rancho Viejo Road/Golf Club Drive	4. Ortega Highway between I-5 Northbound Ramps and I-5 Southbound Ramps (CMP Monitoring Location)
5. La Novia Avenue/Ortega Highway	5. Ortega Highway between I-5 Southbound Ramps and Del Obispo Street
6. Rancho Viejo Road/Ortega Highway	6. Ortega Highway between Del Obispo Street and Camino Capistrano
7. I-5 Northbound Ramps/Ortega Highway (CMP Monitoring Location)	7. Del Obispo Street between Ortega Highway and Camino Capistrano
8. I-5 Southbound Ramps/Ortega Highway (CMP Monitoring Location)	8. Camino Capistrano between Ortega Highway and Del Obispo Street
9. Del Obispo Street/Ortega Highway	9. Camino Capistrano between Del Obispo Street and San Juan Creek Road
10. Camino Capistrano/Ortega Highway	10. San Juan Creek Road between Valle Road and Camino Capistrano
11. Rancho Viejo Road/Paseo Espada	11. Valle Road between San Juan Creek Road and I-5 northbound ramps
12. La Novia Avenue/Calle Arroyo	
13. Rancho Viejo Road/Calle Arroyo	
14. Paseo Tirador-San Juan Creek Trail/Calle Arroyo	
15. Camino Capistrano/Del Obispo Street	
16. La Novia Avenue/San Juan Creek Road	
17. Valle Road/San Juan Creek Road	
18. Camino Capistrano/San Juan Creek Road	
19. Valle Road/I-5 Northbound Ramps-La Novia Avenue (roundabout)	

Source: *Traffic Impact Analysis* (LSA, February 2020).
CMP = Congestion Management Program
I-5 Interstate 5

All of the study area intersections and roadway segments are located within the City of San Juan Capistrano's jurisdiction.

4.11.2.1 Intersection Level of Service Methodologies

Per City of San Juan Capistrano Administrative Policy No. 310, intersections are evaluated using both the intersection capacity utilization (ICU) and *Highway Capacity Manual* (HCM), 6th Edition (Transportation Research Board 2016) methodologies. The ICU methodology for signalized intersections compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums up these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of level of service (LOS), where LOS A represents free-flow activity and LOS F represents overcapacity operation.

The relationship between LOS and the ICU value (i.e., v/c ratio) is shown in Table 4.11.B:

Table 4.11.B: Level of Service and Volume-to-Capacity

Level of Service	Volume-to-Capacity (ICU Methodology)
A	≤0.60
B	>0.60 and ≤0.70
C	>0.70 and ≤0.80
D	>0.80 and ≤0.90
E	>0.90 and ≤1.00
F	>1.00

Source: *Traffic Impact Analysis* (LSA, February 2020).
ICU = intersection capacity utilization

In addition to the ICU methodology for calculating intersection LOS, the HCM methodology was used. The HCM intersection methodology presents LOS in terms of delay (in seconds per vehicle). The resulting delay is expressed in terms of LOS, as in the ICU methodology. The HCM methodology was also used to evaluate the roundabout (Valle Road/I-5 northbound ramps – La Novia Avenue). The relationship between LOS and the delay (at signalized and unsignalized intersections) is shown in Table 4.11.C:

Table 4.11.C: Level of Service and Intersection Delay

Level of Service	Intersection Delay (seconds) per Vehicle (HCM Methodology)	
	Signalized	Unsignalized
A	≤10.0	≤10.0
B	>10.0 and ≤20.0	>10.0 and ≤15.0
C	>20.0 and ≤35.0	>15.0 and ≤25.0
D	>35.0 and ≤55.0	>25.0 and ≤35.0
E	>55.0 and ≤80.0	>35.0 and ≤50.0
F	>80.0	>50.0

Source: *Traffic Impact Analysis* (LSA, February 2020).
HCM = *Highway Capacity Manual* (Transportation Research Board 2017)

The study area intersection LOS analysis was conducted for the weekday a.m. and p.m. peak hours. The City requires an HCM operational analysis of study area intersections designated as "hot spots" using the *Synchro* computer software package. Intersections designated as hot spots are closely spaced and experience high volumes during the peak hours. Based on discussion with City staff, the peak 30-minute volumes in the a.m. and p.m. peak-hour periods are multiplied by 2 to represent the peak-hour volumes at the hot spot intersections. This analysis is conducted to evaluate the impacts of the proposed project on the signal operations of these locations. In addition to the hot spot locations, LSA utilized *Synchro* (version 10) for the HCM analyses of all other study area intersections.

4.11.2.2 Roadway Segment Level of Service Methodology

Roadway segment v/c ratios were determined using the daily capacities contained in the OCTA's *Guidance for Administration of the Orange County Master Plan of Arterial Highways* (MPAH) (OCTA 2018). Table 4.11.D illustrates daily capacities for roadways in the study area:

Table 4.11.D: Daily Roadway Capacities

Facility Type	Number of Lanes	Capacity
Major	8	75,000
Major	6	56,300
Primary	4 (Divided)	37,500
Secondary	4 (Undivided)	25,000
Limited Secondary	2 (Divided)	20,000
Local Arterial	2 (Undivided)	12,500

Source: *Traffic Impact Analysis* (LSA, February 2020).

4.11.2.3 City of San Juan Capistrano Thresholds of Significance

The City of San Juan Capistrano considers LOS D as the upper limit of satisfactory operations for intersections and roadway segments. However, as indicated in the City of San Juan Capistrano General Plan Circulation Element, the following intersections and roadway segments are identified as hot-spot locations where LOS E is considered satisfactory:

- Hot-Spot Intersections
    - I-5 northbound ramps/Ortega Highway
    - I-5 southbound ramps/Ortega Highway
    - Del Obispo Street/Ortega Highway
    - La Novia Avenue/Calle Arroyo
    - Camino Capistrano/Del Obispo Street
    - Camino Capistrano/San Juan Creek Road

- Hot-Spot Roadway Segments
    - Ortega Highway between I-5 northbound ramps and I-5 southbound ramps
    - Ortega Highway between I-5 southbound ramps and Del Obispo Street
    - Del Obispo Street between Ortega Highway and Camino Capistrano

Ortega Highway is an Orange County CMP roadway. LOS E is considered acceptable at this location, consistent with the City's target LOS for hot spot locations.

Based on the City's Administration Policy No. 310, a project impact occurs at a non-hot spot intersection (or roadway segment) when the project's increase in ICU (or v/c ratio) is 0.01 or greater and the resulting LOS is E or F (ICU methodology). A project impact also occurs at a non-hot spot intersection when the project's increase in delay is 1.0 second or greater and the resulting LOS is E or F (HCM methodology).

A project impact occurs at a hot spot intersection (or roadway segment) when the project's increase in ICU (or v/c ratio) is 0.01 or greater and the resulting LOS is F. A project impact also occurs at a hot spot intersection when the project's increase in delay is 1.0 second or greater and the resulting LOS is F.

A cumulative impact occurs at a non-hot spot intersection (or roadway segment) when the project's increase in ICU (or v/c) between Existing Baseline and Existing Plus Project conditions is 0.01 or greater and the Existing Plus Project LOS is A, B, C, or D, and the Existing Plus Project Plus Cumulative LOS is E or F. A cumulative impact also occurs at a non-hot spot intersection when the project's increase in delay between Existing Baseline and Existing Plus Project conditions is 1.0 second or greater and the Existing Plus Project LOS is A, B, C, or D, and the Existing Plus Project Plus Cumulative LOS is E or F.

A cumulative impact occurs at a hot spot intersection (or roadway segment) when the project's increase in ICU (or v/c) between Existing Baseline and Existing Plus Project conditions is 0.01 or greater and the Existing Plus Project LOS is A, B, C, D, or E, and the Existing Plus Project Plus Cumulative LOS is F. A cumulative impact also occurs at a hot spot intersection when the project's increase in delay between Existing Baseline and Existing Plus Project conditions is 1.0 second or greater and the Existing Plus Project LOS is A, B, C, D, or E, and the Existing Plus Project Plus Cumulative LOS is F.

A buildout impact is the same as the cumulative criteria above for hot spot and non-hot spot locations.

4.11.3 Existing Environmental Setting

The 16.1-acre undeveloped project site is located on the south side of Calle Arroyo. The project site is bordered on the north by Calle Arroyo, on the east by Paseo Tirador, and on the west by the I-5 freeway. Paseo Tirador, an existing street within the project site, has been vacated by the City, and it will become a private road as part of the proposed project.

4.11.3.1 Existing Circulation System

Regional access to the project site is provided by Interstate 5 (I-5), State Route 73 (SR-73), State Route 74 (SR-74, also known as Ortega Highway), and Pacific Coast Highway (PCH, also known as State Route 1). The I-5 freeway bisects the central portion of the City in a north-south direction and is directly adjacent to the west of the project site; SR-73 extends in an east-west direction in the northern portion of the City and is located approximately 3.2 miles northwest of the project site; Ortega Highway extends in an east-west direction approximately 0.2 mile north of the project site; and PCH extends in a north-south direction and is approximately 2.8 miles south of the project site. Vehicular, pedestrian, and bicycle access to the project site is currently provided via Calle Arroyo. Primary access to the project site would be provided via driveways on Paseo Tirador, and secondary access would be provided via two driveways on Calle Arroyo.

Key roadways in the vicinity of the project site are as follows:

- **Paseo Tirador:** Paseo Tirador is an undivided two-lane local street that provides direct access to the project site. It extends south from Calle Arroyo to San Juan Creek Trail. Paseo Tirador is currently a private road and will remain a private road as a part of the proposed development.

- **Calle Arroyo:** Calle Arroyo is an east-west roadway that provides direct access to the project site. Calle Arroyo is a two-lane undivided roadway west of Rancho Viejo Road and east of La Novia Avenue, and a four-lane divided roadway between Rancho Viejo Road and La Novia Avenue. It extends from east of San Juan Capistrano to its terminus east of I-5. The speed limit along Calle Arroyo east and west of Rancho Viejo Road is 35 miles per hour (mph) and 30 mph, respectively. Curbside parking is permitted along this roadway on select locations.

- **La Novia Avenue:** La Novia Avenue is a north-south roadway east of the project site, and an east-west roadway south of the project site. It is a divided four-lane roadway north of Calle Arroyo and south of San Juan Creek Road on its north-south portion. La Novia Avenue is an undivided two-lane, east-west roadway east of the I-5 northbound ramps at Valle Road, south of the project site. It extends south from Ortega Highway to the I-5 northbound ramps at Valle Road. La Novia Avenue is designated as a Primary Arterial north of San Juan Creek Road, and a Collector between San Juan Creek Road and the I-5 northbound ramps at Valle Road. The speed limit along La Novia Avenue north and south of San Juan Creek Road is 35 mph and 40 mph, respectively (25 mph adjacent to St. Margaret's Episcopal School when children are present). Curbside parking is not permitted on either side of La Novia Avenue, with the exception of the east side of the street north of Calle Arroyo.

- **Rancho Viejo Road:** Rancho Viejo Road is a four-lane, north-south roadway located northeast of the project site. It is generally divided with a raised median (and left-turn lanes for access to local streets) north of Ortega Highway and undivided south of Ortega Highway. It extends south from Mission Viejo to its terminus at Calle Arroyo. Rancho Viejo Road is designated as a Secondary Arterial north of Ortega Highway and a Collector south of Ortega Highway in the City's Circulation Element. The speed limit along Rancho Viejo Road north and south of Ortega Highway is 45 mph and 30 mph, respectively. Curbside parking is not permitted on either side of Rancho Viejo Road.

- **Camino Capistrano:** Camino Capistrano is a divided north-south roadway located west of the project site. It is a two-lane roadway north of Del Obispo Street, and a four-lane roadway south of Del Obispo Street. It extends south from Laguna Niguel, through the City, to its terminus in Dana Point. Camino Capistrano is designated as a Primary Arterial between San Juan Creek Road and Del Obispo Street, and a Secondary Arterial north of Del Obispo Street in the City's Circulation Element. The speed limits along Camino Capistrano north of Del Obispo Street vary from 25 mph to 45 mph, and south of Del Obispo Street, the limit is 35 mph. Curbside parking is permitted on both sides of this roadway in select locations.

- **Del Obispo Street**: Del Obispo Street is a four-lane divided roadway located west of the project site. It is a north-south roadway at its intersection with Ortega Highway, and becomes an east-west roadway at its intersection with Camino Capistrano to the west. Del Obispo Street is designated as a Secondary Arterial in the City's Circulation Element. The speed limit along Del Obispo Street is 35 mph. Curbside parking is not permitted on either side of the street.

- **Ortega Highway (SR-74):** Ortega Highway is a divided four-lane, east-west roadway north of the project site. It extends east from Camino Capistrano to Interstate 215 (I-215) in Perris. Ortega Highway is designated as a Primary Arterial east of the I-5 southbound ramps and as a Secondary Arterial west of the I-5 southbound ramps to Camino Capistrano. Between the I-5 northbound and southbound ramps, Ortega Highway functions as an eight-lane facility due to the dual left-turn lanes at the signalized I-5 southbound ramp/Ortega Highway intersection. East of the I-5 northbound ramps, and between the I-5 southbound ramps and Del Obispo Street, Ortega Highway is built as a six-lane facility. It is designated as a hot spot between I-5 and Del Obispo Street. The speed limit along Ortega Highway is 25 mph between Camino Capistrano and I-5 and 35–45 mph east of I-5. Curbside parking is permitted on both sides of this roadway in select locations.

- **Junipero Serra:** Junipero Serra is an undivided four-lane, east-west roadway north of the project site. It extends from Rancho Viejo Road to the east, to Camino Capistrano to the west. Junipero Serra is designated as a Primary Arterial in the City's Circulation Element. The speed limit along Junipero Serra is 35 mph. Curbside parking is not permitted on either side of Junipero Serra.

Pedestrian Circulation. In support of the City's General Plan Circulation Goal 3 to "provide an extensive public bicycle, pedestrian, and equestrian trails network," the project will incorporate a continuous system of sidewalks within the project site. The pedestrian amenities within the site and at its adjacencies have been designed to comply with the City's objective. Safe access to the public street system will be provided.

Sidewalks currently exist on both sides of Calle Arroyo (south side provides an off-street bike and pedestrian trail) in the project vicinity.

Bicycle Circulation. Adjacent to the project site, San Juan Creek Trail provides a bicycle trail. San Juan Creek Trail begins at the intersection of Calle Arroyo and Paseo Tirador, traverses the project site in a southwest direction, and terminates at the Pacific Ocean in the City of Dana Point. Rancho Viejo Road south of Ortega Highway (located west of the project site) provides an on-street (class II) bike lane on the west side of the street and a separated bike trail on the east side of the street. North of Ortega Highway, Rancho Viejo Road provides a two-way separated bike trail on the east side of the street.

Transit Facilities. An OCTA bus stop is provided approximately 1 mile west of I-5 on Camino Capistrano north of Ortega Highway. OCTA Route 91 provides transportation to/from the Laguna Hills Transportation Center and the San Clemente Metrolink Station with a stop at the San Juan Capistrano Train Depot.

With access to the San Juan Capistrano Train Depot approximately 1 mile west of the project site, Amtrak's Pacific Surfliner and Metrolink's Inland Empire-Orange County and Orange County Lines connect transit users to the larger Southern California region from the project site.

4.11.3.2 Existing Traffic Volumes and LOS Analysis

Consistent with City Administrative Policy 310, existing traffic volumes were collected over 3 consecutive days (Tuesday through Thursday, when schools were in session) by National Data & Surveying Services (NDS) in November 2018 for the study area intersections and roadway segments. The TIA, provided in Appendix H of this EIR, includes the existing traffic volume data.

Tables 4.11.E and 4.11.F summarize the results of the existing peak-hour LOS analysis for the study area intersections using the ICU and HCM methodologies, respectively. The ICU methodology for signalized intersections compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums up these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The HCM intersection methodology presents LOS in terms of delay (in seconds per vehicle). The resulting delay is expressed in terms of LOS, as in the ICU methodology. As shown in Table 4.11.E and 4.11.F, all study area intersections, including the hot-spot intersections, currently operate at satisfactory LOS based on the ICU methodology and the HCM methodology, respectively.

Existing roadway segment average daily trips (ADT) volumes (average of 3 days), v/c ratios, and LOS are presented in Table 4.11.G. As Table 4.11.G indicates, all study area roadway segments, including the hot-spot roadway, currently operate at satisfactory LOS, with the exception of Valle Road between San Juan Creek Road and I-5 northbound ramps (LOS F).

4.11.4 Regulatory Setting

4.11.4.1 Federal Regulations

No federal policies or regulations pertaining to transportation are applicable to the proposed project.

4.11.4.2 State Regulations

Senate Bill 743. On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law and started a process that changes the methodology of a transportation impact analysis as part of CEQA requirements. SB 743 directed the California Office of Planning and Research (OPR) to establish new CEQA guidance for jurisdictions that removes the level of service (LOS) method, which focuses on automobile vehicle delay and other similar measures of vehicular capacity or traffic congestion, from CEQA transportation analysis. Rather, vehicle miles traveled (VMT), or other measures that promote "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses," are now be used as the basis for determining significant transportation impacts in the State. While the requirement to measure transportation impacts via VMT analysis does not go into effect until July 1, 2020, a VMT analysis for the project is presented below for information purposes.

Table 4.11.E: Existing Intersection Level of Service Summary (ICU)

Intersection		Control	Peak Hour	Existing	
				ICU	LOS
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	0.421	A
			PM	0.408	A
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	0.674	B
			PM	0.595	A
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	0.781	C
			PM	0.724	C
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	0.295	A
			PM	0.299	A
5	La Novia Avenue/Ortega Highway	Signal	AM	0.650	B
			PM	0.707	C
6	Rancho Viejo Road/Ortega Highway	Signal	AM	0.650	B
			PM	0.789	C
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	0.717	C
			PM	0.688	B
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	0.653	B
			PM	0.681	B
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	0.528	A
			PM	0.506	A
10	Camino Capistrano/Ortega Highway	Signal	AM	0.508	A
			PM	0.476	A
11	Rancho Viejo Road/Paseo Espada	Signal	AM	0.292	A
			PM	0.338	A
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	N/A	N/A
			PM	N/A	N/A
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	0.165	A
			PM	0.205	A
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	N/A	N/A
			PM	N/A	N/A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	0.615	B
			PM	0.598	A
16	La Novia Avenue/San Juan Creek Road	Signal	AM	0.475	A
			PM	0.423	A
17	Valle Road/San Juan Creek Road	Signal	AM	0.489	A
			PM	0.614	B
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	0.375	A
			PM	0.495	A
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Roundabout	AM	N/A	N/A
			PM	N/A	N/A

Source: *Traffic Impact Analysis,* Table A (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
NB = northbound
OWSC = one-way stop control
SB = southbound
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)

Table 4.11.F: Existing Intersection Level of Service Summary (HCM)

Intersection		Control	Peak Hour	Existing	
				Delay	LOS
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	29.5	C
			PM	27.6	C
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	29.3	C
			PM	28.1	C
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	42.4	D
			PM	36.0	D
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	18.3	B
			PM	20.0	C
5	La Novia Avenue/Ortega Highway	Signal	AM	23.9	C
			PM	29.2	C
6	Rancho Viejo Road/Ortega Highway	Signal	AM	47.7	D
			PM	53.4	D
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	44.5	D
			PM	35.8	D
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	25.6	C
			PM	27.4	C
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	15.6	B
			PM	15.1	B
10	Camino Capistrano/Ortega Highway	Signal	AM	18.5	B
			PM	13.8	B
11	Rancho Viejo Road/Paseo Espada	Signal	AM	13.4	B
			PM	39.4	D
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	31.1	D
			PM	20.5	C
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	5.4	A
			PM	7.2	A
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	9.4	A
			PM	9.4	A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	34.4	C
			PM	35.0	C
16	La Novia Avenue/San Juan Creek Road	Signal	AM	32.6	C
			PM	34.4	C
17	Valle Road/San Juan Creek Road	Signal	AM	12.2	B
			PM	19.9	B
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	13.1	B
			PM	15.2	B
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Roundabout	AM	7.7	A
			PM	9.7	A

Source: *Traffic Impact Analysis,* Table B (LSA, February 2020).
[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).
AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.G: Existing Roadway Segment Level of Service Summary

Roadway	Segment	No. of Lanes	LOS E Capacity	Existing		
				ADT	V/C	LOS
Rancho Viejo Road	Junipero Serra to Ortega	4D	37,500	10,507	0.280	A
Ortega Highway	La Novia to Rancho Viejo[1]	5D	46,900	42,410	0.904	E
	Rancho Viejo to I-5 NB Ramps[1]	6D	56,300	49,586	0.881	D
	I-5 NB Ramps to I-5 SB Ramps[1,2]	8D	75,000	43,468	0.580	A
	I-5 SB Ramps to Del Obispo[1,2]	6D	56,300	37,390	0.664	B
	Del Obispo to Camino Capistrano[1]	4D	37,500	11,705	0.312	A
Del Obispo Street	Ortega to Camino Capistrano[2]	4D	37,500	27,817	0.742	C
Camino Capistrano	Ortega to Del Obispo	2D	22,000	14,073	0.640	B
	Del Obispo to San Juan Creek	4D	37,500	19,064	0.508	A
San Juan Creek Road	Valle to Camino Capistrano	4U	25,000	19,470	0.779	C
Valle Road	San Juan Creek to I-5 NB Ramps - La Novia	2U	12,500	12,701	1.016	F

Source: *Traffic Impact Analysis*, Table C (LSA, February 2020).
[1] Segment is a "CMP" (Congestion Management Program) location (LOS E is acceptable).
[2] Segment is considered a "Hot Spot" location (LOS E is acceptable).
= exceeds City's Level of Service criteria
For No. of Lanes: D = divided, and U = undivided
ADT = average daily trips
I-5 = Interstate 5
LOS = level of service
NB = northbound
SB = southbound
V/C = volume-to-capacity ratio

***State CEQA Guidelines* Section 15064.3, Subdivision (b).** In January 2018, the State of California Office of Planning and Research (OPR) submitted a proposal for comprehensive updates to the *State CEQA Guidelines* to the California Natural Resources Agency. The submittal included proposed updates related to the analysis of greenhouse gas (GHG) emissions, energy, transportation impacts pursuant to SB 743, and wildfires, as well as revisions to Section 15126.2(a) in response to the California Supreme Court's decision in California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal. 4th 369. On December 28, 2018, the updated *State CEQA Guidelines* went into effect.

As part of the update to the *State CEQA Guidelines*, Section 15064.3 was added and codifies that project-related transportation impacts are typically best measured by evaluating the project's VMT. Specifically, subdivision (b) focuses on specific criteria related to transportation analysis and is divided into four subdivisions: (1) land use projects, (2) transportation projects, (3), qualitative analysis, and (4) methodology. Subdivision (b)(1) provides guidance on determining the significance of transportation impacts of land use projects using VMT; projects located within 0.5 mile of high quality transit should be considered to have a less than significant impact. Subdivision (b)(2) addresses VMT associated with transportation projects and states that projects that reduce VMT, such as pedestrian, bicycle, and transit projects, should be presumed to have a less than significant impact. Subdivision (b)(3) acknowledges that Lead Agencies may not be able to quantitatively estimate VMT for every project type; in these cases, a qualitative analysis may be used. Subdivision (b)(4) stipulates that Lead Agencies have the discretion to formulate a methodology that would

appropriately analyze a project's VMT. Although an agency may elect to be governed by the provisions of this section immediately, it is not required until July 1, 2020.

4.11.4.3 Regional Regulations

Orange County Congestion Management Program. OCTA is a multimodal transportation agency that began in 1991 with the consolidation of seven separate agencies. OCTA serves Orange County residents and travelers by providing the following: countywide bus and paratransit service; Metrolink rail service; the 91 Express Lanes; freeway, street, and road improvement projects; individual and company commuting solutions; motorist aid services; and regulation of taxi operations. State law requires that a CMP be developed, adopted, and updated biennially for every county that includes an urbanized area, and requires that it include every city and the county government within that county. As the Congestion Management Agency for Orange County, OCTA is responsible for implementing the Orange County CMP.

OCTA adopted the CMP in 1991 to reduce traffic congestion and to provide a mechanism for coordinating land use and development decisions in Orange County. Compliance with the CMP requirements ensures a city's eligibility to compete for State gas tax funds for local transportation projects. The CMP was updated most recently in November 2019.

4.11.4.4 Local Regulations

City of San Juan Capistrano General Plan. The City of San Juan Capistrano General Plan was approved by the City Council in December 1999, with the exception of the Housing Element, which was updated and adopted by the City Council in January 2014. In May 2002, the City Council approved a General Plan Amendment, which included a variety of changes to several of the General Plan Elements.

The City's General Plan is the principal land use document guiding development within the City. The City's General Plan is a comprehensive plan that establishes goals, objectives, and policies intended to guide growth and development in the City. The General Plan also serves as a blueprint for development throughout the community and is the vehicle through which the community needs, desires, and aspirations are balanced. The San Juan Capistrano General Plan is the fundamental tool for influencing the quality of life in the City.

> ***Circulation Element.*** The Circulation Element (1999) aims to guide the continued development and implementation of the circulation system to support existing and planned development. The Circulation Element also established acceptable roadway service levels and identifies improvements required to maintain these service levels. It is the stated goal of the City to maintain traffic and transportation LOS at LOS D, with the exception of Camino Capistrano/San Juan Creek Road and Camino Capistrano/I-5 southbound ramps (hot-spot intersections) and Camino Capistrano between the I-5 southbound ramps and Avenida Aeropuerto (hot-spot roadway segment), where LOS E is considered satisfactory. The Circulation Element also encourages the use of other transportation modes, including transit, walking, bicycling, and equestrian riding to reduce the demand on the transportation system and improve air quality. The following goals and policies applicable to the proposed project are presented in the Circulation Element:

Circulation Goal 1: Provide a system of roadways that meets the needs of the community.

Policy 1.1: Provide and maintain a City circulation system that is in balance with the land uses in San Juan Capistrano.

Policy 1.4: Improve the San Juan Capistrano circulation system roadways in concert with land development to ensure sufficient levels of service.

Circulation Goal 3: Provide an extensive public bicycle, pedestrian, and equestrian trails network.

Policy 3.1: Provide and maintain an extensive trails network that supports bicycles, pedestrians, and horses and is coordinated with those networks of adjacent jurisdictions.

Circulation Goal 4: Minimize the conflict between the automobile, commercial vehicles, pedestrians, horses, and bicycles.

Policy 4.1: Provide sufficient right-of-way widths along roadways to incorporate features that buffer pedestrians, horses, and bicycles from vehicular traffic.

Policy 4.3: Install additional street improvements within areas where necessary to improve vehicular and non-vehicular safety.

City Council Policy No. 310. City Council Policy No. 310 requires development projects to conduct a transportation impact analysis to analyze conformance with the transportation strategies, goals, and policies in the General Plan and address adverse impacts to the transportation system. Refer to Section 4.11.2.3, City of San Juan Capistrano Thresholds of Significance, which explains how project-related impacts are determined.

4.11.5 Thresholds of Significance

The thresholds for transportation impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to transportation if it would:

Threshold 4.11.1: **Conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.**

Threshold 4.11.2: **Conflict or be inconsistent with CEQA Guidelines section 15064.3 or will conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.**

Threshold 4.11.3: **Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).**

Threshold 4.11.4: **Result in inadequate emergency access.**

The Initial Study, provided in Appendix A, substantiates that there would be no impacts associated with Threshold 4.11.3 as vehicular traffic to and from the project site would utilize the existing network of regional and local roadways that currently serve the project site area. Further, design of the proposed project's internal private roadways, ingress, egress, and other streetscape changes, would be subject to review by the City's Department of Public Works for compliance with City regulations. Therefore, the proposed project would not impact traffic safety due to a design feature. In addition, the Initial Study substantiates that impacts associated with Threshold 4.11.4 would be less than significant as access to the project site would be provided via three driveways on Calle Arroyo, and one fire department emergency access point would connect the project site to the adjacent 24 Hour Fitness parking lot. Therefore, emergency access to and from the project site would be improved as compared to existing conditions, and impacts related to emergency access would be less than significant. Therefore, these thresholds will not be addressed in the following analysis.

4.11.6 Project Impacts

Threshold 4.11.1: **Would the project conflict with a program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?**

Less Than Significant Impact.

Construction. As described further in Section 3.0, Project Description, construction equipment and vehicles will be staged on site. Although the project does not include any characteristics (e.g., permanent road closure or long-term blocking of road access) that would physically impair or otherwise interfere with transit, roadways, bicycle facilities, and/or pedestrian facilities in the project vicinity, the project would require temporary lane closures on Calle Arroyo to allow for utility connections on the project site.

Project construction would take approximately 20 months. Project construction will consist of the five phases (including average duration, number of employees, and trucks) listed below. It should be noted that Phases 3–5 would overlap for a period of 7 months.

- **Phase 1 – Site Preparation (1 month):** 9 workers
- **Phase 2 – Grading (5 months):** 10 workers and 38 haul trucks
- **Phase 3 – Building Construction (13 months):** 71 workers and 19 vendor trucks
- **Phase 4 – Paving (8 months):** 8 workers
- **Phase 5 – Architectural Coatings (8 months):** 14 workers
- **Overlapping Phases 3–5 (7 months):** 93 workers and 19 vendor trucks

Typical construction hours are 7:00 a.m. to 5:00 p.m., consistent with the City's Municipal Code (Section 8-2.04). Each worker will arrive between 6:30 a.m. and 7:00 a.m. (outside of the a.m. peak hour). Approximately 60 percent of the workers will leave between 3:30 p.m. and 4:00 p.m. (outside the p.m. peak hour) and the remaining 40 percent will leave after 4:00 p.m. (during the p.m. peak hour). To present a conservative analysis, all workers are assumed to drive themselves to/from the project site. Vendor truck trips will occur throughout the day (between 7:00 a.m. and 5:00 p.m.) and haul truck trips will occur outside of the peak hours (between 9:00 a.m. and 4:00 p.m.).

As determined in the TIA, the most intense period of construction (i.e., the overlap of Phases 3–5) would generate 10 a.m. peak-hour trips (5 inbound and 5 outbound) and 47 p.m. peak-hour trips (5 inbound and 42 outbound) in passenger car equivalents (PCEs). Because operations associated with the proposed project (64 a.m. peak-hour trips and 82 p.m. peak-hour trips [discussed in further detail below]) would generate more trips than construction (10 a.m. peak-hour trips and 47 p.m. peak-hour trips) and the LOS analyses have determined that the project would not result in any significant traffic impacts, it can be concluded that construction traffic impacts would be less than significant.

Although construction traffic would be less than traffic generated by project operation, the project would be required to adhere to all applicable City requirements to reduce potential impacts on the local circulation system during project construction. Therefore, construction of the project would result in less than significant traffic impacts related to potential conflicts with plans, programs, ordinances, or policies addressing the local circulation system, and no mitigation would be required.

Operation. The proposed project would be required to comply with General Plan policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The project would also be required to comply with City Council Policy No. 310, which establishes metrics for determining traffic impacts, consistent transportation-related goals and policies in the City's General Plan, and the Orange County CMP (2019). The project's consistency with these plans is described in detail below.

Conformance with the General Plan. The proposed project would be required to comply with transportation related goals and policies in the City's General Plan (refer to Section 4.11.4.4, above, for a list of goals and policies applicable to the proposed project) as described below.

As previously stated, primary access to the project site would be provided via driveways on Paseo Tirador, and secondary access would be provided via two driveways on Calle Arroyo. An LOS analysis was conducted at the intersection of Paseo Tirador-San Juan Creek Trail/ Calle Arroyo, which confirmed that this intersection would operate at LOS B or better during both peak hours using the ICU methodology.

As part of the project, a multi-purpose pedestrian, equestrian, and bicycle trail would be constructed along the project site's southern boundary. The multi-purpose trail would connect to the existing sidewalk along Calle Arroyo directly east of the project site, traverse along the site's southern boundary, and connect to the existing San Juan Creek Trail southwest of the site. Implementation of the multi-purpose trail would be consistent with the intention to expand the existing bicycle, pedestrian, and equestrian trails network (Circulation Element Goal 3 and Policy 3.1), as well as the intention to minimize the conflict between bicycle, pedestrian, and equestrian uses and vehicular traffic (Circulation Element Goal 4 and Policy 4.1).

The proposed project would also connect the project site to nearby sidewalks and bicycle routes on Calle Arroyo through the installation of new internal sidewalks serving the residential development. The project would also allow for the continuation of existing on-street (Class II) bike lanes provided on Rancho Viejo Road (located west of the project site), as well as continuation of the existing bicycle, pedestrian, and equestrian trail located along the San Juan Creek. The existing bicycle, pedestrian, and equestrian network also serve to connect the project area with the surrounding residential, employment, commercial, and recreational destinations. As such, the project would be consistent with the City's goals of proving a circulation system that meets the needs of the community and minimize conflicts between vehicles, pedestrians, equestrians, and bicycles (Circulation Element Goals 1 and 4). In addition, the development of an internal, private circulation system serving the residential development would be consistent with the intention of installing street improvements within areas where necessary to improve the circulation system in concert with land development (Circulation Element Policies 1.1 and 1.4). As such, the proposed project would not conflict with applicable provisions in the City's General Plan Circulation Element.

Conformance with Administration Policy No. 310. City Council Policy No. 310 requires development projects to conduct a transportation impact analysis to analyze conformance with the transportation strategies, goals, and policies in the General Plan and address adverse impacts to the transportation system.

In order to assess the project's consistency with City Administrative Policy 310, a trip generation analysis was first conducted to determine the number of trips that would occur following implementation of the project. As shown in Table 4.11.H, the project has the potential to generate approximately 890 ADT, including 64 trips (16 inbound and 48 outbound) in the a.m. peak hour and 82 trips (51 inbound and 31 outbound) in the p.m. peak hour.

Table 4.11.H: Trip Generation Summary

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates									
Single-Family Detached Housing		DU	9.44	0.19	0.55	0.74	0.62	0.37	0.99
Multifamily Housing		DU	5.44	0.09	0.27	0.36	0.27	0.17	0.44
Project Trip Generation									
Single-Family Detached Housing	43	DU	406	8	24	32	27	16	43
Multifamily Housing	89	DU	484	8	24	32	24	15	39
Total Trip Generation	**132**	**DU**	**890**	**16**	**48**	**64**	**51**	**31**	**82**

Source: *Traffic Impact Analysis*, Table D (LSA, February 2020).
[1] Trip rates referenced from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 10th Edition (2017):
Land Use Code 210 - Single-Family Detached Housing
Land Use Code 221 - Multifamily Housing (Mid-Rise)
ADT = average daily trips
DU = dwelling unit

In order to determine impacts at roadway intersections associated with implementation of the project (i.e., the Existing Plus Project condition), the results of the trip generation analysis for the proposed project were added to existing baseline traffic volumes at the study area intersections. Tables 4.11.I and 4.11.J summarize the results of the Existing Plus Project peak-hour LOS analysis using the ICU and HCM methodologies, respectively. As shown in Table 4.11.I, all study area intersections, including the hot-spot intersections, are anticipated to operate at satisfactory LOS based on the ICU methodology. As shown in Table 4.11.J, all study area intersections, including the hot-spot intersections, are anticipated to operate at satisfactory LOS based on the HCM methodology. Therefore, a significant impact would not occur at any study area intersection based on the ICU and HCM methodologies. No mitigation would be required.

In addition to assessing project impacts on roadway intersections, project-related impacts to roadway segments were also evaluated for conformance with City Administrative Policy No. 310. As part of this assessment, the trip generation results for the proposed project were added to existing baseline traffic volumes at study area roadway segments. Existing Plus Project roadway segment ADT volumes, v/c ratios, and LOS are presented in Table 4.11.K. As Table 4.11.K indicates, all study area roadway segments, including the hot-spot roadways, are anticipated to operate at satisfactory LOS with the project, except for Valle Road between San Juan Creek Road and the I-5 northbound ramps (LOS F). However, the roadway segment v/c ratio does not increase by 0.01 or greater in the Existing Plus Project condition. Therefore, consistent with City Administrative Policy No. 310, impacts would be considered less than significant under Existing Plus Project conditions. No mitigation would be required.

In summary, the project would not result in conflicts with City Administrative Policy No. 310 because the addition of project traffic would not result in impacts to the surrounding roadway system in the Existing Plus Project condition. Therefore, impacts would be less than significant, and no mitigation is required.

Table 4.11.I: Existing Plus Project Intersection Level of Service Summary (ICU)

Intersection		Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Project Impact[2]	
				ICU	LOS	ICU	LOS	ICU	Yes/ No
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	0.421	A	0.421	A	0.000	No
			PM	0.408	A	0.410	A	0.002	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	0.674	B	0.674	B	0.000	No
			PM	0.595	A	0.595	A	0.000	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	0.781	C	0.781	C	0.000	No
			PM	0.724	C	0.724	C	0.000	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	0.295	A	0.296	A	0.001	No
			PM	0.299	A	0.302	A	0.003	No
5	La Novia Avenue/Ortega Highway	Signal	AM	0.650	B	0.650	B	0.000	No
			PM	0.707	C	0.709	C	0.002	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	0.650	B	0.657	B	0.007	No
			PM	0.789	C	0.794	C	0.005	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	0.717	C	0.721	C	0.004	No
			PM	0.688	B	0.692	B	0.004	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	0.653	B	0.654	B	0.001	No
			PM	0.681	B	0.687	B	0.006	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	0.528	A	0.530	A	0.002	No
			PM	0.506	A	0.508	A	0.002	No
10	Camino Capistrano/Ortega Highway	Signal	AM	0.508	A	0.509	A	0.001	No
			PM	0.476	A	0.478	A	0.002	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	0.292	A	0.296	A	0.004	No
			PM	0.338	A	0.345	A	0.007	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	0.165	A	0.189	A	0.024	No
			PM	0.205	A	0.226	A	0.021	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	0.615	B	0.615	B	0.000	No
			PM	0.598	A	0.599	A	0.001	No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	0.475	A	0.478	A	0.003	No
			PM	0.423	A	0.431	A	0.008	No
17	Valle Road/San Juan Creek Road	Signal	AM	0.489	A	0.489	A	0.000	No
			PM	0.614	B	0.615	B	0.001	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	0.375	A	0.375	A	0.000	No
			PM	0.495	A	0.495	A	0.000	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A

Source: *Traffic Impact Analysis*, Table E (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A significant project impact occurs when the ICU in (2) minus the ICU in (1) is 0.01 or greater, and the LOS in (2) is E or F.

AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.J: Existing Plus Project Intersection Level of Service Summary (HCM)

	Intersection	Control	Peak Hour	1 Existing Delay	1 Existing LOS	2 Existing Plus Project Delay	2 Existing Plus Project LOS	3 Project Impact[2] Delay	3 Project Impact[2] Yes/No
1	Rancho Viejo Road/ Junipero Serra Road	Signal	AM	29.5	C	29.5	C	0.0	No
			PM	27.6	C	27.6	C	0.0	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	29.3	C	29.3	C	0.0	No
			PM	28.1	C	28.1	C	0.0	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	42.4	D	42.4	D	0.0	No
			PM	36.0	D	36.0	D	0.0	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	18.3	B	18.4	B	0.1	No
			PM	20.0	C	20.2	C	0.2	No
5	La Novia Avenue/Ortega Highway	Signal	AM	23.9	C	23.9	C	0.0	No
			PM	29.2	C	29.3	C	0.1	No
6	Rancho Viejo Road/ Ortega Highway	Signal	AM	47.7	D	47.7	D	0.0	No
			PM	53.4	D	53.4	D	0.0	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	44.5	D	44.7	D	0.2	No
			PM	35.8	D	36.0	D	0.2	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	25.6	C	25.7	C	0.1	No
			PM	27.4	C	27.6	C	0.2	No
9	Del Obispo Street/ Ortega Highway[1]	Signal	AM	15.6	B	15.6	B	0.0	No
			PM	15.1	B	15.1	B	0.0	No
10	Camino Capistrano/ Ortega Highway	Signal	AM	18.5	B	18.6	B	0.1	No
			PM	13.8	B	13.9	B	0.1	No
11	Rancho Viejo Road/ Paseo Espada	Signal	AM	13.4	B	13.5	B	0.1	No
			PM	39.4	D	38.2	D	-1.2	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	31.1	D	31.5	D	0.4	No
			PM	20.5	C	20.9	C	0.4	No
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	5.4	A	6.6	A	1.2	No
			PM	7.2	A	8.0	A	0.8	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	9.4	A	10.0	B	0.6	No
			PM	9.4	A	10.5	B	1.1	No
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	34.4	C	34.4	C	0.0	No
			PM	35.0	C	35.0	C	0.0	No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	32.6	C	32.7	C	0.1	No
			PM	34.4	C	34.5	C	0.1	No
17	Valle Road/San Juan Creek Road	Signal	AM	12.2	B	12.1	B	-0.1	No
			PM	19.9	B	19.8	B	-0.1	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	13.1	B	13.1	B	0.0	No
			PM	15.2	B	15.9	B	0.7	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Roundabout	AM	7.7	A	7.7	A	0.0	No
			PM	9.7	A	9.8	A	0.1	No

Source: *Traffic Impact Analysis*, Table F (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A significant project impact occurs when the delay in (2) minus the delay in (1) is 1.0 seconds or greater, and the LOS in (2) is E or F.

AWSC = all-way stop control
ICU = Intersection Capacity Utilization
I-5 Interstate 5
LOS = level of service
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.K: Existing Plus Project Roadway Segment Level of Service Summary

Roadway	Segment	No. of Lanes	LOS E Capacity	1 Existing			Project ADT	2 Existing Plus Project			3 Project Impact[3]	
				ADT	V/C	LOS		ADT	V/C	LOS	Δ V/C	Yes/No
Rancho Viejo Rd	Junipero Serra to Ortega	4D	37,500	10,507	0.280	A	0	10,507	0.280	A	0.000	No
Ortega Hwy	La Novia to Rancho Viejo[1]	5D	46,900	42,410	0.904	E	162	42,572	0.908	E	0.004	No
	Rancho Viejo to I-5 NB Ramps[1]	6D	56,300	49,586	0.881	D	162	49,748	0.884	D	0.003	No
	I-5 NB Ramps to I-5 SB Ramps[1,2]	8D	75,000	43,468	0.580	A	97	43,565	0.581	A	0.001	No
	I-5 SB Ramps to Del Obispo[1,2]	6D	56,300	37,390	0.664	B	32	37,422	0.665	B	0.001	No
	Del Obispo to Camino Capistrano[1]	4D	37,500	11,705	0.312	A	32	11,737	0.313	A	0.001	No
Del Obispo St	Ortega to Camino Capistrano[2]	4D	37,500	27,817	0.742	C	0	27,817	0.742	C	0.000	No
Camino Capistrano	Ortega to Del Obispo	2D	22,000	14,073	0.640	B	32	14,105	0.641	B	0.001	No
	Del Obispo to San Juan Creek	4D	37,500	19,064	0.508	A	130	19,194	0.512	A	0.004	No
San Juan Creek Rd	Valle to Camino Capistrano	4U	25,000	19,470	0.779	C	16	19,486	0.779	C	0.000	No
Valle Rd	San Juan Creek to I-5 NB Ramps - La Novia	2U	12,500	12,701	1.016	F	16	12,717	1.017	F	0.001	No

Source: *Traffic Impact Analysis*, Table G (LSA, February 2020).

[1] Segment is a "CMP" (Congestion Management Program) location (LOS E is acceptable).

[2] Segment is considered a "Hot Spot" location (LOS E is acceptable).

[3] A significant project impact occurs when the V/C in (2) minus the V/C in (1) is 0.01 or greater, and the LOS in (2) is E or F.

= exceeds City's Level of Service criteria

For No. of Lanes, D = divided, and U = undivided

ADT = average daily trips
I-5 = Interstate 5
LOS = level of service
NB = northbound
SB = southbound
V/C = volume-to-capacity ratio

Conformance with the Orange County CMP. Ortega Highway is an Orange County CMP roadway. LOS E is considered acceptable at this location, consistent with the City's target LOS for hot spot locations. The TIA included two intersections (I-5 northbound ramps/ Ortega Highway and I-5 southbound ramps/Ortega Highway) and three roadway segments (Ortega Highway between La Novia Avenue and Rancho Viejo Road, Ortega Highway between Rancho Viejo Road and I-5 northbound ramps, and Ortega Highway between I-5 northbound ramps and I-5 southbound ramps) considered CMP monitoring locations. As stated above, the addition of project traffic would not result in impacts to the surrounding roadway system in the Existing Plus Project condition, and therefore, the CMP monitoring locations included in the study area would not be significantly impacted. As such, no further analysis of project-related impacts on CMP roadway segments and/or intersections is required. Therefore, the proposed project would not result in conflicts with the Orange County CMP, and no mitigation would be required.

Queueing Analysis. The TIA analyzed the 95th percentile queues of the I-5 northbound and southbound ramps at Ortega Highway using the HCM 6th Edition methodology. The purpose of this analysis was to determine the adequacy of the existing turn-lane storage capacity and identify the potential for vehicles to spill back into the through lanes at these ramp intersections. The 95th-percentile queue is defined as the queue length that has only a 5 percent probability of being exceeded during the analysis time period. It is a useful parameter for determining the appropriate length of turn pockets, but it is not typical of what an average driver would experience. Table 4.11.L summarizes the queueing analysis for Existing, Existing Plus Project, Existing Plus Cumulative No Project, Existing Plus Cumulative Plus Project, Buildout No Project, and Buildout Plus Project conditions.

As shown in Table 4.11.L, the storage length of the dual westbound turn lanes at the I-5 southbound ramps at Ortega Highway will be exceeded under the Existing Plus Cumulative Plus Project condition. However, the project would only contribute 2 ft to the queue. Therefore, the project would not contribute significant queues under the Existing Plus Cumulative condition.

Similar to the Existing Plus Cumulative Plus Project condition, the storage lengths of four turn lanes at the I-5 northbound and southbound ramps at Ortega Highway will be exceeded under the Buildout Plus Project condition. However, the project would only contribute 6 ft or less to each of these queues. Therefore, the project would not contribute significant queues under the Buildout condition.

Table 4.11.L: I-5 Ramps/Ortega Highway Queueing Summary

ID	Intersection	Turn Movement	Storage Length (feet per lane)	Existing				Existing Plus Cumulative				Buildout			
				No Project		Plus Project		No Project		Plus Project		No Project		Plus Project	
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
7	I-5 Northbound Ramps and Ortega Highway	NBR	740	396	193	398	193	438	246	443	244	540	283	540	288
		NBLTR	740	606	394	605	406	693	484	693	495	762	534	768	536
		EBR	385	62	53	62	53	113	54	115	54	226	167	227	172
8	I-5 Southbound Ramps and Ortega Highway	Dual SBL	400	267	340	268	344	273	349	274	354	428	554	429	559
		Dual SBR	400	248	192	251	193	373	276	374	277	426	313	428	314
		Dual WBL[1]	215	144	201	146	204	156	217	160	219	170	237	174	239

Source: *Traffic Impact Analysis*, Table O (LSA, February 2020).
= 95th Percentile Queue exceeds storage length expressed in feet per lane.
[1] Storage length is the average of the two left-turn lanes.
EBR = Eastbound Right
I-5 = Interstate 5
NBR = Northbound Right
NBLTR = Northbound Left-Through-Right
SBL = Southbound Left
SBR = Southbound Right
WBL = Westbound Left

Threshold 4.11.2: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3 or will conflict with an applicable congestion management program, including but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Less Than Significant Impact. According to *State CEQA Guidelines* Section 15064.3(a), project-related transportation impacts are generally best measured by evaluating the project's vehicle miles traveled (VMT). VMT refers to the amount and distance of automobile travel attributable to a project.

State CEQA Guidelines Section 15064.3(b) sets forth criteria for analyzing transportation impacts, breaking down the methodology based on project type and specifying other criteria for conducting VMT analysis.

For land use projects, VMT exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects located within 0.5 mile of an existing high-quality transit corridor should be considered to have a less than significant impact. *State CEQA Guidelines* Section 15064.3(b)(2) addresses VMT associated with transportation projects and states that projects that reduce VMT, such as pedestrian, bicycle, and transit projects, should be presumed to have a less than significant impact. Subdivision (b)(3) of the *State CEQA Guidelines*, Section 15064.3, acknowledges that Lead Agencies may not be able to quantitatively estimate VMT for every project type; in these cases, a qualitative analysis may be used. The regulation goes on to state that Lead Agencies have the discretion to formulate a methodology that would appropriately analyze a project's VMT. (*State CEQA Guidelines* Section 15064.3(b)(4)). It is important to note that *State CEQA Guidelines* Section 15064.3(c) states that while an agency may elect to be governed by the provisions of this section immediately, it is not required until July 1, 2020.

The City has not yet established thresholds or standards related to VMT. However, State law provides sufficient guidance to evaluate the project's impacts related to VMT.

The Governor's Office of Planning and Research (OPR) Technical Advisory (TA) states that existing VMT for residential projects may be measured at the regional or City level. For purposes of this vehicle miles traveled (VMT) evaluation, the City has been considered as the Region.

The OPR TA on Evaluating Transportation Impacts in CEQA for residential projects, December 2018: Page - 15 states the following:

> *"Recommended threshold for residential projects:*
>
> *A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita. Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the SCS for that city, and should be consistent with the SCS."*

The proposed project will not cumulatively exceed the number of units specified in the Orange County Sustainable Community Strategies (SCS) for the City. Therefore, for purposes of the VMT evaluation and as suggested in the TA, the project VMT per capita has been compared with the City's (Region) VMT per capita to determine whether the project will have a significant transportation impact.

The Orange County Transportation Analysis Model (OCTAM) has been used to estimate both the regional and project VMT, since it is consistent with the forecasts included in the 2018 Orange County Long Range Transportation Plan. The OCTAM socioeconomic database for both base (2012) and future (2040) scenarios was updated with the project land uses to calculate project VMT. Regional and project VMT were calculated from the OCTAM model runs as described below.

- **Project Traffic Analysis Zone Update:** The first step in preparation of the VMT evaluation was to update the traffic analysis zones (TAZs) in the model that include the project area. LSA converted the project land use into model socioeconomic categories. The OCTAM socioeconomic database for both base (2012) and future (2040) scenarios was updated with the project land uses to calculate project VMT. A separate TAZ was created and updated with the socioeconomic data developed for the proposed residential use.

- **Select Zone Model Runs:** Upon completion of the socioeconomic data update, LSA conducted model runs for both 2012 and 2040 scenarios. The model runs included select zone model runs for the project TAZ. The select zone runs have been utilized in determining project-specific VMT data from the model outputs.

In the TIA, regional and project VMT were calculated from the OCTAM runs, as described below. The regional (City) VMT per capita for both base (2012) and future (2040) model scenarios were obtained from the model. Existing (2019) VMT per capita was developed by interpolating between base and future year VMT data obtained from the model. The regional VMT is 24.2 per capita. Project select zone model runs were utilized to develop project VMT. Project VMT per capita was calculated for both base (2012) and future (2040) model scenarios. The existing (2019) project VMT per capita was developed by interpolating between the base and future year VMT per capita for the project. The project-related VMT is 11.7 per capita. As such, the VMT per capita for the project is 51 percent less than the regional VMT per capita under existing (2019) conditions (detailed VMT development calculations are included in Appendix G of the TIA). Therefore, based on the OPR TA guidance, the project will not have a significant VMT transportation impact.

At this time, the City has not adopted a methodology to analyze VMT impacts within its jurisdiction. Therefore, since the City does not currently have thresholds or standards in place for assessing potential VMT impacts, this information is provided for disclosure purposes only, and the analysis of traffic impacts in this Draft EIR for CEQA purposes are based on the City's LOS thresholds. Further, according to the TIA, implementation of the proposed project would not result in any significant project-related impacts to the surrounding roadway system. No mitigation would be required.

4.11.7 Level of Significance Prior to Mitigation

There would be no potentially significant impacts related to transportation.

4.11.8 Regulatory Compliance Measures and Mitigation Measures

4.11.8.1 Regulatory Compliance Measures

No regulatory compliance measures are required for the proposed project.

4.11.8.2 Mitigation Measures

No mitigation is required for the proposed project.

4.11.9 Level of Significance after Mitigation

There would be no significant unavoidable adverse impacts of the proposed project related to transportation. No mitigation would be required.

4.11.10 Cumulative Impacts

As defined in the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects. The cumulative impact area for transportation is the City of San Juan Capistrano. A list of approved/pending projects provided by the City was reviewed to determine whether projects in the vicinity of the project site (if any) should be included in the cumulative condition. With concurrence from the City, the approved/pending projects listed in Table H in the TIA were identified as cumulative projects.

4.11.10.1 Project Plus Cumulative (Opening Year 2021) Condition

Less Than Significant Impact. According to the Project Applicant, the project will open in 2021. To develop a Year 2021 condition, an ambient growth rate of 0.5 percent per year (i.e., 1.5 percent total growth) was applied to the existing 2018 traffic counts. This condition also included the proposed project trips and manually assigned trips generated by approved/pending (cumulative) projects. Application of a 0.5 percent per year growth rate to the existing traffic volumes is considered conservative and would account for any additional future development in the project vicinity.

Refer to Table H in the TIA for the list of approved/pending projects provided by City staff. This list was reviewed to identify projects in the vicinity of the project site that would contribute traffic in the study area beyond the ambient growth already assumed.

Tables 4.11.M and 4.11.N summarize the results of the Existing Plus Project Plus Cumulative peak hour LOS analysis for the study area intersections using the ICU and HCM methodologies, respectively. As shown in Tables 4.11.M and 4.11.N, all study area intersections, including the hot spot intersections, are forecast to operate at satisfactory LOS, with the exception of Rancho Viejo Road/Ortega Highway (LOS E in the p.m. peak hour based on the HCM methodology). However, the delay does not increase by 1.0 second or greater. Therefore, consistent with City Administrative Policy No. 310, a significant project or cumulative impact would not occur at any study area intersection based on the ICU and HCM methodologies.

Table 4.11.M: Existing Plus Project Plus Cumulative Intersection Level of Service Summary (ICU)

Intersection		Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Existing Plus Project Plus Cumulative		4 Cumulative Impact[2]	
				ICU	LOS	ICU	LOS	ICU	LOS	Δ ICU	Yes/No
1	Rancho Viejo Road/ Junipero Serra Road	Signal	AM	0.421	A	0.421	A	0.439	A	0.000	No
			PM	0.408	A	0.410	A	0.423	A	0.002	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	0.674	B	0.674	B	0.684	B	0.000	No
			PM	0.595	A	0.595	A	0.603	B	0.000	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	0.781	C	0.781	C	0.792	C	0.000	No
			PM	0.724	C	0.724	C	0.734	C	0.000	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	0.295	A	0.296	A	0.304	A	0.001	No
			PM	0.299	A	0.302	A	0.310	A	0.003	No
5	La Novia Avenue/Ortega Highway	Signal	AM	0.650	B	0.650	B	0.723	C	0.000	No
			PM	0.707	C	0.709	C	0.780	C	0.002	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	0.650	B	0.657	B	0.709	C	0.007	No
			PM	0.789	C	0.794	C	0.846	D	0.005	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	0.717	C	0.721	C	0.781	C	0.004	No
			PM	0.688	B	0.692	B	0.747	C	0.004	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	0.653	B	0.654	B	0.715	C	0.001	No
			PM	0.681	B	0.687	B	0.735	C	0.006	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	0.528	A	0.530	A	0.593	A	0.002	No
			PM	0.506	A	0.508	A	0.583	A	0.002	No
10	Camino Capistrano/Ortega Highway	Signal	AM	0.508	A	0.509	A	0.756	C	0.001	No
			PM	0.476	A	0.478	A	0.584	A	0.002	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	0.292	A	0.296	A	0.304	A	0.004	No
			PM	0.338	A	0.345	A	0.358	A	0.007	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	0.165	A	0.189	A	0.207	A	0.024	No
			PM	0.205	A	0.226	A	0.263	A	0.021	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	0.615	B	0.615	B	0.715	C	0.000	No
			PM	0.598	A	0.599	A	0.688	B	0.001	No

Table 4.11.M: Existing Plus Project Plus Cumulative Intersection Level of Service Summary (ICU)

Intersection		Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Existing Plus Project Plus Cumulative		4 Cumulative Impact[2]	
				ICU	LOS	ICU	LOS	ICU	LOS	Δ ICU	Yes/No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	0.475	A	0.478	A	0.511	A	0.003	No
			PM	0.423	A	0.431	A	0.478	A	0.008	No
17	Valle Road/San Juan Creek Road	Signal	AM	0.489	A	0.489	A	0.563	A	0.000	No
			PM	0.614	B	0.615	B	0.722	C	0.001	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	0.375	A	0.375	A	0.423	A	0.000	No
			PM	0.495	A	0.495	A	0.560	A	0.000	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: *Traffic Impact Analysis*, Table I (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A cumulative impact occurs when the ICU in (2) minus the ICU in (1) is 0.01 or greater, and the LOS in (3) is E or F.

AWSC = all-way stop control
ICU = Intersection Capacity Utilization
I-5 = Interstate 5
LOS = level of service
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.N: Existing Plus Project Plus Cumulative Intersection Level of Service Summary (HCM)

	Intersection	Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Existing Plus Project Plus Cumulative		4 Cumulative Impact[2]	
				Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Yes/No
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	29.5	C	29.5	C	29.5	C	0.0	No
			PM	27.6	C	27.6	C	27.6	C	0.0	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	29.3	C	29.3	C	29.7	C	0.0	No
			PM	28.1	C	28.1	C	28.3	C	0.0	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	42.4	D	42.4	D	45.0	D	0.0	No
			PM	36.0	D	36.0	D	38.2	D	0.0	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	18.3	B	18.4	B	18.3	B	0.1	No
			PM	20.0	C	20.2	C	20.1	C	0.2	No
5	La Novia Avenue/Ortega Highway	Signal	AM	23.9	C	23.9	C	23.9	C	0.0	No
			PM	29.2	C	29.3	C	29.8	C	0.1	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	47.7	D	47.7	D	52.5	D	0.0	No
			PM	53.4	D	53.4	D	59.7	E	0.0	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	44.5	D	44.7	D	49.9	D	0.2	No
			PM	35.8	D	36.0	D	39.2	D	0.2	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	25.6	C	25.7	C	30.4	C	0.1	No
			PM	27.4	C	27.6	C	30.6	C	0.2	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	15.6	B	15.6	B	18.9	B	0.0	No
			PM	15.1	B	15.1	B	18.0	B	0.0	No
10	Camino Capistrano/Ortega Highway	Signal	AM	18.5	B	18.6	B	33.6	C	0.1	No
			PM	13.8	B	13.9	B	17.2	B	0.1	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	13.4	B	13.5	B	13.7	B	0.1	No
			PM	39.4	D	38.2	D	37.7	D	-1.2	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	31.1	D	31.5	D	44.2	E	0.4	No
			PM	20.5	C	20.9	C	31.9	D	0.4	No
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	5.4	A	6.6	A	7.2	A	1.2	No
			PM	7.2	A	8.0	A	9.2	A	0.8	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	9.4	A	10.0	B	10.5	B	0.6	No
			PM	9.4	A	10.5	B	11.8	B	1.1	No
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	34.4	C	34.4	C	37.4	D	0.0	No
			PM	35.0	C	35.0	C	38.0	D	0.0	No

Table 4.11.N: Existing Plus Project Plus Cumulative Intersection Level of Service Summary (HCM)

	Intersection	Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Existing Plus Project Plus Cumulative		4 Cumulative Impact[2]	
				Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Yes/No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	32.6	C	32.7	C	33.5	C	0.1	No
			PM	34.4	C	34.5	C	34.9	C	0.1	No
17	Valle Road/San Juan Creek Road	Signal	AM	12.2	B	12.1	B	12.0	B	-0.1	No
			PM	19.9	B	19.8	B	18.1	B	-0.1	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	13.1	B	13.1	B	14.0	B	0.0	No
			PM	15.2	B	15.9	B	17.6	B	0.7	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	7.7	A	7.7	A	11.1	B	0.0	No
			PM	9.7	A	9.8	A	19.6	C	0.1	No

Source: *Traffic Impact Analysis,* Table J (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A cumulative impact occurs when the delay in (2) minus the delay in (1) is 1.0 seconds or greater, and the LOS in (3) is E or F.

AWSC = all-way stop control
ICU = Intersection Capacity Utilization
I-5 = Interstate 5
LOS = level of service
NB = northbound
OWSC = one-way stop control
SB = southbound

Existing Plus Project Plus Cumulative roadway segment ADT volumes, v/c ratios, and LOS are presented in Table 4.11.O. As Table 4.11.O indicates, all study area roadway segments, including the hot spot roadways, are forecast to operate at satisfactory LOS, with the exception of the following roadway segments:

- Camino Capistrano between Ortega Highway and Del Obispo Street (LOS E)
- San Juan Creek Road between Valle Road and Camino Capistrano (LOS E)
- Valle Road between San Juan Creek Road and I-5 northbound ramps (LOS F)

However, the v/c ratio does not increase by 0.01 or greater at these roadway segments. As such, consistent with City Administrative Policy No. 310, a significant project or cumulative impact would not occur at any study area roadway segment. Therefore, implementation of the proposed project under Existing Plus Project Plus Cumulative conditions would not result in a significant cumulative impact related to transportation. No mitigation is required.

4.11.10.2 General Plan Buildout (Year 2040) Condition

Less Than Significant Impact. The General Plan Buildout (2040) condition includes all planned circulation improvements consistent with the City's General Plan and all known cumulative projects in the project vicinity.

Tables 4.11.P and 4.11.Q summarize the results of the General Plan Buildout (2040) peak-hour LOS analysis for the study area intersections using the ICU and HCM methodologies, respectively. As shown in Table 4.11.P, all study area intersections, including the hot spot intersections, are forecast to operate at satisfactory LOS based on the ICU methodology, with the exception of La Novia Avenue/Ortega Highway (LOS E in the p.m. peak hour) and Rancho Viejo Road/Ortega Highway (LOS F in the p.m. peak hour). However, the v/c ratio does not increase by 0.01 or greater. Therefore, consistent with City Administrative Policy No. 310, a significant project or buildout impact would not occur at any study area intersection based on the ICU methodology.

As shown in Table 4.11.Q, all study area intersections, including the hot spot intersections, are forecast to operate at satisfactory LOS based on the HCM methodology, with the exception of the following intersections:

- I-5 southbound ramps/Junipero Serra Road (LOS E in the a.m. peak hour)
- Rancho Viejo Road/Ortega Highway (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)
- La Novia Avenue/Calle Arroyo (LOS F in the a.m. and p.m. peak hour)

However, the delay does not increase by 1.0 second or greater at these intersections. Therefore, consistent with City Administrative Policy No. 310, a significant project or buildout impact would not occur at any study area intersection based on the HCM methodology.

Table 4.11.O: Existing Plus Project Plus Cumulative Roadway Segment Level of Service Summary

				1				2			3			4	
				Existing			Project	Existing Plus Project			Existing Plus Project Plus Cumulative			Cumulative Impact[3]	
Roadway	Segment	No. of Lanes	LOS E Capacity	ADT	V/C	LOS	ADT	ADT	V/C	LOS	ADT	V/C	LOS	Δ V/C	Yes/No
Rancho Viejo Road	Junipero Serra to Ortega	4D	37,500	10,507	0.280	A	0	10,507	0.280	A	11,159	0.298	A	0.000	No
Ortega Highway	La Novia to Rancho Viejo[1]	5D	46,900	42,410	0.904	E	162	42,572	0.908	E	46,008	0.981	E	0.004	No
	Rancho Viejo to I-5 NB Ramps[1]	6D	56,300	49,586	0.881	D	162	49,748	0.884	D	54,178	0.962	E	0.003	No
	I-5 NB Ramps to I-5 SB Ramps[1,2]	8D	75,000	43,468	0.580	A	97	43,565	0.581	A	48,992	0.653	B	0.001	No
	I-5 SB Ramps to Del Obispo[1,2]	6D	56,300	37,390	0.664	B	32	37,422	0.665	B	42,042	0.747	C	0.001	No
	Del Obispo to Camino Capistrano[1]	4D	37,500	11,705	0.312	A	32	11,737	0.313	A	14,995	0.400	A	0.001	No
Del Obispo Street	Ortega to Camino Capistrano[2]	4D	37,500	27,817	0.742	C	0	27,817	0.742	C	30,744	0.820	D	0.000	No
Camino Capistrano	Ortega to Del Obispo	2D	22,000	14,073	0.640	B	32	14,105	0.641	B	20,320	0.924	E	0.001	No
	Del Obispo to San Juan Creek	4D	37,500	19,064	0.508	A	130	19,194	0.512	A	21,603	0.576	A	0.004	No
San Juan Creek Road	Valle to Camino Capistrano	4U	25,000	19,470	0.779	C	16	19,486	0.779	C	23,340	0.934	E	0.000	No
Valle Road	San Juan Creek to I-5 NB Ramps - La Novia	2U	12,500	12,701	1.016	F	16	12,717	1.017	F	16,753	1.340	F	0.001	No

Source: *Traffic Impact Analysis,* Table K (LSA, February 2020).

[1] Segment is a "CMP" (Congestion Management Program) location (LOS E is acceptable).

[2] Segment is considered a "Hot Spot" location (LOS E is acceptable).

[3] A cumulative impact occurs when the V/C in (2) minus the V/C in (1) is 0.01 or greater, and the LOS in (3) is E or F.

= exceeds City's Level of Service criteria

For No. of Lanes, D = divided, and U = undivided

ADT = average daily trips

I-5 Interstate 5

LOS = level of service

NB = northbound

SB = southbound

V/C = volume-to-capacity ratio

Table 4.11.P: Buildout Intersection Level of Service Summary (ICU)

	Intersection	Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Buildout		4 Buildout Impact[2]	
				ICU	LOS	ICU	LOS	ICU	LOS	Δ ICU	Yes/ No
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	0.421	A	0.421	A	0.489	A	0.000	No
			PM	0.408	A	0.410	A	0.531	A	0.002	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	0.674	B	0.674	B	0.732	C	0.000	No
			PM	0.595	A	0.595	A	0.636	B	0.000	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	0.781	C	0.781	C	0.842	D	0.000	No
			PM	0.724	C	0.724	C	0.784	C	0.000	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	0.295	A	0.296	A	0.380	A	0.001	No
			PM	0.299	A	0.302	A	0.409	A	0.003	No
5	La Novia Avenue/Ortega Highway	Signal	AM	0.650	B	0.650	B	0.899	D	0.000	No
			PM	0.707	C	0.709	C	0.976	E	0.002	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	0.650	B	0.657	B	0.889	D	0.007	No
			PM	0.789	C	0.794	C	1.025	F	0.005	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	0.717	C	0.721	C	0.829	D	0.004	No
			PM	0.688	B	0.692	B	0.792	C	0.004	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	0.653	B	0.654	B	0.790	C	0.001	No
			PM	0.681	B	0.687	B	0.859	D	0.006	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	0.528	A	0.530	A	0.625	B	0.002	No
			PM	0.506	A	0.508	A	0.623	B	0.002	No
10	Camino Capistrano/Ortega Highway	Signal	AM	0.508	A	0.509	A	0.798	C	0.001	No
			PM	0.476	A	0.478	A	0.618	B	0.002	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	0.292	A	0.296	A	0.591	A	0.004	No
			PM	0.338	A	0.345	A	0.587	A	0.007	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	0.165	A	0.189	A	0.340	A	0.024	No
			PM	0.205	A	0.226	A	0.411	A	0.021	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	0.615	B	0.615	B	0.766	C	0.000	No
			PM	0.598	A	0.599	A	0.729	C	0.001	No

Table 4.11.P: Buildout Intersection Level of Service Summary (ICU)

	Intersection	Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Buildout		4 Buildout Impact[2]	
				ICU	LOS	ICU	LOS	ICU	LOS	Δ ICU	Yes/ No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	0.475	A	0.478	A	0.603	B	0.003	No
			PM	0.423	A	0.431	A	0.584	A	0.008	No
17	Valle Road/San Juan Creek Road	Signal	AM	0.489	A	0.489	A	0.645	B	0.000	No
			PM	0.614	B	0.615	B	0.810	D	0.001	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	0.375	A	0.375	A	0.447	A	0.000	No
			PM	0.495	A	0.495	A	0.599	A	0.000	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			PM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: *Traffic Impact Analysis*, Table L (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A buildout impact occurs when the ICU in (1) minus the ICU in (2) is 0.01 or greater, and the LOS in (3) is E or F.

AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)
NB = northbound
OWSC = one-way stop control
SB = southbound

Table 4.11.Q: Buildout Intersection Level of Service Summary (HCM)

Intersection		Control	Peak Hour	1 Existing		2 Existing Plus Project		3 Buildout		4 Buildout Impact[2]	
				Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Yes/ No
1	Rancho Viejo Road/Junipero Serra Road	Signal	AM	29.5	C	29.5	D	32.0	C	0.0	No
			PM	27.6	C	27.6	C	29.9	C	0.0	No
2	I-5 NB Ramps/Junipero Serra Road	Signal	AM	29.3	C	29.3	C	32.8	C	0.0	No
			PM	28.1	C	28.1	C	28.7	C	0.0	No
3	I-5 SB Ramps/Junipero Serra Road	Signal	AM	42.4	D	42.4	D	57.8	E	0.0	No
			PM	36.0	D	36.0	D	50.1	D	0.0	No
4	Rancho Viejo Road/Golf Club Drive	Signal	AM	18.3	B	18.4	B	21.6	C	0.1	No
			PM	20.0	C	20.2	C	21.1	C	0.2	No
5	La Novia Avenue/Ortega Highway	Signal	AM	23.9	C	23.9	C	31.2	C	0.0	No
			PM	29.2	C	29.3	C	45.4	D	0.1	No
6	Rancho Viejo Road/Ortega Highway	Signal	AM	47.7	D	47.7	D	69.0	E	0.0	No
			PM	53.4	D	53.4	D	>80.0	F	0.0	No
7	I-5 NB Ramps/Ortega Highway[1]	Signal	AM	44.5	D	44.7	D	58.9	E	0.2	No
			PM	35.8	D	36.0	D	45.0	D	0.2	No
8	I-5 SB Ramps/Ortega Highway[1]	Signal	AM	25.6	C	25.7	C	38.6	D	0.1	No
			PM	27.4	C	27.6	C	43.0	D	0.2	No
9	Del Obispo Street/Ortega Highway[1]	Signal	AM	15.6	B	15.6	B	20.3	C	0.0	No
			PM	15.1	B	15.1	B	19.7	B	0.0	No
10	Camino Capistrano/Ortega Highway	Signal	AM	18.5	B	18.6	B	38.2	D	0.1	No
			PM	13.8	B	13.9	B	18.0	B	0.1	No
11	Rancho Viejo Road/Paseo Espada	Signal	AM	13.4	B	13.5	B	20.4	C	0.1	No
			PM	39.4	D	38.2	D	43.7	B	-1.2	No
12	La Novia Avenue/Calle Arroyo[1]	AWSC	AM	31.1	D	31.5	D	>80.0	F	0.4	No
			PM	20.5	C	20.9	C	>80.0	F	0.4	No
13	Rancho Viejo Road/Calle Arroyo	Signal	AM	5.4	A	6.6	A	7.4	A	1.2	No
			PM	7.2	A	8.0	A	9.0	A	0.8	No
14	Paseo Tirador-San Juan Creek Trail/Calle Arroyo	OWSC	AM	9.4	A	10.0	B	10.7	B	0.6	No
			PM	9.4	A	10.5	B	12.0	B	1.1	No
15	Camino Capistrano/Del Obispo Street[1]	Signal	AM	34.4	C	34.4	C	41.9	D	0.0	No
			PM	35.0	C	35.0	C	40.9	D	0.0	No

Table 4.11.Q: Buildout Intersection Level of Service Summary (HCM)

	Intersection	Control	Peak Hour	1 Existing Delay	1 Existing LOS	2 Existing Plus Project Delay	2 Existing Plus Project LOS	3 Buildout Delay	3 Buildout LOS	4 Buildout Impact[2] Δ Delay	4 Buildout Impact[2] Yes/ No
16	La Novia Avenue/San Juan Creek Road	Signal	AM	32.6	C	32.7	C	37.4	D	0.1	No
			PM	34.4	C	34.5	C	38.7	D	0.1	No
17	Valle Road/San Juan Creek Road	Signal	AM	12.2	B	12.1	B	13.1	B	-0.1	No
			PM	19.9	B	19.8	B	19.8	B	-0.1	No
18	Camino Capistrano/San Juan Creek Road[1]	Signal	AM	13.1	B	13.1	B	14.5	B	0.0	No
			PM	15.2	B	15.9	B	18.9	B	0.7	No
19	Valle Road/I-5 NB Ramps-La Novia Avenue	Round-about	AM	7.7	A	7.7	A	13.9	B	0.0	No
			PM	9.7	A	9.8	A	31.4	D	0.1	No

Source: *Traffic Impact Analysis*, Table M (LSA, February 2020).

[1] Intersection is considered a "Hot Spot" location (LOS E is acceptable).

[2] A buildout impact occurs when the delay in (2) minus the delay in (1) is 1.0 seconds or greater, and the LOS in (3) is E or F.

AWSC = all-way stop control
I-5 = Interstate 5
ICU = Intersection Capacity Utilization
LOS = level of service
N/A = not applicable (future intersection and/or evaluated using the Highway Capacity Manual methodology)
NB = northbound
OWSC = one-way stop control
SB = southbound

Buildout roadway segment ADT volumes, v/c ratios, and LOS are presented in Table 4.11.R. As this table indicates, all study area roadway segments, including the hot spot roadways, are forecast to operate at satisfactory LOS, with the exception of the following roadway segments:

- Ortega Highway between La Novia Avenue and Rancho Viejo Road (LOS F)
- Ortega Highway between Rancho Viejo Road and I-5 northbound ramps LOS F)
- Camino Capistrano between Ortega Highway and Del Obispo Street (LOS E)
- San Juan Creek Road between Valle Road and Camino Capistrano (LOS E)
- Valle Road between San Juan Creek Road and I-5 northbound ramps (LOS F)

However, the v/c ratio does not increase by 0.01 or greater at these roadway segments. As such, consistent with City Administrative Policy No. 310, a significant project or buildout impact would not occur at any study area roadway segment. Therefore, implementation of the proposed project under General Plan Buildout conditions would not result in a significant cumulative impact related to transportation. No mitigation is required.

Table 4.11.R: Buildout Roadway Segment Level of Service Summary

				1				2			3			4	
				Existing				Existing Plus Project			Existing Plus Project Plus Cumulative			Cumulative Impact[3]	
Roadway	Segment	No. of Lanes	LOS E Capacity	ADT	V/C	LOS	Project ADT	ADT	V/C	LOS	ADT	V/C	LOS	Δ V/C	Yes /No
Rancho Viejo Rd	Junipero Serra to Ortega	4D	37,500	10,507	0.280	A	0	10,507	0.280	A	13,207	0.352	A	0.000	No
Ortega Hwy	La Novia to Rancho Viejo[1]	5D	46,900	42,410	0.904	E	162	42,572	0.908	E	51,338	1.095	F	0.004	No
	Rancho Viejo to I-5 NB Ramps[1]	6D	56,300	49,586	0.881	D	162	49,748	0.884	D	67,801	1.204	F	0.003	No
	I-5 NB Ramps to I-5 SB Ramps[1,2]	8D	75,000	43,468	0.580	A	97	43,565	0.581	A	55,651	0.742	C	0.001	No
	I-5 SB Ramps to Del Obispo[1,2]	6D	56,300	37,390	0.664	B	32	37,422	0.665	B	44,725	0.794	C	0.001	No
	Del Obispo to Camino Capistrano[1]	4D	37,500	11,705	0.312	A	32	11,737	0.313	A	15,925	0.425	A	0.001	No
Del Obispo St	Ortega to Camino Capistrano[2]	4D	37,500	27,817	0.742	C	0	27,817	0.742	C	32,715	0.872	D	0.000	No
Camino Capistrano	Ortega to Del Obispo	2D	22,000	14,073	0.640	B	32	14,105	0.641	B	21,556	0.980	E	0.001	No
	Del Obispo to San Juan Creek	4D	37,500	19,064	0.508	A	130	19,194	0.512	A	22,975	0.613	B	0.004	No
San Juan Creek Rd	Valle to Camino Capistrano	4U	25,000	19,470	0.779	C	16	19,486	0.779	C	24,811	0.992	E	0.000	No
Valle Rd	San Juan Creek to I-5 NB Ramps - La Novia	2U	12,500	12,701	1.016	F	16	12,717	1.017	F	17,787	1.423	F	0.001	No

Source: *Traffic Impact Analysis,* Table N (LSA, February 2020).

[1] Segment is a "CMP" (Congestion Management Program) location (LOS E is acceptable).

[2] Segment is considered a "Hot Spot" location (LOS E is acceptable).

[3] A buildout impact occurs when the V/C in (2) minus the V/C in (1) is 0.01 or greater, and the LOS in (3) is E or F.

= exceeds City's Level of Service criteria

For No. of Lanes, D = divided, and U = undivided

ADT = average daily trips

LOS = level of service

V/C = volume-to-capacity ratio

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