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4.12 Traffic and Transportation

The City of San Juan Capistrano has adopted the vehicle miles traveled (VMT) metric and significance criteria for transportation impact analyses for CEQA compliance and requires level of service (LOS) analysis for General Plan consistency requirements. This environmental analysis has been prepared consistent with the City of San Juan Capistrano Vehicle Miles Traveled (VMT) Guidelines and Thresholds (May 2020) herein referred to as the "guidelines", which provides guidance on the requirements to evaluate transportation impacts for projects. The guidelines also include the Traffic Circulation Analysis Report requirements per Amended Administrative Policy 310 (Revised May 22, 2020).

Because the Project would generate temporary construction trips in the short term and nominal operational trips, the proposed Project would not generate permanent or long-term trips or VMT. Therefore, a focused analysis of the roadway segment of Camino Capistrano and the Camino Capistrano/Rancho Capistrano intersection during the project's construction phase, along with a qualitative analysis of VMT per current CEQA requirements has been included in the following transportation analysis of the Project. Appendix 4.12A provides the technical data used in the analysis including daily and peak hour traffic counts, and peak hour intersection analysis worksheets.

4.12.1 Affected Environment

4.12.1.1 Existing Regional and Local Transportation Facilities

I-5 is the major north-south route that is used for passenger and goods movement in the region. It traverses diagonally about forty-four miles through Orange County from San Diego County on the south to the Los Angeles County on the north. It serves as the backbone of southern California transportation network, connecting the major urban centers of Los Angeles, Orange, and San Diego Counties. Other significant roadways in the City include Pacific Coast Highway (PCH or State Route 1), State Route 73 (SR-73), and SR-74 (also known as Ortega Highway). The I-5 freeway bisects the City in a north-south direction and is located just east of the project site; PCH extends in a north-south direction in the City and is approximately 10 miles west of the Project; SR-73 is an east-west freeway which starts from I-5 near the Project site; and Ortega Highway extends in an east-west direction approximately 4.0 miles south of the project site.

Characteristics of the existing street system in the study are described below.

I-5. I-5 is the largest highway in the area and provides regional access to the Project site from the north and south via the interchanges of Avery Parkway to the north and Junipero Serra Road to the south. Between SR-73 and SR-74, the freeway is constructed with 10 lanes and 2 HOV lanes. The average daily traffic (ADT) along this segment per Caltrans 2021 traffic census is approximately 210,000 vehicles.

Camino Capistrano. Camino Capistrano is classified as a Secondary Arterial in the General Plan Circulation Element. In the vicinity of the project, it is a two-lane divided roadway that transitions into a two-lane roadway with a painted median, north of its intersection with Rancho Capistrano-Project Access roadway. The posted speed limit is 35 miles per hour (mph) near the proposed project.

Camino Capistrano/Rancho Capistrano-Project Access Intersection. The intersection is unsignalized with free southbound right and eastbound right movements. There is a raised median in the northbound direction that facilitate access in the northbound left direction via a dedicated turn lane. The eastbound left movement is not

allowed and there is newly constructed delineation at this intersection that allows only eastbound right traffic operation. There is a railroad crossing with gate at the westbound approach and KEEP CLEAR markings to warn traffic from blocking the rail tracks or stopping too close to the gates.

Access to the Project site will be provided via an existing access road off Camino Capistrano approximately 0.6 miles northeast of the Project site. A new access road will be improved from the access road off Camino Capistrano to the Project site as shown on the design drawings. Road improvements shall consist of converting dirt roads into gravel roads and widening the roads to meet OCFA and SDG&E standards.

4.12.1.1.1 Pedestrian and Bicycle

There are no paved sidewalks along the roadway near the site.

Camino Capistrano has striped Class II bike lanes from north of the intersection with Rancho Capistrano-Project Access to Junipero Serra Road along west side of the road.

4.12.1.1.2 Public Transportation

Orange County Transportation Authority (OCTA) provides bus transit and MetroLink train service in the County and surrounding cities and destinations. Route 91 Laguna Hills to San Clemente operates in the vicinity of project site, however there are no bus stops or bus service along Camino Capistrano near the project site. Laguna Niguel/Mission Viejo Metrolink Station is located approximately one mile north of the project access intersection.

4.12.1.1.3 Rail Traffic

The closest railway is operated by MetroLink and crosses the project intersection with an at-grade crossing. The nearest rail station is the San Juan Capistrano station located approximately 1.5 miles north of the project site. There are two rail routes that provide service to the area: the Inland Empire – Orange County (IEOC) route and the Orange County route. The IEOC route operates on weekdays from 7:30 a.m. to 11:00 a.m. with 60-minute headways, and from 3:30 p.m. to 8:00 p.m. with 60-minute headways. On weekends, the IEOC route operates from 2:30 p.m. to 7:00 p.m. with 2-hour headways. The Orange County route operates on weekdays from 4:00 a.m. to 10:00 a.m. with 50-minute headways, and from 3:30 p.m. to 6:30 p.m. with 60-minute headways. On weekends, the IEOC route operates from 8:00 a.m. to 7:30 p.m. with 3-hour headways.

4.12.1.1.4 Air Traffic

The nearest airport facility is the John Wayne Airport located approximately 20 miles from the project site. The John Wayne Airport is an international commercial and general aviation airport that serves Orange County, California, and the Greater Los Angeles area.

4.12.1.2 Existing Traffic Conditions and Level of Service

4.12.1.2.1 Existing Intersection Conditions

The City of San Juan Capistrano uses the Highway Capacity Manual (HCM) intersection analysis methodology to analyze the operation of signalized and unsignalized study intersections. The HCM analysis methodology describes the operation of an intersection using a range of LOS, from LOS A (free-flow conditions) to LOS F (severely congested conditions), based on the corresponding control delay experienced per vehicle for intersections.

At the study area intersection and project access driveways, LOS was calculated using the HCM methodology. The Synchro 11 LOS software was used to determine intersection LOS for all study scenarios. Synchro is consistent with the 6th Edition methodology (TRB 2016). Table 4.12-1 shows the LOS values and signalized and unsignalized intersections under the HCM methodology.

Table 4.12-1. Levels of Service for Intersections Using HCM Methodology

Level of Service	HCM Average Delay (seconds per vehicle) Unsignalized Intersections	HCM Average Delay (seconds per vehicle) Signalized Intersections
A	< 10.0	< 10.0
B	> 10.0 to < 15.0	> 10.0 to < 20.0
C	> 15.0 to < 25.0	> 20.0 to < 35.0
D	> 25.0 to < 35.0	> 35.0 to < 55.0
E	> 35.0 to < 50.0	> 55.0 to < 80.0
F	> 50.0	> 80.0

Source: TRB 2016.

HCM = Highway Capacity Manual

Existing weekday peak hour turning movement counts at the study intersection were collected in March 2023, on a typical non-holiday week while area schools were in-session.

This analysis focuses on the weekday daily, AM (7:00 a.m. to 9:00 a.m.) and the PM (4:00 p.m. to 6:00 p.m.) peak periods. The peak periods represent the highest volume of traffic for the adjacent street system. Raw traffic count worksheets are provided in Appendix 4.12A. The gate at the railroad crossing was observed to be closed for approximately one minute during the AM and PM peak hours during the passing of the train. During the AM peak hour, the gate was closed twice and during the PM peak hour the gate was closed only one time. Nominal pedestrians and few bicyclists were observed during AM or PM peak hours at the intersection. Existing intersection geometrics and the weekday AM and PM peak hour volumes at the Camino Capistrano/Rancho Capistrano-Project Access intersection are shown on Figure 4.12-1.

An intersection LOS analysis was prepared for the existing conditions using HCM 6th Edition methodology via the Synchro LOS software. Table 4.12-2 shows the results of the existing conditions analysis. LOS worksheets are provided in Appendix B.

Table 4.12-2. Existing Peak Hour Intersection Level of Service

No.	Intersection	Control	Existing			
			AM Peak		PM Peak	
			Delay ¹	LOS ²	Delay ¹	LOS ²
1	Camino Capistrano/Rancho Capistrano-Project Access	Unsignalized	12.6	B	9.5	A

Notes

¹ Delay in seconds per vehicle

² Level of Service (LOS)

As shown in the table, the Camino Capistrano/Rancho Capistrano-Project Access intersection is currently operating at LOS B or better under existing conditions during both AM and PM peak hours.

4.12.1.2.2 Existing Roadway Conditions

Roadway segment volume to capacity (v/c) ratios were determined using the daily capacities contained in the 2018 Orange County Transportation Authority's (OCTA) Guidance for Administration of the Orange County Master Plan of Arterial Highways (MPAH). Table 4.12-3 illustrates daily capacities for roadways per facility type and number of lanes. Based on the configuration of Camino Capistrano, near the project site, the capacity of 2 lane undivided Local Arterial was used in the roadway segment LOS analysis provided in this section.

Table 4.12-3. Capacity for Roadway Segments

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: TRB 2016.

Existing roadway segment average daily traffic (ADT) volumes (and an average of 3 days) collected in March 2023 are provided in Table 4.12-4. The ADT along Camino Capistrano, near the project site was observed to be **4,732 vehicles**.

Table 4.12-4. Existing Daily Traffic Volumes- Camino Capistrano

Day of the Week	Average Daily Traffic (ADT)	Heavy Vehicle (%)
Tuesday, March 07, 2023	4,916	1.1%
Wednesday, March 08, 2023	4,708	1.4%
Thursday, March 09, 2023	4,573	1.4%
Average (Tuesday-Thursday)	4,732	1.3%

Source: Traffic Counts, 2023.

Table 4.12-5 provides the volumes, v/c ratio and LOS of the Camino Capistrano roadway segment. As Table 4.12-5 indicates, the study area roadway segment of Camino Capistrano currently operates at satisfactory LOS A.

Table 4.12-5. Existing Roadway Segment Level of Service Analysis

No.	Intersection	Lane Classification	Capacity	Existing		
				Volume	V/C	LOS ²
1	Camino Capistrano, near Project Access	2 (Undivided)	12,500	4,732	0.378	A

Notes

¹ V/C = Volumes to capacity ratio

² LOS = Level of Service

4.12.1.2.3 Truck Routes

The Surface Transportation Assistance Act (STAA) allows large trucks to operate on the Interstate and certain primary routes called collectively the National Network. I-5 is part of the National Network of STAA. The construction of project will include truck traffic for all phases of construction and some of the operations and maintenance

requirements. Large and heavy components such as GSU transformer will be transported to the site by large trucks. The origin of these trucks is not known at this time; however, these trucks would most likely use I-5 and its interchanges at Avery Parkway to the north and Junipero Serra Road to the south of the Project.

California Vehicle Code Sections 35550–35796 regulate the use of trucks on state facilities (see Section 4.12.5). Transportation permits will be obtained for all heavy and oversize loads, as required by law.

4.12.1.3 Other Projects

The cumulative projects list included in Section 4 were reviewed to determine if any approved or pending projects in the vicinity would have the potential to add traffic to the study area intersection. As shown in Table 4.12-6, project No. 9,12,25 and 29 were examined. However, as shown in the table below, none of the projects were determined to add traffic to the study area or effect the operations of the study area intersection because they are located at least 0.6 mile or further from the Project and would not likely add traffic to the study area intersection.

Table 4.12-6. Cumulative Projects near Project Site

No.	Name	Location	Description	Distance from Project	Potential for Impact?
19	Paseo De Colinas Townhomes	29001 Paseo De Colinas	38-unit townhome development at a Capistrano Unified School District surplus land site	2.5 miles	No; trips to this site would not typically be routed through the study intersection thus the proposed project would not cause any significant impact to the operations of this project.
12	Oso Ranch Planned Community Residential Zone	Western terminus of Oso Road	A proposed General Plan Amendment to increase the allowable number of residential units within the Oso Ranch Planned Community from 470 units to 700 units.	2.5 miles	No; trips to this site would not typically be routed through the study intersection thus the proposed project would not cause any significant impact to the operations of this project.
25	Seasurf Fish Co.	32341 Golden Lantern, St. H	Site Development Permit and Use Permit to establish and operate a new restaurant (Seasurf Fish Co.) with an outdoor dining area.	6.5 miles	No; trips to this site would not be routed through the study intersection thus the proposed project would not cause any significant impact to the operations of this project.
29	Popeyes Louisiana Kitchen	28722 Camino Capistrano	Site Development Permit to remodel a vacant drive-thru restaurant (formerly Carl's Jr.) and replace it with a Popeyes Louisiana Kitchen.	0.6 miles	No; the site was previously occupied by a similar use project; thus additional trips would not be added to the network nor cause delays through the study intersection

4.12.2 Environmental Analysis

The analysis methodology and thresholds (consistent with CEQA thresholds) used in the project's analysis are described below.

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

4.12.2.1 LOS Assessment

LOS is a metric used to describe the operating characteristics of the street system in terms of the level of congestion or delay experienced by vehicles with service levels range from LOS A through LOS F.

City of San Juan Capistrano LOS Criteria

The City's Amended Administrative Policy establishes the following criteria for traffic or LOS analysis of intersections and roadway segments.

Intersection impacts are considered measurable when:

- Pre-project LOS equals A, B, C, or D, and the addition of the project reduces the LOS to E or worse and increases the HCM/Synchro output by 2.0 seconds/vehicle or more. This is considered a direct measurable impact¹ and the proposed project would be responsible for mitigating back to an acceptable level of service.
- Pre-Project LOS equals E or F, and the addition of the project increases the HCM/Synchro delay output by 2.0 seconds/vehicle or more. This is also considered a direct impact and the proposed project would be responsible for mitigating back to pre-project conditions, or paying mitigation fees if determined financially infeasible or otherwise justified, as determined by the City Manager.

Roadway segment impacts are considered measurable when:

- Pre-project LOS equals A, B, C, or D, and the addition of the project reduces the LOS to E or worse and increases the V/C output by 0.01 or more. This is considered a direct measurable impact and the proposed project would be responsible for mitigating back to an acceptable level of service.
- Pre-Project LOS equals E or F, and the addition of the project increases the V/C output by 0.01 or more. This is also considered a direct impact and the proposed project would be responsible for mitigating back to pre-project conditions, or paying mitigation fees if determined financially infeasible or otherwise justified, as determined by the City Manager.

¹ It should be noted that under updated CEQA guidelines, LOS, or vehicle delay, is no longer considered an environmental impact. The change in LOS and delay is used to measure traffic effect and to recommend improvements measures at intersections.

4.12.2.2 VMT Assessment

On September 27, 2013, SB 743 was signed into law, which created a process to change the way that transportation impacts are analyzed under CEQA. SB 743 required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating transportation impacts. Under the new transportation guidelines, LOS, or vehicle delay, is no longer considered an environmental impact under CEQA. OPR recommended VMT as the most appropriate measure of project transportation impacts for land use projects and land use plans. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. Under the new guidelines, VMT has been adopted as the most appropriate measure of transportation impacts under CEQA. The OPR's regulatory text indicates that a public agency may immediately commence implementation of the new transportation impact guidelines, and that the guidelines must be implemented statewide by July 1, 2020.

CEQA Guidelines Section 15064.3(b) is further divided into four subdivisions: (1) land use projects, (2) transportation projects, (3) qualitative analysis, and (4) methodology. The Updated CEQA Guidelines state that "generally, vehicle miles traveled (VMT) is the most appropriate measure of transportation impacts," and define VMT as "the amount and distance of automobile travel attributable to a project." "Automobile" refers to on-road passenger vehicles, specifically cars and light trucks. The Governor's Office of Planning and Research (OPR) has clarified in its Technical Advisory (OPR 2018) that heavy-duty truck VMT is not required to be included in the estimation of a project's VMT. Other relevant considerations may include the effects of a project on transit and non-motorized traveled. The CEQA Guidelines are accompanied by an OPR Technical Advisory, which includes specifications for how to estimate and forecast VMT for these subdivisions. The City has adopted its own SB 743 guidelines which provide applicable screening criteria, threshold and VMT analysis methodology for land use and transportation projects. If the project does not meet the applicable screening criteria, then further analysis is required.

City of San Juan Capistrano VMT Impact Criteria

The updated CEQA Guidelines do not establish a significance threshold, however City's guidelines recommend a threshold of significance for land use development (residential, office, and other land uses) and transportation projects. The following summarize the City's recommended significance thresholds by land use for determining whether or not a project will have a VMT impact:

- For residential land uses, a project will have a significant impact if the project VMT exceeds the City average VMT/capita minus 15%
- For office and industrial land uses, project will have a significant impact if the project VMT exceeds the City average VMT/employee minus 15%
- For retail, private school/university and hotel/motel/inn land uses, a project will have a significant impact if the project generates a net increase in total City VMT
- For General Plans/Specific Plans, a project will have a significant impact if the project exceeds the City average VMT/service population minus 15%.
- For transportation projects, a project will have a significant if the projects generates a net increase in total City VMT.
- For all land uses, a project will have a cumulative (buildout) significant impact if the project generates a net increase in total City VMT.

VMT Screening and Assessment

It should be noted that there is no significance threshold for construction projects. The guidance from the City does not require a VMT analysis for construction projects. Therefore, the VMT analysis for the project's construction phase has been evaluated qualitatively, per OPR guidance in the Technical Advisory. The analysis for the project's operational phase has been conducted using the City's VMT guidelines. Therefore, as described below, the VMT generated by the construction of the project would be short-term and temporary and would not require a detailed analysis. The VMT generated by the operation of the proposed project would be less than 200 average daily trips (ADT) and hence would be screened out per City's SB 743 Guidelines.

4.12.2.3 LOS Impacts

The following discussion is broken into trip generation from construction, and trip generation from long-term operation of the project. Construction-related trip generation for the proposed project is primarily based on the number of construction employees as well as the quantity of material and equipment delivery-related truck estimate provided by the applicant and used in the proposed project's Air Quality analysis.

4.12.2.3.1 Construction Traffic Generation

Trip generation estimates for construction projects are based on average or peak number of workers and trucks that would be required for the proposed construction activities. Construction traffic includes the number of workers and the amount of truck traffic that would be generated to and from the site daily and during the AM and PM peak commuting hours. The maximum number of construction-related trips is expected to occur over a series of construction phases that would overlap or occur concurrently. Therefore, the overall peak construction period was utilized to calculate the estimated trip generation for the Project.

Construction of the project is anticipated to commence in the beginning of January 2025 and last approximately 18 months, concluding in July 2026. There are eleven construction phases that each have representative start and end dates, with many overlapping days of construction. Construction activities, schedule, and an estimate of related worker and truck trips for the construction and decommissioning phases of the proposed project are shown in Table 4.12-7.

Table 4.12-7. Phasing and Schedule - Construction and Decommissioning

No.	Phase	Start	End	Daily Trips			Total Trips	Total Trips (PCE)
				Workers	Vendor Trucks	Haul Trucks		
Construction								
1	Access Road Site Preparation, Grading, and Paving ¹	1/13/2025	2/3/2025	40	4	20	64	108
2	Site Preparation ¹	1/29/2025	2/11/2025	40	4	20	64	108
3	Switchyard Site Preparation ¹	1/29/2025	2/11/2025	40	4	2	46	54
4	Site Grading ¹	1/29/2025	3/11/2025	40	4	229	273	735
5	Switchyard Grading ¹	1/29/2025	2/11/2025	40	4	0	44	48

Table 4.12-7. Phasing and Schedule - Construction and Decommissioning

No.	Phase	Start	End	Daily Trips			Total Trips	Total Trips (PCE)
				Workers	Vendor Trucks	Haul Trucks		
6	Battery/Container Installation	3/13/2025	3/18/2026	40	20	8	68	104
7	Switchyard Installation ¹	1/29/2025	12/3/2025	40	20	0	60	80
8	Loop-in Transmission Line Foundation and Tower Erection	12/29/2025	2/9/2026	10	4	0	14	18
9	Loop-in Transmission Stringing and Pulling	2/10/2025	3/7/2025	8	4	0	12	16
10	Stormwater Detention Structures and Waterline Installation and Landscaping Installation	3/13/2025	7/16/2025	40	4	8	52	72
11	Commissioning	3/20/2025	7/23/2025	160	0	0	160	160
Peak Phases for Construction (assuming overlap of Phases 1,2,3,4,5, and 7) ¹				240	40	271	551	1,133
Decommissioning								
1	Decommissioning and Demolition	5/31/2050	12/31/2050	40	4	0	44	48

Notes: Dates shown are illustrative only. PCE = Passenger car equivalent

¹ Indicates the peak scenario during which construction of the Compass BESS Project is occurring simultaneously.

Based on the analysis of the construction schedule and phases, it has been determined that construction of Phases 1, 2, 3, 4, 5, and 7 would generate peak construction worker and truck traffic, thereby representing the peak construction period. However, this phase is anticipated to occur only for 8 workdays between January 29, 2025 and February 9, 2025.

Construction traffic includes both cars and trucks or heavy vehicles. To accurately account for the impact trucks may have within traffic volumes as compared to passenger vehicles, passenger car equivalent (PCE) factors were applied to the trip generation estimates to account for truck traffic associated with construction activity. A 1.0 PCE factor was applied to passenger vehicles, 2.0 PCE for vendor trucks, and 3.0 for haul trucks. An 8-hour workday for all construction activities was assumed, with all construction workers arriving to the site in the AM peak hour (7:00 – 9:00 AM), and all construction workers departing the site in the PM peak hour (4:00 – 6:00 PM). Haul trucks were estimated to arrive and depart the site evenly throughout the workday.

The trip generation estimates during the peak construction period for Phases 1, 2, 3, 4, 5, and 7 are summarized in Table 4.12-8 below.

Table 4.12-8. Peak Construction Trip Generation Estimates

Vehicle Type	Daily Quantity		Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Non-PCE Adjusted Trip Generation									
Construction Workers1	120	workers	240	120	0	120	0	120	120
Vendor Trucks2	20	trucks	40	3	2	5	2	3	5
Haul Trucks2	136	trucks	271	17	17	34	17	15	34
Total Trip Generation (Non-PCE)			551	140	19	159	19	140	159
PCE Adjusted Trip Generation									
Construction Workers	120	workers	240	120	0	120	0	120	120
Vendor Trucks3	20	trucks	80	6	4	10	4	6	10
Haul Trucks3	136	trucks	813	51	51	102	51	51	102
Total Trip Generation (PCE)			1,133	177	55	232	55	177	232

As shown in Table 4.12-8, the peak day of construction for the Project would generate approximately 551 daily trips, 159 AM peak hour trips (140 inbound and 19 outbound), and 159 PM peak hour trips (19 inbound and 140 outbound) during construction of Phases 1-5 and 7. After trip generation estimates were adjusted utilizing PCE factors, the peak day of construction for the Project would generate approximately 1,133 daily PCE trips, 232 AM PCE peak hour trips (177 inbound and 55 outbound), and 232 PM PCE peak hour trips (55 inbound and 177 outbound).

For all other subphases of construction, the amount of vehicular traffic is estimated to be less than the peak day. All construction-related traffic would be temporary and short term and would cease upon completion of the Project.

4.12.2.3.2 Construction Traffic Distribution

Project traffic will use the project driveway along Rancho Capistrano Way to access project site. Approximately 80% of the traffic was estimated to enter the project site from north using the southbound right turn lane and 20% from south using the northbound left turn lane along Camino Capistrano Way. Of the exiting traffic, 100% would exit using the eastbound right turn lane along Rancho Capistrano Way.

Project trips were assigned to the study area intersection by applying the above-referenced project trip generation estimates to the trip distribution percentages at the Camino Capistrano/Rancho Capistrano – Project Driveway intersection.

Figure 4.12-2 illustrates the trip distribution and assignment for workers trips. Figure 4.12-3 illustrates the trip distribution and assignment for truck trips. Figure 4.12-4 illustrates the trip distribution and assignment for total project trips.

4.12.2.3.3 Roadway LOS with Construction Traffic

This section details the existing roadway segment operations within the study area, with and without the project-added traffic. Table 4.12-9 shows the results of the roadway segment LOS analysis. The City of San Juan Capistrano considers LOS D as the upper limit of satisfactory operations for roadway segments. As shown below, the study

area roadway segment is operating at an acceptable LOS A under Existing conditions, with and without the project-added traffic.

Table 4.12-9. Existing Roadway Segment Level of Service Analysis

No.	Segment	Lane Classification	Capacity	Existing			Existing plus Project		
				Volume	V/C	LOS ²	Volume	V/C	LOS ²
1	Camino Capistrano, near Project Access	2 (Undivided)	12,500	4,732	0.378	A	5,284	0.427	A

Notes

¹ V/C = Volumes to capacity ratio

² LOS = Level of Service

4.12.2.3.4 Intersection LOS with Construction Traffic

This section details the existing intersection operations within the study area, with and without the project-added traffic. Project trips shown on Figure 4.12.4 were added to Existing peak hour traffic shown on Figure 4.12.5.

An intersection LOS analysis was prepared using HCM 6th Edition methodology via the Synchro LOS software. The City of San Juan Capistrano considers LOS D as the upper limit of satisfactory operations for intersections. Table 4.12-10 shows the results of the intersection LOS analysis. As shown below, the study intersection would continue to operate at an acceptable LOS of B or better under Existing conditions, with project-added traffic conditions. LOS worksheets are provided in Appendix 4.12A. Therefore, addition of construction traffic at the Camino Capistrano/Rancho Capistrano-Project Access would not impact the LOS conditions.

Table 4.12-10. Existing plus Project Peak Hour Intersection Level of Service

No.	Intersection	Control	Existing				Existing plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			Delay ¹	LOS ²	Delay ¹	LOS ²	Delay ¹	LOS ²	Delay ¹	LOS ²
1	Camino Capistrano/Rancho Capistrano-Project Access	Unsignalized	12.6	B	9.6	A	13.2	B	9.6	A

Notes

¹ Delay in seconds per vehicle

² Level of Service (LOS)

4.12.2.4 Truck Turn Analysis

The construction of the project is expected to generate truck traffic over the 11 phases of construction. A truck turning template has been overlaid on the Camino Capistrano/Rancho Capistrano – Project Driveway intersection to determine whether adequate curb radii are available and whether turning movements into and out of project access intersection along Camino Capistrano are possible. Figure 4.12-6 illustrates the inbound and outbound truck access to the project site from Camino Capistrano. A WB-40, an intermediate semitrailer, with overall width of 8 feet and length of 45.5 feet was used as the design vehicle for truck turn analysis and found to be the largest truck that can maneuver the turning movement at the project driveway along Camino Capistrano.

As shown, inbound trucks would not have adequate turn radii from the southbound right turn lane and therefore would have to use the southbound through lane while entering the project site. However, outbound trucks would be able to exit using the eastbound right turn lane at the Camino Capistrano/Rancho Capistrano – Project Driveway intersection. For inbound trucks that have a longer wheelbase than WB-40, the delivery would require to be arranged at an appropriate off-site location, and then delivered to the site from a WB-40 or smaller truck. Alternatively, the existing median at the Camino Capistrano/Rancho Capistrano – Project Driveway intersection can be removed to facilitate the truck turns then reconstructed once construction is completed. Since the through traffic is low along Camino Capistrano, it is not anticipated that traffic along Camino Capistrano would be excessively delayed. However, during construction phases with high truck traffic, a traffic control plan will be implemented which may include the need for flagmen and pedestrian detours.

4.12.2.5 Operational Traffic

The BESS and all associated equipment will be remotely monitored and controlled. Qualified technicians would visit the site approximately 1-2 times per month to conduct routine inspections and maintenance as well as semi-annual and annual services. Periodically, batteries and various components may be replaced or renewed to ensure optimal performance. As such, four trips per week are estimated for operation of the Project.

Based on City's LOS screening criteria, a project that generates 200 or less weekday daily trips or 20 or less weekday trips during the AM or PM peak hour, would not require a Traffic Circulation Analysis Report per Amended Administrative Policy No. 310. As such, no further analysis would be required for the nominal operational traffic generated by the Project.

4.12.2.6 VMT Impacts

4.12.2.6.1 Construction

Construction of the project is not a land use or transportation project, and therefore neither Section 15064.3(b)(1) nor Section 15064.3(b)(2) of the CEQA Guidelines apply. Instead, the proposed project would be categorized under Section 15064.3(b)(3) qualitative analysis. The following paragraph from the Section 15064.3(b)(3) provides guidance regarding qualitative analysis:

If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

Vehicle-trip generation (for workers and trucks) as a result of project construction has been summarized in Tables 4.12-7 and 4.12-8. The VMT for the overall project using approximate trip lengths for worker commute, vendor, and haul trips has been estimated using default values for the South Coast Air Quality District region from the California Emissions Estimator Model (CalEEMod) land use emissions computer model in the project's air quality analysis. However, construction (and decommissioning) related trips are temporary and would not generate permanent trips. Therefore, the VMT from construction (and decommissioning) is not required to be quantified per SB 743 requirements. Further, the project construction would be generally consistent with construction activities in terms of the temporary nature of activities, trip generation characteristics, and the types of vehicles and equipment required. Even though it is anticipated that some of the workers would carpool to the site, managing worker and

vendor trip lengths for the construction projects is not feasible because of the remote location and duration of individual activities. Accessibility to alternative modes of transportation is also not available for workers in the City.

Based on the peak construction trip generation estimates provided in Table 4.12-8, construction of the Project would generate approximately 402 non-PCE daily vehicle trips, totaling 686 PCE daily vehicle trips. However, the trip generation estimates for construction of the Project are based on temporary, short-term vehicular trips. Once construction for the peak construction period has passed, vehicular trips would be reduced, and once construction of the Project is completed, all construction trips would be eliminated from the study area. Therefore, all construction trips would be temporary, and the peak period of construction would only occur for a short-term duration of 8 days; daily trips for other subphases of construction would be estimated to be less than the number of daily vehicle trips estimated during the peak construction period. As stated previously, the operation of the Project is expected to generate nominal permanent vehicular trips within the study area.

Per OPR, heavy vehicle traffic is not required to be included in the estimation of a project's VMT. As noted above, worker and vendor trips would generate VMT, but once construction (and decommissioning) is completed, the construction-related traffic would cease and VMT would return to pre-construction conditions. Measures to reduce the VMT generated by workers and trucks are limited, and there are no thresholds or significance criteria for temporary, construction-related VMT. Additionally, construction (and decommissioning) related VMT would be temporary and short term which would cease after construction is complete. Further, it should be noted that OPR and Tulare County does not require quantitative assessment of temporary construction traffic. Therefore, the proposed project would not conflict or be inconsistent with CEQA Guidelines Sections 15064.3(b)(1) and 15064.3(b)(3), and impacts would be less than significant.

4.12.2.6.2 Operation and Maintenance

As shown in the screening analysis below, the long-term operation of the Project would be screened out using one of the criteria noted below and therefore would not require further VMT analysis. The City's VMT Guidelines suggest that land use projects may screen out of VMT impacts using a variety of factors such as low weekday daily trip generation, proximity to an existing major transit stop or a stop along an existing high quality transit corridor, local serving retail of 50,000 square feet or less, local serving public facility or 100% affordable housing. The following criteria has been used in screening the project's VMT assessment, consistent with the City's VMT guidelines for SB 743 compliance:

- **Generate 200 or less weekday daily trips**
 - Projects that generate 200 or less weekday daily trips are presumed to have little to no impact to the local roadways.

During the operations and maintenance phase, the project will only produce four (4) total weekly trips and nominal peak hour trips. Since the project would generate fewer than both 200 permanent daily trips, the project impacts due to construction and operations would be less than significant. Therefore, a detailed VMT analysis is not required, and the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3(b).

4.12.2.7 Transport of Hazardous Materials

As noted in Section 4.5, Hazardous Material Handling, transportation of hazardous materials will be required once the project is operating. All transportation of hazardous materials will comply with:

- U.S. Environmental Protection Agency (EPA)

- California Department of Transportation (Caltrans)
- California Department of Toxic Substance Control (DTSC)
- California Highway Patrol (CHP)
- California State Fire Marshal Regulations

To manage and prevent potential impacts caused by transporting hazardous materials, contractors will adhere to EPA Caltrans, DTSC, CHP, and California State Fire Marshal regulations. Materials will only be mobilized along approved transportation routes, thereby avoiding sensitive receptors to the extent practicable.

Division 13, Section 31303 of the California Vehicle Code stipulates that the transportation of regulated substances and hazardous materials are required to be carried out via the most direct route, using State or interstate highways whenever possible. In accordance with this policy, subject to Caltrans approval, the recommended route for delivery of regulated or hazardous materials would primarily be via I-5 and SR 73 or SR 74 could also be used. The interchange of I-5 at Avery Parkway to the north and Junipero Serra Road to the south would be used by the truck traffic destined to the site.

4.12.2.8 Public Safety

The Project is not expected to pose any unusual safety hazard to the public, except for the transportation of hazardous materials, where the transporter will be required to obtain a Hazardous Material Transportation License in accordance with CVC Section 32105 and follow proper safety procedures. There are no schools, day care centers, or other generators of pedestrian traffic in the immediate vicinity of the project site.

4.12.2.9 Air Traffic

The project is more than 20 miles from the nearest airport. The Project is not expected to have any effect on the operations of any air facility.

4.12.2.10 Emergency Vehicle Access

Emergency access to Project will be through the main project access intersection on Camino Capistrano. Construction and operation of Project will not involve any road closures and will have no effect on the operations of emergency vehicles. For any truck deliveries, temporary traffic control and flagmen will be used such that through traffic and emergency access is maintained at all times.

4.12.2.11 Parking

All project-related parking would be accommodated on-site during both construction and operations.

4.12.3 Cumulative Effects

Once the Project is constructed, the operation of the project would generate only four trips per week. A traffic analysis of study intersections and roadway segments is not required during the operational phase, as the project will generate fewer than 200 daily and/or 20 peak-hour trips during this phase. The cumulative effect of the project would be less than significant.

4.12.4 Mitigation Measures

As shown in the analysis above, no LOS or VMT impacts were identified. Therefore, no mitigation measures are required. Although all construction related trips would be temporary for the duration of construction and traffic would return to pre-construction conditions upon the completion of construction, a construction traffic management plan or control plan would be implemented to facilitate vehicular access (especially delivery or vendor trucks) at the project access intersection during the peak delivery phase.

Prior to initiation of construction activities, the construction traffic management plan would be created by the contractor and filed with the City. The construction traffic management plan and traffic control measures may include the following:

- Limiting worker and truck traffic during the AM and PM peak hours.
- Methods to increase efficiency, to reduce the overall number of trucks by identifying nearby areas for off-site staging or material storage.
- Flaggers that serve to alert motorists to slow moving trucks and to guide trucks to maneuver turn movement at the project access intersection
- Temporary signage along Camino Capistrano near the project access to warn motorists of construction in the vicinity.

4.12.5 Laws, Ordinances, Regulations, and Standards

The project applicant would ensure compliance with LORS of all applicable federal, state, local and administering agencies pertaining to traffic and transportation issues.

4.12.5.1 Federal LORS

The Code of Federal Regulations (CFR) Hazardous Material Regulations (HMR: 49 CFR Parts 171-180) apply to any person who offers transportation HM in commerce.

- 49 CFR 172, 173, and 173. These regulations provide standards for labels, placards, and markings on hazardous materials shipments by truck (Part 172), standards for packaging hazardous materials (Parts 173), and for transporting hazardous materials in tank cars (Part 179). The administering agencies for the above authority are the CHP and U.S. Department of Transportation.

4.12.5.2 State LORS

The California Vehicle Code (CVC) is the set of statutes that regulate the operation, registration, and ownership of motor vehicles (as well as bicycles and other devices) used to move people, animals and goods along the state's roadways. Following sections would apply to Project.

- CVC Sections 13369, 15275, and 15278 address the licensing of drivers and classifications of licenses required to operate particular types of vehicles.
- CVC Sections 32100.5 addresses the transportation of hazardous materials that pose an inhalation hazard.

- CVC, 13 CCR 1160, et seq. provides the CHP with authority to adopt regulations for the transportation of hazardous materials in California. The CHP can issue permits and specify the route for hazardous material delivery.
- California Streets and Highway Code (S&HC), Sections 660, 670, 1450, 1460 et seq. 1470, and 1480, regulate right-of-way encroachment and granting of permits for encroachments on state and county roads.
- S&HC Sections 117 and 660–711 and CVC Sections 35780 et seq., require permits to transport oversized loads on county roads. S&HC Sections 117 and 660 to 711 require permits for any construction, maintenance, or repair involving encroachment on state highway rights-of-way. CVC Section 35780 requires approval for a permit to transport oversized or excessive loads over state highways.
- Caltrans weight and load limitations for state highways apply to all state and local roadways. The weight and load limitations are specified in CVC Sections 35550 to 35559. The following provisions, from the CVC, apply to all roadways and are therefore applicable to this project.
- General Provisions: The gross weight imposed upon the highway by the wheels on any axle of a vehicle shall not exceed 20,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle, and resting upon the roadway, shall not exceed 10,500 pounds.
- The maximum wheel load is the lesser of the following: (a) the load limit established by the tire manufacturer, or (b) a load of 620 pounds per lateral inch of tire width, as determined by the manufacturer’s rated tire width.
- Vehicles with Trailers or Semi-trailers: The gross weight imposed upon the highway by the wheels on any one axle of a vehicle shall not exceed 18,000 pounds and the gross weight upon any one wheel, or wheels, supporting one end of an axle and resting upon the roadway, shall not exceed 9,500 pounds, except that the gross weight imposed upon the highway by the wheels on any front steering axle of a motor vehicle shall not exceed 12,500 pounds.

4.12.5.3 Local LORS

This section reviews compliance with all relevant local LORS without regard to their applicability as a matter of law. These LORS include the following:

San Juan Capistrano Municipal Code. The electronic version of the San Juan Capistrano Municipal Code was created in January 2000, and is updated on a biannual basis.

- Sections 7-6.01 to 7-6.20 require permits for any construction, maintenance, or repair involving encroachment on any highways or public roads.
- Sections 4-6.301 to 4-6.325 provide limitations for parking such as prohibitions, restrictions and exceptions as specified.

Orange County Congestion Management Program. The Orange County Transportation Authority (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 Congestion Management Program (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 2021 CMP Update is the most recent report prepared by OCTA. A CMP traffic analysis is required for projects that generate 2,400 or more daily trips. Therefore, the Project would not be required to complete a CMP traffic analysis.

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.

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 hot-spot intersections and roadway segments, 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 4.2: Provide traffic management improvements within areas where through traffic creates public safety problems.

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

As shown in Section 4.12.2, the construction of the Project would generate temporary trips. The peak construction trips analysis would not result in unacceptable LOS at the study area intersection. The Project would not generate permanent trips, therefore, would not conflict with the City's General Plan or Circulation Element.

4.12.6 Agencies and Agency Contacts

Table 4.12-11 lists the agency contacts related to traffic and transportation.

Table 4.12-11. Agency Contacts for Traffic and Transportation

Permit	Agency	Contact
Transportation Permit for Oversized Loads	Caltrans	Caltrans Transportation Permits Issuance Branch 1823 14th Street Sacramento, California 95814-7119 (916) 322-4958 http://www.dot.ca.gov/hq/traffops/permits/
Hazardous Materials Transportation License	California Highway Patrol	Hazardous Material Licensing P.O. Box 942898 Sacramento, California 942898-0001 (916) 843-3400 Email form available at: http://www.chp.ca.gov/prog/email.cgi
Safety Permits	Federal Motor Carrier Safety Administration	California Division Office 1325 J St. Suite 1540 Sacramento, California 95814-2941 (916) 930-2760
Encroachment Permits	City of San Juan Capistrano	City of San Juan Capistrano Public Works Department 30448 Rancho Viejo Road, Suite 110 San Juan Capistrano, California 92675 (949) 443-6337
Transportation Permits	City of San Juan Capistrano	City of San Juan Capistrano Public Works Department 30448 Rancho Viejo Road, Suite 110 San Juan Capistrano, California 92675 (949) 443-6337

4.12.7 Permits and Permit Schedule

Table 4.12-12 lists the permits related to traffic and transportation and the permit schedule. The vehicles used to transport heavy equipment and construction materials will require transportation permits when they exceed the size, weight, width, or length thresholds set forth in Section 35780 of the CVC, Sections 117 and 660-711 of the California Streets and Highways Code (S&HC), and Sections 1411.1 to 1411.6 of the CCRs. Affected vehicles will be required to obtain transportation permits from City, Caltrans, or from any other affected agency. Transport route arrangements would be required with Caltrans and CHP officials for permitting and escort, as applicable. Transportation of hazardous materials to and from the Project will be conducted in accordance with CVC Section 31303.

Table 4.12-12. Permit and Permit Schedule for Traffic and Transportation

Permit	Agency Contact	Schedule
Single/annual-trip transportation permit for oversized loads and oversized vehicles	Permit Officer on Duty Caltrans, Transportation Permits Issuance Branch (916) 322-1297	Obtain when necessary, 2-hour processing time (single trip) to 2 weeks (annual trip).
Hazardous Materials Transportation License	California Highway Patrol Hazardous Material Licensing Program (916) 327-5039	Obtain when necessary, approximately 2-week processing time
Single/annual transportation permit for oversize and overweight loads through City of San Juan Capistrano	City of San Juan Capistrano Public Works Department 30448 Rancho Viejo Road, Suite 110, San Juan Capistrano, CA 92675 (949) 443-6337	Obtain when necessary

4.12.8 References

City of San Juan Capistrano. 1999. General Plan Circulation Element. Adopted December 1999.

City of San Juan Capistrano. 2020. City of San Juan Capistrano Vehicle Miles Traveled (VMT) Guidelines. May 22, 2020.

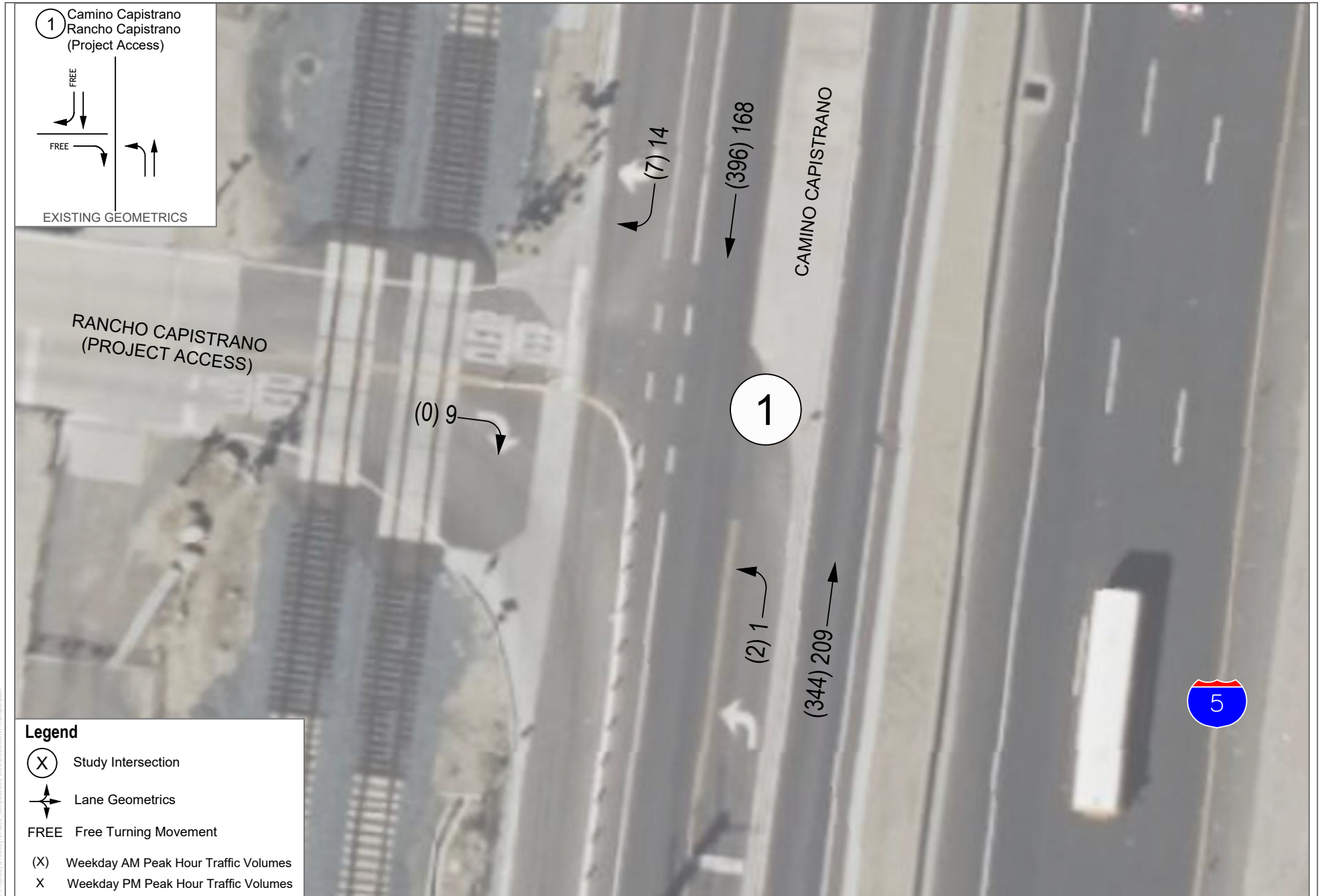
OPR (California Governor's Office of Planning and Research). 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. December 2018.

Orange County Transit Authority (OCTA). 2023. South County Map (octa.net)

OCTA. 2017. Guidance for Administration of the Orange County Master Plan of Arterial Highways. Accessed at https://www.octa.net/pdf/mpah_guidlines.pdf

California Vehicle Code. Accessed at <https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=VEH&tocTitle=+Vehicle+Code+-+VEH>

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SOURCE: Bing Maps

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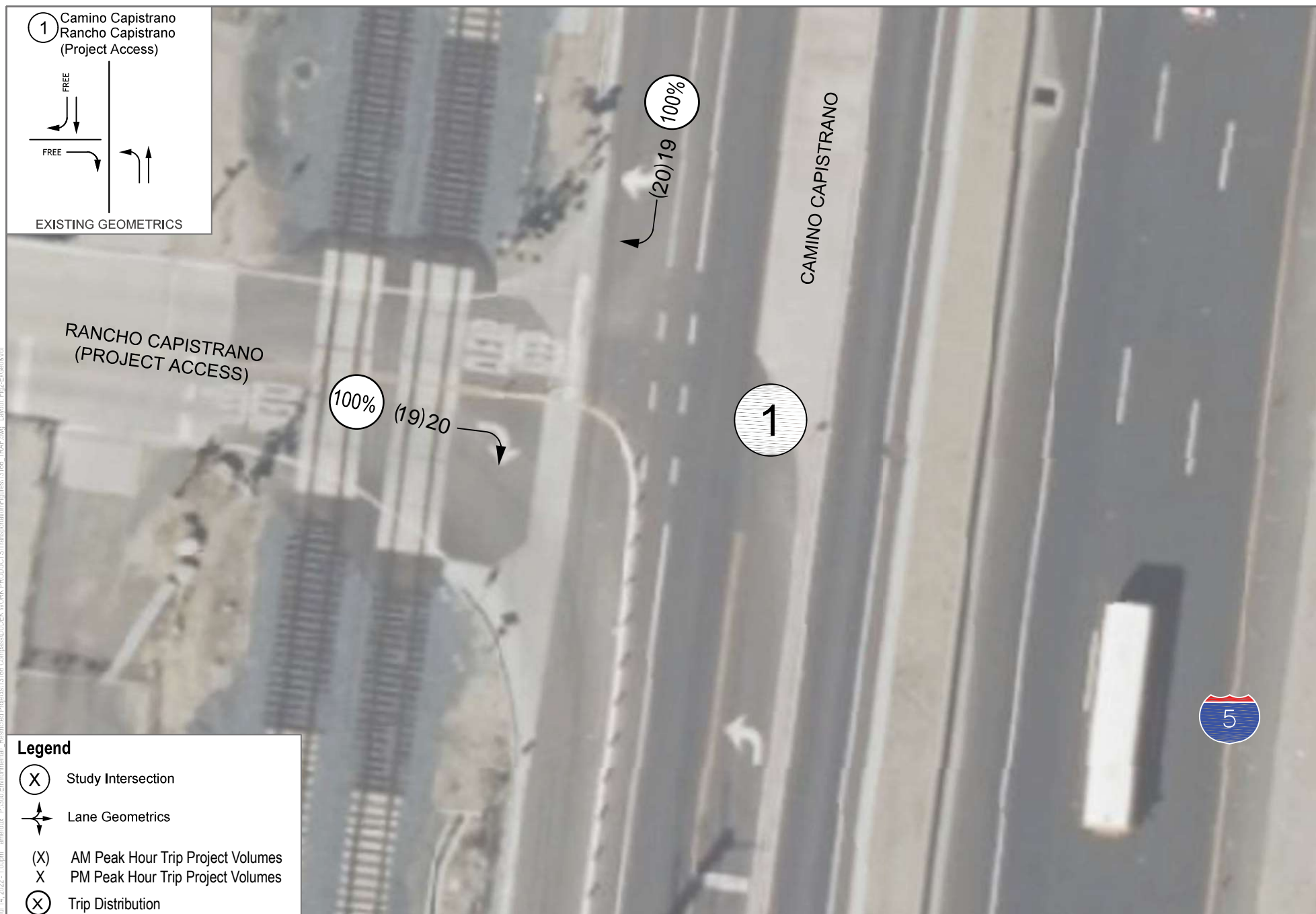


SOURCE: Bing Maps

FIGURE 4.12.2
Trip Distribution and Assignment for Workers Trips
Compass Energy Storage Project

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Figure 4.12-3
Project Trip Assignment and Distribution - Trucks
Compass Energy Storage Project

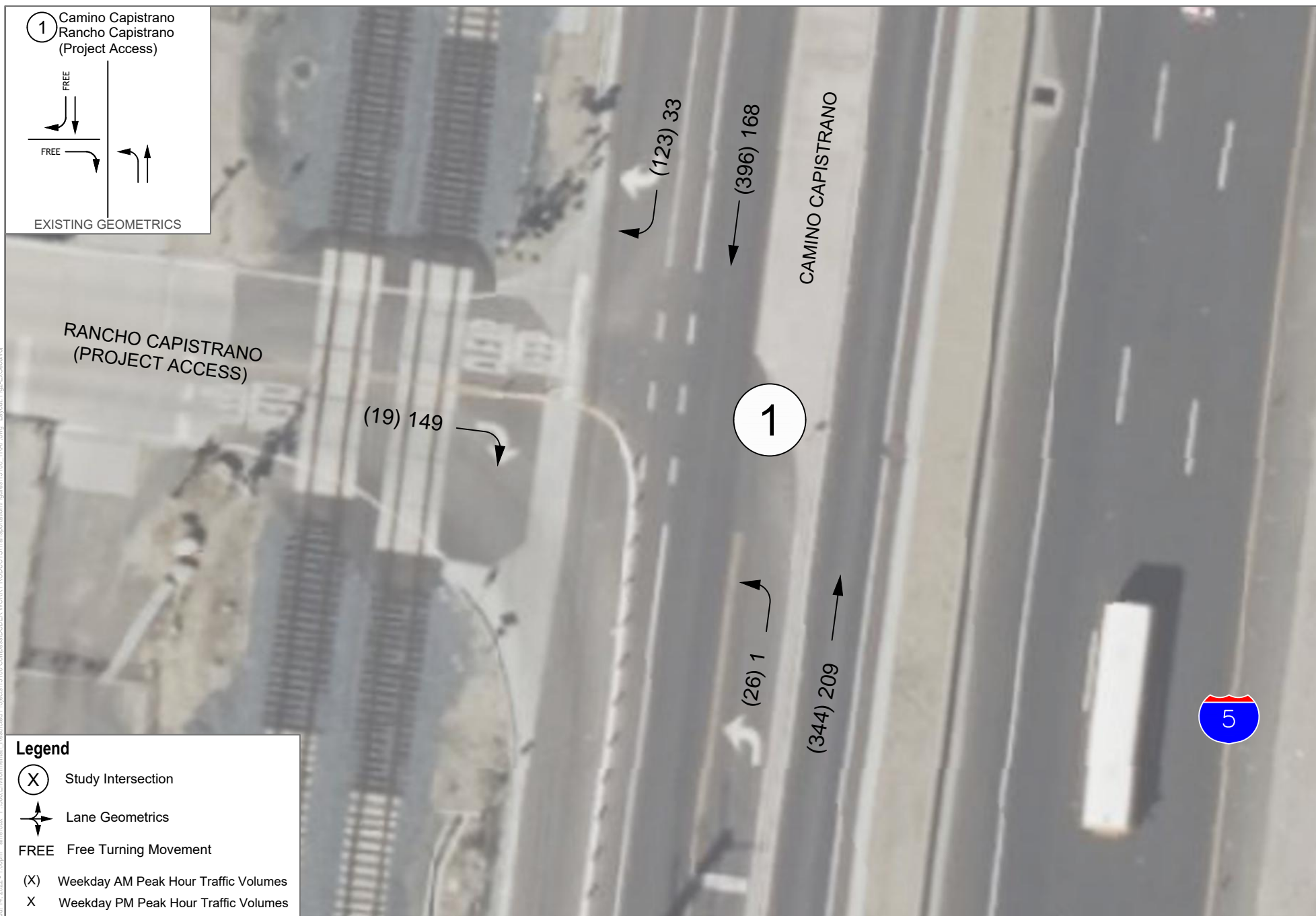
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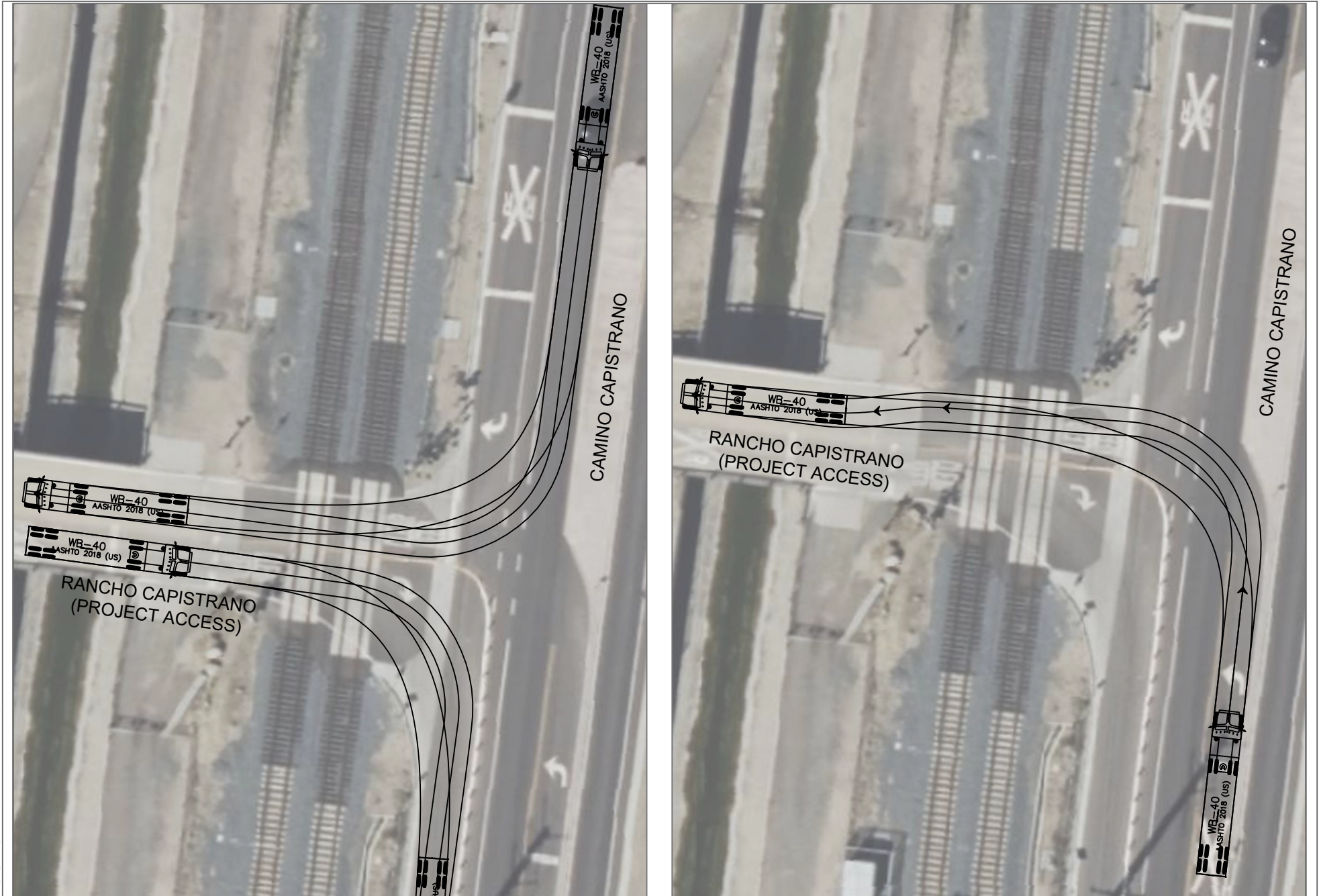


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Figure 4.12-5
Existing plus Project Peak Hour Traffic Volumes

Compass Energy Storage Project

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SOURCE: Bing Maps

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FIGURE 4.12.6

Inbound and Outbound Truck access from Camino Capistrano

Compass Energy Storage Project

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