3.7 Transportation/Circulation

A Traffic Impact Study (TIS) was prepared by Darnell & Associates in 2011 and updated in March 2014 and again in December 2017. This subchapter summarizes information from the study, which is included in its entirety in Appendix I to this EIR. As part of the TIS, a field review of the study area was conducted in June 2017.

3.7.1 Regulatory Framework

3.7.1.1 *County Zoning Ordinance, Parking Regulations, Sections 6750- 6799*

The County's Zoning Ordinance sets the standards for parking including requirements for new uses and structures; existing uses and structures; conversion, alterations, or expansion of existing uses or structures; computation of vehicle and bicycle space requirements; location of parking to building sites; parking space dimensions; design of bicycle storage; design standards for off-street parking; loading spaces; variances from parking regulations; and parking of commercial vehicles in residential, agricultural, and certain special purpose zones. The County of San Diego Off-Street Parking Design Manual implements Section 6793(c) of the County Zoning Ordinance. This section of the Ordinance relates to the design, dimensions, construction, landscaping, and surfacing of parking and bicycle spaces, and driveways.

3.7.1.2 *San Diego County Public Road Standards*

These standards provide design and construction requirements for public road improvement projects located within the unincorporated areas of San Diego County. These standards apply to County initiated public road improvement projects as well as privately initiated public road improvement projects. These standards provide minimum design and construction requirements for public roads.

3.7.1.3 *County of San Diego Consolidated Fire Code*

The County of San Diego, in collaboration with the local fire protection districts, created the Consolidated Fire Code (CFC) in 2001. The CFC contains the County's and fire protection districts' amendments to the California Fire Code. Emergency ingress/egress is established by County's CFC. Ingress/egress is necessary for both citizen evacuation and to provide access for emergency vehicles in the event of a fire or other emergency. Section 902.2 of the CFC dictates minimum design standards for ―Fire Apparatus Access Roads and includes minimum road standards, secondary access requirements, and restrictions for gated communities. Road standard requirements for emergency vehicles specify a minimum 12-foot paved lane or 24-foot travel way.

3.7.1.4 *County of San Diego Regulatory Ordinances, Sections 77.201 – 77.220, Transportation Impact Fee*

The San Diego County Transportation Impact Fee (TIF) Ordinance, as amended in October 2012, requires the assessment and collection of fees for roadway impacts as a condition of approval of a subdivision map or prior to issuance of a development permit, including a building permit. The County TIF Ordinance defrays the actual or estimated costs of constructing planned transportation facilities necessary to accommodate increased traffic generated by future development consistent

with Section 66000 et seq. of the California Government Code (Mitigation Fee Act). Application of this fee includes, but is not limited to, development for residential, commercial, and industrial land uses. The fees are collected to fund identified transportation facilities, or portions thereof, that provide increased road capacity necessitated by the cumulative impacts of future development.

3.7.1.5 *Senate Bill 743*

In September 2013, the Governor's Office signed SB 743 into law, starting a process that fundamentally changes the way transportation impact analysis is conducted under CEQA. In response to the passage of SB 743, the Governor's Office of Planning and Research (OPR) was required to amend the CEQA Guidelines to provide a new approach to evaluating traffic impacts. These changes include the elimination of auto delay, LOS, and similar measurements of vehicular roadway capacity and traffic congestion as the basis for determining significant impacts. The mandate of SB 743 was to devise an alternative traffic impact evaluation criterion that would promote the reduction of GHG emissions as well as foster the development of multi-modal transportation networks and a diversity of land uses.

SB 743 further suggested that a measurement such as vehicle miles traveled (VMT) would be appropriate method to evaluate traffic impacts. VMT is defined as a measurement of miles traveled by vehicles within a specified region and for a specified time period. VMT is calculated based on individual vehicle trips generated and their associated trip lengths.

In January 2016, the OPR issued the *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*, which provided recommendations for updating the CEQA Guidelines and in December 2018 OPR issued the accompanying *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Subsequently OPR and the Office of the Secretary of Natural Resources finalized the CEQA Guidelines for implementing SB 743 and beginning July 1, 2020, the VMT guidelines apply statewide.

OPR has made clear that a lead agency shall have discretion in choosing both the most appropriate methodology and the most appropriate threshold for projects. Lead agencies may even go so far as to choose whether a project-specific threshold involving quantification of VMT or a qualitative analysis is more appropriate for the specific project.

3.7.2 Environmental Setting

The Project impact footprint is located within a roadway network that consists of a series of major streets and highways. As detailed below, several new highways and roadways are planned for the area. The study area covers areas within the jurisdictions of the City and County of San Diego. As a result, the roadways are subject to different long-range improvement plans.

3.7.2.1 *Circulation Network*

Roadway Segments

The existing roadway conditions and intersection geometrics are depicted in Figure 3.7-1, *Existing 2017 Traffic Volumes*, and are described below.

SR 905 is an east-west six-lane expressway which extends from Interstate 805 (I-805) to the Otay Mesa Port of Entry. The posted speed limit is 55 miles per hour (mph). SR 905 is being constructed in multiple phases as part of an ongoing effort to provide for more efficient transportation of people, goods, and services within the Otay Mesa region of San Diego. The following phases have been completed: Phases 1A and 1B (mainlines of the freeway), Phase 2 (improvements to the I-805/SR 905 interchange), and Phase 3A (northbound connectors between SR 905 and SR 125. Additionally, Caltrans has extended SR 905 to provide at-grade connections of SR 905 at Enrico Fermi Drive and two travel lanes in each direction. The remaining phases of the SR 905 project have not yet been constructed: Phase 3B (southbound connectors between SR 905 and SR 125) and Phase 4 (interchange at Heritage Road).

Otay Mesa Road (Old Otay Mesa Road) (SC 1120) is an east-west two-lane roadway located within the jurisdictions of the County and City. The segment from approximately 1,200 feet east of Sanyo Avenue to SR 905 is located within both jurisdictions, with the centerline of the existing road as the boundary. The posted speed limit on this section of Otay Mesa Road is 55 mph.

The segment of Otay Mesa Road (Old Otay Mesa Road) just east of the SR 125 southbound ramp is currently constructed to provide six travel lanes (two eastbound lanes and four westbound lanes). The segment of Otay Mesa Road (Old Otay Mesa Road) just west of Harvest Road is currently constructed to provide five travel lanes (two eastbound lanes and three westbound lanes). These segments of Otay Mesa Road (Old Otay Mesa Road) have the capacity equivalent to that of a modified four-lane Major Arterial (which is the half-way point between a four-lane Major Road and a six-lane Prime Arterial) and can accommodate approximately 47,000 average daily trips (ADT) while operating at a level of service E (LOS E)[1].

The segment of Otay Mesa Road (Old Otay Mesa Road) between Harvest Road and Sanyo Avenue is currently constructed to provide four travel lanes (two eastbound lanes and two westbound lanes). This segment of Otay Mesa Road (Old Otay Mesa Road) has the capacity equivalent to that of a four-lane Major Road with a capacity of 37,000 ADT at LOS E.

The segment of Otay Mesa Road between Sanyo Avenue and Alta Road is basically a two-lane undivided roadway. This section of Otay Mesa Road has a varying pavement width of 40 to 58 feet. East of Sanyo Avenue, the roadway is widened to provide one lane westbound, a westbound left-turn lane, and two eastbound travel lanes that reduces to one lane in each direction at the City/County boundary and continues with one lane in each direction to Enrico Fermi Drive. East of Enrico Fermi Drive, the roadway is widened and striped to provide one lane in each direction and a center left turn lane for 750 feet then reduces to one lane in each direction within the existing 40 feet of pavement.

The current capacity on the County two-lane segments of (Otay Mesa Road) is equivalent to that of a Light Collector, capacity of 16,200 ADT at LOS E. A Light Collector for the County has a cross section of 40 feet curb to curb, and 60 feet of right-of-way.

Based on the East Otay Mesa Specific Plan Amendment (SPA 10-001) approved by the Board of Supervisors September 15, 2010, the ultimate classification of the segment of Otay Mesa Road

[1] Level of service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection is measured.

between Harvest Road and Enrico Fermi Drive is classified as a Prime Arterial. In the East Otay Mesa Specific Plan, this segment is a Prime Arterial with a capacity of 57,000 ADT at LOS E, with a modified cross section of 90 feet curb to curb and 110 feet of right-of-way. Between Enrico Fermi Drive and Alta Road, Otay Mesa Road is classified as a four-lane Major Road. A Major Road has a capacity of 37,000 ADT at LOS E, with a cross section of 78 feet curb to curb and 98 feet of right-of-way.

Enrico Fermi Drive (SA 1105) is a north-south two-lane facility. This roadway segment is split between County and City jurisdictions. The segment north of Airway Road is under the County's jurisdiction and exists as a three-lane roadway just south of Otay Mesa Road and north of Airway Road. Some portion of this roadway segment currently exists as a two-lane roadway. For the purpose of analysis, the roadway segment under County's jurisdiction was analyzed as a Town Collector (capacity of 19,000 ADT at LOS E). The segment of Enrico Fermi Drive, south of Airway Road is under the City's jurisdiction and exists as a four lane Major Arterial (capacity of 40,000 ADT at LOS E).

Enrico Fermi Drive has the ultimate classification in the East Otay Mesa Specific Plan and County of San Diego Mobility Element as a four-lane Major facility with a capacity of 40,000 ADT at LOS E for the segment located within the City and a capacity of 37,000 ADT at LOS E for the segment located within the County. The cross section for a four-lane Major facility is 78 feet curb to curb, with 98 feet right-of-way. Per the East Otay Mesa Specific Plan, the segment of Enrico Fermi Drive between Otay Mesa Road and SR 11 is classified as an Enhanced Major Road Facility that requires additional right-of-way to accommodate turn movements and freeway access from Otay Mesa Road to SR 11.

Alta Road (SR 1112) is constructed as a north-south facility. Between Otay Mesa Road and Lone Star Road (Paseo de la Fuente), the roadway is constructed to provide one lane in each direction plus a left turn lane at Lone Star Road. The LOS E capacity of this roadway segment is 16,200 ADT. The majority of the roadway is generally constructed as a two-lane (one lane each direction) undivided roadway with a capacity of a Light Collector, 16,200 ADT at LOS E. The segment of Alta Road between Lone Star Road (Paseo de la Fuente) and Calzada de la Fuente was widened to provide two northbound travel lanes and two southbound travel lanes and a painted median with a capacity of 28,000 ADT at LOS E.

Based on the Mobility Element of the County General Plan, the ultimate classification of Alta Road between Lone Star Road (Paseo de la Fuente) and Otay Mesa Road (Old Otay Mesa Road) is a modified Major Road with a capacity of 37,000 ADT at LOS E. The ultimate classification of Alta Road between Lone Star Road (Paseo de la Fuente) and Donovan State Prison Road is a four-lane Industrial Collector with a center left turn lane, capacity of 34,200 ADT at LOS E with a modified cross section of 62 feet curb to curb and 86 feet of right-of-way. From Donovan State Prison Road north to the Specific Plan Boundary, the roadway segment of Alta Road is classified as a four-lane Industrial Collector, capacity of 34,200 ADT at LOS E with a modified cross section of 58 feet curb to curb and 84 feet of right-of-way.

Calzada de la Fuente is constructed as an east-west two-lane Industrial/Commercial roadway with a LOS E capacity of 16,200 ADT.

State Route 11 is currently proposed by Caltrans to be extended as a toll road to the new Port of Entry. The SR 11 project would consist of constructing approximately two miles of a new, four-lane freeway from the proposed SR 905/SR 125 junction to the future Federal Port of Entry at east Otay Mesa in San Diego County. An environmental study for the SR 11 program has been completed. SR 11 was extended to Enrico Fermi Drive in February 2017. The SR 11 Toll Facility is currently under design, which includes construction of a 4-lane toll-way and connection to the future Otay Mesa East Port of Entry with Mexico. Construction dates for the SR 11 and Otay Mesa East Port of Entry will not be established until funding for the project is secured; however, this project is a high priority project for the region. Caltrans has identified the preferred interchange alternative for the SR 11, which involves a full interchange at Enrico Fermi Drive and a one and one-half interchange at Siempre Viva Road.

Intersections

The existing intersection geometrics are shown on Figure 3.7-1. The key intersections analyzed include:

- Otay Mesa Road/SR 125 Southbound Ramp (signalized);
- Otay Mesa Road/SR 125 Northbound Ramp (signalized);
- Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue (signalized);
- Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive (signalized);
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road (all-way stop-controlled);
- Airway Road/Enrico Fermi Drive (signalized);
- Siempre Viva Road/Enrico Fermi Drive (signalized);
- Alta Road/Calzada de la Fuente (one-way stop-controlled);
- Alta Road/Lone Star Drive (Paseo de la Fuente) (signalized);
- Enrico Fermi Drive at SR 905 westbound on ramp (uncontrolled); and
- Enrico Fermi Drive at SR 905 eastbound off ramp (one way stop controlled).

Existing Traffic Volumes and Operations

Roadway Segments

Twenty-four hour machine counts were collected on the study area roadways in April 2017. A copy of the worksheets from the traffic counts can be found in Appendix A of the TIS (Appendix I to this EIR).

Table 3.7-1, *Existing Roadway Segment LOS Summary*, summarizes the LOS observed for roadway segments under existing conditions. As shown in Table 3.7-1, based on average daily conditions all key roadway segments currently operate at a LOS C or better.

Intersections

As illustrated in Table 3.7-2, *Existing Intersections LOS Summary*, all intersections in the study area operate at LOS B or better under existing conditions, except for Otay Mesa Road at Alta Road, which operates at a LOS D in the AM peak hour.

SR 905 Mainline Operating Conditions

Table 3.7-3, *Existing (Year 2017) Freeway Mainline Operations for SR 905*, summarizes the mainline freeway operating conditions along SR 905 based on Caltrans peak hour criteria and existing traffic count data. SR 905 mainline segments are currently operating at acceptable levels of service during both the AM and PM peak hours.

Table 3.7-1
EXISTING ROADWAY SEGMENT LOS SUMMARY

Roadway Segment	Jurisdiction	Capacity (LOS E)	Existing		
			ADT	V/C	LOS
Otay Mesa Road (Old Otay Mesa Road)					
SB SR 125 to NB SR 125	**County**/City/Caltrans	47,000[a]	10,372	0.22	A
Harvest Road to Sanyo Avenue	**County**/City	37,000	10,372	0.28	A
Sanyo Avenue to Enrico Fermi Drive	County	16,200	5,327	0.33	C
East of Enrico Fermi Drive	County	19,000	9,065	0.48	C
West of Alta Drive	County	16,200	9,065	0.56	D
Calzada de la Fuente					
East of Alta Road	County	16,200	1,196	0.074	A
Enrico Fermi Drive					
Old Otay Mesa Road to SR 905	County	19,000	7,271	0.38	C
SR 905 to Airway Road	County	19,000	4,902	0.26	C
Alta Road					
Calzada de la Fuente to Lone Star Road (Paseo de la Fuente)	County	28,000	7,250	0.26	A
Lone Star Road (Paseo de la Fuente) to Otay Mesa Road	County	19,000	7,913	0.42	C

Source: Darnell & Associates, Inc. 2017

Key: City = Capacity of segments based on the upper limits of LOS E per the City of San Diego; County = Capacity of segments based on the upper limits of LOS E per the County of San Diego; **BOLD** = Jurisdiction which capacity is based on; ADT = Average Daily Traffic; LOS = Level of Service; V/C = Volume-to-LOS E Capacity Ratio

[a] Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity is 45,000 for City and 47,000 for County at LOS E (half-way between a 4-lane Major and 6-lane Prime Arterial).

Table 3.7-2
EXISTING INTERSECTIONS LOS SUMMARY

Intersection	Jurisdiction	Traffic Control	Critical Move	AM Peak		PM Peak	
				Delay	LOS	Delay	LOS
Otay Mesa Road (E-W) at SR 125 SB (N-S)	**County**/City/ SBX	Sig	Int.	13.6	B	12.1	B
Otay Mesa Road (E-W) at SR 125 NB (N-S)	**County**/City/ SBX	Sig	Int.	4.1	A	7.2	A
Otay Mesa Road (E-W) at Sanyo Ave (N-S)	**County**/City	Sig	Int.	8.0	A	10.1	B
Otay Mesa Road (E-W) at Enrico Fermi Drive (N-S)	County	Sig	Int.	14.5	B	14.0	B
Otay Mesa Road (E-W) at Alta Road (N-S)	County	AWSC	Int.	33.6	D	10.7	B
Enrico Fermi Drive (N-S) at SR 905 WB on Ramp	Caltrans	Uncontrolled	Int.	3.1	A	6.3	A
Enrico Fermi Drive (N-S) at SR 905 EB off Ramp	Caltrans	OWSC	Int.	13.1	B	12.1	B
Alta Road (N-S) at Calzada de la Fuente (E-W)	County	OWSC	WB	14.8	B	13.5	B

Table 3.7-2 (cont.)
EXISTING INTERSECTIONS LOS SUMMARY

Intersection	Jurisdiction	Traffic Control	Critical Move	AM Peak		PM Peak	
				Delay	LOS	Delay	LOS
Alta Road (N-S) at Lone Star Road (Paseo de la Fuente) (E-W)	County	Sig	Int.	2.8	A	2.3	A
Airway Road (E-W) at Enrico Fermi Drive (N-S)	**County**/City	Sig	Int.	14.9	B	13.5	B

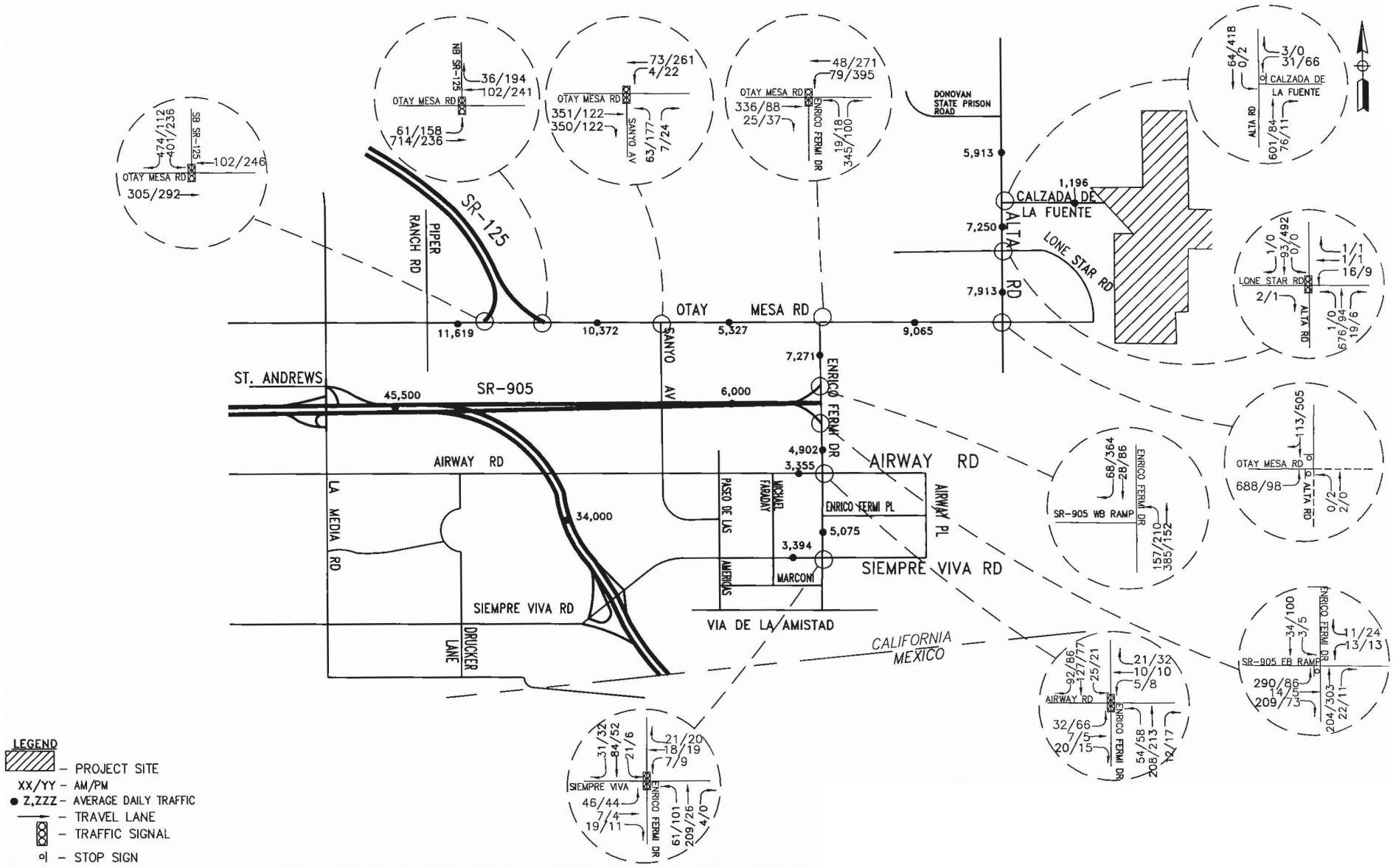
Source: Darnell & Associates, Inc. 2017
Note: Delay is measured in seconds per vehicle.
Key: LOS = Level of Service; sig = signalized; AWSC = All-Way Stop-Controlled; OWSC=One Way Stop Controlled; sig = Signalized; Int. = Intersection; EB = Eastbound Approach; WB = Westbound Approach; NB = Northbound Approach; SB = Southbound Approach; E-W = East-West Roadway; N-S = North-South Roadway; SBX = South Bay Expressway; **BOLD** = Jurisdiction which capacity is based on

Table 3.7-3
EXISTING (YEAR 2017) FREEWAY MAINLINE OPERATIONS FOR SR 905

Intersection	Direction	Number of Lanes	Capacity	Peak Hour Volume		V/C		LOS	
				AM	PM	AM	PM	AM	PM
SR 905 west of Siempre Viva Road	WB	3M	6,000	1,512	1,953	0.38	0.49	A	B
	EB	3M + 1A	7,200	1,054	1,930	0.15	0.27	A	A
SR 905 to Enrico Fermi Drive	WB	2M	4,000	200	469	0.05	0.12	A	A
	EB	2M	4,000	407	142	0.10	0.04	A	A

Source: Darnell & Associates, Inc. 2017
Key: EB = Eastbound Approach; WB = Westbound Approach; M = Mainline; A = Auxiliary Lane; Capacity of M = 2,000 vehicles per hour; Capacity of A = 1,200 vehicles per hour; V/C = Volume to Capacity ratio; LOS = Level of Service.

LOS	V/C
A=	<0.41
B=	>0.41 and <0.62
C=	>0.62 and <0.80
D=	>0.80 and <0.92
E=	>0.92 and <1.0



Source: Darnell & Associates 2017

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Existing 2017 Traffic Volumes

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Figure 3.7-1

HELIX Environmental Planning