TRAFFIC STUDY & APPENDICIES A THRU C

For

The Otay Crossings Commerce Park (TM 5405RPL7, ER 93-19-006Q)

Prepared For: The County of San Diego

Submitted To:
Kearny PCCP Otay 311, LLC
530 B Street, Suite 1800
San Diego, CA 92101

Prepared By:
Bill E. Darnell
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Date Signed: 8/5/2011

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Revised: August 5, 2011
Revised: October 20, 2010
Revised: August 19, 2010
Revised: May 6, 2010
Revised: April 20, 2010
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Revised: April 29, 2009
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Revised: December 14, 2006
Revised: July 24, 2006
Revised: May 25, 2006
Revised: June 28, 2005
Original: October 20, 2004

Volume I of II

Darnell & ASSOCIATES, INC.
TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

August 5, 2011

Mr. John Bragg
Kearny PCCP Otay 311, LLC
530 B Street, Suite 1800
San Diego, CA 92101

D&A Ref. No: 040501

Subject: Revised Traffic Impact Study for the Proposed Otay Crossings Commerce Park Located on 311.5 Acres At the Southeast Corner of Otay Mesa Road and Alta Road in the Otay Mesa Area of San Diego County.

Dear Mr. Bragg:

Darnell & Associates, Inc. (D&A) has revised our October 20 2010 transportation study assessing the impacts related to the proposed Otay Crossings Commerce Park located on 311.5 acres at the southeast corner of Otay Mesa Road and Alta Road in the Otay Mesa Area of San Diego County. The revised report incorporates discussions with the County and City of San Diego regarding the project's mitigation for the project's impacts to the segment segment of Airway Road between the SR-905 and Sanyo Avenue. Per discussions with the County and City of San Diego, the proposed striping concept for the segment of Airway Road between the SR-905 and Sanyo Avenue was revised. This resulted in revisions to the eastbound approach of the Airway Road/Sanyo Avenue intersection under the cumulative mitigation. All other project impacts and mitigation recommendations provided within this iteration of the traffic study are the same as those that were previously identified in our October 20, 2010 or May 6, 2010 reports.

This report analyzes the traffic impacts associated with the proposed project on the local roadways and intersections for existing without and with project, cumulative (2020) with SR-905 [Phases 1A & 1B] conditions, and 2030 conditions analysis per the County's Specific Plan Amendment 2007.

If you have any questions, please feel free to contact this office.

Sincerely,

Darnell & Associates, Inc.

REGISTERED PROFESSIONAL ENGINEER
BILL E. DARNELL
No. 22338
CIVIL
STATE OF CALIFORNIA

Bill E Darnell

Bill E Darnell, P.E.
Firm Principal
RCE 22338

Date Signed 8/5/2011

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TRAFFIC IMPACT STUDY

FOR

THE OTAY CROSSINGS COMMERCE PARK (TM 5405RPL7, ER 09-19-006Q)

IN THE COUNTY OF SAN DIEGO

Submitted To:

KEARNY PCCP OTAY 311, LLC
530 B Street, Suite 1800
San Diego, CA 92101

Prepared by:

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2870 Fourth Avenue, Suite A
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August 5, 2011

040501_OtayCrossingsCommercePark Rpt 15 (Aug 5 2011).doc/08-11

TABLE OF CONTENTS

EXECUTIVE SUMMARY **1**

SECTION I – INTRODUCTION **2**

PROJECT DESCRIPTION 2
CONGESTION MANAGEMENT PROGRAM 2
SCHEDULED OR PROGRAMMED ROAD IMPROVEMENTS PROJECTS 5
Capital Improvement Projects 5
Caltrans' Projects 5
EAST OTAY MESA SPECIFIC PLAN AMENDMENT 2002 7
EAST OTAY MESA SPECIFIC PLAN AMENDMENT 2007 7
SCENARIOS STUDIED 7
LEVEL OF SERVICE 8
ANALYSIS METHODOLOGY 9
REPORT ORGANIZATION 10

SECTION II – PROJECT RELATED CONDITIONS **11**

TRIP GENERATION 11
TRIP DISTRIBUTION/TRIP ASSIGNMENT 11
STUDY AREA 21

SECTION III – EXISTING CONDITIONS **23**

EXISTING ROADWAY CHARACTERISTICS 23
ROADWAY SEGMENT DAILY TRAFFIC 27
KEY INTERSECTIONS 27
INTERSECTION TRAFFIC COUNTS 29
EXISTING LEVEL OF SERVICE CONDITIONS 29
Existing Roadway Segments 29
Existing Arterial Roadway Segments 31
Existing Intersections 31
Existing Synchro Analysis 31
Existing ILV Analysis 33

SECTION IV – IMPACTS **34**

PUBLIC FACILITIES ELEMENT IN COUNTY 34
LEVELS OF SIGNIFICANCE STANDARDS 34
City of San Diego 34
County of San Diego 34
Roadway Segments 35
Two-Lane Highways 36
Signalized Intersections 37
Unsignalized Intersections 37
Regionally Significant Arterials 38
Caltrans 38
Definition of Direct and Cumulative Impact in the City of San Diego and the County of San Diego 39
EXISTING PLUS PROJECT UNIT 1 LEVEL OF SERVICE CONDITIONS 40
Existing + Unit 1 – Roadway Segments 40
Existing + Unit 1 – Arterial Roadway Segments 44
Existing + Unit 1 – Intersections 44
Existing + Unit 1 – Synchro Analysis 44
Existing + Unit 1 – ILV Analysis 48

TABLE OF CONTENTS (CONTINUED)

EXISTING PLUS PROJECT UNITS 1-2 LEVEL OF SERVICE CONDITIONS 49
Existing + Units 1-2 – Roadway Segments 49
Existing + Units 1-2 – Arterial Roadway Segments 53
Existing + Units 1-2 – Intersections 53
Existing + Units 1-2 – Synchro Analysis 53
Existing + Units 1-2 – ILV Analysis 57
EXISTING PLUS PROJECT UNITS 1-3 LEVEL OF SERVICE CONDITIONS 59
Existing + Units 1-3 – Roadway Segments 59
Existing + Units 1-3 – Arterial Roadway Segments 63
Existing + Units 1-3 – Intersections 65
Existing + Units 1-3 – Synchro Analysis 65
Existing + Units 1-3 – ILV Analysis 68
EXISTING PLUS PROJECT UNITS 1-4 LEVEL OF SERVICE CONDITIONS 69
Existing + Units 1-4 – Roadway Segments 69
Existing + Units 1-4 – Arterial Roadway Segments 74
Existing + Units 1-4 – Intersections 76
Existing + Units 1-4 – Synchro Analysis 76
Existing + Units 1-4 – ILV Analysis 79
EXISTING PLUS PROJECT BUILD-OUT (UNITS 1-5) LEVEL OF SERVICE CONDITIONS 81
Existing + Project Build-Out (Units 1-5) – Roadway Segments 81
Existing + Project Build-Out (Units 1-5) – Intersections 88
Existing + Project Build-Out (Units 1-5) – Synchro Analysis 88
Existing + Project Build-Out (Units 1-5) – ILV Analysis 91

SECTION V – CUMULATIVE (YEAR 2020) CONDITIONS **93**

APPROVED/PENDING PROJECTS 93
APPROVED/PENDING PROJECTS ACCESS 96
CUMULATIVE (YEAR 2020) WITH SR-905 1A &1B ROADWAY CONDITIONS 96
CUMULATIVE (YEAR 2020) WITH SR-905 1A &1B TRAFFIC FORECASTS 98
CUMULATIVE (YEAR 2020) WITH SR-905 1A &1B LEVEL OF SERVICE 101
Roadway Segments 101
Intersections 107
Synchro Analysis 107
ILV Analysis 110

SECTION VI – YEAR 2030 CONDITIONS **111**

EAST OTAY MESA SPECIFIC PLAN AMENDMENT 2007 111
Circulation Network 111
Bicycle Network 113
TRAFFIC ASSESSMENT UPDATE FOR THE EOMSPA 2007 114
YEAR 2030 ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS 114

SECTION VII – PROJECT ACCESS AND INTERNAL CIRCULATION **117**

PROJECT ACCESS 117
INTERNAL TRIP DISTRIBUTION/INTERNAL TRAFFIC 117
INTERNAL LEVEL OF SERVICE ANALYSIS 117
Internal – Roadway Segments 117
Internal – Intersections 127
DRIVEWAY LOCATIONS 131

SECTION VIII – CONSTRUCTION TRAFFIC **138**

TABLE OF CONTENTS (CONTINUED)

SECTION IX – RECOMMENDED TRAFFIC MITIGATION MEASURES **139**

TRANSPORTATION IMPACT FEE (TIF) 139
COMMUNITY FACILITIES DISTRICT (CFD) 139
DIRECT IMPACTS 140
Unit 1 Impacts 140
Unit 1 Direct Impacts – Roadway Segments 140
Unit 1 Direct Impacts – Intersections 142
Units 1-2 Impacts 142
Units 1-2 Direct Impacts – Roadway Segments 142
Units 1-2 Direct Impacts – Intersections 144
Units 1-3 Impacts 145
Units 1-3 Direct Impacts – Roadway Segments 145
Units 1-3 Direct Impacts – Intersections 145
Units 1-4 Impacts 147
Units 1-4 Direct Impacts – Roadway Segments 147
Units 1-4 Direct Impacts – Intersections 147
Units 1-5 Impacts 149
Units 1-5 Direct Impacts – Roadway Segments 149
Units 1-5 Direct Impacts – Intersections 150
CUMULATIVE IMPACTS 152
Cumulative Impacts – Roadway Segments 152
Cumulative Impacts – Intersections 152
FUTURE IMPACTS 155
PROJECT ACCESS IMPROVEMENTS 155
MITIGATION SUMMARY LEVEL OF SERVICE 155

SECTION X – SUMMARY OF FINDINGS AND CONCLUSIONS **166**

LIST OF FIGURES

Figure 1 – Vicinity Map 3
Figure 2 – Tentative Map 4
Figure 3 – Project Trip Distribution & Traffic – Unit 1 (Existing Conditions) 13
Figure 4 – Project Trip Distribution & Traffic – Units 1-2 (Existing Conditions) 14
Figure 5 – Project Trip Distribution & Traffic – Units 1-3 (Existing Conditions) 15
Figure 6 – Project Trip Distribution & Traffic – Units 1-4 (Existing Conditions) 16
Figure 7 – Project Trip Distribution & Traffic – Units 1-5 (Existing Conditions) 17
Figure 8 – Project Trip Distribution & Traffic (Cum. Conditions) – Represents 13% of Project Development 18
Figure 9 – Project Trip Distribution & Traffic (Cum. Conditions) – Represents 100% of Project Development 19
Figure 10 – Project Trip Distribution & Traffic – 2030 with Project Units 1-5 20
Figure 11 – Existing Conditions 24
Figure 12 – Existing 2008 Traffic Volumes 28
Figure 13 – Existing + Unit 1 Traffic Volumes 41
Figure 14 – Existing + Units 1-2 Traffic Volumes 50
Figure 15 – Existing + Units 1-3 Traffic Volumes 60
Figure 16 – Existing + Units 1-4 Traffic Volumes 70
Figure 17 – Existing + Units 1-5 Traffic Volumes 82
Figure 18 – Location of Approved/Pending Projects in Otay Mesa 95
Figure 19 – Proposed Method of Connecting Cumulative Project Traffic to Existing Circulation System 97
Figure 20 – Cumulative (Year 2020) With SR-905 [Phases 1A& 1B] Roadway Segment Conditions 99
Figure 21 – Cumulative (Year 2020) With SR-905 [Phases 1A& 1B] Intersection Conditions 100
Figure 22 – Cumulative (Year 2020) With SR-905 [Phases 1A& 1B] w/o Project Daily Traffic Volumes 102
Figure 23 – Cumulative (Year 2020) With SR-905 [Phases 1A& 1B] w/o Project Peak Hour Traffic Volumes 103
Figure 24 – Cumulative (Year 2020) With SR-905 [Phases 1A& 1B] With Project Daily Traffic Volumes 104
Figure 25 – Cumulative (Year 2020) With SR-905 [Phases 1A& 1B] With Project Peak Hour Traffic Volumes 105
Figure 26 – Adopted Circulation Plan for East Otay Mesa (2030 Conditions) 112
Figure 27 – Adopted Circulation Plan Traffic Forecast - 2030 + Project Units 1-5 115
Figure 28 – Unit 1 Internal Circulation/Distribution (Existing Conditions) 118
Figure 29 – Units 1-2 Internal Circulation/Distribution (Existing Conditions) 119
Figure 30 – Units 1-3 Internal Circulation/Distribution (Existing Conditions) 120
Figure 31 – Units 1-4 Internal Circulation/Distribution (Existing Conditions) 121
Figure 32 – Unit 5 Only Internal Circulation/Distribution (Existing Conditions) 122
Figure 33 – Units 1-5 Internal Circulation Project Related Traffic (Existing Conditions) 123
Figure 34 – Units 1-5 Internal Circulation Project Related Traffic (2030 Conditions) 124
Figure 35 – 2030 + Units 1-5 Internal Traffic Volumes 125
Figure 36 – Cumulative (2020) Internal Traffic Volumes 126
Figure 37 – Existing + Unit 1 Conditions 132
Figure 38 – Existing + Units 1-2 Conditions 133
Figure 39 – Existing + Units 1-3 Conditions 134
Figure 40 – Existing + Units 1-4 Conditions 135
Figure 41 – Existing + Units 1-5 Conditions 136
Figure 42 - Recommended Mitigation - Existing + Unit 1 141
Figure 43 – Recommended Mitigation - Existing + Units 1-2 143
Figure 44 – Recommended Mitigation - Existing + Units 1-3 146
Figure 45 – Recommended Mitigation – Existing + Units 1-4 148
Figure 46 – Recommended Mitigation - Existing + Units 1-5 151
Figure 47 – Recommended Mitigation – Cumulative (2020) w/ SR-905 [Phases 1A & 1B] 153

LIST OF TABLES

Table 1 – Level of Service Ranges 9
Table 2 – Trip Generation Rates & Calculations Summary 12
Table 3 – Summary of Study Area Intersections by Scenario 22
Table 4 – Existing Conditions Roadway Segment Daily LOS Summary 30
Table 5 – Existing Conditions Arterial LOS Summary 31
Table 6 – Existing Conditions Intersection LOS Summary 32
Table 7 – Existing ILV Analysis 33
Table 8 – Measures of Significant Project Impacts 35
Table 9 – Measures of Significance on 2-Ln Hwys w/ Signalized Intersection Spacing > 1 Mile 36
Table 10 – Measures of Significance on 2-Ln Hwys w/ Signalized Intersection Spacing < 1 Mile 36
Table 11 – SANTEC/ITE Guidelines for Measures of Significant Project Impacts 38
Table 12 – Existing + Unit 1 Roadway Segment Daily LOS Summary 42
Table 13 – Existing + Unit 1 Arterial LOS Summary 45
Table 14 - Existing + Unit 1 Intersection Level of Service Summary 46
Table 15 – Existing + Unit 1 ILV Analysis 48
Table 16 – Existing + Units 1-2 Roadway Segment Daily LOS Summary 51
Table 17 – Existing + Units 1-2 Arterial LOS Summary 54
Table 18 - Existing + Units 1-2 Intersection Level of Service Summary 55
Table 19 – Existing + Units 1-2 ILV Analysis 58
Table 20 – Existing + Units 1-3 Roadway Segment Daily LOS Summary 61
Table 21 – Existing + Units 1-3 Arterial LOS Summary 64
Table 22 - Existing + Units 1-3 Intersection Level of Service Summary 66
Table 23 – Existing + Units 1-3 ILV Analysis 69
Table 24 – Existing + Units 1–4 Roadway Segment Daily LOS Summary 71
Table 25 – Existing + Units 1-4 Arterial LOS Summary 75
Table 26 - Existing + Units 1-4 Intersection Level of Service Summary 77
Table 27 – Existing + Units 1-4 ILV Analysis 80
Table 28 – Existing + Project Build Out (Units 1–5) Roadway Segment Daily LOS Summary 83
Table 29 – Existing + Project Buildout (Units 1-5) Arterial LOS Summary 87
Table 30 - Existing + Project Build Out (Units 1-5) Intersection Level of Service Summary 89
Table 31 – Existing + Project Build-Out (Units 1-5) ILV Analysis 92
Table 32 – Summary of Approved/Pending Projects in County of San Diego 94
Table 33 – Cumulative (2020) With SR-905 1A &1B Roadway Segment Daily LOS Summary 106
Table 34 – Cumulative (2020) With SR-905 1A &1B Intersection LOS Summary 108
Table 35 – Cumulative (2020) w/ SR-905 [Phases 1A & 1B] ILV Analysis 110
Table 36 – 2030 + Project Build Out (Units 1-5) Roadway Segment Daily LOS Summary 116
Table 37 – Summary of On-Site & Off-Site Roadway Segment Improvements 128
Table 38 – Existing + Project Off-Site/On-Site Roadway Segment Daily LOS Summary 129
Table 39 – Internal Existing + Project Intersection LOS Summary 137
Table 40 – Summary of Project Access Roadway Segment Improvement Requirements 156
Table 41 – Summary of Internal Intersection Improvement Requirements 159
Table 42 – Summary of Direct Mitigation Roadway Segment Level of Service 161
Table 43 – Summary of Roadway Segments Mitigated Level of Service 162
Table 44 – Summary of Direct Mitigation Intersection Level of Service 163
Table 45 – Summary of Cumulative Mitigation Intersection Level of Service 165

LIST OF APPENDICES

APPENDIX A

- 24 Hour Machine Counts
- AM/PM Peak Hour Traffic Counts
- City & County of San Diego Level of Service Thresholds
- Excerpts for the County of San Diego's Public Facility Element (PFE)
- Excerpts from County of San Diego Public Road Standards
- SANDAG's Trip Generation Rates
- Excerpts from City of San Diego Trip Generation Manual
- Excerpts from City of San Diego's Significance Determination Thresholds
- Excerpts from Caltrans Guidelines for the Preparation of Traffic Impact Studies
- County Board Policy J-25
- Excerpts from East Otay Mesa Specific Plan
- County's Guidelines for Determining Significance

APPENDIX B

- Board Resolution, GPS 2-CE1, June 12, 2002
- Board Resolution, SPA 00-005, June 12, 2002
- Board Resolution, GPA 06-013, August 1, 2007
- Board Resolution, SPA 06-003, August 1, 2007
- Excerpts from 5-year Capital Improvement Program (CIP) 2008/09 – 2012/13
- Caltrans' Fact Sheet for SR-905 & SR-11
- Correspondence with Caltrans Re: Airway Road between SR-905 and Sanyo Avenue *dated: April 23, 2009*
- SR-905 1B Funding Correspondence
- ERA Market Forecast
- SANDAG Series 11 Model for Otay Mesa 2020

APPENDIX C

- TIF Calculation Based on the April 2008 TIF Ordinance Update
- Excerpts from the County of San Diego TIF Program Update (January 2008)

APPENDIX D

- Existing Conditions Arterial Synchro Analysis Worksheets
- Existing Conditions Intersection Synchro Analysis Worksheets
- Existing ILV Analysis

APPENDIX E

- Existing + Project Unit 1 Arterial Synchro Analysis Worksheets
- Existing + Project Unit 1 Synchro Analysis Worksheets
- Existing + Project Unit 1 Intersection ILV Analysis

APPENDIX F

- Existing + Project Units 1-2 Arterial Synchro Analysis Worksheets
- Existing + Project Units 1-2 Synchro Analysis Worksheets
- Existing + Project Units 1-2 Intersection ILV Analysis

APPENDIX G

- Existing + Project Units 1-3 Arterial Synchro Analysis Worksheets
- Existing + Project Units 1-3 Synchro Analysis Worksheets
- Existing + Project Units 1-3 Intersection ILV Analysis

APPENDIX H

- Existing + Project Units 1-4 Arterial Synchro Analysis Worksheets
- Existing + Project Units 1-4 Synchro Analysis Worksheets
- Existing + Project Units 1-4 Intersection ILV Analysis

LIST OF APPENDICES (CONTINUED)

APPENDIX I

- Existing + Project Units 1-5 Arterial Synchro Analysis Worksheets
- Existing + Project Units 1-5 Synchro Analysis Worksheets
- Existing + Project Units 1-5 Intersection ILV Analysis

APPENDIX J

- Cumulative w/o Project – Intersection Synchro Analysis
- Cumulative w/o Project – Intersection ILV Analysis
- Cumulative w/Project – Intersection Synchro Analysis
- Cumulative w/Project– Intersection ILV Analysis

APPENDIX K

- Existing + Unit 1 Project Access – Synchro Analysis
- Existing + Units 1-2 Project Access – Synchro Analysis
- Existing + Units 1-3 Project Access – Synchro Analysis
- Existing + Units 1-4 Project Access – Synchro Analysis
- Existing + Units 1-5 Project Access – Synchro Analysis

APPENDIX L

- Freeway Analysis

APPENDIX M

- Signal Warrants
- Illustration of Driveway Spacing

APPENDIX N

- Existing + Project – Recommended Mitigation

APPENDIX O

- Cumulative + Project – Recommended Mitigation

APPENDIX P

- Caltrans Striping Concepts for Otay Mesa Road between Piper Ranch Road and Harvest Road
- Proposed Sunroad Improvements for Otay Mesa Road between Harvest Road and Vann Centre Boulevard
- Caltrans Striping Concepts for Airway Road between Harvest Road and Sanyo Avenue
- Fair-Share Memo for Otay Crossings Mitigation at Otay Mesa Road/Harvest Road
- Caltrans Striping Concept for La Media Road between Otay Mesa Road and Airway Road
- Conceptual Striping Concept for Airway Road between SR-905 and Sanyo Avenue

APPENDIX Q

- Stevens Cresto Engineering, Inc. – Preliminary Route Study for Otay Crossings

EXECUTIVE SUMMARY

The Otay Crossings Commerce Park project is a Tentative Map (TM) and Preliminary Grading Plan (Tract 5405) for 311.5 acres of land designated for Mixed Industrial, Rural Residential and State Route (i.e., SR-11) use in Subarea 2 of the East Otay Mesa Specific Plan (EOMSP). The future route for SR-11 traverses the site and the future U.S. Port-of-Entry is situated on the south portion of the site. The TM will subdivide the property into 59 lots (56 industrial lots and 3 open space lots) ranging in size from 0.90 net acres to 95.4 net acres. The 56 industrial lots and three (3) open space lots will be divided and recorded in five separate units. Approximately 286.4 acres will be placed in lots, while 19.3 acres would contain on site public streets. The right-of-way for SR-11 has been mapped on approximately 3 of the 56 lots. The portions of those lots that are encumbered by the potential Caltrans right-of-way are shown on the TM as "approximate location of future SR-11 right-of-way." The encumbered area is a reservation of future right-of-way for SR-11 made pursuant to Government Code section 66480.

Grading for the proposed project will be completed in two phases. Grading for Phase 1 comprises of three final maps (units 1, 2, and 3) and Grading for Phase 2 comprises two final maps (units 4 and 5). The project proposes to construct the project in the following timeline: construct Unit 1 by 2011, construct Unit 2 by 2012, construct Unit 3 by 2013, and construct Units 4 and 5 by 2014. Since SR-905 Phase 1A is scheduled to be completed by late 2010 and SR-905 Phase 1B is anticipated to be completed by summer 2012; Units 1 and 2 of the proposed project should be completed prior to the completion of SR-905 Phase 1B while Units 3-5 would not be completed until after SR-905 Phase 1B was completed. To assess the worse case scenario, however, this traffic study has assessed the direct traffic impacts of all five (5) units of the proposed units without the completion of the SR-905 facility. The cumulative traffic impacts of all five (5) units of the proposed project were assessed both without the SR-905 and with the completion of Phases 1A and 1B of the SR-905.

Per the proposed site plan, in the near term when the developer will be utilizing the area set aside for the future SR-11 right-of-way for truck parking, the proposed project is estimated to generate 21,279 daily trips, 2,853 AM peak hour trips, and 3,017 PM peak hour trips. Once the SR-11 is constructed and the truck parking can no longer be utilized, the project will generate 18,768 daily trips, 2,627 AM peak hour trips, and 2,816 PM peak hour trips. It should be noted, however, that to assess the worse case scenario the full trip generation potential was analyzed in this report.

This report addresses the following: existing conditions, project trip generation, existing with Unit 1, existing with Units 1-2, existing with Units 1-3, existing with Units 1-4, existing with Units 1-5, cumulative (2020) with SR-905 [Phases 1A & 1B], 2030 conditions without and with Units 1-5 conditions, and recommended mitigation measures.

Please refer to Section IX of this report for a summary of the project's impacts and recommended mitigation measures.

SECTION I – INTRODUCTION

PROJECT DESCRIPTION

The Otay Crossings Commerce Park project is a Tentative Map (TM) and Preliminary Grading Plan (Tract 5405) for 311.5 acres of land designated for Mixed Industrial, Rural Residential and State Route (i.e., SR-11) use in Subarea 2 of the East Otay Mesa Specific Plan (EOMSP). The future route for SR-11 traverses the site and the future U.S. Port-of-Entry is situated on the south portion of the site. The TM will subdivide the property into 59 lots (56 industrial lots and 3 open space lots) ranging in size from 0.90 net acres to 95.4 net acres. The 56 industrial lots will be divided and recorded in five separate units. Approximately 286.4 acres will be placed in lots, while 19.3 acres would contain on site public streets. The right-of-way for SR-11 has been mapped on approximately 3 of the 56 lots. The portions of those lots that are encumbered by the potential Caltrans right-of-way are shown on the TM as "approximate location of future SR-11 right-of-way." The encumbered area is a reservation of future right-of-way for SR-11 made pursuant to Government Code section 66480. Figure 1 shows the vicinity of the proposed project and Figure 2 shows the proposed tentative map.

Grading for the proposed project will be completed in two phases. Grading for Phase 1 comprises of three final maps (units 1, 2, and 3) and Grading for Phase 2 comprises two final maps (units 4 and 5). The project proposes to construct the project in the following timeline: construct Unit 1 by 2011, construct Unit 2 by 2012, construct Unit 3 by 2013, and construct Units 4 and 5 by 2014. Since SR-905 Phase 1A is scheduled to be completed by late 2010 and SR-905 Phase 1B is anticipated to be completed by summer 2012; Units 1 and 2 of the proposed project should be completed prior to the completion of SR-905 Phase 1B while Units 3-5 would not be completed until after SR-905 Phase 1B was completed. To assess the worse case scenario, however, this traffic study has assessed the direct traffic impacts of all five (5) units of the proposed units without the completion of the SR-905 facility.

CONGESTION MANAGEMENT PROGRAM

Based on the approval of Proposition 111 in 1990, regulations require the preparation, implementation, and annual updating of a Congestion Management Program (CMP) in each of California's urbanized counties. The original CMP for the San Diego region was adopted in 1991 and has been updated periodically as an element of the Regional Transportation Plan (RTP). One required element of the CMP is a process to evaluate the transportation and traffic impacts of large projects on the regional transportation system. That process is undertaken by local agencies, project applicants, and traffic consultants through a transportation impact report usually conducted as part of the CEQA project review process. Authority for local land use decisions including project approvals and any required mitigation remains the responsibility of local jurisdictions.

The criteria for which a project is subject to the regulations as set forth in the CMP are determined by the trip generation potential for the project. Currently, the average daily traffic (ADT) threshold is 2,400 vehicles or 200 peak hour trips. The proposed project will generate approximately 21,279 daily trips, 2,853 AM peak hour trips, and 3,017 PM peak hour trips (see Section II, Project Related Conditions) and is therefore subject to CMP guidelines for traffic impact studies.

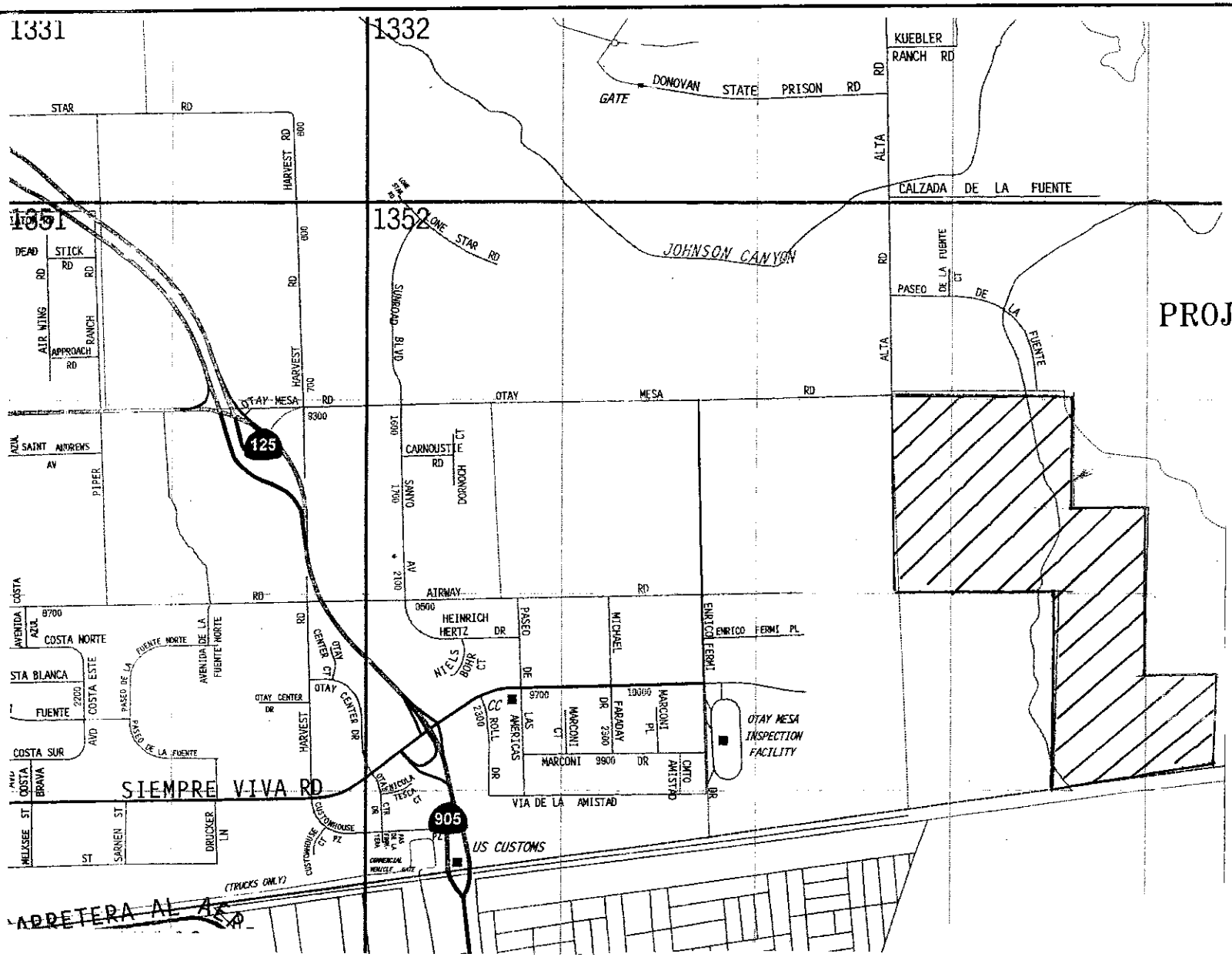

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FIGURE 1

VICINITY MAP

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FIGURE 2

SITE PLAN

SCHEDULED OR PROGRAMMED ROAD IMPROVEMENTS PROJECTS

Capital Improvement Projects

The current County of San Diego's 5-Year Capital Improvement Plan 2008/09 – 2012/13 includes the following three roadway segments within the East Otay Mesa area: (1) Construction of Additional Lanes on Airway Road between Michael Faraday Drive and Enrico Fermi Drive; (2) Construction of Lone Star Road from Alta Road to the west for 0.5 miles, and (3) Widening Otay Mesa Road from Vann Centre Boulevard to Enrico Fermi Drive. Funding for the Airway Road improvements are anticipated to come from Transportation Impact fees, the schedule for completion is to be determined. The Lone Star Road improvements are anticipated to be completed in spring of 2014 with funding anticipated to come from Federal sources. The Otay Mesa Road widening project is anticipated to be completed in spring of 2014 with funding still to be determined. See excerpts from the CIP in Appendix B for more details on each of these projects.

Caltrans' Projects

Caltrans currently has two (2) major State Route facility projects in the Otay Mesa Area: (1) State Route 905 and (2) State Route 11. In addition, during the construction of the structures at the State Route 905/Airway Road intersection, Caltrans proposes to implement a detour to re-route traffic via Sanyo Avenue and Otay Mesa Road. As mitigation of the planned detour, Caltrans was required to make improvements to the Otay Mesa Road/Sanyo Road intersection and the segments of Otay Mesa Road between Harvest Road and Sanyo Avenue, and Sanyo Avenue between Otay Mesa Road and Airway Road. The following summarizes the project description and schedule for each of these projects. (A copy of Caltrans' Fact sheets for the SR-905 and SR-11 projects is provided in Appendix B.)

1. ***State Route 905*** – The State Route 905 (SR-905) project will consist of constructing a transportation facility from Interstate 805 to the Otay Mesa Port of Entry (POE) at the US-Mexico Border. Project alternatives under study include a variable alignment of a six lane freeway alternative that would run parallel and roughly 1,300 feet to the south of the existing Otay Mesa Road, and a six lane toll way. The project will include grade separated local access interchanges with SR-125. The portion of the project from the Otay Mesa POE to Airway Road began construction in January 2003. As a part of this project the SR-905/Siempre Viva Road grade separated interchange was completed and opened to traffic in 2005. The remainder of the project has been divided into 4 phases. In discussions with Caltrans, it has been determined that the SR-905 facility would be constructed in the following four phases:

    - **Phase 1:** Phase 1 consists of two phases, namely Phase 1A (east) and Phase 1B (west). Phase 1A would consist of a six-lane facility between Britannia Boulevard and the Otay Mesa Port of Entry with a full interchange at SR-905/La Media Road and ramps on the eastern side of Britannia Boulevard. Roadway improvements will be made along Otay Mesa Road, Airway Road, Sanyo Avenue, and Harvest Road. Phase 1B consists of a six-lane facility between Caliente Avenue and Britannia Boulevard. Phase 1B includes an interchange at Caliente Avenue and ramps on the western side of Britannia Boulevard. Phase 1A is fully funded. Construction of Phase 1A began in April 2008 and is scheduled to be completed by late 2010. Phase 1B is also fully funded and secured with the majority of the funding coming from the American Recovery & Reinvestment Act funding. Construction of Phase 1B began in July 2009 and is scheduled to be completed by summer 2012.

        - ***La Media Road Improvements:*** As part of the construction of Phase 1A, Caltrans is working on improvements to La Media Road between Otay Mesa Road and approximately 300 feet (300') south of the proposed SR-905 eastbound ramp. The Caltrans improvements to La Media Road have improved the existing cross-section of the segment of La Media Road between Otay Mesa Road and

approximately Saint Andrews Avenue (the approximate location of the SR-905 ramps) to the equivalent of a 4-lane Collector. See Appendix P for Caltrans proposed striping concept of La Media Road.

- **Phase 2**: Phase 2 consists of improvements at the interchange at Interstate 805 (I-805)/SR-905 that includes construction of the westbound SR-905 to northbound I-805 connector from SR-905. An auxiliary lane will also be constructed along northbound I-805 between SR-905 and Palm Avenue. This Phase will also include widening of the Del Sol Boulevard under crossing. Phase 2 of the SR-905 including the connection to Interstate 805 has been funded through the Transportation Investment Generating Economic Recovery Grant (TIGER) award.

- **Phase 3:** Phase 3 consists of construction of the interchange at SR-125/SR-905. Phase 3 is not currently funded.

- **Phase 4:** Construction of the interchange at Heritage Road. Phase 4 is not currently funded.

See Appendix B for the SR-905 Status Update and fact sheets provided by Caltrans.

2. ***State Route 11*** – The State Route 11 (SR-11) project will 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 (POE) at east Otay Mesa in San Diego County. An environmental study for the SR-11 program has been completed and a second study for the project itself is underway, with completion expected in 2010. The current schedule calls for the SR-11 breaking ground in 2012 and opening in 2014, contingent on full funding. The location of the ramp interchanges, and the ramp interchange configurations will not be determined until after the completion of the SR-11 Phase 2 Project-level EIR. In the traffic analysis and study, the SR-11 facility and the POE at the third border crossing were assumed to be constructed and operational only under the 2030 conditions. Appendix B contains the Caltrans fact sheet for the SR-11 project.

3. ***Airway Road Closure/Detour Mitigation Measures*** – Currently Airway Road between the SR-905 and Sanyo Avenue is closed for the construction of the SR-905 overpass, Caltrans schedule shows Airway Road between SR-905 and Sanyo Avenue opening to traffic on January 5, 2011. While the segment of Airway Road between SR-905 and Sanyo Avenue is closed for the construction of the SR-905/Airway Road structures, Caltrans has implemented a detour to re-route traffic via Sanyo Avenue and Otay Mesa Road (Old Otay Mesa Road). As a mitigation requirement of the detour (closure of Airway Road) Caltrans signalized the Otay Mesa Road/Sanyo Avenue intersection and improved the roadway segment of Otay Mesa Road between Harvest Road and Sanyo Avenue to the standards of a 4-lane Major Road and the segment of Sanyo Avenue between Otay Mesa Road and Airway Road to the standards equivalent to that of a 4-lane Collector Road. Upon completion of the SR-905 overcrossings with Airway Road, Caltrans is widening Airway Road to provide two (2) lanes in each direction and a painted median with pavement transitions to provide the equivalent of a collector road that provides one (1) lane in each direction plus a center turn lane from Sanyo Avenue to La Media Road. Per field checks conducted in June 2009, the proposed improvements by Caltrans have been completed.

Planned State Routes SR-11 along with the completion of all phases of SR-905 are critical to accommodating the future development of the entire Otay Mesa area. It should be noted that the SR-125 facility is a major roadway project in the Otay Mesa area that was just recently completed and opened to traffic in November 2007. All traffic counts and existing conditions included within this traffic study include the completion and operation of the SR-125.

EAST OTAY MESA SPECIFIC PLAN AMENDMENT 2002

On June 12, 2002, the County Board of Supervisors approved the Specific Plan Amendment to revise the East Otay Mesa Specific Plan and divide the Specific Plan into two sub-areas. The proposed project is located in Sub-area 2. A copy of excerpts from the Specific Plan Amendment can be found in Appendix B.

In conjunction with approving the Specific Plan Amendment to revise the East Otay Mesa Specific Plan, the County Board of Supervisors also adopted the resolutions for the General Plan Amendment (GPA 02-CE1) and the Amendment of the East Otay Mesa Specific Plan (SPA 00-005). A copy of the Board Resolutions that were adopted on June 12, 2002 can be found in Appendix B. A copy of the complete list of actions taken by the Board of Supervisors on June 12, 2002 can be found in the minutes from the meeting (Minute Order No. 4) which is provided in Appendix B.

EAST OTAY MESA SPECIFIC PLAN AMENDMENT 2007

Since the time the Specific Plan Amendment was adopted in the year 2002 significant changes have occurred in the East Otay Mesa area such as increase in traffic volumes on Otay Mesa Road within the City of San Diego, revised project and construction schedules for SR-125, SR-905 and SR-11 and the future Otay Mesa East Port of Entry, along with revised pace of development within East Otay Mesa. The County has adopted an amendment to the East Otay Mesa Specific Plan, the General Plan Circulation Element, and the County Bicycle Transportation Plan to update the circulation system and bicycle network to reflect revised project plans and construction schedules for State Route 905, State Route 11 and the future Otay Mesa East Port of Entry. There were three types of amendments for the East Otay Mesa Specific Plan Subareas 1 and 2. Those amendments were to the circulation plan, bicycle network, and regulatory standards relating to site plan requirements, fencing detail, driveway location criteria, and sidewalk design.

The Board of Supervisors for the County of San Diego approved the original amendment to the East Otay Mesa Specific Plan Amendment on August 1, 2007. A revised amendment to the East Otay Mesa Business Park Specific Plan for Subarea 1 was adopted by the Board of Supervisors on April 8, 2009. A summary of the General Plan Circulation Element and Specific Plan changes that directly impact the proposed project is provided in Section VI of the traffic study along with figures showing 2030 roadway conditions and traffic forecast. A copy of the Board Resolutions that were adopted on August 1, 2007 can be found in Appendix B. Excerpts from the East Otay Mesa Business Park Specific Plan Amendment for Subarea 1 are also provided in Appendix B.

The proposed project is consistent with the East Otay Mesa Specific Planning Subarea 2.

SCENARIOS STUDIED

The following scenarios were analyzed in this report and are identified as follows:

Existing (Year 2008) Conditions refers to that condition which exists on the ground today (2008), including existing traffic counts and existing lane configurations at intersections and on roadway segments.

Existing (Year 2008) Plus Unit 1 Project Conditions refers to those conditions which includes the existing traffic volumes and lane configurations plus the traffic generated by Unit 1 of the proposed project.

Existing (Year 2008) Plus Units 1-2 Project Conditions refers to those conditions which includes the existing traffic volumes and lane configurations plus the traffic generated by Units 1-2 of the proposed project.

Existing (Year 2008) Plus Units 1-3 Project Conditions refers to those conditions which includes the existing traffic volumes and lane configurations plus the traffic generated by Units 1-3 of the proposed project.

Existing (Year 2008) Plus Units 1-4 Project Conditions refers to those conditions which includes the existing traffic volumes and lane configurations plus the traffic generated by Units 1-4 of the proposed project.

Existing (Year 2008) Plus Build-Out of the Project (Units 1-5) Conditions refers to those conditions which includes the existing traffic volumes and lane configurations plus the traffic generated by full build out (Units 1-5) of the proposed project.

Cumulative (Year 2020) with SR-905 [Phases 1A & 1B] Without Project Conditions refers to that condition which are anticipated to exist by the year 2020. This condition assumes Phase 1A and 1B of the SR-905 facility are constructed and operational. The traffic forecast for this scenario has been prepared utilizing a SANDAG Series 11 model assuming development within the Otay Mesa area of San Diego County would continue to grow based on the high scenario growth rate per the Economics Research Associates (ERA) *Addendum to Real Estate Market Analysis.* (See Section V for more details on the SANDAG 2020 modeling assumptions.) Since, as discussed later in Section V, the Otay Crossings Commerce Park project site was included in the SANDAG model forecast at 13% of its proposed development, the traffic generated by 13% of the Otay Crossings Commerce Park project was subtracted off from the SANDAG model forecasts to obtain the Cumulative (Year 2020) without project conditions. (See Section V for more details on the SANDAG 2020 modeling assumptions.) This scenario assesses the cumulative impacts without any development of the Otay Crossings Commerce Park project site.

Cumulative (Year 2020) with SR-905 [Phases 1A & 1B] With Project Conditions refers to that condition which are anticipated to exist by the year 2020. This condition assumes Phases 1A and 1B of the SR-905 facility are constructed and operational. The traffic forecast for this scenario has been prepared utilizing a SANDAG Series 11 model assuming development within the Otay Mesa area of San Diego County would continue to grow based on the high scenario growth rate per the Economics Research Associates (ERA) *Addendum to Real Estate Market Analysis.* (See Section V for more details on the SANDAG 2020 modeling assumptions.)

Year 2030 Conditions refers to the conditions and traffic volumes that will exist under 2030 conditions without the proposed project. All roadway segments were assumed to be built out to their classifications as identified in the *Traffic Assessment Update for the East Otay Mesa Specific Plan Amendment* 2007, prepared by D&A for the Department of Public Works at the County of San Diego. The traffic forecast for 2030 conditions was prepared from a SANDAG Series 10 model based on the 2030 Mobility Emphasis Network assuming build-out of land uses within the County and City of San Diego. Since the proposed project is consistent with the EOMSP, the 2030 condition includes the traffic generated by the proposed project. Therefore, project traffic was subtracted to get the 2030 conditions analysis.

Year 2030 with Project Conditions refers to those conditions which includes the 2030 traffic volumes and lane configurations plus the traffic generated by full build out (Units 1-5) of the proposed project.

LEVEL OF SERVICE

Level of Service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection is measured. Level of Service is defined on a scale of A to F; where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating speeds. Table 1 shows the delay, miles per hour (mph), and ADT ranges that are equivalent to each Level of Service.

In general, the region-wide goal for an acceptable Level of Service on all roadway segments and intersections is "D."

According to page XII 4-16 and XII 4-17 of the San Diego County General Plan Public Facility Element "A LOS „C', which allows for stable traffic flow with room to maneuver, is generally an accepted level to strive for in new development. However, there are some cases where development cannot achieve a LOS „C' on off-site roadways. For instance, there are areas where the existing development pattern precludes the addition of lanes or other mitigation or when the community is opposed to certain improvements to maintain a LOS „C'. In these cases a Level of Service „D' is acceptable on off-site roadways." A copy of excerpts from the County's Public Facility Element can be found in Appendix A.

Table 1 – Level of Service Ranges

LOS	Intersections		Roadway Segments	
			Daily	Peak Hour
	Signalized -Delay (sec/veh)[1]	Unsignalized Delay (sec/veh)[1]	Average Daily Traffic (ADT)[2]	Arterial Avg. Travel Speed (mph)[3]
A	Less than or equal to 10.0	Less than or equal to 10.0	Less than 1,900	Greater Than 35
B	10.1 to 20.0	10.1 to 15.0	1,901 to 4,100	Greater Than 28 to 35
C	20.1 to 35.0	15.1 to 25.0	4,101 to 7,100	Greater Than 22 to 28
D	35.1 to 55.0	25.1 to 35.0	7,101 to 10,900	Greater than 17 to 22
E	55.1 to 80.0	35.1 to 50.0	10,901 to 16,200	Greater than 13 to 17
F	Greater than 80.0	Greater than 50.1	Greater than 16,200	Less Than or Equal to 13

[1] The delay ranges shown are based on the 2000 Highway Capacity Manual (HCM)
[2] The volume ranges are based on the County of San Diego Circulation Element of a Light Collector, the average daily volume ranges for the other roadway classifications has been provided in Appendix A.
[3] The average travel speeds shown are based on the 2000 HCM.
LOS = Level of Service; mph = miles per hour; sec/veh=seconds per vehicle;

ANALYSIS METHODOLOGY

Even though the proposed project lies within the County of San Diego, the roadway segments in the vicinity of the proposed project are located in both the jurisdictions of the County and City of San Diego. Therefore, for the purpose of this report, the daily traffic volumes of the roadway segments in the vicinity of the project were compared to the County or City of San Diego Level of Service classification thresholds, depending on whether the roadway segment is located within the County's or City's jurisdiction.

The daily (24 hour) traffic count sheets, a copy of the City of San Diego "Roadway Classifications, Levels of Service, and Average Daily Traffic", and a copy of the "Summary of County of San Diego Public Road Standards" are included in Appendix A.

The arterial roadway segment levels of service analysis for the segments of Interim SR-905 (Otay Mesa Road) were determined using the Synchro version 6. The arterial roadway segment level of service analysis methodology utilized by Synchro is based on the 2000 Highway Capacity Manual (HCM).

The levels of service for the freeways (SR-125, SR-905 south of Otay Mesa Road, and the new SR-905) were determined based on the California Department of Transportation (Caltrans) District 11 procedures. Caltrans determines the level of service for freeways based on the volume-to-capacity ratio which considers the variables such as the peak hour volume of traffic, the number of travel lanes, the directional split of traffic, and percentage of heavy vehicles.

Synchro version 6 was utilized to analyze the morning and afternoon peak hour conditions of the intersections in the project vicinity. The signalized intersection methodology defines LOS based on delay using variables such as lane configuration, traffic volumes, and signal timings. The unsignalized intersection methodology defines LOS based on the longest delay experienced by any single movement. Since the Synchro program calculates the average delay per vehicle, there may be instances where the Synchro analysis will show a reduction in delay with the addition of more traffic. This phenomenon occurs when the additional traffic is added to a movement that experiences a shorter amount of delay, thereby decreasing the intersection's average delay per vehicle (i.e. a larger amount of vehicles will have to wait a shorter time while only a few vehicles have to wait an extended period of time). It should be noted that the Synchro program is based on the 2000 Highway Capacity Manual (HCM).

It should be noted the Airway Road/Sanyo Avenue intersection is currently an all-way stop-controlled intersection with three (3) westbound approach lanes (1 left, 1 through, and 1 right). The Highway Capacity Manual (HCM) and Synchro software, however, do not currently provide an analysis methodology to analyze an all-way stop-controlled intersection with more than two (2) approach lanes. Therefore, for analysis purposes, the westbound approach was assumed to have one (1) westbound shared left-through lane and one (1) westbound right turn lane. This results in a delay that is slightly larger than what would be experienced in the field.

Since SR-905 and SR-125 are state owned facilities, to meet the requirements of Caltrans, the Intersecting Lane Vehicles (ILV) analysis was utilized to assess the operating conditions of the intersections along Otay Mesa Road (Interim SR-905) between Britannia Boulevard and the SR-905 connector and the intersections of SR-905 at Siempre Viva Road. Since the control/ownership of Otay Mesa Road (Interim SR-905) between Britannia Boulevard and the SR-905 connector will be relinquished to the City of San Diego once the new SR-905 facility is constructed, the ILV analysis was only completed for these intersections under existing and existing plus project conditions. It should be noted that the ILV analysis is only applicable to signalized intersections.

The Intersecting Lane Vehicle method determines the operating condition of an intersection based upon the number of intersecting vehicles that enter the intersection per lane during the hour (ILV/hr). Where less than 1200 ILV/hr represents stable flow, 1200 to 1500 ILV/hr represents unstable flow with considerable delays possible, and 1500 ILV/hr represents capacity, or stop-and-go operation with severe delay and heavy congestion. Since the upper limits of the ILV analysis is based on the premise of an operating condition of LOS C or better, and since LOS D was considered an acceptable level of service, the ILV analysis was not utilized to determine project significance.

REPORT ORGANIZATION

Following this section, Section II examines the potential trips generated by the proposed project and it defines the trip distribution assumptions. Section III evaluates the existing roadway characteristics and traffic conditions without the project. Section IV evaluates the existing plus project conditions. Section V evaluates the cumulative (2020) with SR-905 [Phases 1A & 1B] conditions. Section VI briefly describes the year 2030 conditions. Section VII addresses the project's access and internal circulation, Section VIII summarizes the construction traffic associated with the proposed project. Section IX summarizes the recommended mitigation measures for the direct and cumulative impacts of the project, and Section X summarizes the report's findings and conclusions.

SECTION II – PROJECT RELATED CONDITIONS

TRIP GENERATION

The trip generation potential for the industrial component of the project was based on daily and peak hour trip generation rates obtained from the *(Not So) Brief Guide of Traffic Generators for the San Diego Region* published by the San Diego Association of Governments (SANDAG) in April 2002 and the trip generation potential for the truck parking component of the project was based on daily and peak hour trip generation rates obtained from the *Trip Generation Manual* published by the City of San Diego in May 2003.

Grading for the proposed project will be completed in two phases. Grading for Phase 1 is comprised of three final maps (Units 1, 2, and 3) and Grading for Phase 2 comprises two final maps (Units 4 and 5). The project proposes to construct the project in the following timeline: construct Unit 1 by 2011, construct Unit 2 by 2012, construct Unit 3 by 2013, and construct Units 4 and 5 by 2014.

As shown in Table 2, in the near term when the developer will be utilizing the area set aside for the future SR-11 right-of-way, the proposed project is estimated to generate 21,279 daily trips, 2,853 AM peak hour trips, and 3,017 PM peak hour trips. Once the SR-11 facility is constructed, the lots being used as a Truck Parking Facility (lots 54, 55 and 56) will no longer be utilized as it will be located within the right-of-way for the future SR-11 and the project will generate 18,768 daily trips, 2,627 AM peak hour trips, and 2,816 PM peak hour trips. It should be noted, however, that all traffic impacts were based on the assumption that the truck parking facility would be being utilized and generating traffic.

TRIP DISTRIBUTION/TRIP ASSIGNMENT

The project trip distribution for the cumulative with SR-905 conditions is based on a SANDAG Select Zone forecast for the year 2020 and for the buildout (year 2030) conditions is based on a SANDAG Select Zone forecast for the year 2030. Figure 3 illustrates the project trip distribution percentages and project related traffic for Unit 1 of the proposed project under existing and cumulative without SR-905 conditions. The trip distribution percentages and project related traffic for Units 2-5 of the proposed project under existing conditions are illustrated in Figures 4 through 7.

Under cumulative (Year 2020) conditions, Phases 1A and 1B of the SR-905 were assumed to be completed and operational. In addition, the SR-905/Airway Road underpass was assumed to be completed. Figures 8 and 9 illustrate the project trip distribution percentages and project related traffic for the proposed project under cumulative (Year 2020) with SR-905 [Phases 1A & 1B] conditions. Since, as discussed later in Section V of this report, the Otay Crossings Commerce Park project is only included in the cumulative (2020) conditions based on 13% of its planned development, the project traffic volumes shown in Figure 8 illustrate what would be generated by only 13% of the proposed project while the project traffic volumes shown in Figure 9 illustrate what would be generated by 100% (or the total of Units 1-5) of the proposed project.

Under 2030 conditions it was assumed that both State Route 11 and the re-aligned State Route 905 would be constructed and that the full project would be completely built out (all five units). The daily trip distributions percentages and project related traffic for Units 1-5 along the roadway segments in the vicinity of the project under 2030 conditions are illustrated in Figure 10.

Table 2 – Trip Generation Rates & Calculations Summary

Trip Generation Rates

Land Use	Daily	AM Peak Hour			PM Peak Hour		
		Total – % of Daily	%In	%Out	Total – % of Daily	%In	%Out
Technology Business Park[1]	120 trips/Acre	14%	80%	20%	15%	30%	70%
Truck Parking[2]	30 trips/Acre	9%	40%	60%	8%	50%	50%

Trip Generation Calculations Summary

Land Use	Total No Of Units	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Unit 1								
Technology Business Park	51.6 AC	6,192	867	694	173	929	279	650
Sub Total Unit 1	**51.6 AC**	**6,192**	**867**	**694**	**173**	**929**	**279**	**650**
Unit 2								
Technology Business Park	49.1 AC	5,892	825	660	165	884	265	619
Sub Total Unit 2	**49.1 AC**	**5,892**	**825**	**660**	**165**	**884**	**265**	**619**
Total Units 1-2	**100.7 AC**	**12,084**	**1,692**	**1,354**	**338**	**1,813**	**544**	**1,269**
Unit 3								
Technology Business Park	22.1 AC	2,652	371	297	74	398	119	279
Truck Parking	23.7 AC	711	64	26	38	57	29	28
Sub Total Unit 3	**45.8 AC**	**3,363**	**435**	**323**	**112**	**455**	**148**	**307**
Total Units 1-3	**146.5 AC**	**15,447**	**2,127**	**1,677**	**450**	**2,268**	**692**	**1,576**
Unit 4								
Technology Business Park	33.6 AC	4,032	564	451	113	605	182	423
Truck Parking	0.9 AC	27	2	1	1	2	1	1
Sub Total Unit 4	**34.5 AC**	**4,059**	**566**	**452**	**114**	**607**	**183**	**424**
Total Units 1-4	**181.0 AC**	**19,506**	**2,693**	**2,129**	**564**	**2,875**	**875**	**2,000**
Unit 5								
Truck Parking	59.1 AC	1,773	160	64	96	142	71	71
Sub Total Unit 5	**59.1 AC**	**1,773**	**160**	**64**	**96**	**142**	**71**	**71**
Total Units 1-5	**240.1 AC**	**21,279**	**2,853**	**2,193**	**660**	**3,017**	**946**	**2,071**
w/o Truck Parking Total Units 1-4	**156.4 AC**	**18,768**	**2,627**	**2,102**	**525**	**2,816**	**845**	**1,971**

[1] SANDAG Rates
[2] City of San Diego Rates for the Otay Mesa Region
AC = Acres

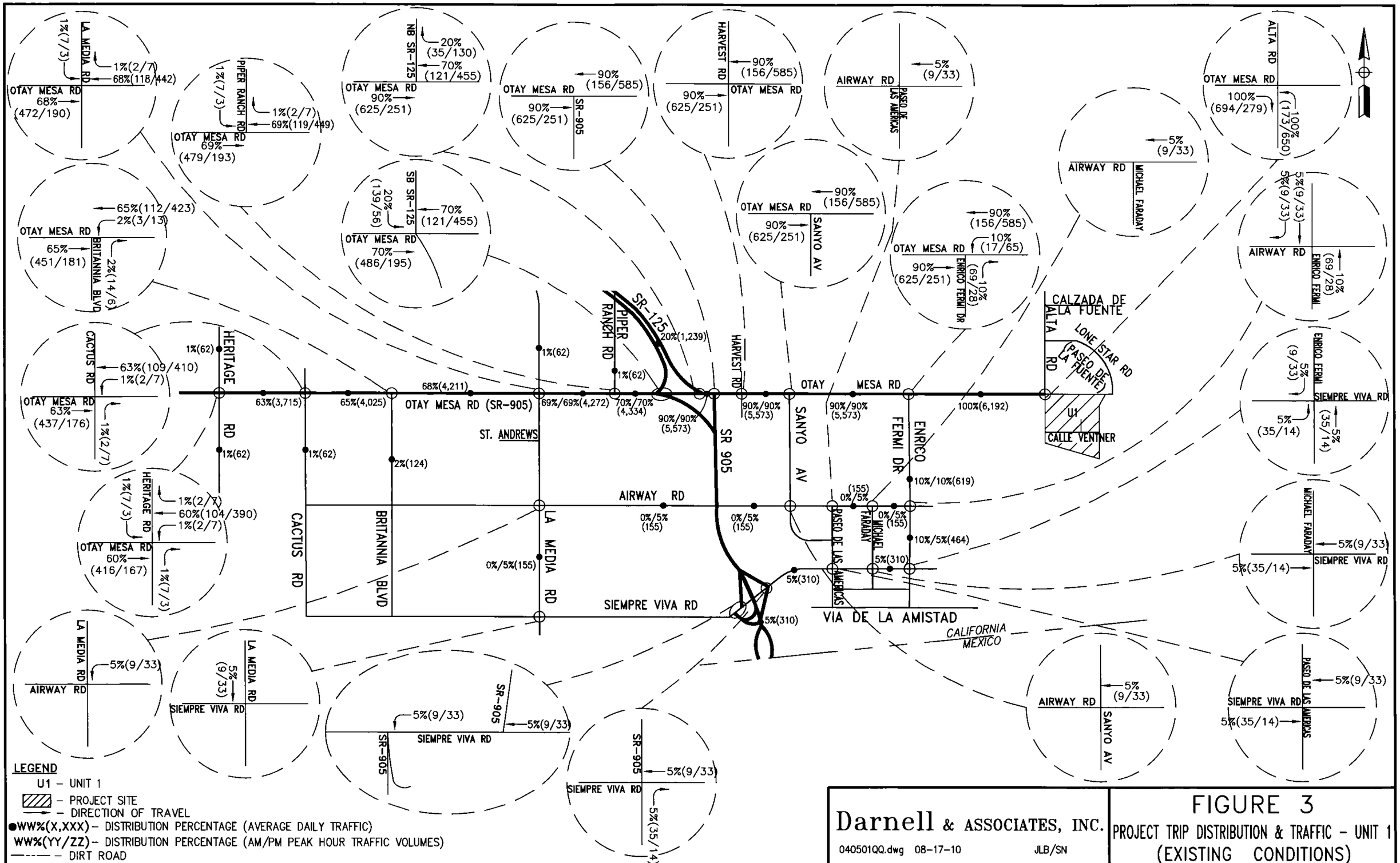

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FIGURE 3

PROJECT TRIP DISTRIBUTION & TRAFFIC – UNIT 1 (EXISTING CONDITIONS)

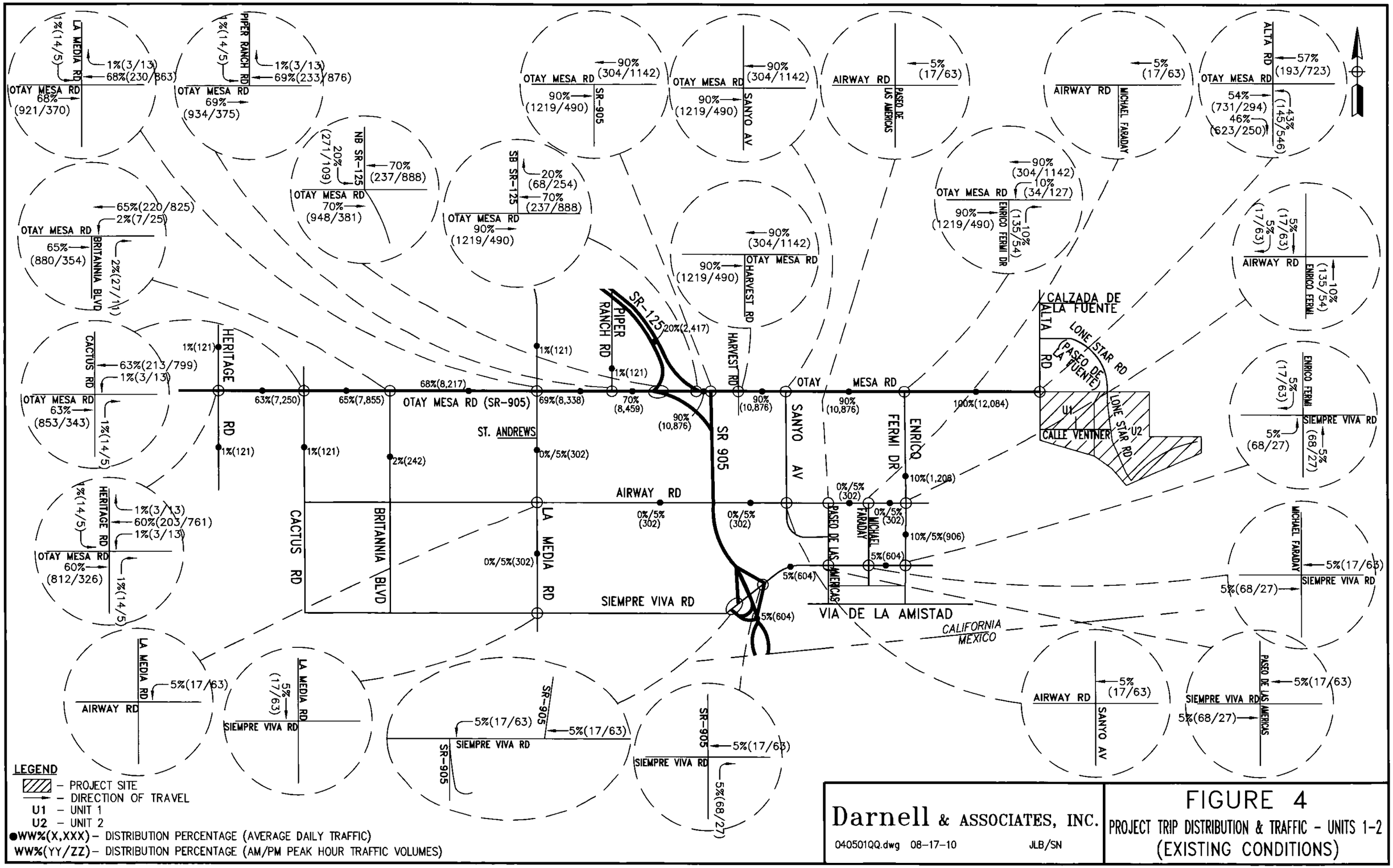

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FIGURE 4

PROJECT TRIP DISTRIBUTION & TRAFFIC - UNITS 1-2 (EXISTING CONDITIONS)

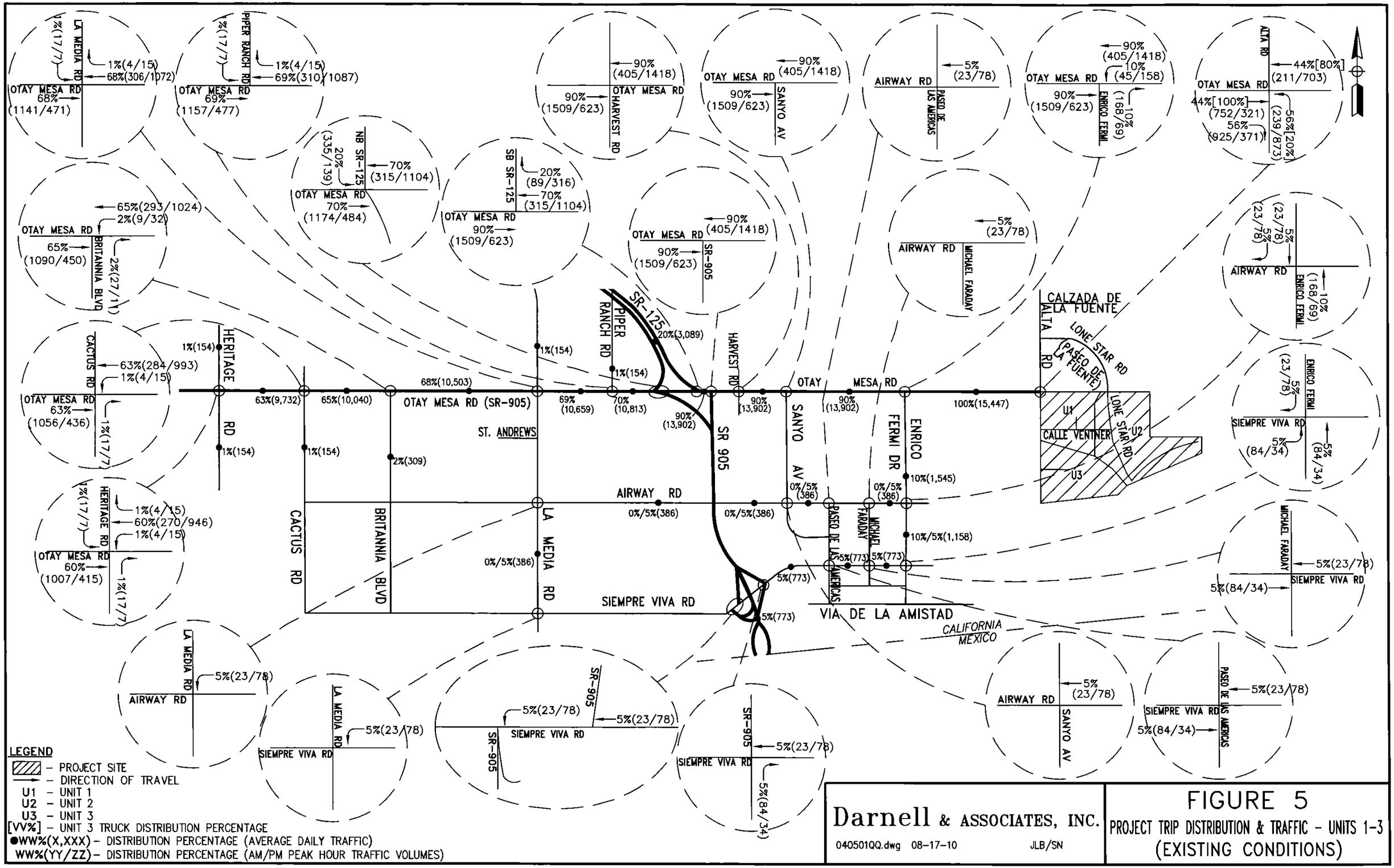

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FIGURE 5

PROJECT TRIP DISTRIBUTION & TRAFFIC - UNITS 1-3 (EXISTING CONDITIONS)

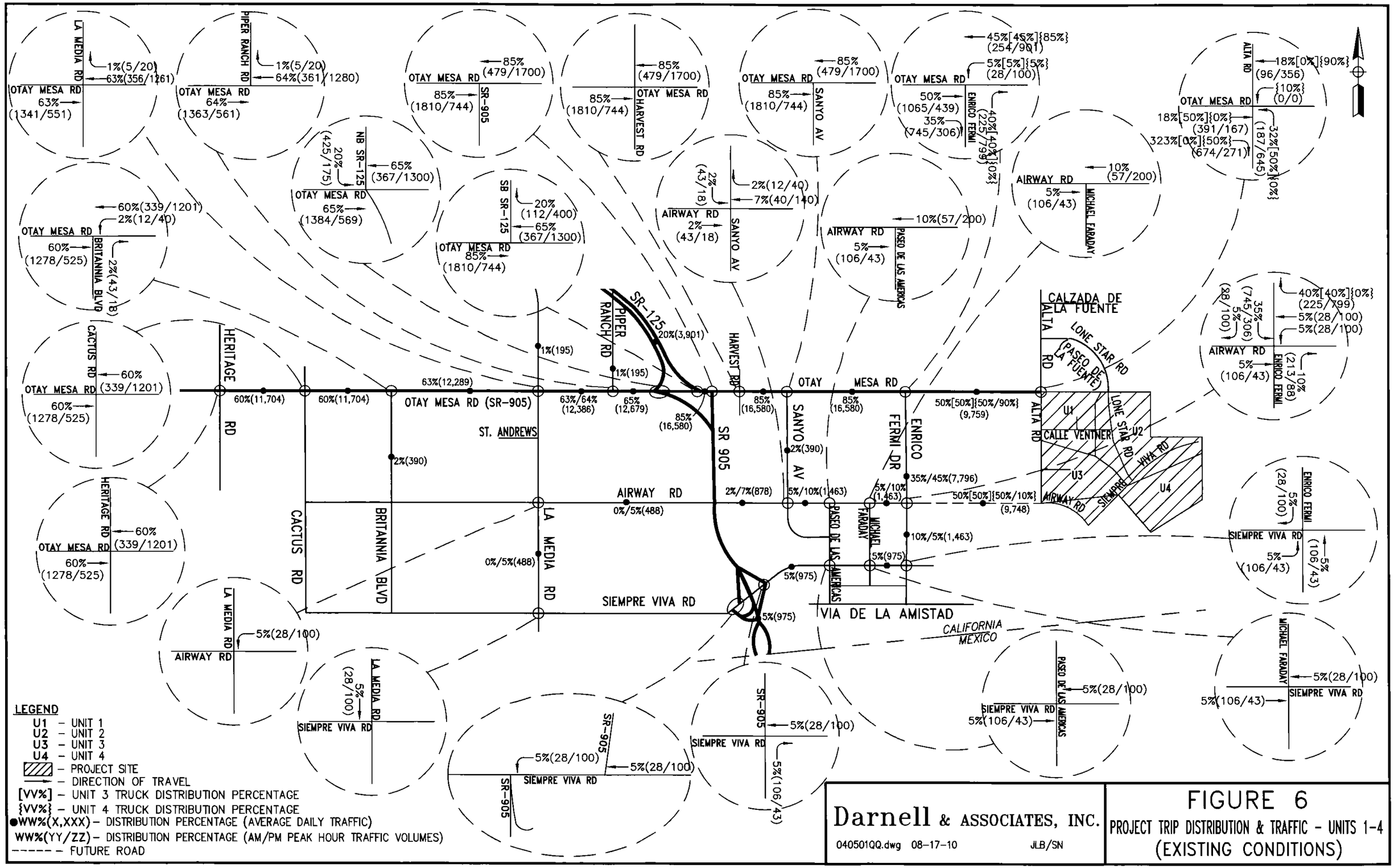

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FIGURE 6

PROJECT TRIP DISTRIBUTION & TRAFFIC - UNITS 1-4 (EXISTING CONDITIONS)

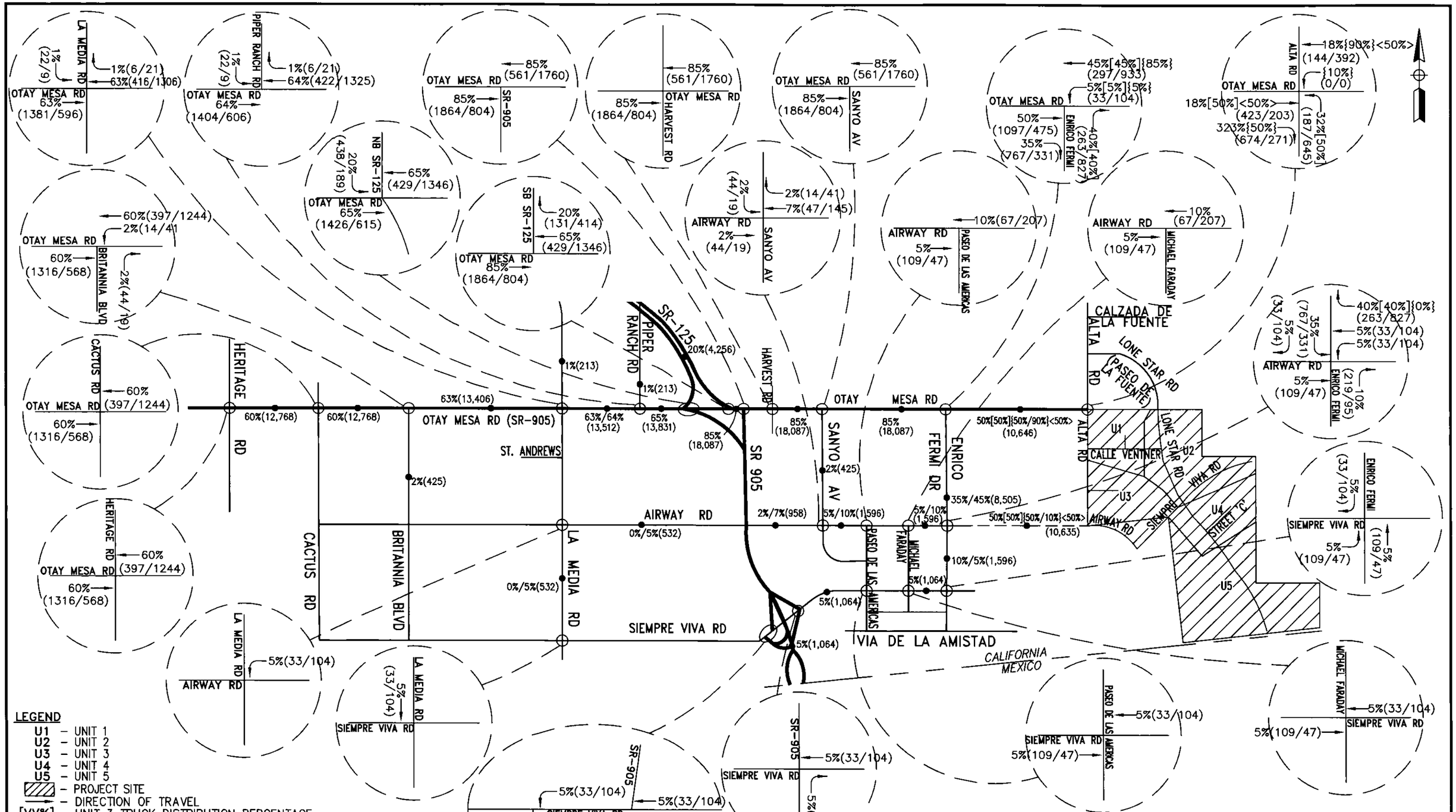

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FIGURE 7

PROJECT TRIP DISTRIBUTION & TRAFFIC - UNITS 1-5 (EXISTING CONDITIONS)

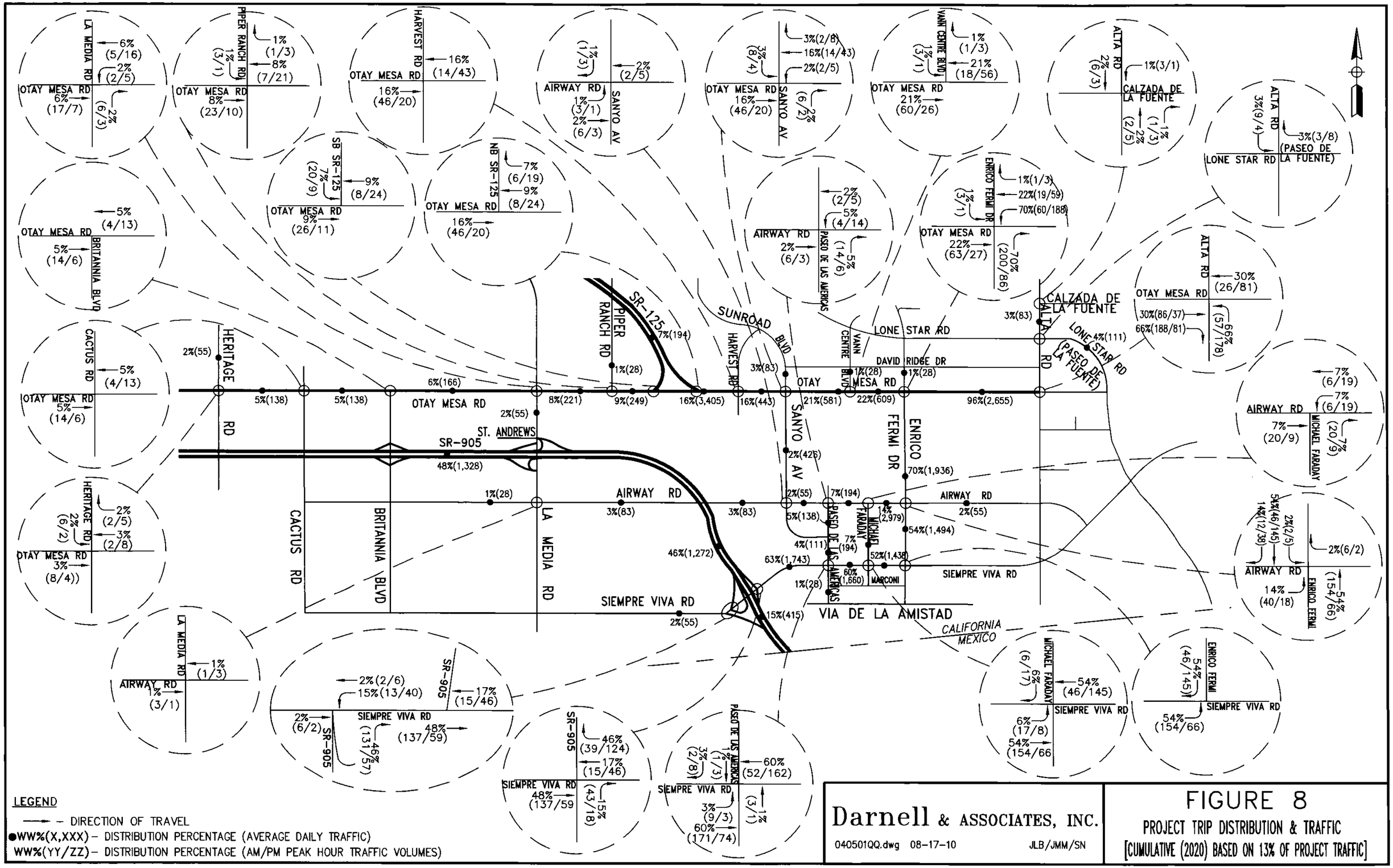

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FIGURE 8

PROJECT TRIP DISTRIBUTION & TRAFFIC

[CUMULATIVE (2020) BASED ON 13% OF PROJECT TRAFFIC]

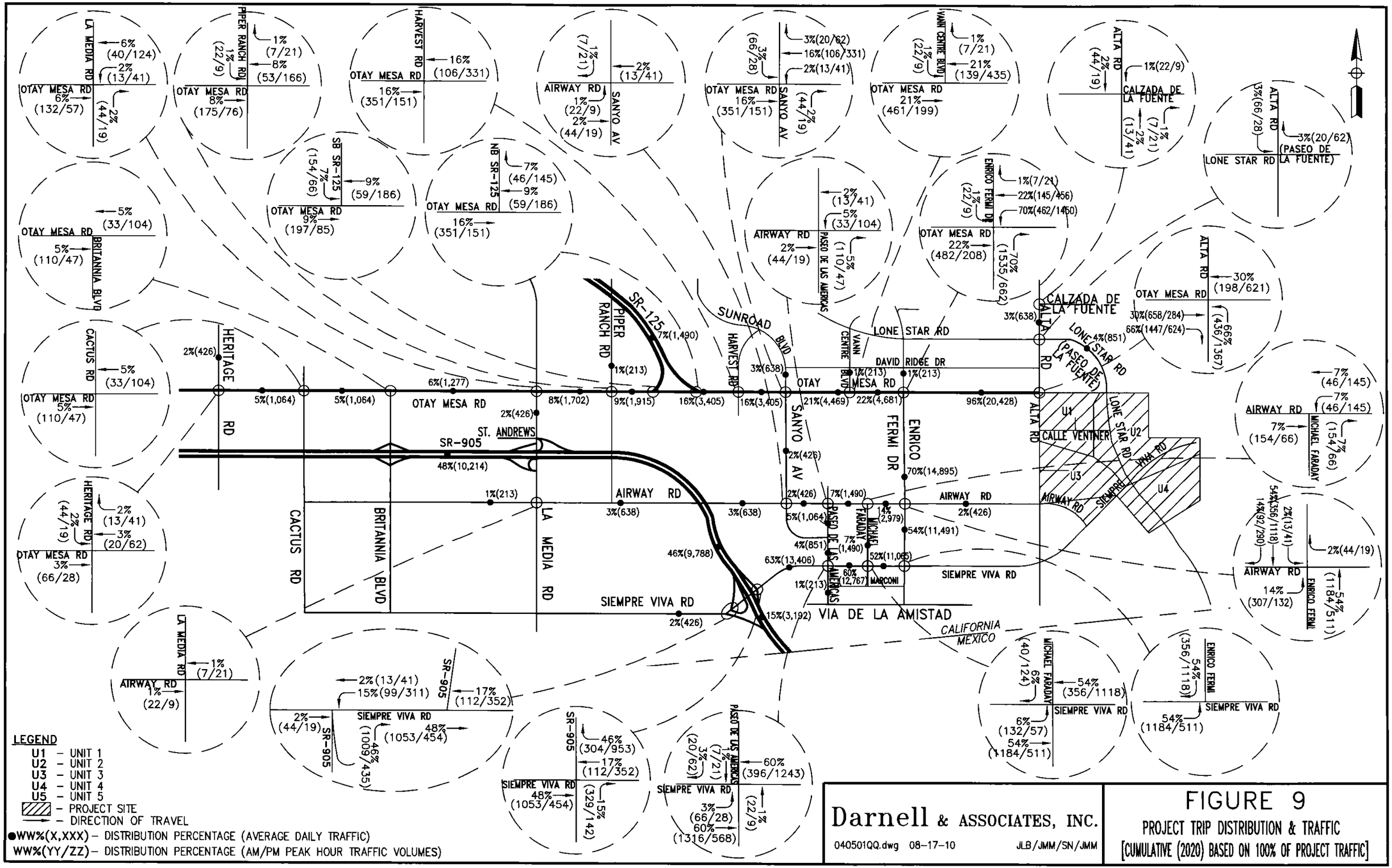
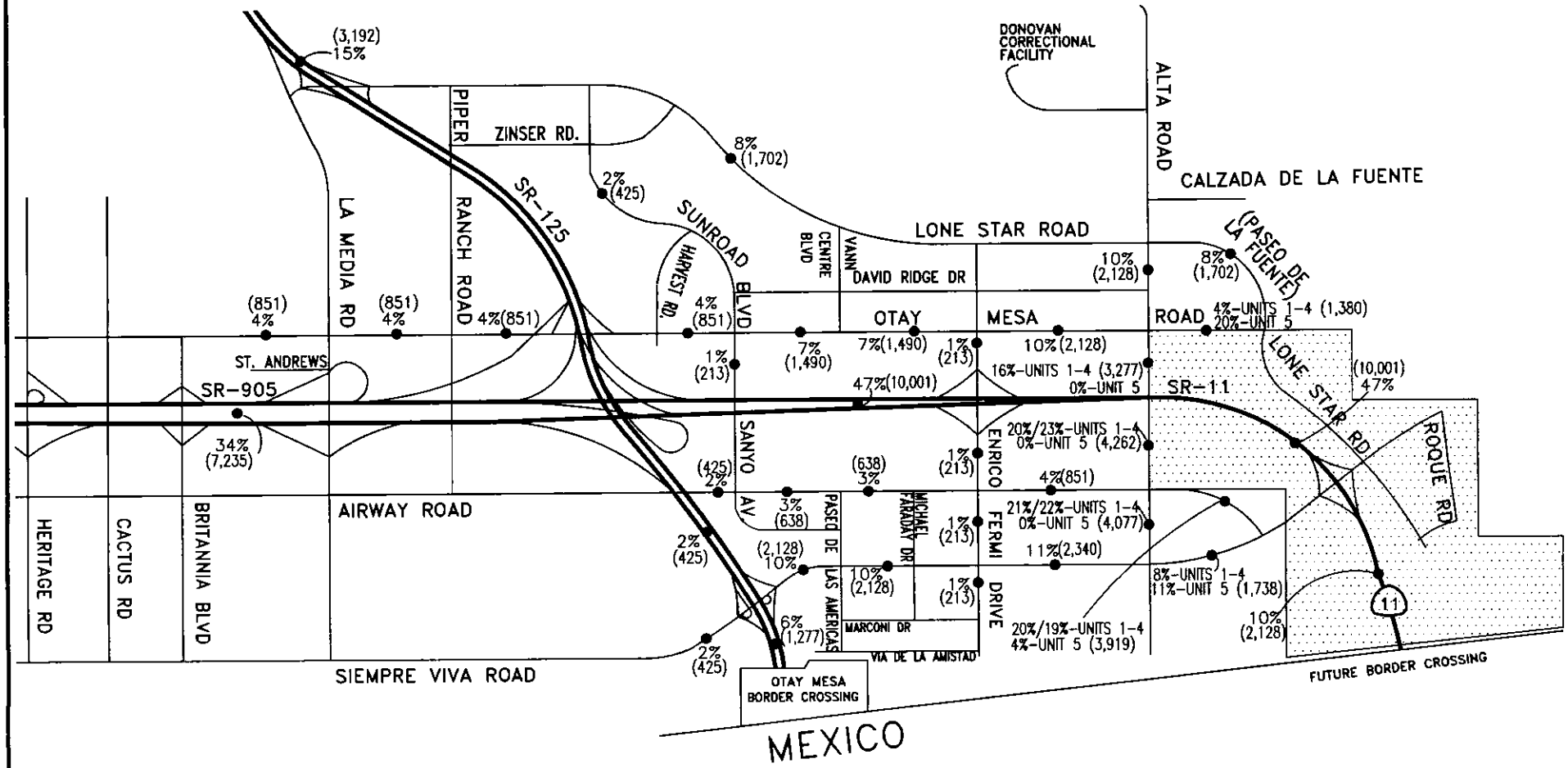


FIGURE 9
PROJECT TRIP DISTRIBUTION & TRAFFIC
[CUMULATIVE (2020) BASED ON 100% OF PROJECT TRAFFIC]



LEGEND

- PROJECT SITE
- ● XX% – DISTRIBUTION PERCENTAGE
- Z,ZZZ – AVERAGE DAILY TRAFFIC
- → – DIRECTION OF TRAVEL

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040501QQ.dwg 8-17-10 JLB/SN/JMM

FIGURE 10

PROJECT TRIP DISTRIBUTION PERCENTAGES & PROJECT TRAFFIC FOR (YEAR 2030) CONDITIONS – UNITS 1-5

STUDY AREA

To determine the study area for the project D&A utilized the County of San Diego's criteria which recommends the inclusion of all transportation facilities that receive 25 or more peak hour trips from the proposed project, and the City of San Diego's criteria which requires the analysis of all regionally significant arterial system segments and intersections where the proposed project will add 50 or more peak hour trips in either direction and all mainline freeway locations where the project will add 50 or more peak hour trips in either direction. The County or City criteria was utilized dependent on the jurisdiction which the roadway segment or intersection was located in.

Based on the County and City's criteria and a review of Figures 3-7, it was determined that under existing conditions, the study area for Unit 1 would need to include all roadway segments and intersections along Interim SR-905 (Otay Mesa Road) between Heritage Road and the SR-125, all segments and intersections along Otay Mesa Road (Old Otay Mesa Road) between the SR-125 and the project site, and all segments and intersections along Enrico Fermi Drive between Otay Mesa Road (Old Otay Mesa Road) and Siempre Viva Road. With Units 1-2 and Units 1-3 the study area would need to expand to include all segments and intersections along Siempre Viva Road between the SR-905 southbound ramp and Enrico Fermi Drive as well as the Airway Road/La Media Road and Siempre Viva Road/La Media Road intersections. With Units 1-4 and Units 1-5, the study area would need to expand to include the roadway segments and intersections along Airway Road between the SR-905 and the project site.

Based on a review of Figures 8 and 9, it was determined that under cumulative with SR-905 Phases 1A & 1B conditions the study area would need to include all roadway segments and intersections along Otay Mesa Road and Otay Mesa Road (Old Otay Mesa Road) between Heritage Road and Alta Road, all segments and intersections along Airway Road between SR-905 and the project site, all segments and intersections along Siempre Viva Road between the SR-905 southbound ramp and the project site, and all segments and intersections along Alta Road between Calzada De La Fuente and the project site. It should be noted that the Siempre Viva Road/La Media Road intersection does not need to be included in the study area under cumulative with SR-905 Phases 1A & 1B conditions.

See Table 3 for a summary of the study area for each unit and study scenario. To maintain consistency, the same intersections and roadway segments were analyzed for all scenarios.

Table 3 – Summary of Study Area Intersections by Scenario			
Intersection	Criteria Utilized to Determine Study Area	Peak Hour Trip Threshold	Scenario Where Analysis is Required
Interim SR-905 @ Heritage Rd	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Interim SR-905 @ Cactus Rd	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Interim SR-905 @ Britannia Blvd	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Interim SR-905 @ La Media Rd	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Interim SR-905 @ Piper Ranch Rd	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Otay Mesa Rd @ SR125 SB	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Otay Mesa Rd @ SR 125 NB	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Otay Mesa Rd @ SR-905 Conector	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5
Otay Mesa Rd @ Harvest Rd	County	25	C w/905
Otay Mesa Rd @ Sanyo Av	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Otay Mesa Rd @ Vann Centre Blvd	County	25	C w/905
Otay Mesa Rd @ Enrico Fermi Dr	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Otay Mesa Rd @ Alta Rd	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Otay Mesa Rd @ Paseo De La Fuente-Lone Star Rd	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5
Airway Rd @ La Media Rd	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Airway Rd @ Sanyo Av	City	50	E+1-4, E+1-5, C w/905
Airway Rd @ Paseo De Las Americas	City	50	E+1-4, E+1-5, C w/905
Airway Rd @ Michael Faraday	City	50	E+1-4, E+1-5, C w/905
Airway Rd @ Enrico Fermi Dr	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Airway Rd @ Alta Rd	County	25	E+1-4, E+1-5
Siempre Viva Rd @ La Media Rd	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5
SR-905 SB Ramp @ EB Siempre Viva	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
SR-905 SB Ramp @ WB Siempre Viva	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
SR-905 NB Ramp @ Siempre Viva	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Siempre Viva @ Paseo De Las Americas	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Siempre Viva @ Michael Faraday	City	50	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Siempre Viva Rd @ Enrico Fermi Dr	County	25	E+1, E+1-2, E+1-3, E+1-4, E+1-5, C w/905
Siempre Viva Rd @ Airway Rd	County	25	E+1-4, E+1-5, C w/905
Alta Rd @ Calzada De La Fuente	County	25	C w/905
Alta Rd @ Paseo De La Fuente	County	25	C w/905

E+1 = Existing + Project Unit 1
E+1-2 = Existing + Project Units 1-2
E+1-3 = Existing + Project Units 1-3
E+1-4 = Existing + Project Units 1-4
E+1-5 = Existing + Project Units 1-5
C w/905 = Cumulative w/SR-905 [Phases 1A & 1B]

SECTION III – EXISTING CONDITIONS

This section of the traffic study is intended to assess the existing conditions of the roadways within the vicinity of the project to determine travel flow difficulties, if any, that exist prior to adding the traffic generated by the proposed project. The existing conditions analysis establishes a base condition that is used to assess the other scenarios discussed in this report. Darnell & Associates, Inc (D&A) conducted a field review of the area surrounding the project in January 2010. Figure 11 illustrates the existing roadway conditions in the project vicinity.

EXISTING ROADWAY CHARACTERISTICS

The key segments analyzed in the study area are identified below:

Interim State Route 905 (SR-905)/Otay Mesa Road (SC-1120) is an east-west six-lane expressway which extends from Interstate 5 to the City of San Diego Otay Mesa Community. Approximately one mile east of Interstate 805, there is a break in the route and SR-905 becomes Otay Mesa Road. The posted speed limit on Otay Mesa Road is 55 miles per hour (mph).

The study refers the segment of SR-905/Otay Mesa Road from Heritage Road to SR-125 (Old Otay Mesa Road) as interim SR-905 (Otay Mesa Road) and the segment from SR-125 (Old Otay Mesa Road) to Siempre Viva Road as SR-905 under existing conditions. It is at the junction with SR-125 where SR-905 and Otay Mesa Road split from one another (Otay Mesa Road continues traveling in the east-west direction, while SR-905 becomes a north-south roadway).

Interim SR-905 (Otay Mesa Road) is improved to six lane Prime Arterial standards from west of Caliente Avenue to approximately Piper Ranch Road. Immediately east of Piper Ranch Road, Interim SR-905 (Otay Mesa Road) provides five (5) travel lanes (2 eastbound lanes and 3 westbound lanes), however as it traverses easterly towards the SR-125; Otay Mesa Road widens to provide a total of seven (7) travel lanes (4 eastbound lanes and 3 westbound lanes). For analysis purposes, this segment of Interim SR-905 (Otay Mesa Road) was assumed to have the capacity equivalent to that of a six-lane Prime Arterial. (Copies of Caltrans striping concepts for the segment of Otay Mesa Road between Piper Ranch Road and Harvest Road are provided in Appendix P.) From its junction at SR-125 to the international border, SR-905 is a four-lane Major Arterial.

The segment of interim SR-905/Otay Mesa Road from west of Heritage Road to approximately Piper Ranch Road and the segment of SR-905 from Otay Mesa Road to south of Siempre Viva Road are currently located within the jurisdictions of both the City of San Diego and Caltrans, while the segments from approximately Piper Ranch Road to SR-125 is located with the jurisdictions of the City of San Diego, the County of San Diego, and Caltrans. In the City of San Diego Circulation Element, a six-lane Prime Arterial has a capacity of 60,000 Average Daily Trips (ADT) at Level of Service (LOS) E with a cross section of 102 feet (102') curb to curb and a right-of-way of 122 feet (122'). A four-lane Major Arterial has a capacity of 40,000 ADT at LOS E with a cross section of 78 feet (78') curb to curb and a right-of-way of 98 feet (98'). In the County of San Diego Circulation Element a six-lane Prime Arterial has a capacity of 57,000 ADT at LOS E.

Otay Mesa Road (Old Otay Mesa Road) (SC-1120) is basically a two-lane roadway located within the jurisdictions of the County and City of San Diego. The segment from SR-905 to approximately 1,200 feet east of Sanyo Avenue is located within both jurisdictions, with the centerline of the existing road as the boundary. Otay Mesa Road has a varying pavement width of 40 to 64 feet. The posted speed limit on this section of Otay Mesa Road is 55 mph.

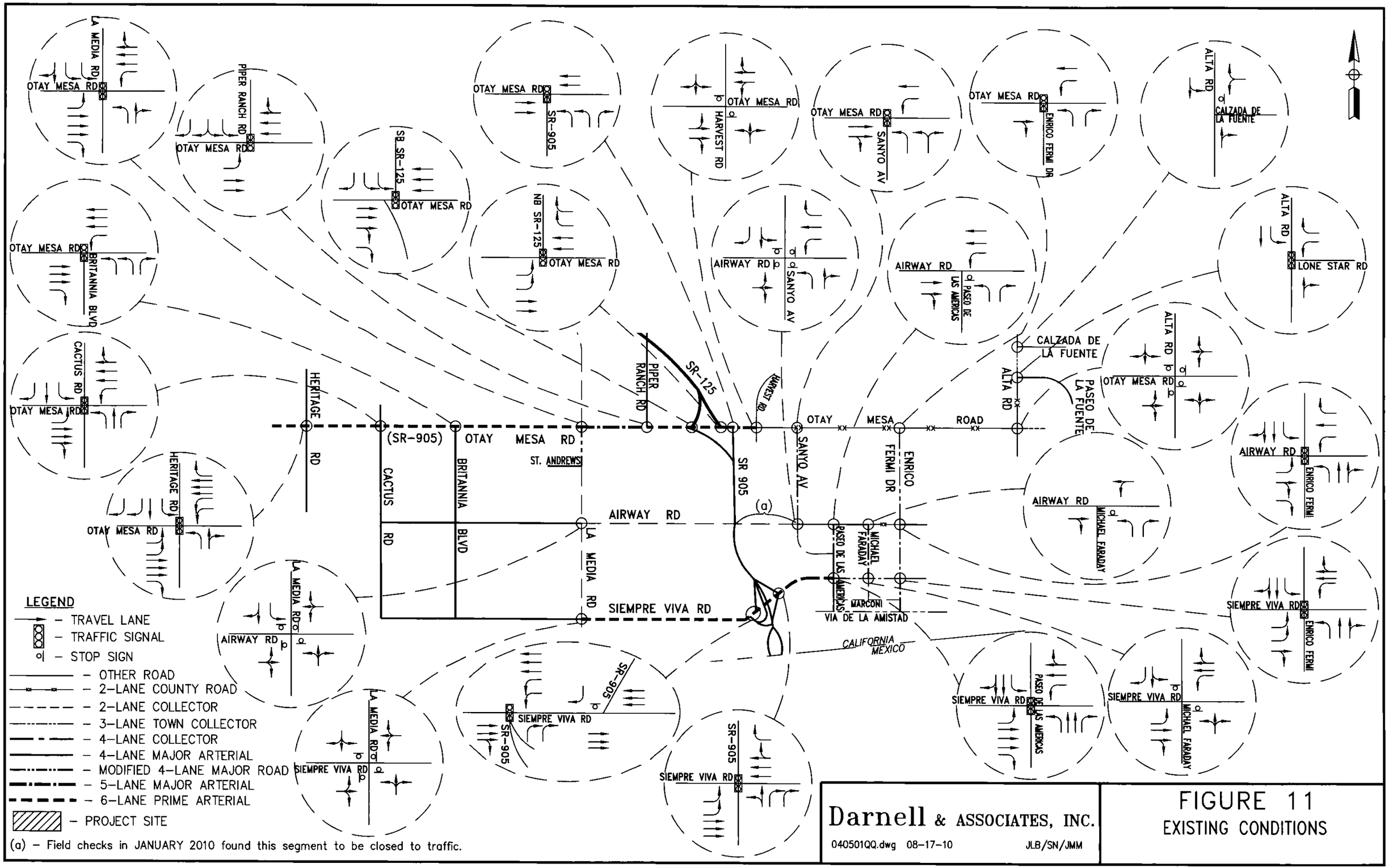

FIGURE 11
EXISTING CONDITIONS

The segment of Otay Mesa Road (Old Otay Mesa Road) between the SR-125 Southbound ramp and the Interim SR-905 connection is currently constructed to provide six (6) travel lanes (2 eastbound lanes and 4 westbound lanes). The segment of Otay Mesa Road (Old Otay Mesa Road) between the Interim SR-905 connection and Harvest Road is currently constructed to provide five (5) travel lanes (2 eastbound lanes and 3 westbound lanes). For the purpose of analysis, these segments of Otay Mesa Road (Old Otay Mesa Road) were assumed to have the capacity equivalent to that of a 5-lane Major Arterial, approximately 47,000 ADT at LOS E (the half-way point between a 4-lane Major Road and a 6-lane Prime Arterial).

The current capacity on the City two-lane segments of Otay Mesa Road (Old Otay Mesa Road) is estimated to be equivalent to that of a two-lane Collector Road with no fronting property, capacity of 10,000 ADT at LOS E. The current capacity on the County two-lane segments of (Otay Mesa Road) is estimated to be equivalent to that of a Light Collector, capacity of 16,200 ADT at LOS E. A two-lane Collector for the City and a Light Collector for the County have the same cross section of 40 feet (40') curb to curb, and 60 feet (60') of right-of-way.

Based on the East Otay Mesa Specific Plan, the ultimate classification of the segment of Otay Mesa Road 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 (90') curb to curb and 110 feet (110') 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 (78') curb to curb and 98 feet (98') of right-of-way.

Airway Road (SC-2300) is an east-west roadway that is located within the jurisdiction of both the City of San Diego (west of Paseo de Las Americas) and the County of San Diego (between Paseo de Las Americas to Enrico Fermi Drive). Airway Road, between La Media Road and Avenida Costa Azul, is a two-lane undivided roadway. Between Avenida Costa Azul and Piper Ranch Road, Airway Road widens to a four-lane roadway with a raised median. East of Piper Ranch Road, for approximately 150 feet, Airway Road provides one (1) eastbound lane and two (2) westbound lanes. Between State Route 905 and Sanyo Avenue, Airway Road is only striped to provide two travel lanes, however, the westbound lane is approximately 29 feet wide, and the eastbound lane is approximately 25 feet wide. Airway Road between Sanyo Avenue and Michael Faraday Drive has been improved to the standards of a four lane Major Road. Between Michael Faraday Drive and Enrico Fermi Drive, Airway Road narrows back down to a two-lane roadway. Just east of Enrico Fermi Drive to its current terminus, Airway Road is currently constructed as a four-lane roadway with a raised median.

For the purpose of analysis, the segment of Airway Road between La Media and Sanyo Avenue was assumed to have the capacity equivalent to that of a two lane Collector Road with a capacity of 15,000 ADT at LOS E. The segment between Sanyo Avenue and Michael Faraday Drive was assumed to have the capacity equivalent to the City's classification of a Major Arterial with a capacity of 40,000 ADT at LOS E. The segment between Michael Faraday Drive and Enrico Fermi Drive was assumed to have the capacity equivalent to that of the County of San Diego's Light Collector with a capacity of 16,200 ADT at LOS E with a cross section of 40 feet (40') curb to curb, with 60 feet (60') right-of-way. It should be noted that Airway Road will be reconstructed as to no longer be provided with access to State Route 905.

In the East Otay Mesa Specific Plan Amendment, Airway Road has the ultimate classification 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 (78') curb to curb, with 98 feet (98') right-of-way.

Siempre Viva Road is an east-west roadway that is located under the jurisdiction of the City of San Diego. From west of SR-905 to Paseo De Las Americas, Siempre Viva Road is a six-lane facility with a cross-section equivalent to that of a Prime Arterial, capacity of 60,000 ADT at LOS E. Currently, east of Paseo De Las Americas to Enrico Fermi Drive, Siempre Viva Road is a four-lane road with a cross-section equivalent to that of a Collector Road, capacity of 30,000 ADT at LOS E. This segment of Siempre Viva Road is planned as a six-lane facility with a cross-section equivalent to that of a Prime Arterial, capacity of 60,000 ADT at LOS E. Just east of Enrico Fermi Drive to the CHP facility located, Siempre Viva Road is currently constructed to provide one (1) eastbound lane and two (2) westbound travel lanes. From the CHP facility to Airway Place, Siempre Viva Road is constructed to provide two (2) westbound travel lanes. For purposes of analysis, the segment of Siempre Viva Road between Enrico Fermi Drive and Airway Place was assumed to have the capacity equivalent to that of a Light Collector, 16,200 ADT at LOS E.

La Media Road (SA 1103) is a north-south facility that is currently under construction for the SR-905 interchange. La Media Road immediately south of Otay Mesa Road currently provides two (2) northbound travel lanes (1 northbound left, and 1 northbound shared through-right) and three (3) southbound lanes (2 southbound through and 1 southbound right turn lane) along with a partially painted median. Just north of Saint Andrews Avenue and the future SR-905 westbound off ramp, La Media Road provides one (1) northbound travel lane, and two (2) southbound travel lanes (1 southbound through and 1 southbound right) along with a painted median. For purposes of analysis, the segment of La Media Road between Otay Mesa Road and Saint Andrews Avenue/future SR-905 westbound off ramp was assumed to have the capacity equivalent to that of a 4-lane Collector, 30,000 ADT at LOS E. La Media Road from Saint Andrews Avenue/SR-905 westbound off ramp to Siempre Viva Road is currently constructed as a two-lane undivided roadway that has a classification equivalent to that of a 2-lane Collector, capacity 10,000 ADT at LOS E.

Upon completion of the SR-905 interchange, La Media Road from Otay Mesa Road to Saint Andrews Avenue will still provide two (2) northbound travel lanes (1 northbound left, and 1 northbound shared through-right) and three (3) southbound lanes (2 southbound through and 1 southbound right turn lane) along with a partially painted median immediately south of Otay Mesa Road. However, just north of Saint Andrews Avenue, La Media Road will be widened to provide two (2) northbound through lanes, three (3) southbound through lanes, one (1) southbound right turn lane, and a painted median. Therefore, upon completion of the SR-905 interchange, La Media Road from Otay Mesa Road to Saint Andrews Avenue (SR-905 westbound off ramp) is estimated to have a capacity equivalent to that of a modified 4-lane Collector, approximately 35,000 ADT at LOS E (the half-way point between a 4-lane Collector and a 4-lane Major Arterial).

Upon completion of the SR-905 interchange, La Media Road from Saint Andrews Avenue (SR-905 westbound off ramp) to the SR-905 eastbound ramp is a six-lane divided roadway that has a classification equivalent to that of a 6-lane Prime Arterial, capacity of 60,000 ADT at LOS E. La Media Road from approximately 300 feet (300') south of the proposed SR-905 eastbound ramp to Siempre Viva Road is constructed as a two-lane undivided roadway that has a classification equivalent to that of a 2-lane Collector, capacity 10,000 ADT at LOS E.

Sanyo Avenue is a north-south facility that is currently constructed as a four-lane undivided roadway between Otay Mesa Road (Old Otay Mesa Road) and Airway Road. The roadway segment of Sanyo Avenue between Otay Mesa Road (Old Otay Mesa Road) and Airway Road is under the City's jurisdiction and has the classification of a 4 lane Collector, capacity of 30,000 ADT at LOS E.

Enrico Fermi Drive (SA-1105) is constructed as a north-south facility. This roadway segment is split between County and City of San Diego 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 4 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 Amendment 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 (78') curb to curb, with 98 feet (98') right-of-way. Per the East Otay Mesa Specific Plan Amendment adopted in August 2007, the segment of Enrico Fermi Drive between Otay Mesa Road and SR-11 is proposed as an Enhanced Major Road Facility that would have additional turn lanes to facilitate freeway access.

Alta Road (SR 1112) is a north-south roadway that is generally constructed as a two (2)-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 Paseo De La Fuente and Calzada De La Fuente was widened to provide two (2) northbound travel lanes and one (1) southbound travel lane. This segment of Alta Road has a capacity equivalent to that of a Town Collector, 19,000 ADT at LOS E.

Based on the County Circulation Element, the ultimate classification of Alta Road between Lone Star Road/Paseo De La Fuente and Otay Mesa Road (Old Otay Mesa Road) is a four-lane Major Road with a bike trail within the east side of roadway, 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 (62') curb to curb and 86 feet (86') of right-of-way. North of State Donavan Road, the roadway segment of Alta Road is a four-lane Industrial Collector, capacity of 34,200 ADT at LOS E with a modified cross section of 58 feet (58') curb to curb and 84 feet (84') of right-of-way.

ROADWAY SEGMENT DAILY TRAFFIC

Twenty-four (24) hour count data for the key roadway segments were collected on typical weekdays during the months of February and March, 2008. Count summary sheets can be found in Appendix A. The existing daily traffic volumes are illustrated in Figure 12.

KEY INTERSECTIONS

Figure 11 provides intersection configurations and traffic control for the key intersections. The key intersections analyzed include:

- Interim SR-905 (Otay Mesa Road)/Heritage Road (signalized);
- Interim SR-905 (Otay Mesa Road)/Cactus Road (signalized);
- Interim SR-905 (Otay Mesa Road)/Britannia Boulevard (signalized);
- Interim SR-905 (Otay Mesa Road)/La Media Road (signalized);
- Interim SR-905 (Otay Mesa Road)/Piper Ranch Road (signalized);
- Interim SR-905 (Otay Mesa Road)/SR-125 Southbound Ramp (signalized);
- Interim SR-905 (Otay Mesa Road)/SR-125 Northbound Ramp (signalized);
- Otay Mesa Road (Old Otay Mesa Road)/SR-905 Connector (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/La Media Road (all-way stop-controlled);
- Airway Road/Sanyo Avenue (all-way stop-controlled);
- Airway Road/Paseo De Las Americas (one-way stop-controlled);
- Airway Road/Michael Faraday Drive (one-way stop-controlled);
- Airway Road/Enrico Fermi Drive (signalized);
- Siempre Viva Road/La Media Road (all-way stop-controlled)
- SR-905 Southbound Ramp/Eastbound Siempre Viva Road (signalized);

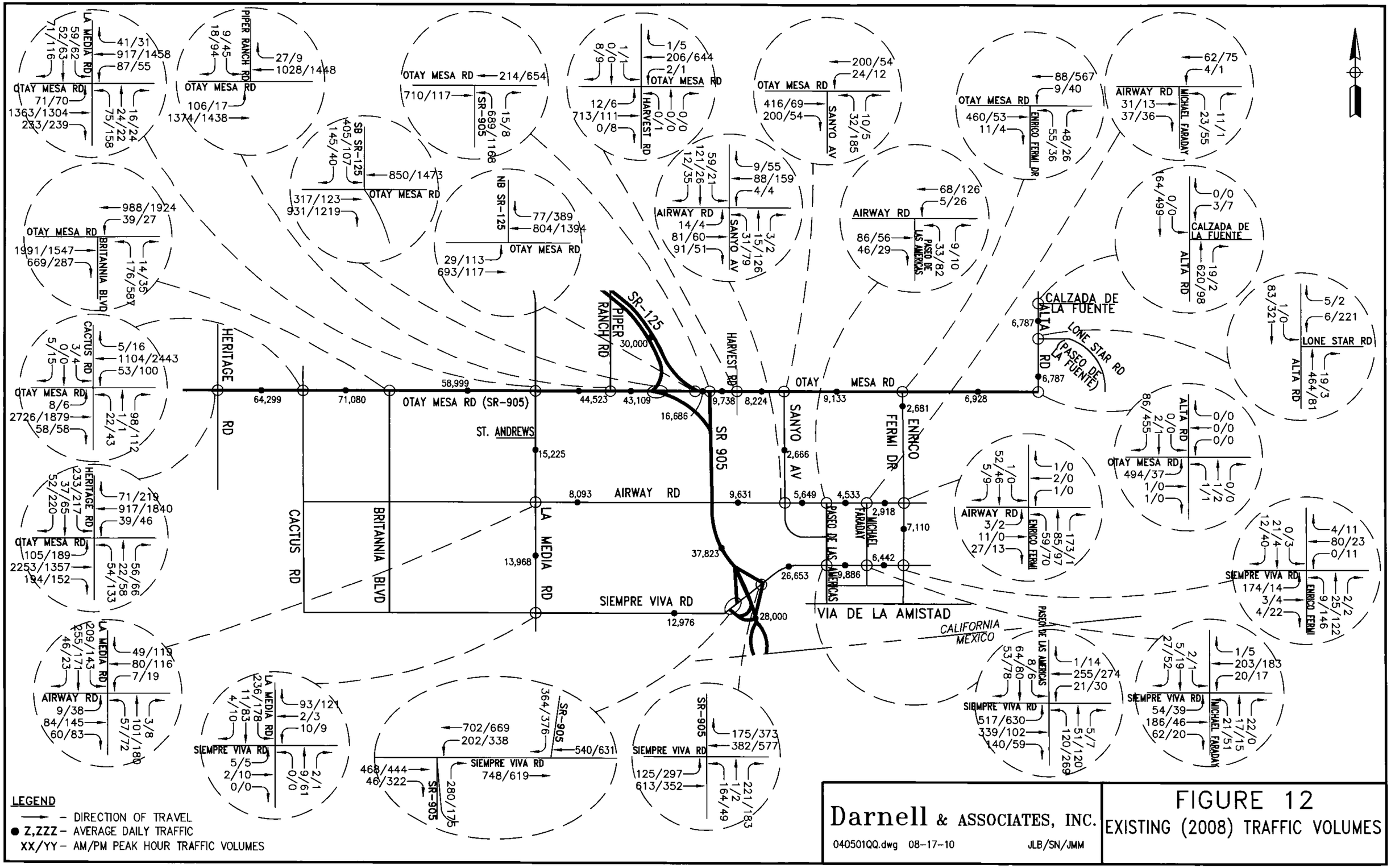

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FIGURE 12
EXISTING (2008) TRAFFIC VOLUMES

- SR-905 Southbound Ramp/Westbound Siempre Viva Road (one-way stop-controlled);
- SR-905 Northbound Ramp/Siempre Viva Road (signalized);
- Siempre Viva Road/Paseo De Las Americas (signalized);
- Siempre Viva Road/Michael Faraday Drive (two-way stop-controlled);
- Siempre Viva Road/Enrico Fermi Drive (signalized); and
- Alta Road/Paseo De La Fuente (signalized).

INTERSECTION TRAFFIC COUNTS

Morning and afternoon peak hour turn counts for each of the key intersections were collected on typical weekdays during the months of February and March, 2008. It should be noted that Caltrans recently restricted the westbound left and eastbound right turn movements at the Otay Mesa Road/SR-905 connector intersection. Thus the intersection volumes collected in the field were manually adjusted to reflect this restriction. Count summary sheets can be found in Appendix A. Figure 12 presents the existing conditions traffic volumes used in this analysis.

EXISTING LEVEL OF SERVICE CONDITIONS

Existing Roadway Segments

Table 4 summarizes the daily segment analysis for the existing conditions. As shown in Table 4, based on average daily conditions the following roadways segments currently operate at an unacceptable LOS E or F:

- Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard (operates at LOS F);
- Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road (operates at LOS E);
- La Media Road between Saint Andrews Avenue and Airway Road (operates at LOS F); and
- State Route 905 between Otay Mesa Road and Siempre Viva Road (operates at LOS E).

All other key roadway segments currently operate at an acceptable LOS D or better under existing conditions. It should be noted that field observations conducted in January 2010 found that the segment of Airway Road between SR-905 and Sanyo Avenue, which based on the February 2008 count data operates at LOS E, was closed to traffic for the construction of the structures at the SR-905/Airway Road intersection. It should be noted Airway Road between the SR-905 and Sanyo Avenue is presently closed to traffic by Caltrans to allow construction of the SR-905 overcrossing.

Table 4 – Existing Conditions Roadway Segment Daily LOS Summary						
Roadway Segment	Jurisdiction	Classification	Capacity (LOS E)	ADT	v/c	LOS
Interim SR-905 (Otay Mesa Rd)						
Heritage Rd to Cactus Rd	**City**/Caltrans	6P	60,000	**64,299**	**1.07**	**F**
Cactus Rd to Britannia Blvd	**City**/Caltrans	6P	60,000	**71,080**	**1.18**	**F**
Britannia Blvd to La Media Rd	**City**/Caltrans	6P	60,000	**58,999**	**0.98**	**E**
La Media Rd to Piper Ranch Rd	**City**/Caltrans	5M	45,000	**44,523**	**0.99**	**E**
Piper Ranch Rd to SR-125	**County**/City/Caltrans	6P	57,000	43,109	0.76	C
Otay Mesa Road (Old Otay Mesa Road)						
SR-125 to Interim SR-905 Connector	**County**/City/Caltrans	5M (a)	47,000	16,686	0.36	A
Interim SR-905 Connector to Harvest Rd	**County**/City/Caltrans	5M (a)	47,000	9,738	0.21	A
Harvest Rd to Sanyo Ave	**County**/City/Caltrans	4M	37,000	8,224	0.22	A
Sanyo Ave to Enrico Fermi Dr	**County**/City	LC	16,200	9,133	0.56	D
Enrico Fermi Dr to Alta Rd	County	LC	16,200	6,928	0.43	C
Airway Road						
La Media Rd to SR-905	City	2C	15,000	8,093	0.54	C
SR-905 to Sanyo Ave (c)	City	2C	10,000	**9,631**	**0.96**	**E**
Sanyo Ave to Paseo de Las Americas	City	4M	40,000	5,649	0.14	C
Paseo de Las Americas to Michael Faraday	**County**/City	4M	37,000	4,533	0.12	C
Michael Faraday to Enrico Fermi Dr	**County**/City	LC	16,200	2,918	0.18	B
Enrico Fermi Dr to Airway Pl	County	C	34,200	1,160	0.03	A
Siempre Viva Road						
Drucker Ln to SR-905	City	6P	60,000	12,976	0.22	A
SR-905 to Paseo de Las Americas	City	6P	60,000	26,653	0.44	B
Paseo de Las Americas to Michael Faraday	City	4C	30,000	9,886	0.33	A
Michael Faraday to Enrico Fermi Dr	City	4C	30,000	6,442	0.21	A
Enrico Fermi Dr to Airway Pl	County	LC	16,200	830	0.05	A
La Media Road						
Interim SR-905 (Otay Mesa Rd) to St. Andrews	City	4C	30,000	15,225	0.51	C
SR-125						
North of Otay Mesa Road	SBX	4-Fwy	(b)	30,000	0.33	A
SR-905						
Airway Rd to Siempre Viva Rd	**City**/Caltrans	4M	40,000	**37,823**	**0.95**	**E**
South of Siempre Viva Rd	City/**Caltrans**	4-Fwy	(b)	28,000	0.32	A
Sanyo Avenue						
Otay Mesa Rd to Airway Rd	City	4C	30,000	2,666	0.09	A
Enrico Fermi Drive						
Otay Mesa Rd to Airway Rd	County	TC	19,000	2,681	0.14	A
Airway Rd to Siempre Viva Rd	City	4M	40,000	7,110	0.18	A
Alta Road						
Calzada De La Fuente to Paseo De La Fuente	County	TC	19,000	6,787	0.36	C
Paseo De La Fuente to Otay Mesa Rd	County	LC	16,200	6,787	0.42	C

City = Capacity of City segments is based on the upper limits of LOS E per the City of San Diego;
County = Capacity of County segments is 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; 4-Fwy = 4-Lane Freeway; 6P = 6-Lane Prime Arterial; 5M = 5-Lane Major Arterial;
4M = 4-Lane Major Arterial; 4C = 4-Lane Collector; TC = Town Collector; 2C= 2-Lane Collector with no fronting property;
LC = Light Collector.
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half-way between a 4-lane Major & 6-Lane Prime Arterial).
(b) Capacity based on Caltrans District 11 & HCM procedures, See Appendix L for LOS calculations
(c) Field checks conducted in January 2010 found that this segment of Airway Road was currently closed to traffic

Existing Arterial Roadway Segments

A review of the 24 hour counts sheets for Otay Mesa Road, found that the traffic flow is rather constant between the hours of 7:00am to 6:00pm, compared to most 5-lane and 6-lane roadways which have high peak hour flows in the morning and afternoon. Further it should be noted that the Otay Mesa Port-of-Entry is open 24 hours a day with long lines crossing the border. This results in the spread of vehicles through the day resulting in increased daily traffic volumes. Since level of service based on daily volumes assumes significant increases in traffic counts during the peak hour periods, daily capacity analysis is not particularly accurate for Otay Mesa Road. Therefore, in addition to evaluating the roadway based on daily capacity it was also analyzed based on the Highway Capacity Manual's (HCM) Arterial Segment Methodology utilizing the Synchro software. Since the arterial segment analysis determines level of service based on the average travel speeds that occur on the roadway it provides a more accurate representation of the travel patterns and levels of service for Otay Mesa Road. The results of the analysis are summarized in Table 5.

Table 5 illustrates the existing conditions arterial level of service summary during the AM and PM peak hours. As shown in Table 5, all arterial roadway segments along Interim SR-905 (Otay Mesa Road) operate at an acceptable LOS C or better under existing conditions. A copy of the Synchro worksheets can be found in Appendix D.

Table 5 – Existing Conditions Arterial LOS Summary

Intersection	Jurisdiction	Direction of Travel	AM Peak Hour		PM Peak Hour	
			Speed (mph)	LOS	Speed (mph)	LOS
Interim SR-905 – Heritage Rd. to Cactus Rd.	City/Caltrans	Eastbound	37.5	A	29.3	B
		Westbound	32.4	B	24.4	C
Interim SR-905 – Cactus Rd. to Britannia Blvd.	City/Caltrans	Eastbound	34.2	B	36.1	A
		Westbound	38.9	A	38.2	A
Interim SR-905 – Britannia Blvd. to La Media Rd.	City/Caltrans	Eastbound	41.2	A	35.4	A
		Westbound	43.6	A	39.4	A
Interim SR-905 – La Media Rd. to Piper Ranch Rd.	City/Caltrans/County	Eastbound	38.5	A	38.1	A
		Westbound	33.0	B	28.3	B
Interim SR-905 – Piper Ranch Rd to SR125	City/Caltrans/County	Eastbound	34.0	B	35.8	B
		Westbound	29.5	B	34.2	B

LOS = Level of Service; Speed is measured in miles per hour (mph)

Existing Intersections

Existing Synchro Analysis

Table 6 illustrates the existing intersection levels of service summary under existing conditions. As can be seen from Table 6, all intersections operate at an acceptable LOS D or better under existing conditions. A copy of the Synchro worksheets for the existing conditions can be found in Appendix D.

Table 6 – Existing Conditions Intersection LOS Summary							
Intersection	Jurisdiction	Traffic Control	Critical Move	AM Peak		PM Peak	
				Delay	LOS	Delay	LOS
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	**City**/Caltrans	Sig	Int.	26.0	C	29.2	C
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	**City**/Caltrans	Sig	Int.	6.9	A	11.5	B
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	**City**/Caltrans	Sig	Int.	9.0	A	18.8	B
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	**City**/Caltrans	Sig	Int.	15.6	B	27.0	C
Otay Mesa Rd (E-W) @ Piper Ranch Rd (N-S)	**County**/City/Caltrans	Sig	Int.	6.1	A	3.6	A
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	**County**/City/SBX	Sig	Int.	11.2	B	2.5	A
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	**County**/City/SBX	Sig	Int.	0.9	A	5.6	A
Otay Mesa Rd (E-W) @ SR-905 (N-S)	**County**/City/SBX	Sig	Int.	16.1	B	21.1	C
Otay Mesa Rd (E-W) @ Sanyo Av (N-S)	**County**/City	Sig	Int.	4.1	A	12.6	B
Otay Mesa Rd (E-W) @ Enrico Fermi Dr (N-S)	County	Sig	Int.	10.4	B	9.4	A
Otay Mesa Rd (E-W) @ Alta Rd (N-S)	County	AWSC	EB	32.5	D	9.8	A
			NB	9.3	A	8.2	A
			SB	9.8	A	18.3	C
			Int.	27.6	D	17.2	C
Airway Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	11.1	B	14.5	B
			WB	10.9	B	13.9	B
			NB	11.4	B	15.4	C
			SB	13.3	B	12.2	B
			Int.	12.3	B	13.9	B
Airway Rd (E-W) @ Sanyo Av (N-S)	City	AWSC	EB	10.1	B	9.9	A
			WB	8.1	A	9.1	A
			NB	8.0	A	9.2	A
			SB	9.6	A	8.0	A
			Int.	9.3	A	9.1	A
Airway Rd (E-W) @ Paseo De Las Americas (N-S)	**County**/City	OWSC	NBL	9.7	A	10.6	B
Airway Rd (E-W) @ Michael Faraday (N-S)	**County**/City	OWSC	NBL	9.6	A	9.6	A
Airway Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig	Int	6.6	A	13.0	B
Siempre Viva Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	8.0	A	8.4	A
			WB	7.8	A	8.5	A
			NB	7.6	A	8.4	A
			SB	9.8	A	11.0	B
			Int.	9.2	A	9.9	A
Siempre Viva (E-W) @ SR-905 SB to EB Siempre Viva (N-S)	City/**Caltrans**	Sig	Int.	7.0	A	8.5	A
Siempre Viva (E-W) @ SR-905 SB to WB Siempre Viva (N-S)	City/**Caltrans**	OWSC	SB	14.3	B	13.3	B
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	City/**Caltrans**	Sig	Int.	10.8	B	11.0	B
Siempre Viva (E-W) @ Paseo De Las Americas (N-S)	City	Sig	Int.	24.7	C	40.0	D
Siempre Viva (E-W) @ Michael Faraday (N-S)	City	TWSC	NB	14.5	B	13.2	B
			SBL-T	15.9	C	12.3	B
Siempre Viva (E-W) @ Enrico Fermi (N-S)	**County**/City	Sig	Int	12.6	B	13.7	B
Calzada De La Fuente (E-W) @ Alta Rd (N-S)	County	OWSC	WB	14.1	B	12.3	B
Paseo De La Fuente (E-W) @ Alta Rd (N-S)	County	Sig	Int	2.7	A	12.6	B

Delay is measured in seconds/vehicle; LOS=Level of Service; sig=signalized; AWSC = All-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled; sig – Signalized; Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach; NBL = Northbound Left; SBL-T= Shared Southbound Left-Through; SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway

Existing ILV Analysis

Table 7 summarizes the existing conditions ILV analysis. As shown in Table 7, all state-owned intersections currently operate under stable flow during the AM and PM peak hours. A copy of the ILV worksheets can be found in Appendix D.

Table 7 – Existing ILV Analysis

Intersection	AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	1,115	Stable Flow	1,049	Stable Flow
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	1,129	Stable Flow	1,055	Stable Flow
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	708	Stable Flow	936	Stable Flow
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	740	Stable Flow	924	Stable Flow
Otay Mesa Rd (E-W) @ Piper Ranch Rd (N-S)	696	Stable Flow	766	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	701	Stable Flow	677	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	417	Stable Flow	754	Stable Flow
Otay Mesa Rd (E-W) @ SR-905 Connector (N-S)	700	Stable Flow	911	Stable Flow
Siempre Viva (E-W) @ SR-905 SB to EB Siempre Viva (N-S)	363	Stable Flow	463	Stable Flow
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	372	Stable Flow	483	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour;
<1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
E-W = East-West Roadway; N-S = North-South Roadway

SECTION IV – IMPACTS

PUBLIC FACILITIES ELEMENT IN COUNTY

According to page XII-4-20 of the Public Facility Element for San Diego County, a discretionary project which has a significant impact on roadways will be required, as a condition of approval, to make "improvements or other measures necessary to mitigate traffic impacts to avoid reduction in the existing Level of Service below „D' on off-site and on-site abutting County of San Diego's Circulation Element roads. New development that would significantly impact congestion on roads at LOS „E' or „F', either currently or as a result of the project, will be denied unless improvements are scheduled to increase the LOS to „D' or better or appropriate mitigation is provided. Appropriate mitigation would include a fair share contribution in the form of road improvements or a fair share contribution to an established program or project. If impacts cannot be mitigated, the project will be denied unless a specific statement of overriding findings is made pursuant to Section 15091(b) and 15093 of the State CEQA Guidelines."

The *Public Facility Element* for the County of San Diego also requires that all on-site County Circulation Element roads operate at Level of Service C or better. If the Level of Service at an on-site County Circulation Element road is reduced below LOS C, the proposed project must provide appropriate mitigation measures. A copy of excerpts from the County's *Public Facility Element* can be found in Appendix A.

LEVELS OF SIGNIFICANCE STANDARDS

The roadway segments and intersections in the vicinity of the proposed project are located in the jurisdiction of both the City and County of San Diego. The criteria for determining project significance depend on whether the roadway segment or intersection is located in the City or the County. Both the City's and the County's significance of impact criteria are discussed below.

City of San Diego

For projects deemed complete on or after January 1, 2007, the City of San Diego has adopted a modification in the significance criteria in the level of service thresholds for facilities operating at LOS E or F. Therefore, the study utilizes the adopted level of significance thresholds to assess the proposed project's traffic impact on the roadway network operating at LOS E or F located within the City's jurisdiction. The City of San Diego's Significance Transportation Impact Measures and significance thresholds per California Environmental Quality Act (CEQA) that the City has adopted in January 2007 are summarized in Table 8. A copy of excerpts from the City of San Diego's Significance Determination Thresholds, adopted January 2007 is provided in Appendix A. Since the City of San Diego considers LOS D to be an acceptable level of service, the City of San Diego's Significant Transportation Impact Measures were only applied to the segments and intersections located within the City of San Diego that were found to operate at LOS E or F.

County of San Diego

Although the *Public Facility Element (PFE)* sets standards as to which level of service roadways and intersections must operate within the County (i.e. requires operation of LOS D or better), it does not establish a guideline to evaluate whether a project is significant if it adds traffic to a roadway facility that is currently operating at an unacceptable LOS E or F. Thus, the *County of San Diego Guidelines for Determining Significance, First Modification February 19, 2010* was developed to evaluate the significance of traffic impacts on roadways and intersections which are currently operating at LOS E or F. A summary of the County's Guidelines is provided in Table 8. Excerpts from the County's Guidelines are provided in Appendix A.

Table 8 – Measures of Significant Project Impacts					
City of San Diego					
LOS w/Project	Allowable Increase/Decrease Due to Project Impacts (for projects deemed complete after January 1, 2007)				
	Intersection		Roadway Segments		
	Delay (sec)		V/C	Speed (mph)	
E	2.0		0.02	1.0	
F	1.0		0.01	0.5	
County of San Diego					
LOS	Allowable Increase on Congested Roads and Intersections				
	Intersections		Road Segments		
	Signalized	Unsignalized	2-Lane Road	4-Lane Road	6-Lane Road
LOS E	Delay of 2 seconds or less	20 or less peak hour trips on a critical movement	200 ADT	400 ADT	600 ADT
LOS F	Either a Delay of 1second, or 5 peak hour trips or less on a critical movement	5 or less peak hour trips on a critical movement	100 ADT	200 ADT	300 ADT
County Notes: – A critical movement is an intersection movement (right turn, left turn, through-movement) that experiences excessive queues, which typically operate at LOS F. Also if a project adds significant volume to a minor roadway approach, a gap study should be provided that details the headways between vehicles on the major roadway. – By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes additional trips must mitigate a share of the cumulative impacts. – The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity. – For determining significance at signalized intersection with LOS F conditions, the analysis must evaluate both the delay and the number of trips on a critical movement, exceedance of either criteria result in a significant impact.					
ADT = Average Daily Traffic; LOS = Level of Service, sec = Seconds of Delay per Vehicle					

Roadway Segments

As shown in Table 8, per the County's Guidelines, "[t]raffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road or State Highway currently operating at LOS E or LOS F, or will cause a Circulation Element Road or State Highway to operate at a LOS E or LOS F as a result of the proposed project as identified in Table [8], or

- The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity."

As discussed on pages 13 and 14 of the *County of San Diego Guidelines for Determining Significance, First Modification February 19, 2010*, an increase of the daily thresholds established for roadway segments operating at LOS E would result in only one additional car every 2.4 minutes per lane while the thresholds established for roadway segments operating at LOS F would result in only one additional car every 4.8 minutes. Therefore, the thresholds identified in Table 8, in most cases, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact on the roadway.

The County guidelines also states that "For large projects, controversial projects and/or projects which are preparing Environmental Impact Reports, more detailed evaluations to verify the applicability of the significance thresholds for the individual project conditions may be necessary. Additional evaluations may include analysis of vehicle headways, speeds, average gaps, queues, delay, and/or other factors."

Two-Lane Highways

Intersection Spacing Over One (1) Mile

In the *County of San Diego Guidelines for Determining Significance, First Modification February 19, 2010* the County of San Diego established a higher capacity and a higher impact significance level for two-lane highways with signalized intersection spacing over one mile. Table 9 provides a summary of the level of service criteria and guidelines for significance for two-lane highways with intersection spacing over one-mile.

Table 9 – Measures of Significance on 2-Ln Hwys w/ Signalized Intersection Spacing > 1 Mile

Level of Service	LOS Criteria	Impact Significance Level
E	> 16,200 ADT	>325 ADT
F	> 22,900 ADT	>225 ADT

Note: Where detailed data is available, the Director of Public Works may also accept a detailed level of service analysis based upon the two-lane highway analysis procedures provided in the Chapter 20 Highway Capacity Manual

Intersection Spacing Less Than One (1) Mile

"Similar to the experience of drivers in urban areas with closely space intersections, the functionality of two-lane highway conditions with signalized intersection spacing under one-mile becomes constrained not due to the segment capacity but the intersection operations. Therefore the assessment of operates of intersection on two-lane highways shall be guided by a Level of Service standard. Level of Service for purposes of this significance guideline is based upon the overall intersection operations similar - to Urban Street analysis in Chapter 15 Highway Capacity Manual." Impacts for the two-lane highways with signalized intersection under one mile spacing will be determined by evaluating the intersection impact criteria identified in Table 10.

Table 10 – Measures of Significance on 2-Ln Hwys w/ Signalized Intersection Spacing < 1 Mile

Level of Service	Adjacent Signalized Intersection
E	Delay of 2 seconds or less
F	Delay of 1 second, or 5 peak hour trips or less on a critical movement

Notes:
– A critical movement is an intersection movement (right turn, left turn, through-movement) that experiences excessive queues which typically operate at LOS F.
– By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project is responsible for mitigating its share of the cumulative impact.
– The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

It should be noted that per the *County of San Diego Guidelines for Determining Significance, First Modification February 19, 2010,* "[i]mpacts related to operational features on two-lane highways will be evaluated on a case-by-case basis based upon traffic flow patterns, geometrics, available sight distance, accident histories, and other factors."

Signalized Intersections

"Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a signalized intersection":

- "The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F, or will cause a signalized intersection to operate at a LOS E or LOS F as identified in Table [8]."

- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, the project would significantly impact the operations of the intersection."

As discussed on page 16 of the *County of San Diego Guidelines for Determining Significance, First Modification February 19, 2010*, an increase in delay of two seconds or less, the threshold established for signalized intersections operating at LOS E, "…is a small fraction of the typical cycle length for a signalized intersection that ranges between 60 and 120 seconds. The likelihood of increased queues forming due to the additional two seconds of delay is low." Thus, the increase in delay of two (2) seconds or less, on average, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact. Since small changes and disruptions to the traffic flow at a signalized intersection can have a greater effect on the overall intersection operation when the intersection is operating at LOS F, versus LOS E, a more stringent guideline of one (1) second of delay was established for intersections operating at LOS F.

The five (5)-peak hour trip threshold, established for the critical movement of a signalized intersection operating at LOS F, when spread out over the peak hour, results in an increase of one (1) vehicle every 12 minutes or 720 seconds. This increase would not be noticeable to the average driver because one additional vehicle during a 12-minute interval on average would clear the traffic signal cycles well within the 12-minute period. Further, even if all five (5) additional peak hour vehicles arrived at the same time, these trips would also, on average, clear the traffic cycle and the existing queue lengths would be re-established. Thus, the increase of five (5) peak hour trips to a critical movement at a signalized intersection, on average, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact. (See page 17 of the County's *Guidelines for Determining Significance* provided in Appendix A.)

Unsignalized Intersections

"Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant impact at an unsignalized intersection as listed in Table [8] and described as text below:"

- "The additional or redistributed ADT generated by the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection, and cause an unsignalized intersection to operate below LOS D, or

- The additional or redistributed ADT generated by the proposed project will add 21 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS E, or

- The additional or redistributed ADT generated by the proposed project will add 6 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F, or

- The additional or redistributed ADT generated by the proposed project will add 6 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS F, or

- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, the project would significantly impact the operations of the intersection."

As discussed on page 18 of the *County of San Diego Guidelines for Determining Significance, First Modification February 19, 2010,* the addition of 20 peak hour trips to a critical movement, would result in an increase of one (1) vehicle every 3.0 minutes or 180 seconds. "Assuming the average wait time for a vehicle in the critical movement queue is less than 3.0 minutes, which is typical for LOS E conditions; this would not be noticeable to the average driver and would not be considered a significant impact." Five (5) – trips spread out over an hour would result in an increase of one (1) vehicle every 12.0 minutes or 720 seconds. "This typically exceeds the average wait time in the queue and would not be noticeable to the average driver." (See page 18 of the County's *Guidelines for Determining Significance* provided in Appendix A.)

Regionally Significant Arterials

For Regionally Significant Arterials (RSA), such as Interim SR-905 and SR-125, Caltrans utilizes the *San Diego Traffic Engineers' Council (SANTEC)/Institute of Transportation Engineers (ITE) Guidelines For Traffic Impact studies (TIS) in the San Diego Region* to determine significance. A summary of the SANTEC/ITE Guidelines are provided in Table 11. Since Interim SR-905 (Otay Mesa Road) from Heritage Road to SR-125 is also a regionally significant arterial that is currently under the jurisdiction of Caltrans as well as the City of San Diego and/or County of San Diego, this traffic study utilizes the SANTEC/ITE guidelines summarized in Table 11 to determine the level of significance for the peak hour arterial level of service analysis based on an increase in average speed.

Table 11 – SANTEC/ITE Guidelines for Measures of Significant Project Impacts

LOS with Project	Allowable Change due to Project Impact					
	Freeways		Roadway Segments		Signalized Intersections	Ramps with > 15 min. delay
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E & F	0.01	1	0.02	1	2	2

V/C = Volume to Capacity Ratio

Consistent with the *Public Facility Element* the criteria described above for roadway segments, intersections, and regionally significant arterials were applied to segments and intersections that operate at LOS E or LOS F. It should be noted that as outlined in the *Public Facility Element*, if the addition of the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F), it is considered to be significant regardless of the volume of traffic it adds to the segment or intersection.

Caltrans

Caltrans Guide for the Preparation of Traffic Impact Studies, December 2002 requires that State highway facilities (i.e., freeway segments, signalized intersections, on-or off-ramps, etc.) maintain a target LOS at the transition between LOS C and LOS D. See Appendix A for excerpts from Caltrans traffic impact guidelines.

Definition of Direct and Cumulative Impact in the City of San Diego and the County of San Diego

The County's *Guidelines for Determining Significance* adopted on February 19, 2010 was developed to evaluate the significance of traffic impacts on roadways and intersections which are currently operating at LOS E or F. It should be noted that the significance guidelines summarized in Table 8 are currently only utilized by the County of San Diego to determine if a project has a significant direct and/or future impact. A project is considered to have a significant cumulative impact if it adds any traffic to a roadway segment and/or intersection that operates at LOS E or F under cumulative conditions and the total cumulative traffic added to the roadway segment and/or intersection exceeds the value identified in Table 8. The City of San Diego defines cumulative traffic impacts as those projected to occur at some point after a proposed development becomes operational, such as when the affected community plan area reaches full planned build out.

Since the project is located in the County of San Diego, the traffic study is prepared in accordance with the guidelines provided by the County of San Diego. However, the City's significance thresholds are utilized in analyzing the roadway segments and intersections located in the City of San Diego.

The City of San Diego identifies direct impacts based on a comparison of two scenarios: (1) Existing traffic conditions plus cumulative (approved) projects versus (2) Existing traffic conditions plus cumulative (approved) projects plus the proposed project. The City's methodology is designed to capture impacts from projects that will likely be open by the time the proposed project opens. Compared to the County's methodology, this type of analysis creates a third scenario, a "near-term cumulative," in addition to the County's two standard analyses: (1) Existing plus Project and (2) cumulative (2020). A near-term cumulative analysis would include fewer projects than the County's 2020 cumulative analysis because none of the Tentative Map projects can start applying for building permits until after they record a Final Map and obtain approval of a Site Plan. Thus, approval of a Site Plan, not a Tentative Map, is the threshold for a near-term cumulative project.

The County's East Otay Mesa cumulative analysis methodology uses expected development conditions as of the year 2020, thus it assumes SR-905 Phases 1A and 1B are completed; project phases are scheduled to open to traffic by 2010 and 2012 respectively. Normally future road improvements would not be assumed in a near-term analysis. However, in this case it is reasonable to assume completion of Phases 1A and 1B because they are fully funded and construction on both phases has already begun. In addition, no project that requires Phase 1A or 1B of the SR-905 for mitigation will get occupancy before those segments are open to traffic, as is further explained below.

Near Term Cumulative Conditions

The County's analysis found the potential for impacts on the interim 905 caused by "near-term" cumulative projects to be less than significant. Specifically, there are nine (9) near-term cumulative projects: California Crossings, CCA, COPART, FEDEX, Insurance Auto Auctions, Salvage Yards, Sunroad Interim Uses, Travel Plaza, and Vulcan Materials. Together, those 9 projects produce 36,522 ADT, which is less than one quarter of the trips included in the County's 2020 cumulative analysis. Of the 36,522 ADT, the majority of the trips (62%) are from one project, California Crossings. California Crossings is located very close to the City/County of San Diego boundary, so it is more likely to affect City streets than most of the other near-term cumulative projects. Nonetheless, California Crossings does not require SR-905 Phase 1B for mitigation, because the study area required by the City of San Diego does not need to be extended west of Britannia Boulevard. California Crossings does rely on the completion of SR-905 Phase 1A, but this is not a development constraint because the project is not expected to get Site Plan approval (let alone building permits) until late 2011 and Phase 1A is expected to be completed a year earlier (late 2010). In addition, California Crossings will be conditioned to require Phase 1A to be open to traffic prior to issuance of building permits. The other eight projects combined produce only 13,737 trips, and all are located farther east than California Crossings (farther away from impacted City street segments). Therefore, it's reasonable to assume that those projects won't have significant impacts on Otay Mesa Road (Interim SR-905) before the freeway SR-905 Phases 1A and 1B are completed.

EXISTING PLUS PROJECT UNIT 1 LEVEL OF SERVICE CONDITIONS

This section analyzes the existing conditions plus Unit 1 of the proposed project under. Figure 13 illustrates the existing plus Unit 1 project traffic volumes.

Existing + Unit 1 – Roadway Segments

Table 12 summarizes the daily roadway segment level of service analysis under the existing without and with Unit 1 project conditions. As shown in Table 12, the following roadway segments operate at an unacceptable LOS E or F under existing plus Unit 1 project conditions:

- Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard (LOS F without and with Unit 1 of the project);
- Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road (LOS E without the project and LOS F with Unit 1 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Harvest Road and Sanyo Avenue (LOS A without the project and LOS E with Unit 1 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive (LOS D without the project and LOS E with Unit 1 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road (LOS C without the project and LOS E with Unit 1 of the project);
- Airway Road between SR-905 and Sanyo Avenue (LOS E without and with Unit 1 of the project – Airway Road is presently closed by Caltrans); and
- State Route 905 between Otay Mesa Road and Siempre Viva Road (LOS E without and with Unit 1 of the project).

The segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at an unacceptable LOS F under existing without and with Unit 1 of the proposed project conditions. With the addition of between 3,901 and 4,025 ADT from Unit 1 of the project, the volume-to-capacity (v/c) ratio will be increased by 0.07 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will continue to operate at LOS F. The increase in v/c exceed the 0.01 allowed per the City of San Diego's thresholds for significance for a roadway segment operating at LOS F, thus, based on average daily conditions Unit 1 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). However, based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at an acceptable level of service, further as shown later in Table 14 both the Otay Mesa Road/Heritage Road and Otay Mesa Road/Britannia Boulevard intersections operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

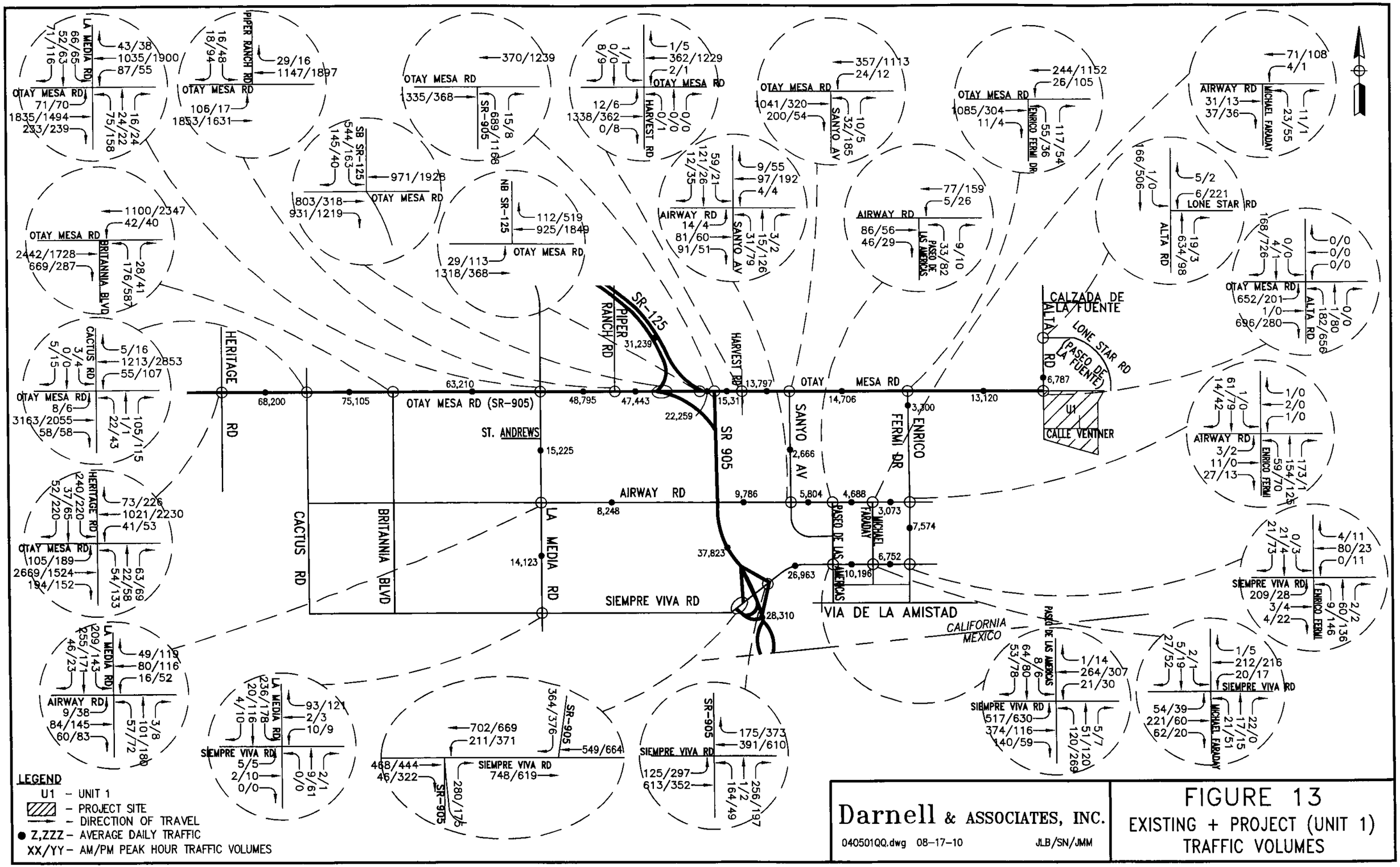

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FIGURE 13

EXISTING + PROJECT (UNIT 1)

TRAFFIC VOLUMES

Table 12 – Existing + Unit 1 Roadway Segment Daily LOS Summary

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Existing 2008			Existing + Unit 1					
				ADT	V/C	LOS	Proj. Tr	ADT	V/C	LOS	ΔV/C	Sig
Interim SR-905 (Otay Mesa Rd)												
Heritage Rd to Cactus Rd	**City**/Caltrans	6P	60,000	**64,299**	**1.07**	**F**	**3,901**	**68,200**	**1.14**	**F**	**0.07**	**Yes[d]**
Cactus Rd to Britannia Blvd	**City**/Caltrans	6P	60,000	**71,080**	**1.19**	**F**	**4,025**	**75,105**	**1.25**	**F**	**0.07**	**Yes[d]**
Britannia Blvd to La Media Rd	**City**/Caltrans	6P	60,000	**58,999**	**0.98**	**E**	**4,211**	**63,210**	**1.05**	**F**	**0.07**	**Yes[d]**
La Media Rd to Piper Ranch Rd	**City**/Caltrans	5M	45,000	**44,523**	**0.99**	**E**	**4,272**	**48,795**	**1.08**	**F**	**0.09**	**Yes[d]**
Piper Ranch Rd to SR-125	**County**/City/Caltrans	6P	57,000	43,109	0.73	C	4,334	47,443	0.83	D	0.07	No
Otay Mesa Rd (Old Otay Mesa Rd)												
SR-125 to Interim SR-905 Connector	**County**/City/Caltrans	5M(a)	47,000	16,686	0.36	A	5,573	22,259	0.47	B	0.11	No
Interim SR-905 Connector to Harvest Rd	**County**/City/Caltrans	5M(a)	47,000	9,738	0.21	A	5,573	15,311	0.33	A	0.12	No
Harvest Rd to Sanyo Av	**County**/City/Caltrans	4M	37,000	8,224	0.22	A	5,573	13,797	0.37	A	0.15	No
Sanyo Av to Enrico Fermi Dr	**County**/City	LC	16,200	9,133	0.56	D	**5,573**	**14,706**	**0.91**	**E**	**0.35**	**Yes**
Enrico Fermi Dr to Alta Rd	County	LC	16,200	6,928	0.43	C	**6,192**	**13,120**	**0.81**	**E**	**0.38**	**Yes**
Airway Road												
La Media Rd to SR-905	City	2C	15,000	8,093	0.54	C	155	8,248	0.55	C	0.01	No
SR-905 to Sanyo Av (c)	City	2C	10,000	**9,631**	**0.96**	**E**	**155**	**9,786**	**0.98**	**E**	**0.02**	**No**
Sanyo Av to Paseo de las Americas	City	4M	40,000	5,649	0.14	C	155	5,804	0.15	C	0.01	No
Paseo de las Americas to Michael Faraday Dr	**County**/City	4M	37,000	4,513	0.12	C	155	4,688	0.13	C	0.01	No
Michael Faraday Dr to Enrico Fermi Dr	**County**/City	LC	16,200	2,918	0.18	B	155	3,073	0.19	B	0.01	No
Enrico Fermi Dr to Airway Pl	County	4C	34,200	1,160	0.03	A	0	1,160	0.03	A	0.00	No
Siempre Viva Road												
SR-905 NB to Paseo de las Americas	City	6P	60,000	26,653	0.44	B	310	26,963	0.45	B	0.01	No
Paseo de las Americas to Michael Faraday Dr	City	4C	30,000	9,886	0.33	A	310	10,196	0.34	B	0.01	No
Michael Faraday Dr to Enrico Fermi Dr	City	4C	30,000	6,442	0.22	A	310	6,752	0.23	A	0.02	No
Enrico Fermi Dr to Airway Pl	County	LC	16,200	830	0.05	A	0	830	0.05	A	0.00	No
La Media Road												
Otay Mesa Rd to St. Andrews	City	4C	30,000	15,225	0.51	C	0	15,225	0.51	C	0.00	No
SR-125												
North of Otay Mesa Rd	SBX	4-Fwy	(b)	30,000	0.33	A	1,239	31,239	0.34	A	0.01	No
Existing SR-905												
Otay Mesa Rd to Siempre Viva Rd	**City**/Caltrans	4M	40,000	**37,823**	**0.95**	**E**	**0**	**37,823**	**0.95**	**E**	**0.00**	**No**
South of Siempre Viva Rd	City/**Caltrans**	4-Fwy	(b)	28,000	032	A	310	28,310	0.32	A	0.00	No
Sanyo Avenue												
Otay Mesa Rd to Airway Rd	City	4C	30,000	2,666	0.09	A	0	2,666	0.09	A	0.00	No
Enrico Fermi Drive												
Otay Mesa Rd to Airway Rd	County	TC	19,000	2,681	0.14	A	619	3,300	0.17	B	0.03	No
Airway Rd to Siempre Viva Rd	City	4M	40,000	7,110	0.19	A	464	7,574	0.19	A	0.01	No

City = Capacity of city segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of county segments is based on the upper limits of LOS E per the County of San Diego;
SBX = South Bay Expressway; **Bold** = Jurisdiction which capacity is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; Fwy = Freeway; 6P = 6-Lane Prime Arterial;
5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector; 2C= 2-Lane Collector with no fronting property; LC = Light Collector; TC = Town Collector
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half way between a 4M & 6P).
(b) Capacity based on Caltrans District 11 & HCM procedures, See Appendix L for LOS calculations.
(c) Field checks conducted in January 2010 found that this segment of Airway Road was currently closed to traffic.
(d) Table 13 of the Arterial Roadway Segment analysis shows that the roadway segment does not have a significant impact.

The segments of Interim SR-905 (Otay Mesa Road) from Britannia Boulevard to Piper Ranch Road operate at an unacceptable LOS E under existing conditions. With the addition of between 4,211 and 4,272 ADT from Unit 1 of the project, the v/c ratio will be increased by a range of 0.07 to 0.09 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will degrade to LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds for significance for a roadway segment operating at LOS F, thus, based on average daily conditions Unit 1 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). However, based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road operate at an acceptable level of service, further as shown later in Table 14 all signalized intersections along these segments operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive operates at LOS D under existing conditions. With the addition of 5,573 ADT from Unit 1 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS E. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Unit 1 of the project lowers the existing level of service from LOS D to LOS E, based on average daily conditions, Unit 1 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road operates at LOS C under existing conditions. With the addition of 6,192 ADT from Unit 1 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS E. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Unit 1 of the project lowers the existing level of service from LOS C to LOS E, based on average daily conditions, Unit 1 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

Although based on February 2008 count data, the segment of Airway Road between SR-905 and Sanyo Avenue operates at LOS E under existing conditions. This segment of Airway Road; however, is currently closed to traffic for the construction of the structures at the SR-905/Airway Road intersection. By the time Unit 1of the proposed project comes on line this segment of Airway Road is anticipated to be re-opened, thus project traffic is added to the segment of Airway Road between the SR-905 and Sanyo Avenue. With the addition of 155 ADT from Unit 1 of the proposed project the v/c ratio will be increased by 0.02 and the level of service on this segment of Airway Road will continue to operate at LOS E. The increase in v/c does not exceed the 0.02 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS E, thus, based on average daily conditions Unit 1 of the project is not a significant direct impact on the segment of Airway Road between the SR-905 and Sanyo Avenue.

The segment of SR-905 between Otay Mesa Road and Siempre Viva Road operates at LOS E under existing without and with Unit 1 of the project conditions. Since the project is not adding any traffic to this segment the v/c ratio will not be increased with the addition of the project; thus, Unit 1 of the proposed project is not considered to have a significant impact.

All other roadway segments continue to operate at LOS D or better under existing plus Unit 1 of the proposed project conditions.

Existing + Unit 1 – Arterial Roadway Segments

A review of the 24 hour counts sheets for Otay Mesa Road, found that the traffic flow is rather constant between the hours of 7:00am to 6:00 pm, compared to most 5-lane and 6-lane roadways which have high peak hour flows in the morning and afternoon. Further it should be noted that the Otay Mesa Port-of-Entry is open 24 hours a day with long lines crossing the border. This results in the spread of vehicles through the day resulting in increased daily traffic volumes. Since level of service based on daily volumes assumes significant increases in traffic counts during the peak hour periods, daily capacity analysis is not particularly accurate for Otay Mesa Road. Therefore, in addition to evaluating the roadway based on daily capacity it was also analyzed based on the Highway Capacity Manual's (HCM) Arterial Segment Methodology utilizing the Synchro software. Since the arterial segment analysis determines level of service based on the average travel speeds that occur on the roadway it provides a more accurate representation of the travel patterns and levels of service for Otay Mesa Road. The results of the analysis are summarized in Table 13.

Based on daily roadway segment capacities, the project is part of significant impact to the roadway segments of Interim SR-905 (Otay Mesa Road); however, as shown in the arterial roadway segment analysis in Table 13 the failing segments of the Interim SR-905 (Otay Mesa Road) operate under acceptable level of service conditions during both the peak hours. A copy of the Synchro worksheets can be found in Appendix D and E.

Existing + Unit 1 – Intersections

Existing + Unit 1 – Synchro Analysis

Table 14 summarizes the existing plus Unit 1 project conditions intersection level of service summary during the AM and PM peak hours. (A copy of the Synchro worksheets can be found in Appendix D and E.) As shown in Table 14, the Otay Mesa Road (Old Otay Mesa Road)/Alta Road total intersection operates at LOS D or better without the project and LOS F during both peak hours with Unit 1 of the project.

The Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection currently operates at LOS D during the AM peak hour and LOS C during the PM peak hour overall. With the addition of 867 AM peak hour trips (694 to the eastbound approach) from Unit 1 of the project to the intersection, the eastbound approach and overall intersection will to degrade to LOS F. With the addition of 929 PM peak hour trips (650 to the northbound approach) from Unit 1 of the project, the northbound approach and the overall intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Unit 1 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

Table 13 – Existing + Unit 1 Arterial LOS Summary

AM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Unit 1 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	37.5	A	35.9	A	(1.6)	No
		WB	32.4	B	31.9	B	(0.5)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	34.2	B	32.2	B	(2.0)	No
		WB	38.9	A	38.9	A	0.0	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	41.2	A	40.8	A	(0.4)	No
		WB	43.6	A	43.5	A	(0.1)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.5	A	37.2	A	(1.3)	No
		WB	33.0	B	32.7	B	(0.3)	
Interim SR-905 - Piper Ranch Rd to SR125	City/Caltrans/ County	EB	34.0	B	27.4	C	(6.6)	No
		WB	29.5	B	31.1	B	1.6	

PM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Unit 1 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	29.3	B	29.8	B	0.5	No
		WB	24.4	C	24.0	C	(0.4)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	36.1	A	36.0	A	(0.1)	No
		WB	38.2	A	37.7	A	(0.5)	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	35.4	A	34.9	B	(0.5)	No
		WB	39.4	A	38.2	A	(1.2)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.1	A	37.7	A	(0.4)	No
		WB	28.3	B	26.6	C	(1.7)	
Interim SR-905 - Piper Ranch Rd to SR125	City/Caltrans/ County	EB	35.8	B	33.5	B	(2.3)	No
		WB	34.2	B	31.3	B	(2.9)	

LOS=Level of Service; Speed is measured in miles per hour (mph); sig=signalized; Δ Speed = Increase (decrease) in speed;
Occasionally adding traffic to a critical movement optimizes the segment resulting in increase in speed.

Table 14 - Existing + Unit 1 Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Unit 1									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	**City**/Caltrans	Sig.	Int	26.0	C	29.2	C	29.7	C	538	3.7	No	32.5	C	577	3.3	No
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	**City**/Caltrans	Sig.	Int	6.9	A	11.5	B	8.2	A	555	1.3	No	11.2	B	596	(0.3)	No
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	**City**/Caltrans	Sig.	Int	9.0	A	18.8	B	11.0	B	580	2.0	No	19.3	B	623	0.5	No
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	**City**/Caltrans	Sig.	Int	15.6	B	27.0	C	14.9	B	599	(0.7)	No	28.5	C	642	1.5	No
Otay Mesa Rd (E-W)@ Piper Ranch Rd (N-S)	**County**/City/Caltrans	Sig.	Int	6.1	A	3.6	A	5.2	A	607	(0.9)	No	4.1	A	652	0.5	No
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	**County**/City/SBX	Sig.	Int	11.2	B	2.5	A	13.4	B	746	2.2	No	3.2	A	706	0.7	No
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	**County**/City/SBX	Sig.	Int	0.9	A	5.6	A	1.6	A	781	0.7	No	4.1	A	836	(1.4)	No
Otay Mesa Rd (E-W) @ SR-905 (N-S)	**County**/City/SBX	Sig.	Int	16.1	B	21.1	C	16.6	B	781	0.5	No	22.2	C	836	1.4	No
Otay Mesa Rd (E-W) @ Sanyo Av (N-S)	**County**/City	Sig.	Int	4.1	A	12.6	B	3.4	A	781	(0.7)	No	22.8	C	836	13.5	No
Otay Mesa Rd (E-W) @ Enrico Fermi Dr (N-S)	County	Sig.	Int	10.4	B	9.4	A	26.8	C	867	16.4	No	13.5	B	930	4.1	No
Otay Mesa Rd (E-W) @ Alta Rd (N-S)	County	AWSC	EB	32.5	D	9.8	A	**463.5**	**F**	**694**	**431.0**	**Yes**	31.9	D	279	22.1	**Yes**
			WB	0.0	A	0.0	A	0.0	A	0	0.0		0.0	A	0	0.0	
			NB	9.3	A	8.2	A	12.8	B	0	3.5		**221.8**	**F**	**650**	**213.6**	
			SB	9.8	A	18.3	C	11.0	B	173	1.2		**205.3**	**F**	**0**	187.0	
			Int	27.6	D	17.2	C	**369.3**	**F**	**867**	**341.7**		**173.9**	**F**	**929**	**156.7**	
Airway Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	11.1	B	14.5	B	11.2	B	0	0.1	No	15.0	B	0	0.5	No
			WB	10.9	B	13.9	B	11.1	B	9	0.2		15.5	B	33	1.6	
			NB	11.4	B	15.4	C	11.5	B	0	0.1		16.0	C	0	0.6	
			SB	13.3	B	12.2	B	13.4	B	0	0.1		12.6	B	0	0.4	
			Int	12.3	B	13.9	B	12.4	B	9	0.1		14.6	B	33	0.7	

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

Table 14 (Continued) - Existing + Unit 1 Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Unit 1									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Airway Rd (E-W) @ Sanyo Av (N-S)	City	AWSC	EB	10.1	B	9.9	A	10.2	B	0	0.1	No	10.0	B	0	0.1	No
			WB	8.1	A	9.1	A	8.2	A	9	0.1		9.8	A	33	0.7	
			NB	8.0	A	9.2	A	8.0	A	0	0.0		9.4	A	0	0.2	
			SB	9.6	A	8.0	A	9.6	A	0	0.0		8.2	A	0	0.2	
			Int	9.3	A	9.1	A	9.4	A	9	0.1		9.5	A	33	0.4	
Airway Rd (E-W) @ Paseo De Las Americas (N-S)	**County**/City	OWSC	NB	9.7	A	10.6	B	9.7	A	0	0.0	No	11.1	B	0	0.5	No
Airway Rd (E-W) @ Michael Faraday (N-S)	**County**/City	OWSC	NB	9.6	A	9.6	A	9.2	A	0	(0.4)	No	9.7	A	0	0.1	No
Airway Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	6.6	A	13.0	B	6.3	A	87	(0.3)	No	7.8	B	94	(3.2)	No
Siempre Viva Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	8.0	A	8.4	A	8.0	A	0	0.0	No	8.5	A	0	0.1	No
			WB	7.8	A	8.5	A	7.8	A	0	0.0		8.7	A	0	0.2	
			NB	7.6	A	8.4	A	7.6	A	0	0.0		8.5	A	0	0.1	
			SB	9.8	A	11.0	B	10.0	A	9	0.2		11.8	B	33	0.8	
			Int	9.2	A	9.9	A	9.3	A	9	0.1		10.5	B	33	0.6	
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva EB (N-S)	Caltrans	Sig.	Int	7.0	A	8.5	A	7.2	A	9	0.2	No	8.8	A	33	0.3	No
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva WB (N-S)	Caltrans	OWSC	SB	14.3	B	13.3	B	14.4	B	0	0.1	No	13.3	B	0	0.0	No
Siempre Viva Rd (E-W) @ SR-905 NB Ramp (N-S)	Caltrans	Sig.	Int	10.8	B	11.0	B	10.7	B	44	(0.1)	No	10.9	B	47	(0.1)	No
Siempre Viva Rd (E-W) @ Paseo De Las Americas (N-S)	City	Sig.	Int	24.7	C	40.0	D	24.5	C	44	(0.2)	No	40.7	D	47	0.7	No
Siempre Viva Rd (E-W) @ Michael Faraday (N-S)	City	TWSC	NB	14.5	B	13.2	B	15.3	C	0	0.8	No	13.8	B	0	0.6	No
			SB	15.9	C	12.3	B	16.7	C	0	0.8		12.8	B	0	0.5	
Siempre Viva Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	12.6	B	13.7	B	12.6	B	79	0.0	No	13.7	B	61	0.0	No
Alta Rd (N-S) @ Paseo De La Fuente (E-W)	County	Sig.	Int	2.7	A	12.6	B	2.2	A	0	(0.5)	No	12.6	A	0	0.0	No

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

Existing + Unit 1 – ILV Analysis

Table 15 summarizes the existing without and with project conditions intersection ILV analysis. As shown in Table 15, with the exception of the Otay Mesa Road/Heritage Road, Otay Mesa Road/Cactus Road and Otay Mesa Road/SR-905 Connector all intersections operate under stable flow during the AM and PM peak hours under existing without and with project conditions. A copy of the ILV worksheets can be found in Appendix E.

The Otay Mesa Road/Heritage Road currently operates under stable flow during both the AM and PM peak hours. With addition to Unit 1 of the project the Otay Mesa Road/Heritage Road intersection operates under unstable flow during the AM peak hour and stable flow during the PM peak hour.

The Otay Mesa Road/Cactus Road currently operates under stable flow during both the AM and PM peak hours. With addition to Unit 1 of the project the Otay Mesa Road/Heritage Road intersection operates under unstable flow during the AM peak hour and stable flow during the PM peak hour.

The Otay Mesa Road/SR-905 Connector currently operates under stable flow during both the AM and PM peak hours. With addition to Unit 1 of the project the Otay Mesa Road/ SR-905 Connector intersection operates under stable flow during the AM peak hour and unstable flow during the PM peak hour.

Table 15 – Existing + Unit 1 ILV Analysis

Intersection	Existing				Existing + Unit 1			
	AM Peak Hour		PM Peak Hour		AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	1,115	Stable Flow	1,049	Stable Flow	1,268	Unstable Flow	1,186	Stable Flow
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	1,129	Stable Flow	1,055	Stable Flow	1,206	Unstable Flow	1,122	Stable Flow
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	708	Stable Flow	936	Stable Flow	944	Stable Flow	1,077	Stable Flow
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	740	Stable Flow	924	Stable Flow	897	Stable Flow	1,038	Stable Flow
Otay Mesa Rd (E-W) @ Piper Ranch Rd (N-S)	696	Stable Flow	766	Stable Flow	989	Stable Flow	864	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	701	Stable Flow	677	Stable Flow	667	Stable Flow	725	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	417	Stable Flow	754	Stable Flow	659	Stable Flow	982	Stable Flow
Otay Mesa Rd (E-W) @ SR-905 Connector (N-S)	700	Stable Flow	911	Stable Flow	1,013	Stable Flow	1,204	Unstable Flow
Siempre Viva (E-W) @ SR-905 SB to EB Siempre Viva (N-S)	363	Stable Flow	463	Stable Flow	350	Stable Flow	551	Stable Flow
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	372	Stable Flow	483	Stable Flow	370	Stable Flow	494	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour;
<1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
E-W = East-West Roadway; N-S = North-South Roadway

EXISTING PLUS PROJECT UNITS 1-2 LEVEL OF SERVICE CONDITIONS

This section analyzes the existing conditions plus Units 1-2 of the proposed project. Figure 14 illustrates the existing plus Units 1-2 project traffic volumes.

Existing + Units 1-2 – Roadway Segments

Table 16 summarizes the daily roadway segment level of service analysis under the existing without and with Units 1-2 project conditions. As shown in Table 16, the following roadway segments operate at an unacceptable LOS E or F under existing plus Units 1-2 project conditions:

- Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard (LOS F without and with Units 1-2 of the project);
- Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road (LOS E without the project and LOS F with Units 1-2 of the project);
- Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and the SR-125 (LOS C without the project and LOS E with Units 1-2 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive (LOS D without the project and LOS F with Units 1-2 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road (LOS C without the project and LOS F with Units 1-2 of the project);
- Airway Road between SR-905 and Sanyo Avenue (LOS E without and with Units 1-2 of the project – Airway Road is presently closed by Caltrans); and
- State Route 905 between Otay Mesa Road and Siempre Viva Road (LOS E without and with Units 1-2 of the project).

The segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at an unacceptable LOS F under existing without and with Units 1-2 of the proposed project conditions. With the addition of between 7,613 and 7,855 ADT from Units 1-2 of the project, the volume-to-capacity (v/c) ratio will be increased by a range of 0.13 to 0.14 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will continue to operate at LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-2 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). However, based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at an acceptable level of service, further as shown later in Table 18 both the Otay Mesa Road/Heritage Road and Otay Mesa Road/Britannia Boulevard intersections operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

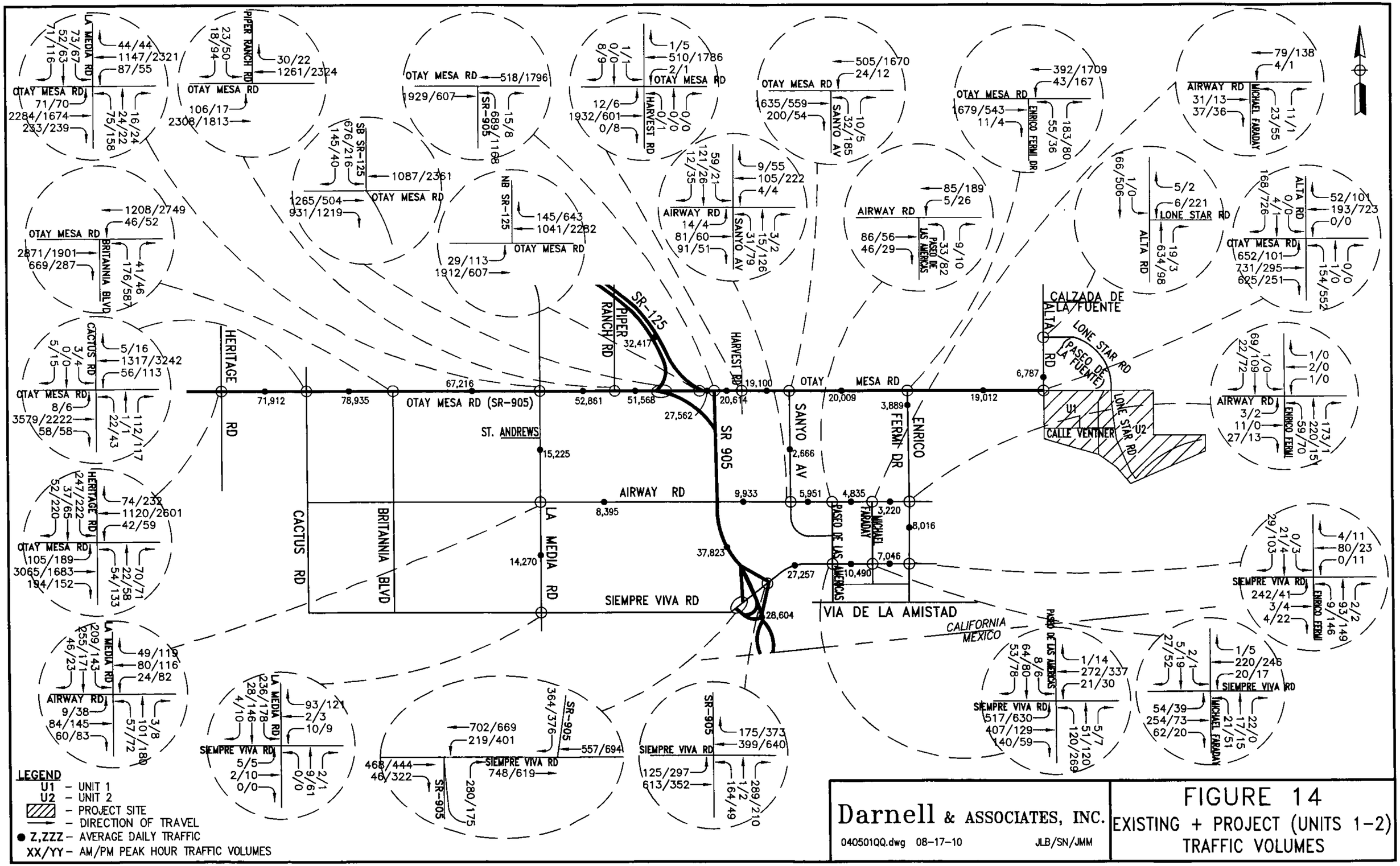

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FIGURE 14
EXISTING + PROJECT (UNITS 1-2)
TRAFFIC VOLUMES

Table 16 – Existing + Units 1-2 Roadway Segment Daily LOS Summary

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Existing 2008			Existing + Units 1-2					
				ADT	V/C	LOS	Proj. Tr	ADT	V/C	LOS	ΔV/C	Sig
Interim SR-905 (Otay Mesa Rd)												
Heritage Rd to Cactus Rd	**City**/Caltrans	6P	60,000	**64,299**	**1.07**	**F**	**7,613**	**71,912**	**1.20**	**F**	**0.13**	**Yes[(d)]**
Cactus Rd to Britannia Blvd	**City**/Caltrans	6P	60,000	**71,080**	**1.19**	**F**	**7,855**	**78,935**	**1.32**	**F**	**0.14**	**Yes[(d)]**
Britannia Blvd to La Media Rd	**City**/Caltrans	6P	60,000	**58,999**	**0.98**	**E**	**8,217**	**67,216**	**1.12**	**F**	**0.14**	**Yes[(d)]**
La Media Rd to Piper Ranch Rd	**City**/Caltrans	5M	45,000	**44,523**	**0.99**	**E**	**8,338**	**52,861**	**1.17**	**F**	**0.18**	**Yes[(d)]**
Piper Ranch Rd to SR-125	**County**/City/Caltrans	6P	57,000	43,109	0.73	C	**8,459**	**51,568**	**0.90**	**E**	**0.14**	**Yes[(d)]**
Otay Mesa Rd (Old Otay Mesa Rd)												
SR-125 to Interim SR-905 Connector	**County**/City/Caltrans	5M(a)	47,000	16,686	0.36	A	10,876	27,562	0.59	B	0.23	No
Interim SR-905 Connector to Harvest Rd	**County**/City/Caltrans	5M(a)	47,000	9,738	0.21	A	10,876	20,614	0.44	B	0.23	No
Harvest Rd to Sanyo Av	**County**/City/Caltrans	4M	37,000	8,224	0.22	A	10,876	19,100	0.52	B	0.30	No
Sanyo Av to Enrico Fermi Dr	**County**/City	LC	16,200	9,133	0.56	D	**10,876**	**20,009**	**1.24**	**F**	**0.68**	**Yes**
Enrico Fermi Dr to Alta Rd	County	LC	16,200	6,928	0.43	C	**12,084**	**19,012**	**1.17**	**F**	**0.74**	**Yes**
Airway Road												
La Media Rd to SR-905	City	2C	15,000	8,093	0.54	C	302	8,395	0.56	C	0.02	No
SR-905 to Sanyo Av (c)	City	2C	10,000	**9,631**	**0.96**	**E**	**302**	**9,933**	**0.99**	**E**	**0.03**	**Yes**
Sanyo Av to Paseo de las Americas	City	4M	40,000	5,649	0.14	C	302	5,951	0.15	C	0.01	No
Paseo de las Americas to Michael Faraday Dr	**County**/City	4M	37,000	4,513	0.12	C	302	4,835	0.13	C	0.01	No
Michael Faraday Dr to Enrico Fermi Dr	**County**/City	LC	16,200	2,918	0.18	B	302	3,220	0.20	B	0.02	No
Enrico Fermi Dr to Airway Pl	County	4C	34,200	1,160	0.03	A	0	1,160	0.03	A	0.00	No
Siempre Viva Road												
SR-905 NB to Paseo de las Americas	City	6P	60,000	26,653	0.44	B	604	27,257	0.45	B	0.01	No
Paseo de las Americas to Michael Faraday Dr	City	4C	30,000	9,886	0.33	A	604	10,490	0.35	B	0.02	No
Michael Faraday Dr to Enrico Fermi Dr	City	4C	30,000	6,442	0.22	A	604	7,046	0.23	A	0.02	No
Enrico Fermi Dr to Airway Pl	County	LC	16,200	830	0.05	A	0	830	0.05	A	0.00	No
La Media Road												
Otay Mesa Rd to St. Andrews	City	4C	30,000	15,225	0.51	C	0	15,225	0.51	C	0.00	No
SR-125												
North of Otay Mesa Rd	SBX	4-Fwy	(b)	30,000	0.33	A	2,417	32,417	0.36	A	0.03	No
Existing SR-905												
Otay Mesa Rd to Siempre Viva Rd	**City**/Caltrans	4M	40,000	**37,823**	**0.95**	**E**	**0**	**37,823**	**0.95**	**E**	**0.00**	**No**
South of Siempre Viva Rd	City/**Caltrans**	4-Fwy	(b)	28,000	032	A	604	28,604	0.32	A	0.00	N/A
Sanyo Avenue												
Otay Mesa Rd to Airway Rd	City	4C	30,000	2,666	0.09	A	0	2,666	0.09	A	0.00	No
Enrico Fermi Drive												
Otay Mesa Rd to Airway Rd	County	TC	19,000	2,681	0.14	A	1,208	3,889	0.20	B	0.06	No
Airway Rd to Siempre Viva Rd	City	4M	40,000	7,110	0.19	A	906	8,016	0.20	A	0.02	No

City = Capacity of city segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of county segments is based on the upper limits of LOS E per the County of San Diego;
SBX = South Bay Expressway; **Bold** = Jurisdiction which capacity is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; Fwy = Freeway; 6P = 6-Lane Prime Arterial;
5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector; 2C= 2-Lane Collector with no fronting property; LC = Light Collector; TC = Town Collector
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half way between a 4M & 6P).
(b) Capacity based on Caltrans District 11 & HCM procedures, See Appendix L for LOS calculations.
(c) Field checks conducted in January 2010 found that this segment of Airway Road was currently closed to traffic.
(d) Table 17 of the Arterial Roadway Segment analysis shows that the roadway segment does not have a significant impact.

The segments of Interim SR-905 (Otay Mesa Road) from Britannia Boulevard to Piper Ranch Road operate at an unacceptable LOS E under existing conditions. With the addition of between 8,217 and 8,338 ADT from Units 1-2 of the project, the v/c ratio will be increased by a range of 0.14 to 0.18 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will degrade to LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-2 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). However, based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road operate at an acceptable level of service, further as shown later in Table 18 all signalized intersections along these segments operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

The segment of Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and SR-125 operates at an acceptable LOS C under existing conditions. With the addition of 8,459 ADT from Units 1-2 of the project, the v/c ratio will be increased by 0.14 and the level of service on this segment of Interim SR-905 (Otay Mesa Road) will degrade to LOS E. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-2 of the project lowers the existing level of service from LOS C to LOS E, based on average daily conditions, Units 1-2 of the project is considered to have a significant direct impact. However, based on the arterial roadway segment analysis the segment of Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and the SR-125 operates at an acceptable level of service, further as shown later in Table 18 both the Otay Mesa Road/Piper Ranch Road and Otay Mesa Road/SR-125 Southbound Ramp intersections operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive operates at LOS D under existing conditions. With the addition of 10,876 ADT from Units 1-2 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-2 of the project lowers the existing level of service from LOS D to LOS F, based on average daily conditions, Units 1-2 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road operates at LOS C under existing conditions. With the addition of 12,084 ADT from Units 1-2 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-2 of the project lowers the existing level of service from LOS C to LOS F, based on average daily conditions, Units 1-2 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive to Alta Road. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

Although based on February 2008 count data, the segment of Airway Road between SR-905 and Sanyo Avenue operates at LOS E under existing conditions. This segment of Airway Road; however, is currently closed to traffic for the construction of the structures at the SR-905/Airway Road intersection. By the time Units 1-2 of the proposed project comes on line this segment of Airway Road is anticipated to be re-opened, thus project traffic is added to the segment of Airway Road between the SR-905 and Sanyo Avenue. With the addition of 302 ADT from Units 1-2 of the proposed project the v/c ratio will be

increased by 0.03 and the level of service on this segment of Airway Road will operate at LOS E. The increase in v/c exceeds the 0.02 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS E, thus, based on average daily conditions Units 1-2 of the project has a significant direct impact on the segment of Airway Road between the SR-905 and Sanyo Avenue. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segment of SR-905 between Otay Mesa Road and Siempre Viva Road operates at LOS E under existing without and with Units 1-2 of the project conditions. Since the project is not adding any traffic to this segment the v/c ratio will not be increased with the addition of the project; thus, Units 1-2 of the proposed project is not considered to have a significant impact.

All other roadway segments continue to operate at LOS D or better under existing plus Units 1-2 of the proposed project conditions.

Existing + Units 1-2 – Arterial Roadway Segments

A review of the 24 hour counts sheets for Otay Mesa Road, found that the traffic flow is rather constant between the hours of 7:00am to 6:00 pm, compared to most 5-lane and 6-lane roadways which have high peak hour flows in the morning and afternoon. Further it should be noted that the Otay Mesa Port-of-Entry is open 24 hours a day with long lines crossing the border. This results in the spread of vehicles through the day resulting in increased daily traffic volumes. Since level of service based on daily volumes assumes significant increases in traffic counts during the peak hour periods, daily capacity analysis is not particularly accurate for Otay Mesa Road. Therefore, in addition to evaluating the roadway based on daily capacity it was also analyzed based on the Highway Capacity Manual's (HCM) Arterial Segment Methodology utilizing the Synchro software. Since the arterial segment analysis determines level of service based on the average travel speeds that occur on the roadway it provides a more accurate representation of the travel patterns and levels of service for Otay Mesa Road. The results of the analysis are summarized in Table 15.

Based on daily roadway segment capacities, the project is part of significant impact to the roadway segments of Interim SR-905 (Otay Mesa Road); however, as shown in the arterial roadway segment analysis in Table 15 the failing segments of the Interim SR-905 (Otay Mesa Road) operate under acceptable level of service conditions during both the peak hours. A copy of the Synchro worksheets can be found in Appendix D and F.

Existing + Units 1-2 – Intersections

Existing + Units 1-2 – Synchro Analysis

Table 18 summarizes the existing plus Units 1-2 project conditions intersection level of service summary during the AM and PM peak hours. (A copy of the Synchro worksheets can be found in Appendix D and F.) As shown in Table 18, the following intersections operate at LOS F during at least one of the peak hours under existing pus Units 1-2 project conditions:

- Otay Mesa Road/Interim SR-905 Connector (LOS C or better without project and LOS E during the PM peak hour with Units 1-2 of the project);
- Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue (LOS B without the project and LOS F during the PM peak hour with Units 1-2 of the project);
- Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive (LOS B or better without project and LOS F during the PM peak hour with Units 1-2 of the project); and
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road (Total intersection operates at LOS B or better without the project and LOS F during both peak hours with Units 1-2 of the project).

Table 17 – Existing + Units 1-2 Arterial LOS Summary

AM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Units 1-2 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	37.5	A	30.1	B	(7.4)	No
		WB	32.4	B	31.6	B	(0.8)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	34.2	B	28.2	B	(6.0)	No
		WB	38.9	A	39.0	A	0.1	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	41.2	A	40.1	A	(1.1)	No
		WB	43.6	A	43.5	A	(0.1)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.5	A	33.8	B	(4.7)	No
		WB	33.0	B	32.4	B	(0.6)	
Interim SR-905 - Piper Ranch Rd to SR125	City/Caltrans/ County	EB	34.0	B	23.6	C	(10.4)	No
		WB	29.5	B	31.3	B	1.8	

PM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Units 1-2 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	29.3	B	30.6	B	1.3	No
		WB	24.4	C	22.2	C	(2.2)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	36.1	A	34.1	B	(2.0)	No
		WB	38.2	A	35.9	A	(2.3)	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	35.4	A	34.3	B	(1.1)	No
		WB	39.4	A	36.5	A	(2.9)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.1	A	37.1	A	(1.0)	No
		WB	28.3	B	24.3	C	(4.0)	
Interim SR-905 - Piper Ranch Rd to SR125	City/Caltrans/ County	EB	35.8	B	32.4	B	(3.4)	No
		WB	34.2	B	31.3	B	(2.9)	

LOS=Level of Service; Speed is measured in miles per hour (mph); sig=signalized; Δ Speed = Increase (decrease) in speed;
SBX = South Bay Expressway, Occasionally adding traffic to a critical movement optimizes the segment resulting in increase in speed.

Table 18 - Existing + Units 1-2 Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Units 1-2									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	**City**/Caltrans	Sig.	Int	26.0	C	29.2	C	39.8	D	1,049	13.8	No	37.1	D	1,123	7.9	No
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	**City**/Caltrans	Sig.	Int	6.9	A	11.5	B	14.9	B	1,083	8.0	No	11.8	B	1,160	(0.3)	No
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	**City**/Caltrans	Sig.	Int	9.0	A	18.8	B	15.9	B	1,134	6.9	No	22.1	C	1,215	3.3	No
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	**City**/Caltrans	Sig.	Int	15.6	B	27.0	C	15.1	B	1,168	(0.5)	No	31.6	C	1,251	4.6	No
Otay Mesa Rd (E-W)@ Piper Ranch Rd (N-S)	**County**/City/Caltrans	Sig.	Int	6.1	A	3.6	A	8.0	A	1,184	1.9	No	4.3	A	1,269	0.7	No
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	**County**/City/SBX	Sig.	Int	11.2	B	2.5	A	13.1	B	1,456	1.9	No	3.8	A	1,378	1.3	No
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	**County**/City/SBX	Sig.	Int	0.9	A	5.6	A	4.1	A	1,524	3.2	No	7.3	A	1,632	0.2	No
Otay Mesa Rd (E-W) @ SR-905 (N-S)	**County**/City/SBX	Sig.	Int	16.1	B	21.1	C	31.0	C	1,523	14.9	No	**80.5**	**E**	**1,632**	**48.9**	**Yes**
Otay Mesa Rd (E-W) @ Sanyo Av (N-S)	**County**/City	Sig.	Int	4.1	A	12.6	B	7.2	A	1,523	3.1	No	**164.0**	**F**	**1,632**	**133.4**	**Yes**
Otay Mesa Rd (E-W) @ Enrico Fermi Dr (N-S)	County	Sig.	Int	10.4	B	9.4	A	**180.3**	**F**	**1,692**	**169.9**	**Yes**	13.9	B	1,813	4.5	No
Otay Mesa Rd (E-W) @ Alta Rd (N-S)	County	AWSC	EB	32.5	D	9.8	A	**1050.8**	**F**	**1,354**	**1018.3**	**Yes**	**454.6**	**F**	**544**	**444.8**	**Yes**
			WB	0.0	A	0.0	A	12.8	B	193	12.8		**576.6**	**F**	**723**	576.6	
			NB	9.3	A	8.2	A	13.4	B	145	4.1		**361.7**	**F**	**546**	**353.5**	
			SB	9.8	A	18.3	C	12.2	B	0	2.4		**518.9**	**F**	**0**	500.6	
			Int	27.6	D	17.2	C	**837.3**	**F**	**1,692**	**809.7**		**486.2**	**F**	**1,813**	**469.0**	
Airway Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	11.1	B	14.5	B	11.2	B	0	0.1	No	15.5	C	0	1.0	No
			WB	10.9	B	13.9	B	11.3	B	17	0.4		17.3	C	63	3.4	
			NB	11.4	B	15.4	C	11.6	B	0	0.2		16.6	C	0	1.2	
			SB	13.3	B	12.2	B	13.6	B	0	0.3		13.0	B	0	0.8	
			Int	12.3	B	13.9	B	12.5	B	17	0.2		15.5	C	63	1.6	

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

Table 18 (Continued) - Existing + Units 1-2 Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Units 1-2									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Airway Rd (E-W) @ Sanyo Av (N-S)	City	AWSC	EB	10.1	B	9.9	A	10.2	B	0	0.1	No	10.1	A	0	0.2	No
			WB	8.1	A	9.1	A	8.3	A	17	0.2		10.5	B	63	1.4	
			NB	8.0	A	9.2	A	8.0	A	0	0.0		9.5	A	0	0.3	
			SB	9.6	A	8.0	A	9.7	A	0	0.1		8.3	A	0	0.3	
			Int	9.3	A	9.1	A	9.4	A	17	0.1		9.9	A	63	0.8	
Airway Rd (E-W) @ Paseo De Las Americas (N-S)	**County**/City	OWSC	NB	9.7	A	10.6	B	9.8	A	0	0.1	No	11.4	B	0	0.8	No
Airway Rd (E-W) @ Michael Faraday (N-S)	**County**/City	OWSC	NB	9.6	A	9.6	A	9.6	A	0	0.0	No	10.0	A	0	0.4	No
Airway Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	6.6	A	13.0	B	6.3	A	169	(0.3)	No	8.1	A	180	(4.9)	No
Siempre Viva Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	8.0	A	8.4	A	8.0	A	0	0.0	No	8.6	A	0	0.2	No
			WB	7.8	A	8.5	A	7.9	A	0	0.1		8.8	A	0	0.3	
			NB	7.6	A	8.4	A	7.6	A	0	0.0		8.6	A	0	0.2	
			SB	9.8	A	11.0	B	10.1	B	17	0.3		12.7	B	63	1.7	
			Int	9.2	A	9.9	A	9.4	A	17	0.2		11.2	B	63	1.3	
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva EB (N-S)	Caltrans	Sig.	Int	7.0	A	8.5	A	7.4	A	17	0.4	No	9.2	A	63	0.7	No
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva WB (N-S)	Caltrans	OWSC	SB	14.3	B	13.3	B	14.5	B	0	0.2	No	13.2	B	0	(0.1)	No
Siempre Viva Rd (E-W) @ SR-905 NB Ramp (N-S)	Caltrans	Sig.	Int	10.8	B	11.0	B	10.6	B	85	(2)	No	10.9	B	90	(0.1)	No
Siempre Viva Rd (E-W) @ Paseo De Las Americas (N-S)	City	Sig.	Int	24.7	C	40.0	D	24.3	C	85	(0.4)	No	41.3	D	90	1.3	No
Siempre Viva Rd (E-W) @ Michael Faraday (N-S)	City	TWSC	NB	14.5	B	13.2	B	16.1	C	0	1.6	No	14.4	B	0	1.2	No
			SB	15.9	C	12.3	B	17.5	C	0	1.6		13.4	B	0	1.1	
Siempre Viva Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	12.6	B	13.7	B	12.6	B	153	0.0	No	13.0	B	117	(0.7)	No
Alta Rd (N-S) @ Paseo De La Fuente (E-W)	County	Sig.	Int	2.7	A	12.6	B	2.2	A	0	(0.5)	No	12.6	A	0	0.0	No

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

The Otay Mesa Road/Interim SR-905 Connector intersection operates at LOS B during the AM peak hour and LOS C during the PM peak hour under existing conditions. With the addition of 1,632 PM peak hour trips from Units 1-2 of the project, the PM peak hour delay will be increased by 48.9 seconds degrading the existing LOS to LOS E. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since the proposed project lowers the existing level of service from an acceptable LOS C to an unacceptable LOS F, Units 1-2 of the proposed project is considered to have a significant direct impact at the Otay Mesa Road/Interim SR-905 Connector intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impact.

The Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue intersection operates at LOS A during the AM peak hour and LOS B during the PM peak hour under existing conditions. With the addition of 1,632 PM peak hour trips from Units 1-2 of the project to the intersection, the intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Units 1-2 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive intersection operates at LOS B during the AM peak hour and LOS A during the PM peak hour under existing conditions. With the addition of 1,632 AM peak hour trips from Units 1-2 of the project to the intersection, the intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Units 1-2 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection currently operates at LOS D during the AM peak hour and LOS C during the PM peak hour overall. With the addition of 1,692 AM peak hour trips (1,354 to the eastbound approach) from Units 1-2 of the project to the intersection, the eastbound approach and overall intersection will to degrade to LOS F. With the addition of 1,813 PM peak hour trips (723 to the westbound approach) from Units 1-2 of the project all approaches and the overall intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Units 1-2 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

Existing + Units 1-2 – ILV Analysis

Table 19 summarizes the existing without and with project conditions intersection ILV analysis. As shown in Table 19, with the exception of the Otay Mesa Road/Heritage Road, Otay Mesa Road/Cactus Road, Otay Mesa Road/Britannia Boulevard and Otay Mesa Road/SR-905 Connector all intersections operate under stable flow during the AM and PM peak hours under existing without and with project conditions. A copy of the ILV worksheets can be found in Appendix F.

The Otay Mesa Road/Heritage Road currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-2 of the project the Otay Mesa Road/Heritage Road intersection operates under unstable flow during both the AM and PM peak hours.

The Otay Mesa Road/Cactus Road currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-2 of the project the Otay Mesa Road/Heritage Road intersection operates under unstable flow during both the AM and PM peak hours.

The Otay Mesa Road/Britannia Boulevard currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-2 of the project the Otay Mesa Road/Heritage Road intersection operates under stable flow during the AM peak hour and unstable flow during the PM peak hour.

The Otay Mesa Road/SR-905 Connector currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-2 of the project the Otay Mesa Road/ SR-905 Connector intersection operates under unstable flow during both the AM and PM peak hours.

Table 19 – Existing + Units 1-2 ILV Analysis

Intersection	Existing				Existing + Units 1-2			
	AM Peak Hour		PM Peak Hour		AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	1,115	Stable Flow	1,049	Stable Flow	1,414	Unstable Flow	1,313	Unstable Flow
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	1,129	Stable Flow	1,055	Stable Flow	1,395	Unstable Flow	1,259	Unstable Flow
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	708	Stable Flow	936	Stable Flow	1,091	Stable Flow	1,211	Unstable Flow
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	740	Stable Flow	924	Stable Flow	1,047	Stable Flow	1,196	Stable Flow
Otay Mesa Rd (E-W) @ Piper Ranch Rd (N-S)	696	Stable Flow	766	Stable Flow	1,168	Stable Flow	955	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	701	Stable Flow	677	Stable Flow	887	Stable Flow	895	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	417	Stable Flow	754	Stable Flow	956	Stable Flow	1,198	Stable Flow
Otay Mesa Rd (E-W) @ SR-905 Connector (N-S)	700	Stable Flow	911	Stable Flow	1,310	Unstable Flow	1,477	Unstable Flow
Siempre Viva (E-W) @ SR-905 SB to EB Siempre Viva (N-S)	363	Stable Flow	463	Stable Flow	372	Stable Flow	561	Stable Flow
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	372	Stable Flow	483	Stable Flow	372	Stable Flow	508	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour;
<1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
E-W = East-West Roadway; N-S = North-South Roadway

EXISTING PLUS PROJECT UNITS 1-3 LEVEL OF SERVICE CONDITIONS

This section analyzes the existing conditions plus Units 1-3 of the proposed project. Figure 15 illustrates the existing plus Units 1-3 project traffic volumes.

Existing + Units 1-3 – Roadway Segments

Table 20 summarizes the daily roadway segment level of service analysis under the existing without and with Units 1-3 project conditions. As shown in Table 20, the following roadway segments operate at an unacceptable LOS E or F under existing plus Units 1-3 project conditions:

- Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard (LOS F without and with Units 1-3 of the project);
- Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road (LOS E without the project and LOS F with Units 1-3 of the project);
- Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and the SR-125 (LOS C without the project and LOS E with Units 1-3 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive (LOS D without the project and LOS F with Units 1-3 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road (LOS C without the project and LOS F with Units 1-3 of the project);
- Airway Road between SR-905 and Sanyo Avenue (LOS E without the project and LOS F with Units 1-3 of the project – Airway Road is presently closed by Caltrans); and
- State Route 905 between Otay Mesa Road and Siempre Viva Road (LOS E without and with Units 1-3 of the project).

The segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at an unacceptable LOS F under existing without and with Units 1-3 of the proposed project conditions. With the addition of between 9,732 and 10,040 ADT from Units 1-3 of the project, the volume-to-capacity (v/c) ratio will be increased by a range of 0.16 to 0.17 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will continue to operate at LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-3 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). However, based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at an acceptable level of service, further as shown later in Table 22 both the Otay Mesa Road/Heritage Road and Otay Mesa Road/Britannia Boulevard intersections operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

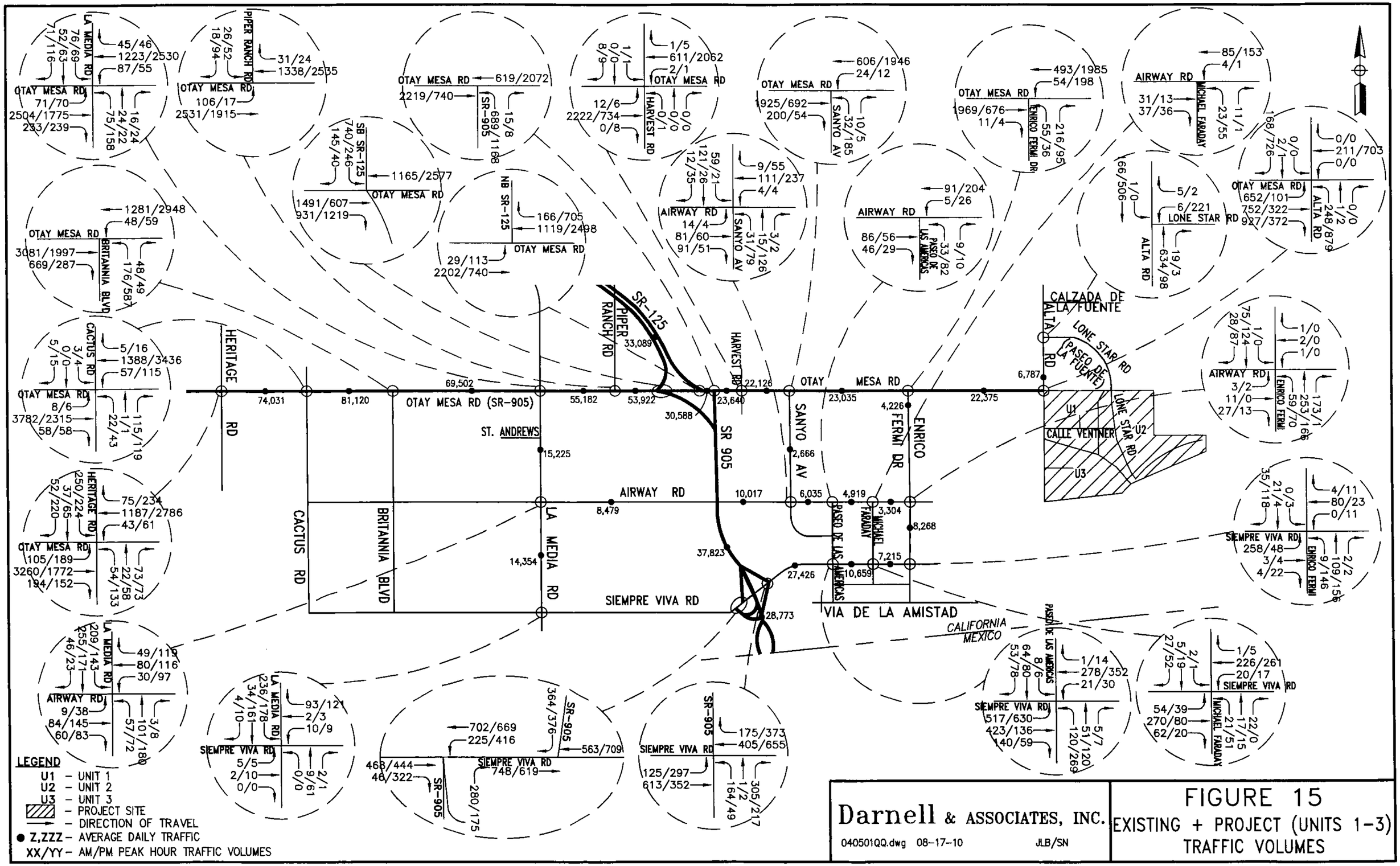

OTAY MESA RD (SR-905)
HERITAGE RD
CACTUS RD
BRITANNIA BLVD
LA MEDIA RD
ST. ANDREWS
AIRWAY RD
SIEMPRE VIVA RD
SR 905
SR-125
PIPER RANCH RD
HARVEST RD
SANYO AV
PASEO DE LAS AMERICAS
MICHAEL FARADAY
ENRICO FERMI DR
VIA DE LA AMISTAD
CALIFORNIA
MEXICO
CALZADA DE LA FUENTE
ALTA RD
LONE STAR RD
(PASEO DE LA FUENTE)
CALLE VENTNER
U1
U2
U3
LEGEND
U1 - UNIT 1
U2 - UNIT 2
U3 - UNIT 3
- PROJECT SITE
- DIRECTION OF TRAVEL
● Z,ZZZ - AVERAGE DAILY TRAFFIC
XX/YY - AM/PM PEAK HOUR TRAFFIC VOLUMES
Darnell & ASSOCIATES, INC.
040501QQ.dwg 08-17-10 JLB/SN
FIGURE 15
EXISTING + PROJECT (UNITS 1-3)
TRAFFIC VOLUMES

Table 20 – Existing + Units 1-3 Roadway Segment Daily LOS Summary

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Existing 2008			Existing + Units 1-3					
				ADT	V/C	LOS	Proj. Tr	ADT	V/C	LOS	ΔV/C	Sig
Interim SR-905 (Otay Mesa Rd)												
Heritage Rd to Cactus Rd	**City**/Caltrans	6P	60,000	**64,299**	**1.07**	**F**	**9,732**	**74,031**	**1.23**	**F**	**0.16**	**Yes[d]**
Cactus Rd to Britannia Blvd	**City**/Caltrans	6P	60,000	**71,080**	**1.19**	**F**	**10,040**	**81,120**	**1.35**	**F**	**0.17**	**Yes[d]**
Britannia Blvd to La Media Rd	**City**/Caltrans	6P	60,000	**58,999**	**0.98**	**E**	**10,503**	**69,502**	**1.16**	**F**	**0.18**	**Yes[d]**
La Media Rd to Piper Ranch Rd	**City**/Caltrans	5M	45,000	**44,523**	**0.99**	**E**	**10,659**	**55,182**	**1.23**	**F**	**0.24**	**Yes[d]**
Piper Ranch Rd to SR-125	**County**/City/Caltrans	6P	57,000	43,109	0.73	C	**10,813**	**53,922**	**0.95**	**E**	**0.19**	**Yes[d]**
Otay Mesa Rd (Old Otay Mesa Rd)												
SR-125 to Interim SR-905 Connector	**County**/City/Caltrans	5M(a)	47,000	16,686	0.36	A	13,902	30,588	0.65	B	0.29	No
Interim SR-905 Connector to Harvest Rd	**County**/City/Caltrans	5M(a)	47,000	9,738	0.21	A	13,902	23,640	0.50	B	0.29	No
Harvest Rd to Sanyo Av	**County**/City/Caltrans	4M	37,000	8,224	0.22	A	13,902	22,126	0.60	B	0.38	No
Sanyo Av to Enrico Fermi Dr	**County**/City	LC	16,200	9,133	0.56	D	**13,902**	**23,035**	**1.42**	**F**	**0.86**	**Yes**
Enrico Fermi Dr to Alta Rd	County	LC	16,200	6,928	0.43	C	**15,447**	**22,375**	**1.38**	**F**	**0.95**	**Yes**
Airway Road												
La Media Rd to SR-905	City	2C	15,000	8,093	0.54	C	386	8,479	0.57	C	0.03	No
SR-905 to Sanyo Av (c)	City	2C	10,000	**9,631**	**0.96**	**E**	**386**	**10,017**	**1.00**	**F**	**0.04**	**Yes**
Sanyo Av to Paseo de las Americas	City	4M	40,000	5,649	0.14	C	386	6,035	0.15	C	0.01	No
Paseo de las Americas to Michael Faraday Dr	**County**/City	4M	37,000	4,513	0.12	C	386	4,919	0.13	C	0.01	No
Michael Faraday Dr to Enrico Fermi Dr	**County**/City	LC	16,200	2,918	0.18	B	386	3,304	0.20	B	0.01	No
Enrico Fermi Dr to Airway Pl	County	4C	34,200	1,160	0.03	A	0	1,160	0.03	A	0.00	No
Siempre Viva Road												
SR-905 NB to Paseo de las Americas	City	6P	60,000	26,653	0.44	B	773	27,426	0.46	B	0.02	No
Paseo de las Americas to Michael Faraday Dr	City	4C	30,000	9,886	0.33	A	773	10,659	0.36	B	0.03	No
Michael Faraday Dr to Enrico Fermi Dr	City	4C	30,000	6,442	0.22	A	773	7,215	0.24	A	0.03	No
Enrico Fermi Dr to Airway Pl	County	LC	16,200	830	0.05	A	0	830	0.05	A	0.00	No
La Media Road												
Otay Mesa Rd to St. Andrews	City	4C	30,000	15,225	0.51	C	0	15,225	0.51	C	0.00	No
SR-125												
North of Otay Mesa Rd	SBX	4-Fwy	(b)	30,000	0.33	A	3,089	33,089	0.36	A	0.03	No
Existing SR-905												
Otay Mesa Rd to Siempre Viva Rd	**City**/Caltrans	4M	40,000	**37,823**	**0.95**	**E**	**0**	**37,823**	**0.95**	**E**	**0.00**	**No**
South of Siempre Viva Rd	City/**Caltrans**	4-Fwy	(b)	28,000	032	A	773	28,773	0.33	A	0.01	No
Sanyo Avenue												
Otay Mesa Rd to Airway Rd	City	4C	30,000	2,666	0.09	A	0	2,666	0.09	A	0.00	No
Enrico Fermi Drive												
Otay Mesa Rd to Airway Rd	County	TC	19,000	2,681	0.14	A	1,545	4,226	0.22	B	0.08	No
Airway Rd to Siempre Viva Rd	City	4M	40,000	7,110	0.19	A	1,158	8,268	0.21	A	0.03	No

City = Capacity of city segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of county segments is based on the upper limits of LOS E per the County of San Diego; SBX = South Bay Expressway; **Bold** = Jurisdiction which capacity is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; Fwy = Freeway; 6P = 6-Lane Prime Arterial;
5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector; 2C= 2-Lane Collector with no fronting property; LC = Light Collector; TC = Town Collector
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half way between a 4M & 6P).
(b) Capacity based on Caltrans District 11 & HCM procedures, See Appendix L for LOS calculations.
(c) Field checks conducted in January 2010 found that this segment of Airway Road was currently closed to traffic.
(d) Table 21 of the Arterial Roadway Segment analysis shows that the roadway segment does not have a significant impact.

The segments of Interim SR-905 (Otay Mesa Road) from Britannia Boulevard to Piper Ranch Road operate at an unacceptable LOS E under existing conditions. With the addition of between 10,503 and 10,659 ADT from Units 1-3 of the project, the v/c ratio will be increased by a range of 0.18 to 0.24 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will degrade to LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-3 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). However, based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road operate at an acceptable level of service, further as shown later in Table 22 all signalized intersections along these segments operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

The segment of Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and SR-125 operates at an acceptable LOS C under existing conditions. With the addition of 10,813 ADT from Units 1-3 of the project, the v/c ratio will be increased by 0.19 and the level of service on this segment of Interim SR-905 (Otay Mesa Road) will degrade to LOS E. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-3 of the project lowers the existing level of service from LOS C to LOS E, based on average daily conditions, Units 1-3 of the project is considered to have a significant direct impact. However, based on the arterial roadway segment analysis the segment of Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and the SR-125 operates at an acceptable level of service, further as shown later in Table 22 both the Otay Mesa Road/Piper Ranch Road and Otay Mesa Road/SR-125 Southbound Ramp intersections operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive operates at LOS D under existing conditions. With the addition of 13,902 ADT from Units 1-3 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-3 of the project lowers the existing level of service from LOS D to LOS F, based on average daily conditions, Units 1-3 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road operates at LOS C under existing conditions. With the addition of 15,447 ADT from Units 1-3 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-3 of the project lowers the existing level of service from LOS C to LOS F, based on average daily conditions, Units 1-3 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive to Alta Road. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

Although based on February 2008 count data, the segment of Airway Road between SR-905 and Sanyo Avenue operates at LOS E under existing conditions. This segment of Airway Road; however, is currently closed to traffic for the construction of the structures at the SR-905/Airway Road intersection. By the time Units 1-3 of the proposed project comes on line this segment of Airway Road is anticipated to be re-opened, thus project traffic is added to the segment of Airway Road between the SR-905 and Sanyo

Avenue. With the addition of 386 ADT from Units 1-3 of the proposed project the v/c ratio will be increased by 0.04 and the level of service on this segment of Airway Road will operate at LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-3 of the project has a significant direct impact on the segment of Airway Road between the SR-905 and Sanyo Avenue. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segment of SR-905 between Otay Mesa Road and Siempre Viva Road operates at LOS E under existing without and with Units 1-3 of the project conditions. Since the project is not adding any traffic to this segment the v/c ratio will not be increased with the addition of the project; thus, Units 1-3 of the proposed project is not considered to have a significant impact.

All other roadway segments continue to operate at LOS D or better under existing plus Units 1-3 of the proposed project conditions.

Existing + Units 1-3 – Arterial Roadway Segments

A review of the 24 hour counts sheets for Otay Mesa Road, found that the traffic flow is rather constant between the hours of 7:00am to 6:00 pm, compared to most 5-lane and 6-lane roadways which have high peak hour flows in the morning and afternoon. Further it should be noted that the Otay Mesa Port-of-Entry is open 24 hours a day with long lines crossing the border. This results in the spread of vehicles through the day resulting in increased daily traffic volumes. Since level of service based on daily volumes assumes significant increases in traffic counts during the peak hour periods, daily capacity analysis is not particularly accurate for Otay Mesa Road. Therefore, in addition to evaluating the roadway based on daily capacity it was also analyzed based on the Highway Capacity Manual's (HCM) Arterial Segment Methodology utilizing the Synchro software. Since the arterial segment analysis determines level of service based on the average travel speeds that occur on the roadway it provides a more accurate representation of the travel patterns and levels of service for Otay Mesa Road. The results of the analysis are summarized in Table 21. Based on daily roadway segment capacities, the project is part of significant impact to the roadway segments of Interim SR-905 (Otay Mesa Road); however, as shown in the arterial roadway segment analysis in Table 21 the failing segments of the Interim SR-905 (Otay Mesa Road) operate under acceptable level of service conditions during both the peak hours. A copy of the Synchro worksheets can be found in Appendix D and G.

Table 21 – Existing + Units 1-3 Arterial LOS Summary

AM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Units 1-3 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	37.5	A	23.1	C	(14.4)	No
		WB	32.4	B	31.3	B	(1.1)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	34.2	B	21.6	D	(12.6)	No
		WB	38.9	A	39.0	A	0.1	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	41.2	A	39.8	A	(1.4)	No
		WB	43.6	A	43.4	A	(0.2)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.5	A	29.4	B	(9.1)	No
		WB	33.0	B	32.3	B	(0.7)	
Interim SR-905 - Piper Ranch Rd to SR125	City/Caltrans/ County	EB	34.0	B	22.0	C	(12.0)	No
		WB	29.5	B	29.1	B	(0.4)	

PM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Units 1-3 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	29.3	B	30.8	B	1.5	No
		WB	24.4	C	20.4	D	(4.0)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	36.1	A	33.3	B	(2.8)	No
		WB	38.2	A	34.5	B	(3.7)	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	35.4	A	34.0	B	(1.4)	No
		WB	39.4	A	35.2	A	(4.2)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.1	A	36.7	A	(1.4)	No
		WB	28.3	B	22.4	C	(5.9)	
Interim SR-905 - Piper Ranch Rd to SR125	City/Caltrans/ County	EB	35.8	B	32.0	B	(3.8)	No
		WB	34.2	B	30.9	B	(3.3)	

LOS=Level of Service; Speed is measured in miles per hour (mph); sig=signalized; Δ Speed = Increase (decrease) in speed;
SBX = South Bay Expressway, Occasionally adding traffic to a critical movement optimizes the segment resulting in increase in speed.

Existing + Units 1-3 – Intersections

Existing + Units 1-3 – Synchro Analysis

Table 22 summarizes the existing plus Units 1-3 project conditions intersection level of service summary during the AM and PM peak hours. (A copy of the Synchro worksheets can be found in Appendix D and G.) As shown in Table 22, the following intersections operates at LOS E or F during at least one of the peak hours under existing pus Units 1-3 project conditions:

- Otay Mesa Road/Interim SR-905 Connector (LOS C or better without project and LOS F with Units 1-3 of the project);
- Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue (LOS B without project and LOS F during the PM peak hour with Units 1-3 of the project);
- Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive (LOS B or better without project and LOS F with Units 1-3 of the project); and
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road (Total intersection operates at LOS B or better without the project and LOS F during both peak hours with Units 1-3 of the project).

The Otay Mesa Road/Interim SR-905 Connector intersection operates at LOS B during the AM peak hour and LOS C during the PM peak hour under existing conditions. With the addition of 1,914 AM peak hour trips from Units 1-3 of the project, the AM peak hour delay will be increased by 58.7 seconds degrading the existing LOS to LOS E. With the addition of 2,041 PM peak hour trips from Units 1-3 of the project, the PM peak hour delay will be increased by 86.2 seconds degrading the existing LOS to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since the proposed project lowers the existing level of service from and acceptable LOS C or better to an unacceptable LOS E during the AM peak hour and LOS F during the PM peak hour, Units 1-3 of the proposed project is considered to have a significant direct impact at the Otay Mesa Road/Interim SR-905 Connector intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impact.

The Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue intersection operates at LOS A during the AM peak hour and LOS B during the PM peak hour under existing conditions. With the addition of 2,014 PM peak hour trips from Units 1-3 of the project to the intersection, the intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Units 1-3 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

Table 22 - Existing + Units 1-3 Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Units 1-3									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	**City**/Caltrans	Sig.	Int	26.0	C	29.2	C	53.0	D	1,319	27.0	No	41.4	D	1,405	12.2	No
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	**City**/Caltrans	Sig.	Int	6.9	A	11.5	B	27.8	C	1,361	20.9	No	12.9	B	1,451	1.4	No
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	**City**/Caltrans	Sig.	Int	9.0	A	18.8	B	28.0	C	1,426	19.0	No	24.2	C	1,520	5.4	No
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	**City**/Caltrans	Sig.	Int	15.6	B	27.0	C	15.0	B	1,468	(0.6)	No	34.8	C	1,565	7.8	No
Otay Mesa Rd (E-W)@ Piper Ranch Rd (N-S)	**County**/City/Caltrans	Sig.	Int	6.1	A	3.6	A	13.7	B	1,488	7.6	No	4.6	A	1,586	1.0	No
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	**County**/City/SBX	Sig.	Int	11.2	B	2.5	A	14.0	B	1,824	2.8	No	4.3	A	1,727	1.8	No
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	**County**/City/SBX	Sig.	Int	0.9	A	5.6	A	6.6	A	1,913	5.7	No	15.5	B	2,043	9.9	No
Otay Mesa Rd (E-W) @ SR-905 (N-S)	**County**/City/SBX	Sig.	Int	16.1	B	21.1	C	**74.8**	**E**	**1,914**	**58.7**	**Yes**	**107.3**	**F**	**2,041**	**86.2**	**Yes**
Otay Mesa Rd (E-W) @ Sanyo Av (N-S)	**County**/City	Sig.	Int	4.1	A	12.6	B	8.6	A	1,914	4.5	No	**213.3**	**F**	**2,041**	**200.7**	**Yes**
Otay Mesa Rd (E-W) @ Enrico Fermi Dr (N-S)	County	Sig.	Int	10.4	B	9.4	A	**283.5**	**F**	**2,127**	**273.1**	**Yes**	**137.6**	**F**	**2,268**	**128.2**	**Yes**
Otay Mesa Rd (E-W) @ Alta Rd (N-S)	County	AWSC	EB	32.5	D	9.8	A	**1447.8**	**F**	**1,677**	**1415.3**	**Yes**	**645.4**	**F**	**692**	**635.6**	**Yes**
			WB	0.0	A	0.0	A	14.9	B	211	14.9		**549.4**	**F**	**703**	549.4	
			NB	9.3	A	8.2	A	18.2	C	239	8.9		**815.3**	**F**	**873**	**807.1**	
			SB	9.8	A	18.3	C	13.3	B	0	3.5		**518.9**	**F**	**0**	500.6	
			Int	27.6	D	17.2	C	**1142.4**	**F**	**2,127**	**1114.8**		**642.1**	**F**	**2,268**	**624.9**	
Airway Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	11.1	B	14.5	B	11.3	B	0	0.2	No	15.7	C	0	1.2	No
			WB	10.9	B	13.9	B	11.5	B	23	0.6		18.4	B	78	4.5	
			NB	11.4	B	15.4	C	11.6	B	0	0.2		16.9	C	0	1.5	
			SB	13.3	B	12.2	B	13.7	B	0	0.4		13.2	B	0	1.0	
			Int	12.3	B	13.9	B	12.6	B	23	0.3		16.0	C	78	2.1	

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

Table 22 (Continued) - Existing + Units 1-3 Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Units 1-3									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Airway Rd (E-W) @ Sanyo Av (N-S)	City	AWSC	EB	10.1	B	9.9	A	10.2	B	0	0.1	No	10.2	B	0	0.3	No
			WB	8.1	A	9.1	A	8.4	A	23	0.3		10.9	B	78	1.8	
			NB	8.0	A	9.2	A	8.1	A	0	0.1		9.6	A	0	0.4	
			SB	9.6	A	8.0	A	9.7	A	0	0.1		8.4	A	0	0.4	
			Int	9.3	A	9.1	A	9.4	A	23	0.1		10.1	B	78	1.0	
Airway Rd (E-W) @ Paseo De Las Americas (N-S)	**County**/City	OWSC	NB	9.7	A	10.6	B	9.8	A	0	0.1	No	11.6	B	0	1.0	No
Airway Rd (E-W) @ Michael Faraday (N-S)	**County**/City	OWSC	NB	9.6	A	9.6	A	9.6	A	0	0.0	No	10.1	A	0	0.5	No
Airway Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	6.6	A	13.0	B	6.5	A	214	(0.1)	No	7.5	A	225	(5.5)	No
Siempre Viva Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	8.0	A	8.4	A	8.0	A	0	0.0	No	8.6	A	0	0.2	No
			WB	7.8	A	8.5	A	7.9	A	0	0.1		8.9	A	0	0.4	
			NB	7.6	A	8.4	A	7.6	A	0	0.0		8.6	A	0	0.2	
			SB	9.8	A	11.0	B	10.2	B	23	0.4		13.2	B	78	2.2	
			Int	9.2	A	9.9	A	9.5	A	23	0.3		11.5	B	78	1.6	
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva EB (N-S)	Caltrans	Sig.	Int	7.0	A	8.5	A	7.5	A	23	0.5	No	9.3	A	78	0.8	No
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva WB (N-S)	Caltrans	OWSC	SB	14.3	B	13.3	B	14.6	B	0	0.3	No	13.2	B	0	(0.1)	No
Siempre Viva Rd (E-W) @ SR-905 NB Ramp (N-S)	Caltrans	Sig.	Int	10.8	B	11.0	B	10.5	B	107	(0.3)	No	10.9	B	112	(0.1)	No
Siempre Viva Rd (E-W) @ Paseo De Las Americas (N-S)	City	Sig.	Int	24.7	C	40.0	D	24.3	C	107	(0.4)	No	41.6	D	112	1.6	No
Siempre Viva Rd (E-W) @ Michael Faraday (N-S)	City	TWSC	NB	14.5	B	13.2	B	16.6	C	0	2.1	No	14.8	B	0	1.6	No
			SB	15.9	C	12.3	B	17.9	C	0	2.0		13.7	B	0	1.4	
Siempre Viva Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	12.6	B	13.7	B	12.7	B	191	0.1	No	12.8	B	146	(0.9)	No
Alta Rd (N-S) @ Paseo De La Fuente (E-W)	County	Sig.	Int	2.7	A	12.6	B	2.2	A	0	(0.5)	No	12.6	A	0	0.0	No

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

The Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive intersection operates at LOS B during the AM peak hour and LOS A during the PM peak hour under existing conditions. With the addition of 2,127 AM peak hour trips and 2,268 PM peak hour trips from Units 1-3 of the project, the AM peak hour delay will be increased by 273.1 seconds and the PM peak hour delay will be increased by 128.2 seconds degrading the existing LOS to LOS F during both peak hours. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since the proposed project lowers the existing level of service from an acceptable LOS B or better to an unacceptable LOS F, Units 1-3 of the proposed project is considered to have a significant direct impact at the Otay Mesa Road(Old Otay Mesa Road)/Enrico Fermi Drive intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impact.

The Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection currently operates at LOS D during the AM peak hour and LOS C during the PM peak hour overall. With the addition of 2,127 AM peak hour trips (1,677 to the eastbound approach) from Units 1-3 of the project to the intersection, the eastbound approach and overall intersection will to degrade to LOS F. With the addition of 2,268 PM peak hour trips (873 to the northbound approach) from Units 1-3 of the project all approaches and the overall intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Units 1-3 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

All other intersections continue to operate at LOS D or better under existing plus Units 1-3 project conditions.

Existing + Units 1-3 – ILV Analysis

Table 23 summarizes the existing without and with project conditions intersection ILV analysis. As shown in Table 23, the Otay Mesa Road/SR-125 SB Ramp, Siempre Viva Road/SR-905 Southbound to Eastbound Siempre Viva Road and Siempre Viva Road/SR-905 Northbound Ramp operates under stable flow during the AM and PM peak hours under existing without and with project conditions. All other intersections operate under unstable flow or at over capacity. A copy of the ILV worksheets can be found in Appendix G.

The Otay Mesa Road/Heritage Road and Otay Mesa Road/Cactus Road currently operate under stable flow during both the AM and PM peak hours. With addition to Units 1-3 of the project the Otay Mesa Road/Heritage Road and Otay Mesa Road/Cactus Road intersections operate under unstable flow during both the AM and PM peak hours.

The Otay Mesa Road/Britannia Boulevard, Otay Mesa Road/La Media Road and Otay Mesa Road/SR-125 Northbound Ramp currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-3 of the project the Otay Mesa Road/Heritage Road, Otay Mesa Road/La Media Road and Otay Mesa Road/SR-125 Northbound Ramp intersections operate under stable flow during the AM peak hour and unstable flow during the PM peak hour.

The Otay Mesa Road/Piper Ranch Road currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-3 of the project the Otay Mesa Road/Piper Ranch Road intersection operate under unstable flow during both the AM peak hour and stable flow during the PM peak hour.

The Otay Mesa Road/SR-905 Connector currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-3 of the project the Otay Mesa Road/SR-905 Connector intersection operates under unstable flow during both the AM peak hour and at over capacity during the PM peak hour.

Table 23 – Existing + Units 1-3 ILV Analysis								
Intersection	Existing				Existing + Units 1-3			
	AM Peak Hour		PM Peak Hour		AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	1,115	Stable Flow	1,049	Stable Flow	1,485	Unstable Flow	1,397	Unstable Flow
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	1,129	Stable Flow	1,055	Stable Flow	1,424	Unstable Flow	1,353	Unstable Flow
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	708	Stable Flow	936	Stable Flow	1,163	Stable Flow	1,277	Unstable Flow
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	740	Stable Flow	924	Stable Flow	1,120	Stable Flow	1,266	Unstable Flow
Otay Mesa Rd (E-W) @ Piper Ranch Rd (N-S)	696	Stable Flow	766	Stable Flow	1,281	Unstable Flow	1,007	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	701	Stable Flow	677	Stable Flow	883	Stable Flow	982	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	417	Stable Flow	754	Stable Flow	1,101	Stable Flow	1,306	Unstable Flow
Otay Mesa Rd (E-W) @ SR-905 Connector (N-S)	700	Stable Flow	911	Stable Flow	1,455	Unstable Flow	1,620	Over Capacity
Siempre Viva (E-W) @ SR-905 SB to EB Siempre Viva (N-S)	363	Stable Flow	463	Stable Flow	375	Stable Flow	568	Stable Flow
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	372	Stable Flow	483	Stable Flow	373	Stable Flow	515	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour;
<1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
E-W = East-West Roadway; N-S = North-South Roadway

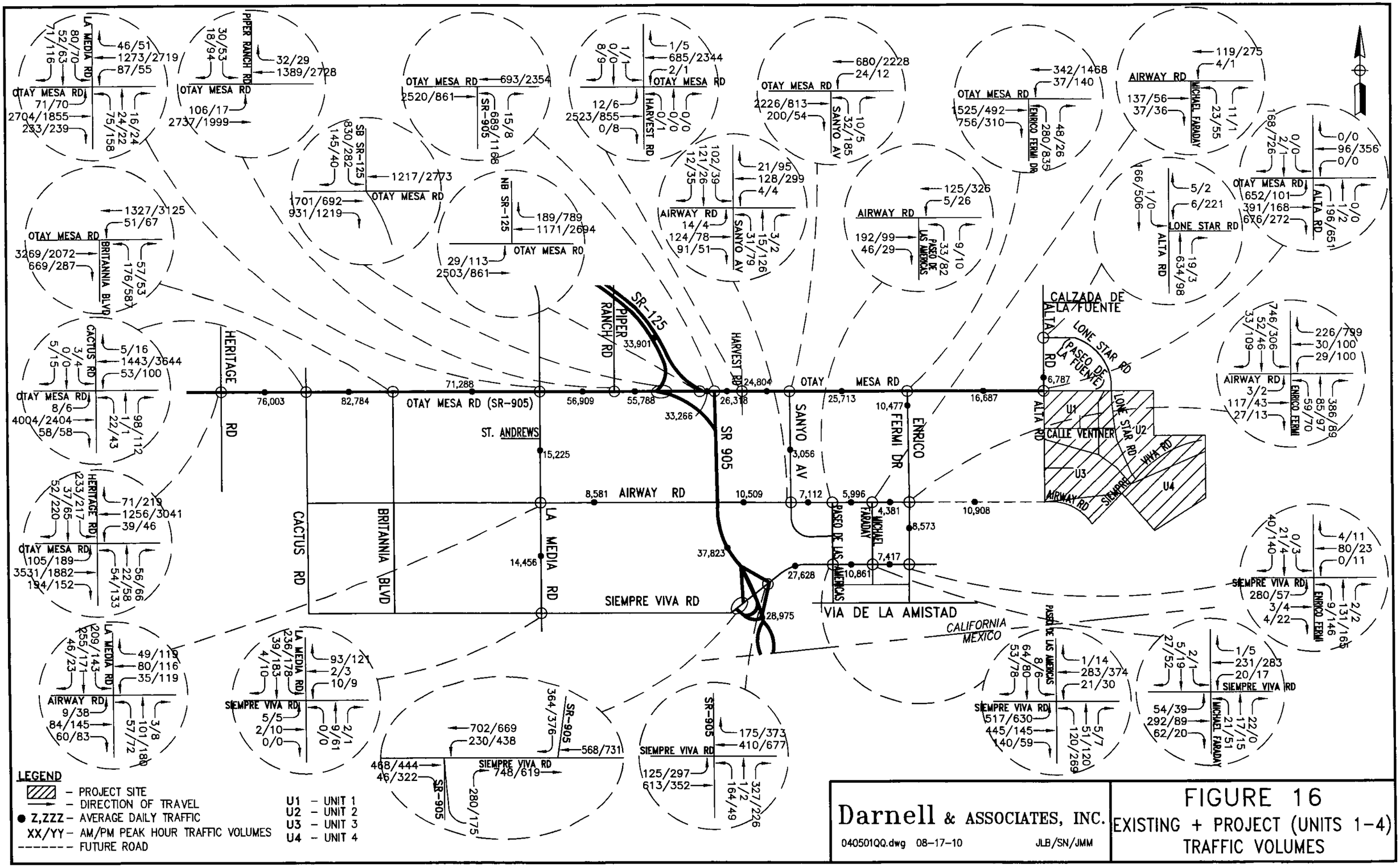
EXISTING PLUS PROJECT UNITS 1-4 LEVEL OF SERVICE CONDITIONS

This section analyzes the existing conditions plus Units 1-4 of the proposed project. Figure 16 illustrates the existing plus Units 1-4 project traffic volumes.

Existing + Units 1-4 – Roadway Segments

Table 24 summarizes the daily roadway segment level of service analysis under the existing without and with Units 1-4 project conditions. As shown in Table 24, the following roadway segments operate at an unacceptable LOS E or F under existing plus Units 1-4 project conditions:

- Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard (LOS F without and with Units 1-4 of the project);
- Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road (LOS E without the project and LOS F with Units 1-4 of the project);
- Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and the SR-125 (LOS C without the project and LOS E with Units 1-4 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive (LOS D without the project and LOS F with Units 1-4 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road (LOS C without the project and LOS F with Units 1-4 of the project);



Darnell & ASSOCIATES, INC.

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FIGURE 16
EXISTING + PROJECT (UNITS 1-4)
TRAFFIC VOLUMES

Table 24 – Existing + Units 1–4 Roadway Segment Daily LOS Summary

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Existing 2008			Existing + Units 1–4					
				ADT	V/C	LOS	Proj. Tr	ADT	V/C	LOS	ΔV/C	Sig
Interim SR-905 (Otay Mesa Rd)												
Heritage Rd to Cactus Rd	**City**/Caltrans	6P	60,000	**64,299**	**1.07**	**F**	**11,704**	**76,003**	**1.27**	**F**	**0.20**	**Yes**
Cactus Rd to Britannia Blvd	**City**/Caltrans	6P	60,000	**71,080**	**1.19**	**F**	**11,704**	**82,784**	**1.38**	**F**	**0.20**	**Yes**
Britannia Blvd to La Media Rd	**City**/Caltrans	6P	60,000	**58,999**	**0.98**	**E**	**12,289**	**71,288**	**1.19**	**F**	**0.21**	**Yes[(d)]**
La Media Rd to Piper Ranch Rd	**City**/Caltrans	5M	45,000	**44,523**	**0.99**	**E**	**12,386**	**56,909**	**1.26**	**F**	**0.27**	**Yes[(d)]**
Piper Ranch Rd to SR-125	**County**/City/Caltrans	6P	57,000	43,109	0.73	C	**12,679**	**55,788**	**0.98**	**E**	**0.22**	**Yes[(d)]**
Otay Mesa Rd (Old Otay Mesa Rd)												
SR-125 to Interim SR-905 Connector	**County**/City/Caltrans	5M(a)	47,000	16,686	0.36	A	16,580	33,266	0.71	C	0.35	No
Interim SR-905 Connector to Harvest Rd	**County**/City/Caltrans	5M(a)	47,000	9,738	0.21	A	16,580	26,318	0.56	B	0.35	No
Harvest Rd to Sanyo Av	**County**/City/Caltrans	4M	37,000	8,224	0.22	A	16,580	25,804	0.67	C	0.45	No
Sanyo Av to Enrico Fermi Dr	**County**/City	LC	16,200	9,133	0.56	D	**16,580**	**25,713**	**1.59**	**F**	**1.03**	**Yes**
Enrico Fermi Dr to Alta Rd	County	LC	16,200	6,928	0.43	C	**9,759**	**16,687**	**1.03**	**F**	**0.60**	**Yes**
Airway Road												
La Media Rd to SR-905	City	2C	15,000	8,093	0.54	C	488	8,581	0.57	C	0.03	No
SR-905 to Sanyo Av (c)	City	2C	10,000	**9,631**	**0.96**	**E**	**878**	**10,509**	**1.05**	**F**	**0.09**	**Yes**
Sanyo Av to Paseo de las Americas	City	4M	40,000	5,649	0.14	C	1,463	7,112	0.18	C	0.04	No
Paseo de las Americas to Michael Faraday Dr	**County**/City	4M	37,000	4,513	0.12	C	1,463	5,996	0.16	C	0.04	No
Michael Faraday Dr to Enrico Fermi Dr	**County**/City	LC	16,200	2,918	0.18	B	1,463	4,381	0.27	C	0.09	No
Enrico Fermi Dr to Airway Pl	County	4C	34,200	1,160	0.03	A	9,748	10,908	0.32	A	0.29	No
Airway Pl to Alta Rd	County	LC	16,200	**Does Not Exist**			9,748	9,748	0.60	D	0.60	No
Siempre Viva Road												
SR-905 NB to Paseo de las Americas	City	6P	60,000	26,653	0.44	B	975	27,628	0.46	B	0.02	No
Paseo de las Americas to Michael Faraday Dr	City	4C	30,000	9,886	0.33	A	975	10,861	0.36	B	0.03	No
Michael Faraday Dr to Enrico Fermi Dr	City	4C	30,000	6,442	0.22	A	975	7,417	0.25	A	0.04	No
Enrico Fermi Dr to Airway Pl	County	LC	16,200	830	0.05	A	0	830	0.05	A	0.00	No
La Media Road												
Otay Mesa Rd to St. Andrews	City	4C	30,000	15,225	0.51	C	0	15,225	0.51	C	0.00	No
SR-125												
North of Otay Mesa Rd	SBX	4-Fwy	(b)	30,000	0.33	A	3,901	33,901	0.37	A	0.04	No

City = Capacity of city segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of county segments is based on the upper limits of LOS E per the County of San Diego;
SBX = South Bay Expressway; **Bold** = Jurisdiction which capacity is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; Fwy = Freeway; 6P = 6-Lane Prime Arterial;
5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector; 2C= 2-Lane Collector with no fronting property; LC = Light Collector; TC = Town Collector
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half way between a 4M & 6P).
(b) Capacity based on Caltrans District 11 & HCM procedures, See Appendix L for LOS calculations.
(c) Field checks conducted in January 2010 found that this segment of Airway Road was currently closed to traffic.
(d) Table 25 of the Arterial Roadway Segment analysis shows that the roadway segment does not have a significant impact.

Table 24 (Continued) – Existing + Units 1–4 Roadway Segment Daily LOS Summary

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Existing 2008			Existing + Units 1–4					
				ADT	V/C	LOS	Proj. Tr	ADT	V/C	LOS	ΔV/C	Sig
Existing SR-905												
Otay Mesa Rd to Siempre Viva Rd	**City**/Caltrans	4M	40,000	**37,823**	**0.95**	**E**	**0**	**37,823**	**0.95**	**E**	**0.00**	**No**
South of Siempre Viva Rd	City/**Caltrans**	4-Fwy	(b)	28,000	032	A	975	28,975	0.33	A	0.01	No
Sanyo Avenue												
Otay Mesa Rd to Airway Rd	City	4C	30,000	2,666	0.09	A	390	3,056	0.10	A	0.01	No
Enrico Fermi Drive												
Otay Mesa Rd to Airway Rd	County	TC	19,000	2,681	0.14	A	7,796	10,477	0.55	D	0.41	No
Airway Rd to Siempre Viva Rd	City	4M	40,000	7,110	0.19	A	1,463	8,573	0.21	A	0.03	No

City = Capacity of city segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of county segments is based on the upper limits of LOS E per the County of San Diego;
SBX = South Bay Expressway; **Bold** = Jurisdiction which capacity is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; Fwy = Freeway; 6P = 6-Lane Prime Arterial;
5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector; 2C= 2-Lane Collector with no fronting property; LC = Light Collector; TC = Town Collector
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half way between a 4M & 6P).
(b) Capacity based on Caltrans District 11 & HCM procedures, See Appendix L for LOS calculations.
(c) Field checks conducted in January 2010 found that this segment of Airway Road was currently closed to traffic.
(d) Table 25 of the Arterial Roadway Segment analysis shows that the roadway segment does not have a significant impact.

- Airway Road between SR-905 and Sanyo Avenue (LOS E without project and LOS F with Units 1-4 of the project – Airway Road is presently closed by Caltrans); and
- State Route 905 between Otay Mesa Road and Siempre Viva Road (LOS E without and with Units 1-4 of the project).

The segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at an unacceptable LOS F under existing without and with Units 1-4 of the proposed project conditions. With the addition of 11,704 ADT from Units 1-4 of the project, the volume-to-capacity (v/c) ratio will be increased by 0.20 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will continue to operate at LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-4 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). Based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard also operate at an unacceptable LOS E during at least one of the peak hours during at least one direction of travel, thus even based on peak hour levels of operation Units 1-4 of the project is considered to have a significant direct impact on the segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard. See the arterial roadway segment section for more details. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segments of Interim SR-905 (Otay Mesa Road) from Britannia Boulevard and Piper Ranch Road operate at an unacceptable LOS E under existing conditions. With the addition of between 12,289 and 12,389 ADT from Units 1-4 of the project, the v/c ratio will be increased by a range of 0.21 to 0.27 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will degrade to LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-4 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). However, based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road operate at an acceptable level of service, further as shown later in Table 26 all signalized intersections along these segments operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

The segment of Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and SR-125 operates at an acceptable LOS C under existing conditions. With the addition of 12,679 ADT from Units 1-4 of the project, the v/c ratio will be increased by 0.22 and the level of service on this segment of Interim SR-905 (Otay Mesa Road) will degrade to LOS E. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-4 of the project lowers the existing level of service from LOS C to LOS E, based on average daily conditions, Units 1-4 of the project is considered to have a significant direct impact. However, based on the arterial roadway segment analysis the segment of Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and the SR-125 operates at an acceptable level of service, further as shown later in Table 26 both the Otay Mesa Road/Piper Ranch Road and Otay Mesa Road/SR-125 Southbound Ramp intersections operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive operates at LOS D under existing conditions. With the addition of 16,580 ADT from Units 1-4 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-4 of the project lowers the existing level of service from LOS D to LOS F, based on average daily conditions, Units 1-4 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road operates at LOS C under existing conditions. With the addition of 9,759 ADT from Units 1-4 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-4 of the project lowers the existing level of service from LOS C to LOS F, based on average daily conditions, Units 1-4 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive to Alta Road. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

Although based on February 2008 count data, the segment of Airway Road between SR-905 and Sanyo Avenue operates at LOS E under existing conditions. This segment of Airway Road; however, is currently closed to traffic for the construction of the structures at the SR-905/Airway Road intersection. By the time Units 1-4 of the proposed project comes on line this segment of Airway Road is anticipated to be re-opened, thus project traffic is added to the segment of Airway Road between the SR-905 and Sanyo Avenue. With the addition of 878 ADT from Units 1-4 of the proposed project the v/c ratio will be increased by 0.04 and the level of service on this segment of Airway Road will operate at LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-4 of the project has a significant direct impact on the segment of Airway Road between the SR-905 and Sanyo Avenue. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segment of SR-905 between Otay Mesa Road and Siempre Viva Road operates at LOS E under existing without and with Units 1-4 of the project conditions. Since the project is not adding any traffic to this segment the v/c ratio will not be increased with the addition of the project; thus, Units 1-4 of the proposed project is not considered to have a significant impact.

All other roadway segments continue to operate at LOS D or better under existing plus Units 1-4 of the proposed project conditions.

Existing + Units 1-4 – Arterial Roadway Segments

A review of the 24 hour counts sheets for Otay Mesa Road, found that the traffic flow is rather constant between the hours of 7:00am to 6:00 pm, compared to most 5-lane and 6-lane roadways which have high peak hour flows in the morning and afternoon. Further it should be noted that the Otay Mesa Port-of-Entry is open 24 hours a day with long lines crossing the border. This results in the spread of vehicles through the day resulting in increased daily traffic volumes. Since level of service based on daily volumes assumes significant increases in traffic counts during the peak hour periods, daily capacity analysis is not particularly accurate for Otay Mesa Road. Therefore, in addition to evaluating the roadway based on daily capacity it was also analyzed based on the Highway Capacity Manual's (HCM) Arterial Segment Methodology utilizing the Synchro software. Since the arterial segment analysis determines level of service based on the average travel speeds that occur on the roadway it provides a more accurate representation of the travel patterns and levels of service for Otay Mesa Road. The results of the analysis are summarized in Table 25.

Table 25 – Existing + Units 1-4 Arterial LOS Summary

AM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Units 1-4 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	37.5	A	17.5	D	(20.0)	No
		WB	32.4	B	31.5	B	(0.9)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	34.2	B	**16.7**	**E**	**(17.5)**	**Yes**
		WB	38.9	A	38.9	A	0.0	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	41.2	A	37.8	A	(3.4)	No
		WB	43.6	A	43.4	A	(0.2)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.5	A	22.0	D	(16.5)	No
		WB	33.0	B	32.2	B	(0.8)	
Interim SR-905 - Piper Ranch Rd to SR125 SB	City/Caltrans/ County	EB	34.0	B	20.8	D	(13.2)	No
		WB	29.5	B	27.3	C	(2.2)	

PM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Units 1-4 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	29.3	B	30.8	B	1.5	**Yes**
		WB	24.4	C	**16.1**	**E**	**(8.3)**	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	36.1	A	32.7	B	(3.4)	No
		WB	38.2	A	33.4	B	(4.8)	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	35.4	A	33.7	B	(1.7)	No
		WB	39.4	A	33.6	B	(5.8)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.1	A	36.2	A	(1.9)	No
		WB	28.3	B	19.2	D	(9.1)	
Interim SR-905 - Piper Ranch Rd to SR125 SB	City/Caltrans/ County	EB	35.8	B	31.3	B	(4.5)	No
		WB	34.2	B	30.7	B	(3.5)	

LOS=Level of Service; Speed is measured in miles per hour (mph); sig=signalized; Δ Speed = Increase (decrease) in speed;
SBX = South Bay Expressway, Occasionally adding traffic to a critical movement optimizes the segment resulting in increase in speed.

Based on daily roadway segment capacities summarized in Table 20, Units 1-4 of the project is part of significant impact to the roadway segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and the SR-125. The arterial roadway segment analysis summarized in Table 25, shows that the segments of Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and the SR-125 operates at LOS D or better during both peak hours. Thus, based on peak hour analysis, Units 1-4 of the proposed project is not considered to be part of a significant direct impact on the segments of Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and the SR-125.

The segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at LOS E during at least one of the peak hours during at least one direct of travel under existing plus Units 1-4 of the project conditions. Thus, Units 1-4 of the proposed project is considered to be a significant part of the direct impacts based on daily and peak hour analysis on the segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard. A copy of the Synchro worksheets can be found in Appendix D and H.

Existing + Units 1-4 – Intersections

Existing + Units 1-4 – Synchro Analysis

Table 26 summarizes the existing plus Units 1-4 project conditions intersection level of service summary during the AM and PM peak hours. (A copy of the Synchro worksheets can be found in Appendix D and H.) As shown in Table 26, the following intersections operate at LOS E or F during at least one of the peak hours under existing pus Units 1-4 project conditions:

- Interim SR-905 (Otay Mesa Road)/Heritage Road (LOS C without project and LOS E during the AM peak hour with Units 1-4);
- Otay Mesa Road/Interim SR-905 Connector (LOS C or better without project and LOS F with Units 1-4 of the project);
- Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue (LOS B without the project and LOS F during the PM peak hour with Units 1-4 of the project);
- Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive (LOS B or better without project and LOS F with Units 1-4 of the project); and
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road (Total intersection operates at LOS B or better without the project and LOS F during both peak hours with Units 1-4 of the project).

The Interim SR-905 (Otay Mesa Road)/Heritage Road intersection operates at LOS C during the AM peak hour under existing conditions. With the addition of 1,617 AM peak hour trips from Units 1-4 of the project the AM peak hour delay will be increased by 43.8 seconds degrading the existing LOS to LOS E. The increase in delay exceeds the two (2) seconds allowed per the City of San Diego's thresholds of significance for an intersection operating at LOS E, thus Units 1-4 of the project has a significant direct impact on the Interim SR-905 (Otay Mesa Road)/Heritage Road intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impact.

Table 26 - Existing + Units 1-4 Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Units 1-4									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	**City**/Caltrans	Sig.	Int	26.0	C	29.2	C	**69.8**	**E**	**1,617**	**43.8**	**Yes**	52.1	D	1,726	22.9	No
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	**City**/Caltrans	Sig.	Int	6.9	A	11.5	B	45.7	D	1,617	38.8	No	13.6	B	1,726	2.1	No
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	**City**/Caltrans	Sig.	Int	9.0	A	18.8	B	43.1	D	1,672	34.1	No	27.0	C	1,784	8.2	No
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	**City**/Caltrans	Sig.	Int	15.6	B	27.0	C	17.8	B	1,723	2.2	No	42.0	D	1,840	15.0	No
Otay Mesa Rd (E-W)@ Piper Ranch Rd (N-S)	**County**/City/Caltrans	Sig.	Int	6.1	A	3.6	A	27.7	C	1,750	21.6	No	5.0	A	1,869	1.4	No
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	**County**/City/SBX	Sig.	Int	11.2	B	2.5	A	15.7	B	2,176	4.5	No	5.1	A	2,044	2.6	No
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	**County**/City/SBX	Sig.	Int	0.9	A	5.6	A	5.7	A	2,289	4.8	No	39.0	D	2,444	33.4	No
Otay Mesa Rd (E-W) @ SR-905 (N-S)	**County**/City/SBX	Sig.	Int	16.1	B	21.1	C	**121.6**	**F**	**2,289**	**105.5**	**Yes**	**153.2**	**F**	**2,444**	**132.1**	**Yes**
Otay Mesa Rd (E-W) @ Sanyo Av (N-S)	**County**/City	Sig.	Int	4.1	A	12.6	B	23.5	B	2,289	19.4	No	**289.5**	**F**	**2,444**	**276.9**	**Yes**
Otay Mesa Rd (E-W) @ Enrico Fermi Dr (N-S)	County	Sig.	Int	10.4	B	9.4	A	**512.3**	**F**	**2,317**	**501.9**	**Yes**	**205.2**	**F**	**2,545**	**195.8**	**Yes**
Otay Mesa Rd (E-W) @ Alta Rd (N-S)	County	AWSC	EB	32.5	D	9.8	A	**800.6**	**F**	**1,065**	**768.1**	**Yes**	**310.6**	**F**	**438**	**300.8**	**Yes**
			WB	0.0	A	0.0	A	10.8	B	96	10.8		**104.7**	**F**	**356**	104.7	
			NB	9.3	A	8.2	A	14.0	B	187	4.7		**497.7**	**F**	**645**	**489.5**	
			SB	9.8	A	18.3	C	11.7	B	0	1.9		**518.9**	**F**	**0**	**500.6**	
			Int	27.6	D	17.2	C	**632.8**	**F**	**1,348**	**605.2**		**398.5**	**F**	**1,439**	**381.3**	
Airway Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	11.1	B	14.5	B	11.3	B	0	0.2	No	16.1	C	0	1.6	No
			WB	10.9	B	13.9	B	11.7	B	28	0.2		20.4	C	100	6.5	
			NB	11.4	B	15.4	C	11.7	B	0	0.3		17.4	C	0	2.0	
			SB	13.3	B	12.2	B	13.8	B	0	0.5		13.5	C	0	1.3	
			Int	12.3	B	13.9	B	12.7	B	28	0.4		16.9	C	100	3.0	

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

Table 26 (Continued) - Existing + Units 1-4 Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Units 1-4									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Airway Rd (E-W) @ Sanyo Av (N-S)	City	AWSC	EB	10.1	B	9.9	A	11.6	B	43	1.5	No	11.0	B	18	1.1	No
			WB	8.1	A	9.1	A	9.0	A	52	0.9		13.2	B	180	4.1	
			NB	8.0	A	9.2	A	8.5	A	0	0.5		10.3	B	0	1.1	
			SB	9.6	A	8.0	A	11.4	B	43	1.8		9.3	A	18	1.3	
			Int	9.3	A	9.1	A	10.7	B	138	1.4		11.7	B	216	2.6	
Airway Rd (E-W) @ Paseo De Las Americas (N-S)	**County**/City	OWSC	NB	9.7	A	10.6	B	10.9	B	0	1.2	No	13.8	B	0	3.2	No
Airway Rd (E-W) @ Michael Faraday (N-S)	**County**/City	OWSC	NB	9.6	A	9.6	A	10.4	B	0	0.8	No	11.8	B	0	2.2	No
Airway Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	6.6	A	13.0	B	29.4	C	1,373	22.8	No	20.2	C	1,536	7.2	No
Siempre Viva Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	8.0	A	8.4	A	8.1	A	0	0.1	No	8.7	A	0	0.3	No
			WB	7.8	A	8.5	A	7.9	A	0	0.1		9.0	A	0	0.5	
			NB	7.6	A	8.4	A	7.6	A	0	0.0		8.6	A	0	0.2	
			SB	9.8	A	11.0	B	10.3	B	28	0.5		14.0	B	100	3.0	
			Int	9.2	A	9.9	A	9.5	A	28	0.3		12.2	B	100	2.3	
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva EB (N-S)	Caltrans	Sig.	Int	7.0	A	8.5	A	7.6	A	28	0.6	No	9.6	A	100	1.1	No
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva WB (N-S)	Caltrans	OWSC	SB	14.3	B	13.3	B	14.7	B	0	0.4	No	13.1	B	0	0.2	No
Siempre Viva Rd (E-W) @ SR-905 NB Ramp (N-S)	Caltrans	Sig.	Int	10.8	B	11.0	B	10.4	B	134	(0.4)	No	10.9	B	143	(0.1)	No
Siempre Viva Rd (E-W) @ Paseo De Las Americas (N-S)	City	Sig.	Int	24.7	C	40.0	D	24.2	C	134	(0.5)	No	42.2	D	143	(2.2)	No
Siempre Viva Rd (E-W) @ Michael Faraday (N-S)	City	TWSC	NB	14.5	B	13.2	B	17.2	C	0	2.7	No	15.3	C	0	2.1	No
			SB	15.9	C	12.3	B	18.5	C	0	2.6		14.1	B	0	1.8	
Siempre Viva Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	12.6	B	13.7	B	12.7	B	240	0.1	No	13.0	B	186	(0.7)	No
Alta Rd (N-S) @ Paseo De La Fuente (E-W)	County	Sig.	Int	2.7	A	12.6	B	2.2	A	0	(0.5)	No	12.6	A	0	0.0	No

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

The Otay Mesa Road/Interim SR-905 Connector intersection operates at LOS B during the AM peak hour and LOS C during the PM peak hour under existing conditions. With the addition of 2,289 AM peak hour trips from Units 1-4 of the project, the AM peak hour delay will be increased by 105.5 seconds degrading the existing LOS to LOS F. With the addition of 2,444 PM peak hour trips from Units 1-4 of the project, the PM peak hour delay will be increased by 132.1 seconds degrading the existing LOS to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since the proposed project lowers the existing level of service from and acceptable LOS C or better to an unacceptable LOS F, Units 1-4 of the proposed project is considered to have a significant direct impact at the Otay Mesa Road/Interim SR-905 Connector intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impact.

The Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue intersection operates at LOS A during the AM peak hour and LOS B during the PM peak hour under existing conditions. With the addition of 2,444 PM peak hour trips from Units 1-4 of the project to the intersection, the intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Units 1-4 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive intersection operates at LOS B during the AM peak hour and LOS A during the PM peak hour under existing conditions. With the addition of 2,317 AM peak hour trips and 2,545 PM peak hour trips from Units 1-4 of the project, the AM peak hour delay will be increased by 205.2 seconds and the PM peak hour delay will be increased by 195.8 seconds degrading the existing LOS to LOS F during both peak hours. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since the proposed project lowers the existing level of service from an acceptable LOS B or better to an unacceptable LOS F, Units 1-4 of the proposed project is considered to have a significant direct impact at the Otay Mesa Road(Old Otay Mesa Road)/Enrico Fermi Drive intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impact.

The Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection currently operates at LOS D during the AM peak hour and LOS C during the PM peak hour overall. With the addition of 1,348 AM peak hour trips (1,065 to the eastbound approach) from Units 1-4 of the project to the intersection, the eastbound approach and overall intersection will to degrade to LOS F. With the addition of 1,439 PM peak hour trips (645 to the northbound approach) from Units 1-4 of the project all approaches and the overall intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Units 1-4 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

All other intersections continue to operate at LOS D or better under existing plus Units 1-4 project conditions.

Existing + Units 1-4 – ILV Analysis

Table 27 summarizes the existing without and with project conditions intersection ILV analysis. As shown in Table 27, the Otay Mesa Road/SR-125 SB Ramp, Siempre Viva Road/SR-905 Southbound to Eastbound Siempre Viva Road and Siempre Viva Road/SR-905 Northbound Ramp operates under stable flow during the AM and PM peak hours under existing without and with project conditions. All other intersections operate under unstable flow or at over capacity. A copy of the ILV worksheets can be found in Appendix H.

The Otay Mesa Road/Heritage Road currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-4 of the project the Otay Mesa Road/Heritage Road intersection operate at over capacity during the AM and under unstable flow during the PM peak hour.

The Otay Mesa Road/Cactus Road, Otay Mesa Road/Britannia Boulevard and Otay Mesa Road/SR-125 Northbound Ramp currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-4 of the project the Otay Mesa Road/Cactus Road, Otay Mesa Road/Britannia Boulevard and Otay Mesa Road/SR-125 Northbound Ramp intersections operate under unstable flow during both the AM and PM peak hours.

The Otay Mesa Road/La Media Road currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-4 of the project the Otay Mesa Road/La Media Road intersection operates under stable flow during the AM peak hour and unstable flow during the PM peak hour.

The Otay Mesa Road/Piper Ranch Road currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-4 of the project the Otay Mesa Road/Piper Ranch Road intersection operate under unstable flow during both the AM peak hour and stable flow during the PM peak hour.

The Otay Mesa Road/SR-125 Northbound Ramp currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-4 of the project Otay Mesa Road/SR-125 Northbound Ramp intersection operates under unstable flow during both the AM and PM peak hours.

The Otay Mesa Road/SR-905 Connector currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-4 of the project the Otay Mesa Road/SR-905 Connector intersection operates at over capacity during both the AM and PM peak hours.

Table 27 – Existing + Units 1-4 ILV Analysis

Intersection	Existing				Existing + Units 1-4			
	AM Peak Hour		PM Peak Hour		AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	1,115	Stable Flow	1,049	Stable Flow	1,541	Over Capacity	1,450	Unstable Flow
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	1,129	Stable Flow	1,055	Stable Flow	1,487	Unstable Flow	1,425	Unstable Flow
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	708	Stable Flow	936	Stable Flow	1,229	Unstable Flow	1,336	Unstable Flow
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	740	Stable Flow	924	Stable Flow	1,196	Stable Flow	1,331	Unstable Flow
Otay Mesa Rd (E-W) @ Piper Ranch Rd (N-S)	696	Stable Flow	766	Stable Flow	1,385	Unstable Flow	1,049	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	701	Stable Flow	677	Stable Flow	982	Stable Flow	1,067	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	417	Stable Flow	754	Stable Flow	1,252	Unstable Flow	1,404	Unstable Flow
Otay Mesa Rd (E-W) @ SR-905 Connector (N-S)	700	Stable Flow	911	Stable Flow	1,605	Over Capacity	1,761	Over Capacity
Siempre Viva (E-W) @ SR-905 SB to EB Siempre Viva (N-S)	363	Stable Flow	463	Stable Flow	370	Stable Flow	533	Stable Flow
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	372	Stable Flow	483	Stable Flow	378	Stable Flow	530	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour;
<1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
E-W = East-West Roadway; N-S = North-South Roadway

EXISTING PLUS PROJECT BUILD-OUT (UNITS 1-5) LEVEL OF SERVICE CONDITIONS

This section analyzes the existing conditions plus build-out of the proposed project (Units 1-5). Figure 17 illustrates the existing plus Units 1-5 project traffic volumes.

Existing + Project Build-Out (Units 1-5) – Roadway Segments

Table 28 summarizes the daily roadway segment level of service analysis under the existing without and with Units 1-5 project conditions. As shown in Table 28, the following roadway segments operate at an unacceptable LOS E or F under existing plus Units 1-5 project conditions:

- Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard (LOS F without and with Units 1-5 of the project);
- Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road (LOS E without the project and LOS F with Units 1-5 of the project);
- Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and the SR-125 (LOS C without the project and LOS E with Units 1-5 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive (LOS D without the project and LOS F with Units 1-5 of the project);
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road (LOS C without the project and LOS F with Units 1-5 of the project);
- Airway Road between SR-905 and Sanyo Avenue (LOS E without project and LOS F with Units 1-5 of the project – Airway Road is presently closed by Caltrans); and
- State Route 905 between Otay Mesa Road and Siempre Viva Road (LOS E without and with Units 1-5 of the project).

The segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at an unacceptable LOS F under existing without and with Units 1-5 of the proposed project conditions. With the addition of 12,768 ADT from Units 1-5 of the project, the volume-to-capacity (v/c) ratio will be increased by a range of 0.21to 0.22 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will continue to operate at LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-5 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). Based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard also operate at an unacceptable LOS E during at least one of the peak hours during at least one direction of travel, thus even based on peak hour levels of operation Units 1-5 of the project is considered to have a significant direct impact on the segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard. See the arterial roadway segment section for more details. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

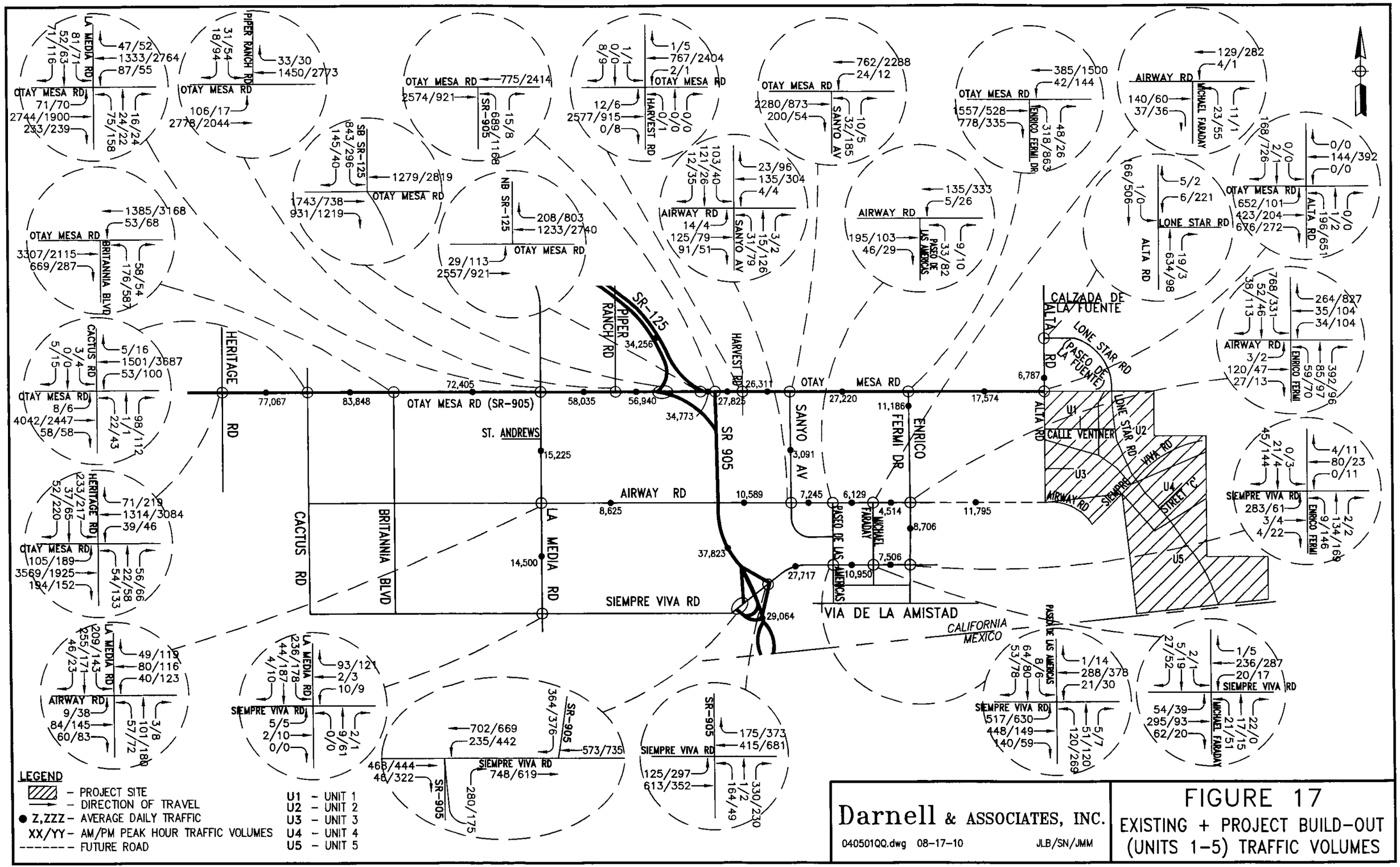

FIGURE 17
EXISTING + PROJECT BUILD-OUT
(UNITS 1-5) TRAFFIC VOLUMES

Table 28 – Existing + Project Build Out (Units 1–5) Roadway Segment Daily LOS Summary

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Existing 2008			Existing + Project Build Out (Units 1–5)					
				ADT	V/C	LOS	Proj. Tr	ADT	V/C	LOS	ΔV/C	Sig
Interim SR-905 (Otay Mesa Rd)												
Heritage Rd to Cactus Rd	**City**/Caltrans	6P	60,000	**64,299**	**1.07**	**F**	**12,768**	**77,067**	**1.28**	**F**	**0.21**	**Yes**
Cactus Rd to Britannia Blvd	**City**/Caltrans	6P	60,000	**71,080**	**1.19**	**F**	**12,768**	**83,848**	**1.40**	**F**	**0.22**	**Yes**
Britannia Blvd to La Media Rd	**City**/Caltrans	6P	60,000	**58,999**	**0.98**	**E**	**13,406**	**72,405**	**1.21**	**F**	**0.23**	**Yes[d]**
La Media Rd to Piper Ranch Rd	**City**/Caltrans	5M	45,000	**44,523**	**0.99**	**E**	**13,512**	**58,035**	**1.29**	**F**	**0.30**	**Yes[d]**
Piper Ranch Rd to SR-125	**County**/City/Caltrans	6P	57,000	43,109	0.73	C	**13,831**	**56,940**	**1.00**	**E**	**0.24**	**Yes[d]**
Otay Mesa Rd (Old Otay Mesa Rd)												
SR-125 to Interim SR-905 Connector	**County**/City/Caltrans	5M(a)	47,000	16,686	0.36	A	18,087	34,773	0.74	C	0.38	No
Interim SR-905 Connector to Harvest Rd	**County**/City/Caltrans	5M(a)	47,000	9,738	0.21	A	18,087	27,825	0.59	B	0.38	No
Harvest Rd to Sanyo Av	**County**/City/Caltrans	4M	37,000	8,224	0.22	A	18,087	26,311	0.71	C	0.49	No
Sanyo Av to Enrico Fermi Dr	**County**/City	LC	16,200	9,133	0.56	D	**18,087**	**27,220**	**1.68**	**F**	**1.12**	**Yes**
Enrico Fermi Dr to Alta Rd	County	LC	16,200	6,928	0.43	C	**10,646**	**17,574**	**1.08**	**F**	**0.65**	**Yes**
Airway Road												
La Media Rd to SR-905	City	2C	15,000	8,093	0.54	C	532	8,625	0.58	C	0.04	No
SR-905 to Sanyo Av(c)	City	2C	10,000	**9,631**	**0.96**	**E**	**958**	**10,589**	**1.06**	**F**	**0.10**	**Yes**
Sanyo Av to Paseo de las Americas	City	4M	40,000	5,649	0.14	C	1,596	7,245	0.18	C	0.04	No
Paseo de las Americas to Michael Faraday Dr	**County**/City	4M	37,000	4,513	0.12	C	1,596	6,129	0.17	C	0.05	No
Michael Faraday Dr to Enrico Fermi Dr	**County**/City	LC	16,200	2,918	0.18	B	1,596	4,514	0.28	C	0.10	No
Enrico Fermi Dr to Airway Pl	County	4C	34,200	1,160	0.03	A	10,635	11,795	0.34	A	0.31	No
Airway Pl to Alta Rd	County	LC	16,200	**Does Not Exist**			10,635	10,635	0.66	D	0.66	No
Siempre Viva Road												
SR-905 NB to Paseo de las Americas	City	6P	60,000	26,653	0.44	B	1,064	27,717	0.46	B	0.02	No
Paseo de las Americas to Michael Faraday Dr	City	4C	30,000	9,886	0.33	A	1,064	10,950	0.37	B	0.04	No
Michael Faraday Dr to Enrico Fermi Dr	City	4C	30,000	6,442	0.22	A	1,064	7,506	0.25	A	0.04	No
Enrico Fermi Dr to Airway Pl	County	4C	34,200	830	0.02	A	0	830	0.02	A	0.00	No
La Media Road												
Otay Mesa Rd to St. Andrews	City	4C	30,000	15,225	0.51	C	0	15,225	0.51	C	0.00	No
SR-125												
North of Otay Mesa Rd	SBX	4-Fwy	(b)	30,000	0.33	A	4,256	34,256	0.38	A	0.05	No

City = Capacity of city segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of county segments is based on the upper limits of LOS E per the County of San Diego;
SBX = South Bay Expressway; **Bold** = Jurisdiction which capacity is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio;
Fwy = Freeway; 6P = 6-Lane Prime Arterial; 5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector; 2C= 2-Lane Collector with no fronting property; LC = Light Collector;
TC = Town Collector
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half way between a 4M & 6P).
(b) Capacity based on Caltrans District 11 & HCM procedures, See Appendix L for LOS calculations.
(c) Field checks conducted in January 2010 found that this segment of Airway Road was currently closed to traffic.
(d) Table 29 of the Arterial Roadway Segment analysis shows that the roadway segment does not have a significant impact.

Table 28 (Continued) – Existing + Project Build Out (Units 1–5) Roadway Segment Daily LOS Summary

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Existing 2008			Existing + Project Build Out (Units 1–5)					
				ADT	V/C	LOS	Proj. Tr	ADT	V/C	LOS	ΔV/C	Sig
Existing SR-905												
Otay Mesa Rd to Siempre Viva Rd	**City**/Caltrans	4M	40,000	**37,823**	**0.95**	**E**	**0**	**37,823**	**0.95**	**E**	**0.00**	**No**
South of Siempre Viva Rd	City/**Caltrans**	4-Fwy	(b)	28,000	032	A	1,064	29,064	0.33	A	0.01	No
Sanyo Avenue												
Otay Mesa Rd to Airway Rd	City	4C	30,000	2,666	0.09	A	425	3,091	0.10	A	0.01	No
Enrico Fermi Drive												
Otay Mesa Rd to Airway Rd	County	TC	19,000	2,681	0.14	A	8,505	11,186	0.59	D	0.45	No
Airway Rd to Siempre Viva Rd	City	4M	40,000	7,110	0.19	A	1,596	8,706	0.22	A	0.04	No

City = Capacity of city segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of county segments is based on the upper limits of LOS E per the County of San Diego;
SBX = South Bay Expressway; **Bold** = Jurisdiction which capacity is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio;
Fwy = Freeway; 6P = 6-Lane Prime Arterial; 5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector; 2C= 2-Lane Collector with no fronting property; LC = Light Collector;
TC = Town Collector
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half way between a 4M & 6P).
(b) Capacity based on Caltrans District 11 & HCM procedures, See Appendix L for LOS calculations.
(c) Field checks conducted in January 2010 found that this segment of Airway Road was currently closed to traffic.
(d) Table 29 of the Arterial Roadway Segment analysis shows that the roadway segment does not have a significant impact.

The segments of Interim SR-905 (Otay Mesa Road) from Britannia Boulevard to Piper Ranch Road operate at an unacceptable LOS E under existing conditions. With the addition of between 13,406 and 13,512 ADT from Units 1-5 of the project, the v/c ratio will be increased by a range of 0.23 to 0.30 and the level of service on these segments of Interim SR-905 (Otay Mesa Road) will degrade to LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-5 of the project has a significant direct impact on these segments of Interim SR-905 (Otay Mesa Road). However, based on the arterial roadway segment analysis the segments of Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and Piper Ranch Road operate at an acceptable level of service, further as shown later in Table 30 all signalized intersections along these segments operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

The segment of Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and SR-125 operates at an acceptable LOS C under existing conditions. With the addition of 13,831 ADT from Units 1-5 of the project, the v/c ratio will be increased by 0.24 and the level of service on this segment of Interim SR-905 (Otay Mesa Road) will degrade to LOS E. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-5 of the project lowers the existing level of service from LOS C to LOS E, based on average daily conditions, Units 1-5 of the project is considered to have a significant direct impact. However, based on the arterial roadway segment analysis the segment of Interim SR-905 (Otay Mesa Road) between Piper Ranch Road and the SR-125 operates at an acceptable level of service, further as shown later in Table 30 both the Otay Mesa Road/Piper Ranch Road and Otay Mesa Road/SR-125 Southbound Ramp intersections operate at acceptable levels of service during the AM and PM peak hours. Therefore the project is not considered to have a significant direct impact. See the arterial roadway segment and intersection level of service analysis sections for more details.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive operates at LOS D under existing conditions. With the addition of 18,087 ADT from Units 1-5 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-5 of the project lowers the existing level of service from LOS D to LOS F, based on average daily conditions, Units 1-5 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road operates at LOS C under existing conditions. With the addition of 10,646 ADT from Units 1-5 of the project, this segment of Otay Mesa Road (Old Otay Mesa Road) will operate at LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since Units 1-5 of the project lowers the existing level of service from LOS C to LOS F, based on average daily conditions, Units 1-5 of the project is considered to have a significant direct impact on the segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive to Alta Road. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

Although based on February 2008 count data, the segment of Airway Road between SR-905 and Sanyo Avenue operates at LOS E under existing conditions. This segment of Airway Road; however, is currently closed to traffic for the construction of the structures at the SR-905/Airway Road intersection. By the time Units 1-5 of the proposed project comes on line this segment of Airway Road is anticipated to be re-opened, thus project traffic is added to the segment of Airway Road between the SR-905 and Sanyo Avenue. With the addition of 958 ADT from Units 1-5 of the proposed project the v/c ratio will be

increased by 0.10 and the level of service on this segment of Airway Road will operate at LOS F. The increase in v/c exceeds the 0.01 allowed per the City of San Diego's thresholds of significance for a roadway segment operating at LOS F, thus, based on average daily conditions Units 1-5 of the project has a significant direct impact on the segment of Airway Road between the SR-905 and Sanyo Avenue. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The segment of SR-905 between Otay Mesa Road and Siempre Viva Road operates at LOS E under existing without and with Units 1-5 of the project conditions. Since the project is not adding any traffic to this segment the v/c ratio will not be increased with the addition of the project; thus, Units 1-5 of the proposed project is not considered to have a significant impact.

All other roadway segments continue to operate at LOS D or better under existing plus Units 1-5 of the proposed project conditions.

Existing + Project Build-Out (Units 1-5) – Arterial Roadway Segments

A review of the 24 hour counts sheets for Otay Mesa Road, found that the traffic flow is rather constant between the hours of 7:00am to 6:00 pm, compared to most 5-lane and 6-lane roadways which have high peak hour flows in the morning and afternoon. Further it should be noted that the Otay Mesa Port-of-Entry is open 24 hours a day with long lines crossing the border. This results in the spread of vehicles through the day resulting in increased daily traffic volumes. Since level of service based on daily volumes assumes significant increases in traffic counts during the peak hour periods, daily capacity analysis is not particularly accurate for Otay Mesa Road. Therefore, in addition to evaluating the roadway based on daily capacity it was also analyzed based on the Highway Capacity Manual's (HCM) Arterial Segment Methodology utilizing the Synchro software. Since the arterial segment analysis determines level of service based on the average travel speeds that occur on the roadway it provides a more accurate representation of the travel patterns and levels of service for Otay Mesa Road. The results of the analysis are summarized in Table 29.

Based on daily roadway segment capacities summarized in Table 28, Units 1-5 of the project is part of significant impact to the roadway segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and the SR-125. The arterial roadway segment analysis summarized in Table 29, shows that the segments of Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and the SR-125 operates at LOS D or better during both peak hours. Thus, based on peak hour analysis, Units 1-5 of the proposed project is not considered to be part of a significant direct impact on the segments of Interim SR-905 (Otay Mesa Road) between Britannia Boulevard and the SR-125.

The segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard operate at LOS E during at least one of the peak hours during at least one direction of travel under existing plus Units 1-5 of the project conditions. Thus, Units 1-5 of the proposed project is considered to be a significant part of the direct impacts based on daily and peak hour analysis on the segments of Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard. See Section IX for a discussion on how the developer will mitigate its significant direct impacts. A copy of the Synchro worksheets can be found in Appendix D and I.

Table 29 – Existing + Project Buildout (Units 1-5) Arterial LOS Summary

AM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Units 1-5 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	37.5	A	**16.7**	**E**	**(20.8)**	**Yes**
		WB	32.4	B	31.4	B	(1.0)	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	34.2	B	**15.9**	**E**	**(18.3)**	**Yes**
		WB	38.9	A	38.9	A	0.0	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	41.2	A	36.5	A	(4.7)	No
		WB	43.6	A	43.3	A	(0.3)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.5	A	20.5	D	(18.0)	No
		WB	33.0	B	32.0	B	(1.0)	
Interim SR-905 - Piper Ranch Rd to SR125	City/Caltrans/ County	EB	34.0	B	20.5	D	(13.5)	No
		WB	29.5	B	26.8	C	(2.7)	

PM Peak Hour

Intersection	Jurisdiction	Direction of Travel	Existing (A)		Existing + Units 1-5 (B)			(B) – (A)
			Speed (mph)	LOS	Speed (mph)	LOS	Δ Speed	Sig. Impact
Interim SR-905 - Heritage Rd. to Cactus Rd.	City/Caltrans	EB	29.3	B	30.7	B	1.4	**Yes**
		WB	24.4	C	**15.4**	**E**	**(9.0)**	
Interim SR-905 - Cactus Rd. to Britannia Blvd.	City/Caltrans	EB	36.1	A	32.4	B	(3.7)	No
		WB	38.2	A	33.1	B	(5.1)	
Interim SR-905 - Britannia Blvd. to La Media Rd.	City/Caltrans	EB	35.4	A	33.5	B	(1.9)	No
		WB	39.4	A	33.0	B	(6.4)	
Interim SR-905 - La Media Rd. to Piper Ranch Rd.	City/Caltrans/ County	EB	38.1	A	36.0	A	(2.1)	No
		WB	28.3	B	18.2	D	(10.1)	
Interim SR-905 - Piper Ranch Rd to SR125	City/Caltrans/ County	EB	35.8	B	30.8	B	(5.0)	No
		WB	34.2	B	30.7	B	(3.5)	

LOS=Level of Service; Speed is measured in miles per hour (mph); sig=signalized; Δ Speed = Increase (decrease) in speed;
SBX = South Bay Expressway, Occasionally adding traffic to a critical movement optimizes the segment resulting in increase in speed.

Existing + Project Build-Out (Units 1-5) – Intersections

Existing + Project Build-Out (Units 1-5) – Synchro Analysis

Table 30 summarizes the existing plus Units 1-5 project conditions intersection level of service summary during the AM and PM peak hours. (A copy of the Synchro worksheets can be found in Appendix D and I.) As shown in Table 30, the following intersections operate at LOS E or F during at least one of the peak hours under existing pus Units 1-5 project conditions:

- Interim SR-905 (Otay Mesa Road)/Heritage Road (LOS C without project and LOS E during the AM peak hour with Units 1-5 of the project);
- Otay Mesa Road/Interim SR-905 Connector (LOS C or better without project and LOS F with Units 1-5 of the project);
- Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue (LOS B without the project and LOS F during the PM peak hour with Units 1-5 of the project);
- Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive (LOS B or better without project and LOS F with Units 1-5 of the project); and
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road (Total intersection operates at LOS B or better without the project and LOS F during both peak hours with Units 1-5 of the project).

The Interim SR-905 (Otay Mesa Road)/Heritage Road intersection operates at LOS C during the AM peak hour under existing conditions. With the addition of 1,713 AM peak hour trips from Units 1-5 of the project the AM peak hour delay will be increased by 46.8 seconds degrading the existing LOS to LOS E. The increase in delay exceeds the two (2) seconds allowed per the City of San Diego's thresholds of significance for an intersection operating at LOS E, thus Units 1-5 of the project has a significant direct impact on the Interim SR-905 (Otay Mesa Road)/Heritage Road intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impact.

The Otay Mesa Road/Interim SR-905 Connector intersection operates at LOS B during the AM peak hour and LOS C during the PM peak hour under existing conditions. With the addition of 2,425 AM peak hour trips from Units 1-5 of the project, the AM peak hour delay will be increased by 112.4 seconds degrading the existing LOS to LOS F. With the addition of 2,564 PM peak hour trips from Units 1-5 of the project, the PM peak hour delay will be increased by 152.4 seconds degrading the existing LOS to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since the proposed project lowers the existing level of service from and acceptable LOS C or better to an unacceptable LOS F, Units 1-5 of the proposed project is considered to have a significant direct impact at the Otay Mesa Road/Interim SR-905 Connector intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impact.

Table 30 - Existing + Project Build Out (Units 1-5) Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Project Build Out (Units 1-5)									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	**City**/Caltrans	Sig.	Int	26.0	C	29.2	C	**72.8**	**E**	**1,713**	**46.8**	**Yes**	54.8	D	1,812	25.6	No
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	**City**/Caltrans	Sig.	Int	6.9	A	11.5	B	48.9	D	1,713	42.0	No	13.9	B	1,812	2.4	No
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	**City**/Caltrans	Sig.	Int	9.0	A	18.8	B	46.5	D	1,771	37.5	No	28.0	C	1,872	9.2	No
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	**City**/Caltrans	Sig.	Int	15.6	B	27.0	C	19.8	B	1,828	4.2	No	44.7	D	1,932	17.7	No
Otay Mesa Rd (E-W)@ Piper Ranch Rd (N-S)	**County**/City/Caltrans	Sig.	Int	6.1	A	3.6	A	31.5	C	1,854	25.4	No	5.1	A	1,961	1.5	No
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	**County**/City/SBX	Sig.	Int	11.2	B	2.5	A	15.9	B	2,293	4.7	No	5.5	A	2,150	3.0	No
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	**County**/City/SBX	Sig.	Int	0.9	A	5.6	A	5.7	A	2,424	4.8	No	35.6	D	2,564	30.0	No
Otay Mesa Rd (E-W) @ SR-905 (N-S)	**County**/City/SBX	Sig.	Int	16.1	B	21.1	C	**128.5**	**F**	**2,425**	**112.4**	**Yes**	**173.5**	**F**	**2,564**	**152.4**	**Yes**
Otay Mesa Rd (E-W) @ Sanyo Av (N-S)	**County**/City	Sig.	Int	4.1	A	12.6	B	31.0	C	2,425	26.9	No	**299.9**	**F**	**2,564**	**287.3**	**Yes**
Otay Mesa Rd (E-W) @ Enrico Fermi Dr (N-S)	County	Sig.	Int	10.4	B	9.4	A	**569.2**	**F**	**2,457**	**558.8**	**Yes**	**220.7**	**F**	**2,670**	**271.3**	**Yes**
Otay Mesa Rd (E-W) @ Alta Rd (N-S)	County	AWSC	EB	32.5	D	9.8	A	**865.3**	**F**	**1,097**	**832.8**	**Yes**	**358.5**	**F**	**474**	**348.7**	**Yes**
			WB	0.0	A	0.0	A	11.9	B	144	11.9		**143.0**	**F**	**392**	143.0	
			NB	9.3	A	8.2	A	14.5	B	187	5.2		**497.7**	**F**	**645**	**489.5**	
			SB	9.8	A	18.3	C	12.1	B	0	2.3		**518.9**	**F**	**0**	500.6	
			Int	27.6	D	17.2	C	**672.1**	**F**	**1,428**	**644.5**		**410.8**	**F**	**1,511**	**393.6**	
Airway Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	11.1	B	14.5	B	11.3	B	0	0.2	No	16.2	C	0	1.7	No
			WB	10.9	B	13.9	B	11.8	B	33	(0.1)		20.8	C	104	6.9	
			NB	11.4	B	15.4	C	11.8	B	0	0.4		17.5	C	0	2.1	
			SB	13.3	B	12.2	B	13.9	B	0	0.6		13.5	B	0	1.3	
			Int	12.3	B	13.9	B	12.8	B	33	0.5		17.1	C	104	3.2	

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

Table 30 (Continued) - Existing + Project Build Out (Units 1-5) Intersection Level of Service Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Existing				Existing + Project Build Out (Units 1-5)									
				AM Peak		PM Peak		AM Peak					PM Peak				
				Delay	LOS	Delay	LOS	Delay	LOS	Proj. Trips	Δ Delay	Sig.	Delay	LOS	Proj. Trips	Δ Delay	Sig.
Airway Rd (E-W) @ Sanyo Av (N-S)	City	AWSC	EB	10.1	B	9.9	A	11.7	B	44	1.6	No	11.1	B	19	1.2	No
			WB	8.1	A	9.1	A	9.1	A	61	1.0		13.5	B	186	4.4	
			NB	8.0	A	9.2	A	8.5	A	0	0.5		10.4	B	0	1.2	
			SB	9.6	A	8.0	A	11.6	B	44	2.0		9.3	A	19	1.3	
			Int	9.3	A	9.1	A	10.8	B	149	1.5		11.9	B	224	2.8	
Airway Rd (E-W) @ Paseo De Las Americas (N-S)	**County**/City	OWSC	NB	9.7	A	10.6	B	11.0	B	0	1.3	No	14.0	B	0	3.4	No
Airway Rd (E-W) @ Michael Faraday (N-S)	**County**/City	OWSC	NB	9.6	A	9.6	A	10.5	B	0	0.9	No	11.9	B	0	2.3	No
Airway Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	6.6	A	13.0	B	30.8	C	1,457	24.2	No	21.3	C	1,612	8.3	No
Siempre Viva Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	8.0	A	8.4	A	8.1	A	0	0.1	No	8.7	A	0	0.3	No
			WB	7.8	A	8.5	A	7.9	A	0	0.1		9.0	A	0	0.5	
			NB	7.6	A	8.4	A	7.6	A	0	0.0		8.7	A	0	0.3	
			SB	9.8	A	11.0	B	10.3	B	33	0.5		14.2	B	104	3.2	
			Int	9.2	A	9.9	A	9.6	A	33	0.4		12.3	B	104	2.4	
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva EB (N-S)	Caltrans	Sig.	Int	7.0	A	8.5	A	7.7	A	33	0.7	No	9.7	A	104	1.2	No
Siempre Viva Rd (E-W) @ SR-905 SB off to Siempre Viva WB (N-S)	Caltrans	OWSC	SB	14.3	B	13.3	B	14.7	B	0	0.4	No	13.1	B	0	(0.2)	No
Siempre Viva Rd (E-W) @ SR-905 NB Ramp (N-S)	Caltrans	Sig.	Int	10.8	B	11.0	B	10.4	B	142	(0.4)	No	10.9	B	151	(0.1)	No
Siempre Viva Rd (E-W) @ Paseo De Las Americas (N-S)	City	Sig.	Int	24.7	C	40.0	D	24.3	C	142	(0.4)	No	42.3	D	151	2.3	No
Siempre Viva Rd (E-W) @ Michael Faraday (N-S)	City	TWSC	NB	14.5	B	13.2	B	17.4	C	0	2.9	No	15.4	C	0	2.2	No
			SB	15.9	C	12.3	B	18.7	C	0	2.8		14.2	B	0	1.9	
Siempre Viva Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/City	Sig.	Int	12.6	B	13.7	B	12.7	B	251	0.1	No	13.0	B	198	(0.7)	No
Alta Rd (N-S) @ Paseo De La Fuente (E-W)	County	Sig.	Int	2.7	A	12.6	B	2.2	A	0	(0.5)	No	12.6	A	0	0.0	No

LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled;
Int = Intersection; NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach;
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; **Bold** = Jurisdiction which significance criteria is based on
Δ Delay = Increase (decrease) in delay; Occasionally adding traffic to a critical movement optimizes the intersection resulting in a decrease in delay

The Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue intersection operates at LOS A during the AM peak hour and LOS B during the PM peak hour under existing conditions. With the addition of 2,668 PM peak hour trips from Units 1-5 of the project to the intersection, the intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Units 1-5 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

The Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive intersection operates at LOS B during the AM peak hour and LOS A during the PM peak hour under existing conditions. With the addition of 2,457 AM peak hour trips and 2,670 PM peak hour trips from Units 1-5 of the project, the AM peak hour delay will be increased by 558.8 seconds and the PM peak hour delay will be increased by 271.3 seconds degrading the existing LOS to LOS F during both peak hours. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to an unacceptable level (LOS E or F). Since the proposed project lowers the existing level of service from an acceptable LOS B or better to an unacceptable LOS F, Units 1-5 of the proposed project is considered to have a significant direct impact at the Otay Mesa Road(Old Otay Mesa Road)/Enrico Fermi Drive intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impact.

The Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection currently operates at LOS D during the AM peak hour and LOS C during the PM peak hour overall. With the addition of 1,428 AM peak hour trips (1,097 to the eastbound approach) from Units 1-5 of the project, the eastbound approach and overall intersection will to degrade to LOS F. With the addition of 1,511 PM peak hour trips (645 to the northbound approach) from Units 1-5 of the project all approaches and the overall intersection will degrade to LOS F. Per the PFE a significant impact will occur if the project reduces an acceptable level of service (LOS D or better) to and unacceptable level (LOS E or F). Thus, per the PFE Units 1-5 of the project is considered to have a significant direct impact at the Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection. See Section IX for a discussion on how the developer will mitigate its significant direct impacts.

All other intersections continue to operate at LOS D or better under existing plus Units 1-5 project conditions.

Existing + Project Build-Out (Units 1-5) – ILV Analysis

Table 31 summarizes the existing without and with project conditions intersection ILV analysis. As shown in Table 31, the Otay Mesa Road/SR-125 SB Ramp, Siempre Viva Road/SR-905 Southbound to Eastbound Siempre Viva Road and Siempre Viva Road/SR-905 Northbound Ramp operates under stable flow during the AM and PM peak hours under existing without and with project conditions. All other intersections operate under unstable flow or at over capacity. A copy of the ILV worksheets can be found in Appendix I.

The Otay Mesa Road/Heritage Road currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-5 of the project the Otay Mesa Road/Heritage Road intersection operate at over capacity during the AM and under unstable flow during the PM peak hour.

The Otay Mesa Road/Cactus Road, Otay Mesa Road/Britannia Boulevard and Otay Mesa Road/SR-125 Northbound Ramp currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-5 of the project the Otay Mesa Road/Cactus Road, Otay Mesa Road/Britannia Boulevard and Otay Mesa Road/SR-125 Northbound Ramp intersections operate under unstable flow during both the AM and PM peak hours.

The Otay Mesa Road/La Media Road currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-5 of the project the Otay Mesa Road/La Media Road intersection operates under stable flow during the AM peak hour and unstable flow during the PM peak hour.

The Otay Mesa Road/Piper Ranch Road currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-5 of the project the Otay Mesa Road/Piper Ranch Road intersection operate under unstable flow during both the AM peak hour and stable flow during the PM peak hour.

The Otay Mesa Road/SR-905 Connector currently operates under stable flow during both the AM and PM peak hours. With addition to Units 1-5 of the project the Otay Mesa Road/SR-905 Connector intersection operates at over capacity during both the AM and PM peak hours.

Table 31 – Existing + Project Build-Out (Units 1-5) ILV Analysis

Intersection	Existing				Existing + Project Build-Out (Units 1-5)			
	AM Peak Hour		PM Peak Hour		AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	1,115	Stable Flow	1,049	Stable Flow	1,554	Over Capacity	1,464	Unstable Flow
Otay Mesa Rd (E-W) @ Cactus Rd (N-S)	1,129	Stable Flow	1,055	Stable Flow	1,490	Unstable Flow	1,415	Unstable Flow
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	708	Stable Flow	936	Stable Flow	1,244	Unstable Flow	1,350	Unstable Flow
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	740	Stable Flow	924	Stable Flow	1,200	Stable Flow	1,346	Unstable Flow
Otay Mesa Rd (E-W) @ Piper Ranch Rd (N-S)	696	Stable Flow	766	Stable Flow	1,406	Unstable Flow	1,072	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	701	Stable Flow	677	Stable Flow	1,003	Stable Flow	1,088	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	417	Stable Flow	754	Stable Flow	1,279	Unstable Flow	1,427	Unstable Flow
Otay Mesa Rd (E-W) @ SR-905 Connector (N-S)	700	Stable Flow	911	Stable Flow	1,632	Over Capacity	1,791	Over Capacity
Siempre Viva (E-W) @ SR-905 SB to EB Siempre Viva (N-S)	363	Stable Flow	463	Stable Flow	391	Stable Flow	593	Stable Flow
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	372	Stable Flow	483	Stable Flow	383	Stable Flow	537	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour;
<1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
E-W = East-West Roadway; N-S = North-South Roadway

SECTION V – CUMULATIVE (YEAR 2020) CONDITIONS

APPROVED/PENDING PROJECTS

In discussions with the County of San Diego, it was determined that the impacts of cumulative development, caused by placing all cumulative trips on the network at one time, exceeded the rate of the real estate market to potentially absorb developed industrial land. The County's decision was based on a review of the December 15, 2006 *Addendum to Real Estate Market Analysis*, which was prepared by Economics Research Associates (ERA) for the City of San Diego during the preparation of the Otay Mesa Community Plan. The percentage of development that could be expected by the year 2020 was estimated by taking the total industrial acreage forecast for the unincorporated County portion of the East Otay Mesa area between 2006 and 2020, based on the high scenario growth rate (or 135 acres), divided by the total acreage of industrial subdivisions proposed in the County (or 1,068 acres). A copy of excerpts from the ERA market forecast is provided in Appendix B.

In the unincorporated County of San Diego, there are seventeen (17) cumulative projects, including many large-scale subdivisions and the proposed project, which are located in the Otay Mesa Specific Plan Area. The methodology used to apply the ERA market analysis was as follows:

- Traffic generated by projects processed as Major Use Permits, Interim Use Permits, and Site Plans would be applied at 100% of their planned development capacity by the year 2020. Nine (9) of the seventeen (17) approved/pending projects met that criteria and marketing assumptions in the ERA analysis and were applied to this group of projects.

- Traffic generated by projects processed as subdivisions (Tentative Maps, Tentative Parcel Maps) would be applied at a reduced percentage of the planned development capacity by the year 2020. The reduced percentage was based on market absorption data in the ERA market study. This group included the remaining eight (8) approved/pending projects. The County estimated that these eight (8) projects, based on the market absorption factors described above, could reasonably develop a calculated percentage of the total acreage available for future development. This percentage was determined to be approximately 13% of their total development capacity by the year 2020. Thus the cumulative traffic volumes attributed to these large subdivisions was factored at 13% of total traffic volumes.

This methodology presents a more reasonable approach to cumulative traffic analysis by recognizing the real-estate/market-absorption factors that influence the rate at which industrial land is subdivided and made fully operational by development and therefore the cumulative traffic impacts realized. This methodology also takes into consideration the fact that developers must process a second permit, called a Site Plan, before development can occur within subdivisions located in the East Otay Mesa Specific Plan Area. The County will monitor market trends and the level of development in the East Otay Mesa area to ensure that the assumptions utilized above remain valid and reasonable. In addition, the cumulative project list will be updated, as appropriate, when Site Plans are submitted to the County. Traffic generated by projects with Site Plans would then be applied at 100%.

Table 32 summarizes the list of approved/pending projects and identifies which ones were assumed by the County of San Diego to be developed at 100% or 13% of its planned development by the year 2020. Figure 18 illustrates the location of the approved/pending projects in the Otay Mesa area of the County of San Diego. As shown in Table 32, the approved/pending projects within the County of San Diego are estimated to generate a total of approximately 155,932 average daily trips, of which, approximately 52,045 ADT are anticipated to be added to the roadway network by the year 2020.

Table 32 – Summary of Approved/Pending Projects in County of San Diego

Map ID #	Project Name	County Project #	Project Location	# Acres	Land Use	Trip Generation		
						Total ADT	% Cumulative Traffic applied to year 2020	
							%	ADT
Project's Processing Site Plans								
1	California Crossings	P06-102 TPM 21046	NW Corner of Otay Mesa Rd & Harvest Rd	29.6 Acres	325.502 ksf of Community Shopping Ctr	22,785	100%	22,785
2	CCA San Diego Correctional Facility	MPA 09-029 P 06-074	n/o Calzada De La Fuente, e/o Alta Rd	37.0 Acres	2,132 Bed Correctional Detention Facility	2,323	100%	2,323
3	COPART County Sales Yard Time Extension (a)	P 88-020W1	SW Corner of Otay Mesa Rd & Alta Rd	38.2 Acres	Auto Auction	846	100%	846
4	FEDEX Site Plan	S08-018	NE Corner of Airway Rd & Paseo De Las Americas	18.9 Acres	FEDEX Distribution Center	1,598	100%	1,598
5	Insurance Auto Auctions	P00-012TE	NW Corner of Otay Mesa Rd & Alta Rd	38.2 Acres	Auto Auction	354	100%	354
6	Salvage Yards/ National Enterprises Recycling	P 98-001	East & West Side of Alta Rd, n/o Otay Mesa Rd	162.0 Acres	Auto Recycling & Salvage Yards	2,408	100%	2,408
7	Sunroad Interim Uses -Sunroad Centre I Harvest Ranch Nursery	P 09-009 P 09-005	n/o Otay Mesa Rd btwn Harvest Rd & Vann Centre Blvd	138.0 Acres	Nursery	14	100%	14
8	Travel Plaza	P 98-024W1 TPM 20414	e/o Enrico Fermi Drive, btwn Otay Mesa Rd & Airway Rd	83.6 Acres	Truck Stop	5,116	100%	5,116
9	Vulcan	S 07-038	NE quadrant of Lone Star Rd (Paseo De La Fuente) & Otay Mesa Rd	12.7 Acres	Asphalt & Concrete Plant	1,078	100%	1,078
			Sub-Total:	**558.2 Acres**		**36,522**	**100%**	**36,522**
Project's Processing Tentative Maps								
10	International Industrial Park	TM 5549	n/o Lone Star Rd btwn Vann Centre Blvd & e/o Enrico Fermi Dr	170.6 Acres	111.05 Net Acres Business/Technology Park	13,326	13%	1,732
11	OMC Properties	TPM 21140	NE Corner of Otay Mesa Rd & Alta Rd	49.8 Acres	30.1 Acres Technology Business Park & 8.4 Acres Commercial Retail	9,380	13%	1,219
12	Otay Business Park	TM 5505	s/o Airway Rd, East of Alta Rd	161.6 Acres	2092.9 ksf of Industrial/ Business Park	33,486	13%	4,353
13	Otay Crossings Commerce Park	TM 5405 SPA 04-006	SE Quadrant of Otay Mesa Rd & Alta Rd	311.4 Acres	Mixed Industrial & Temporary Truck Parking	21,279	13%	2,766
14	Sunroad/Otay Tech Centre	SPA 07-003 TM 5538	n/o Otay Mesa Rd btwn Harvest Rd & Vann Centre Blvd	253.1 Acres	130 Acres Technology Business Park & 27 Acres Commercial Retail	30,566	13%	3,974
15	Piper Otay Park	TM 5527	NE quadrant of Otay Mesa Rd & Piper Ranch Rd	25.0 Acres	Light Industrial	1,612	13%	210
16	South County Commerce Centre	TM 5394R	SW Corner of Otay Mesa Rd & Enrico Fermi Dr	80.0 Acres	Industrial	7,159	13%	931
17	Saeed Revised Map	TM 5304R	n/o Airway Rd btwn Paseo De Las Americas & Michael Faraday Dr	16.1 Acres	Industrial	2,602	13%	338
			Sub-Total:	**1,067.6 Acres**		**119,410**	**13%**	**15,523**
			Grand-Total:	**1,625.8 Acres**		**155,932**	**-**	**52,045**

(a) Existing Interim Use processing a time Extension
NW = Northwest; NE = Northeast; SW = Southwest; SE = Southeast; n/o = north of; s/o = south of; e/o = East of; btwn = between

LIST OF CUMMULATIVE PROJECTS

PROJECT'S THAT ARE PROCESSING SITE PLANS

1. CALIFORNIA CROSSINGS
2. CCA SAN DIEGO CORRECTIONAL FACILITY
3. COPART COUNTY SALES YARD
4. FEDEX SITE PLAN
5. INSURANCE AUTO AUCTIONS
6. SALVAGE YARDS/NATIONAL ENTERPRISE RECYCLING
7. SUNROAD CENTRE I HARVEST RANCH NURSERY
8. TRAVEL PLAZA
9. VULCAN

PROJECT'S THAT ARE PROCESSING TENTATIVE MAPS

10. INTERNATIONAL INDUSTRIAL PARK
11. OMC PROPERTIES
12. OTAY BUSINESS PARK
13. OTAY CROSSINGS COMMERCE PARK
14. SUNROAD/OTAY TECH CENTRE
15. PIPER OTAY PARK
16. SOUTH COUNTY COMMERCE CENTRE
17. SAEED REVISED MAP

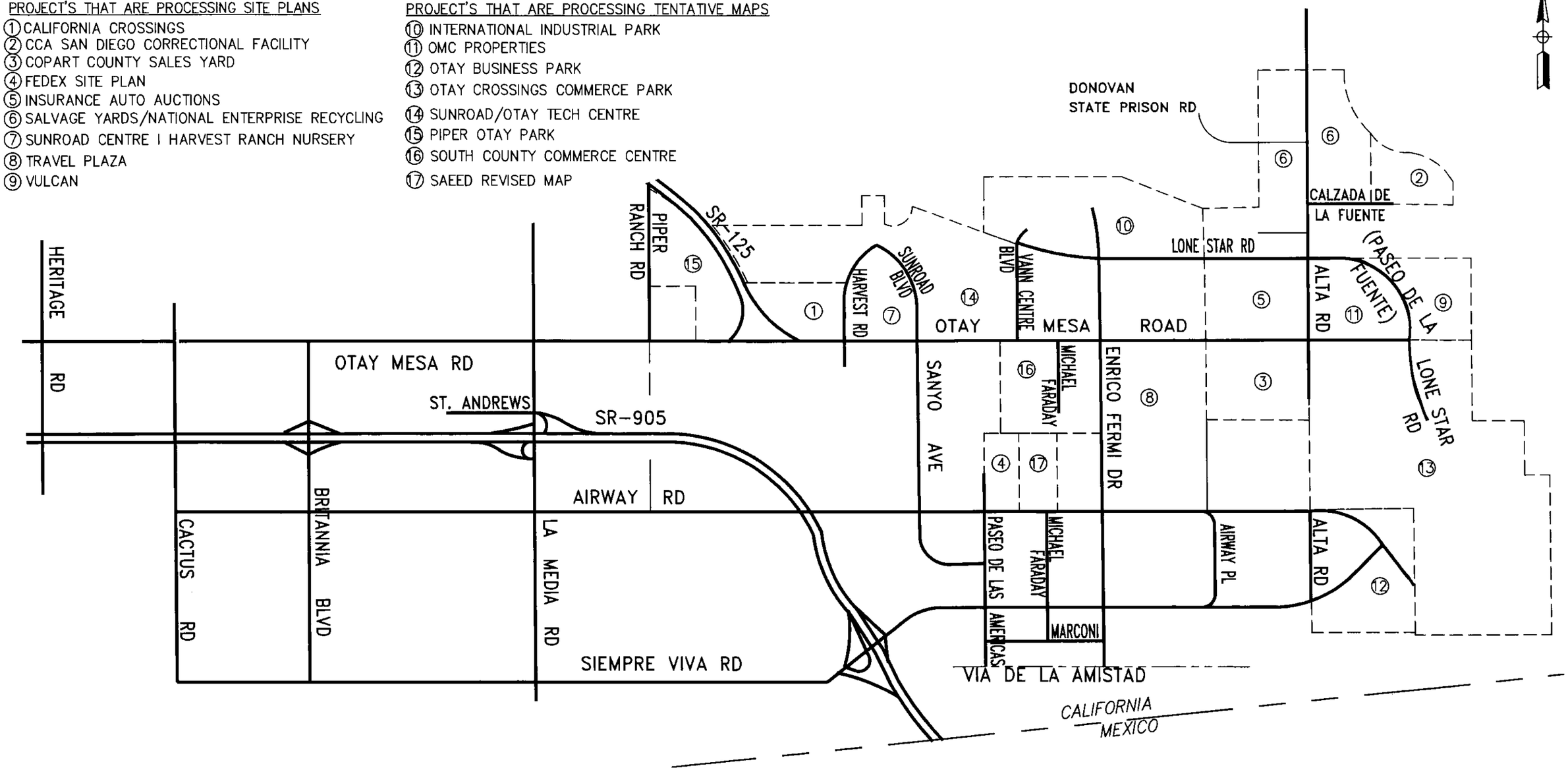

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FIGURE 18

LOCATION OF APPROVED/PENDING PROJECT IN EAST OTAY MESA

APPROVED/PENDING PROJECTS ACCESS

Three (3) of the approved/pending projects listed in Table 32: (1) International Industrial Park, TM 5549 (2) Otay Business Park, TM 5505; and (3) Otay Crossings Commerce Park, TM 5405 do not have project frontage along existing roadways. Thus, in order to include the traffic generated by these projects in the cumulative analysis some assumptions have to be made as to how the traffic associated with each of these projects would get to/from the existing roadway network. Figure 19 provides an illustration of the assumed points of access for each of these projects.

Each project's traffic will be assigned to the network presented on Figure 19. As each project is processed it will identify the facilities needed to accommodate its development and pay the County's Traffic Impact Fees (TIF) to mitigate cumulative impacts. It should be noted, that as illustrated in Figure 19, the extension of Airway Road and Siempre Viva Road east of Airway Place are only needed to provide access to the Otay Business Park (TM 5505) project and no other approved/pending projects traffic were assigned to these roadway segments under cumulative (2020) conditions.

CUMULATIVE (YEAR 2020) WITH SR-905 1A &1B ROADWAY CONDITIONS

In addition to the roads that will be required to be constructed to provide access to the (1) International Industrial Park, TM 5549; (2) Otay Business Park, TM 5505; and (3) Otay Crossings Commerce Park, TM 5405 projects as described above, the development of several of the approved/pending projects listed in Table 32 will also result in the construction/modifications of existing intersections or roadway improvements in order to provide access to the project site. It is reasonable to assume the completion of the intersections modifications and roadway improvements because the cumulative projects associated with the improvements could not open without the completion of the assumed improvements. Since all the cumulative projects were assumed to be constructed by the year 2020, the following new roadway facilities and intersection modifications within the County of San Diego were assumed to be constructed under the cumulative conditions. The roadway conditions listed here are based on the pending projects constructing facilities required for their development.

- SR-905 Phases 1A & 1B were assumed to be completed and operational. See Section I for more details on the description of Phases 1A &1B of SR-905.

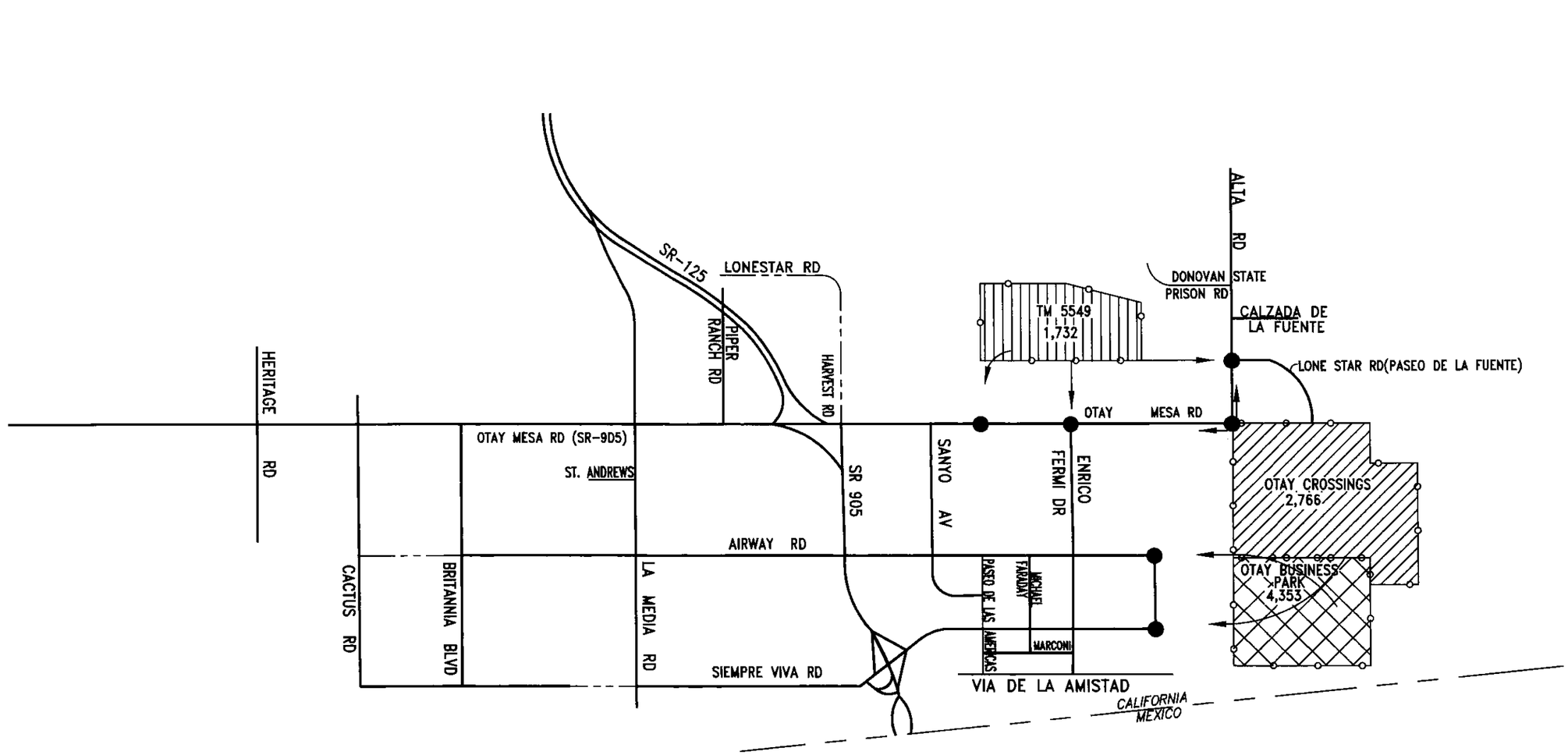
- The Interim Signalized SR-905 Intersection at Otay Mesa (Old Otay Mesa Road) will be removed upon opening of Phase 1A of SR-905.

- The segment of Interim SR-905 between Otay Mesa Road and Airway Road will be removed upon opening of Phase 1A of SR-905.

- Old Otay Mesa Road between Alta Road and Lone Star Road (Paseo De La Fuente) (currently a dirt road) will be built to the standards of a Light Collector (provides access for the following cumulative projects: Vulcan Materials [cumulative traffic assumed at 100%] and Otay Crossing Commerce Park [cumulative traffic assumed at 13%]);

- Airway Road between Airway Place and Siempre Viva Road (currently does not exist) will be built to the equivalence of a Light Collector to provide two (2) travel lanes (provides access for the following cumulative project: Otay Business Park [cumulative traffic assumed at 13%] without this roadway there would be no access to the Otay Business Park project);

- Siempre Viva Road between the CHP entrance east of Enrico Fermi Drive and Airway Place (currently only provides 2 westbound travel lanes) will be improved to the standards of a Light Collector Road (provides access for the following cumulative project: Otay Business Park [cumulative traffic assumed at 13%] without this roadway there would be no access to the Otay Business Park project);



LEGEND

- ● – CONNECTION POINT FOR CUMULATIVE PROJECTS
- – EXISTING DIRT ROAD
- – EXISTING PAVED ROADWAY FACILITY
- –○–○– – CUMULATIVE PROJECTS BOUNDARY

NOTE: ADT'S REPRESENT THE TRAFFIC GENERATED BY APROXIMATELY 13% OF THE DEVELOPMENT

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FIGURE 19

PROPOSED METHOD OF CONNECTING CUMULATIVE PROJECT TRAFFIC TO EXISTING CIRCULATION SYSTEM

- Siempre Viva Road between Airway Place and Lone Star Road (currently does not exist) will be built to the equivalence of a Light Collector Road (provides access for the following cumulative project: Otay Business Park [cumulative traffic assumed at 13%] without this roadway there would be no access to the Otay Business Park project);

- Harvest Road between Old Otay Mesa Road and Sunroad Boulevard (currently a dirt road) will be built to the standards of a Modified 4-Lane Industrial/Commercial Collector to accommodate a painted median and turn lanes at intersections (provides access for the following cumulative projects: California Crossings [cumulative traffic assumed at 100%] and Otay Tech Centre [Sunroad] [cumulative traffic assumed at 13%]);

- The Otay Mesa Road (SR-905)/Piper Ranch Road intersection has been modified to a four (4) legged intersection (south leg does not currently exist, provides access for the following cumulative projects: Interstate Industrial Centre [cumulative traffic assumed at 13%]); and Sunroad Otay Park [cumulative traffic assumed at 13%]);

- The Old Otay Mesa Road/Sanyo Avenue-Sunroad Boulevard intersection has been constructed as a four (4) legged intersection (north leg does not currently exist, provides access for the following cumulative project: Otay Tech Centre [cumulative traffic assumed at 13%]);

- The Old Otay Mesa Road/Vann Centre Boulevard intersection has been constructed as a T-intersection (Vann Center Boulevard does not currently exist, provides access for the following cumulative projects: Otay Tech Centre [cumulative traffic assumed at 13%] and International Industrial Park[cumulative traffic assumed at 13%]);

- The Old Otay Mesa Road/Enrico Fermi Drive intersection has been modified to a four (4) legged intersection (north leg does not currently exist access, provides access for the following cumulative project: International Industrial Park [cumulative traffic assumed at 13%]);

- The Alta Road/Lone Star Road (Paseo De La Fuente) intersection has been modified to a four (4) legged intersection (west leg currently does not exist, provides access for the following cumulative project: International Industrial Park [cumulative traffic assumed at 13%]);

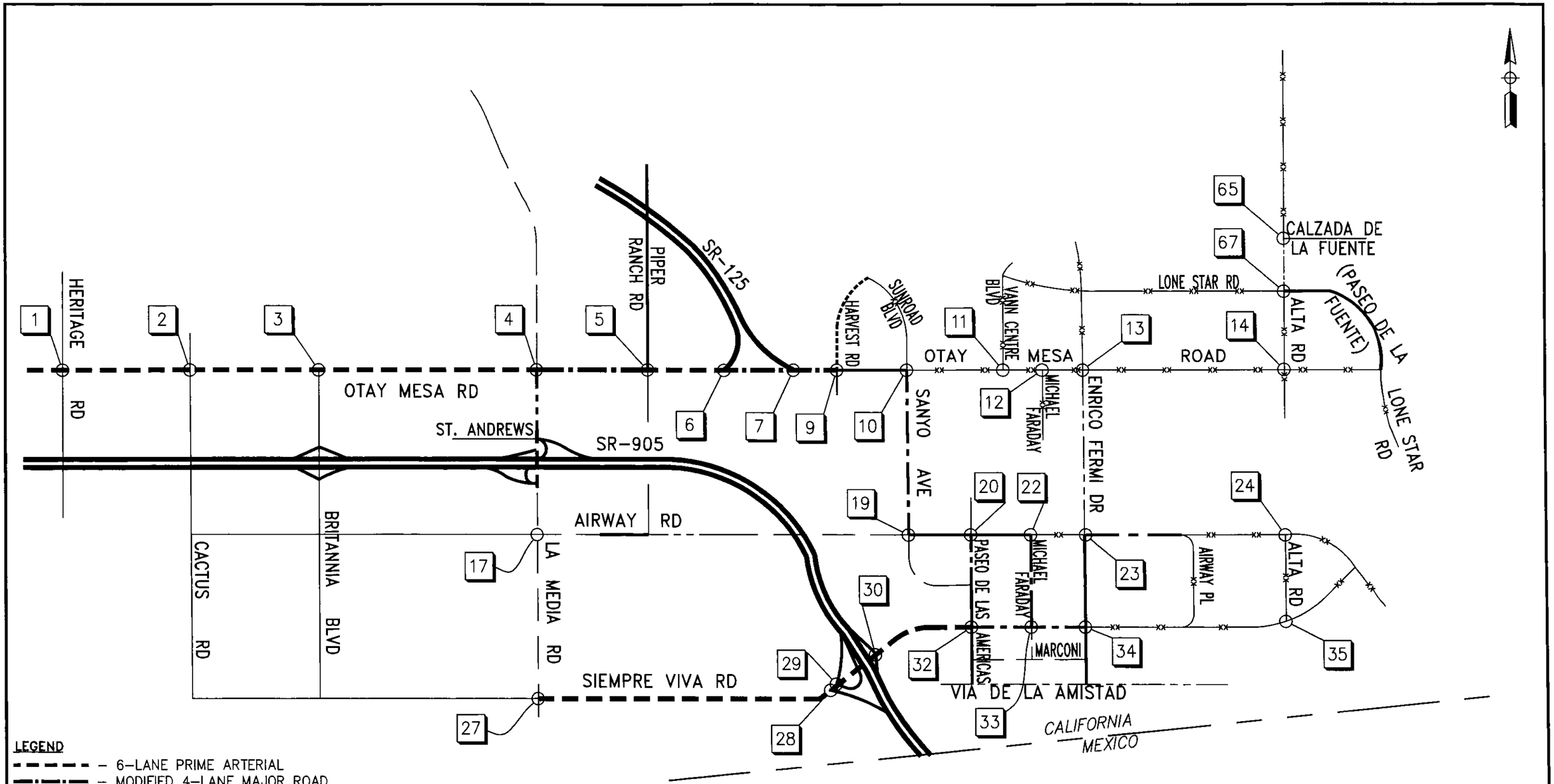
- The Old Otay Mesa Road/Harvest Road intersection was assumed to be signalized (signalization of this intersections is required to provide access for the following cumulative project: California Crossings [cumulative traffic assumed at 100%]);

All other roadway segments and intersections were assumed to have the same lane configuration and traffic control as what currently exists (See Figure 10 in Section III). Figures 20 and 21 illustrate the cumulative (2020) with SR-905 [Phases 1A & 1B] roadway conditions.

CUMULATIVE (YEAR 2020) WITH SR-905 1A &1B TRAFFIC FORECASTS

The traffic forecast for cumulative (2020) with SR-905 Phases 1A and 1B was prepared by SANDAG based on the Series 11 model. The 2020 land use information included in the model was based on the list of approved/pending projects in the County of San Diego summarized in Table 32. In addition, the City of San Diego provided SANDAG with proposed intensity of development that would occur by the year 2020 for the area of Otay Mesa located within the City's jurisdiction.

The roadway network assumptions included in the SANDAG model forecasts for the year 2020 were based on the assumptions previously described and illustrated in Figures 20 and 21. A copy of a map illustrating the roadway network assumptions utilized in the SANDAG 2020 model forecasts along with a copy of the SANDAG 2020 forecast are provided in Appendix B.



LEGEND

- 6-LANE PRIME ARTERIAL
- MODIFIED 4-LANE MAJOR ROAD
- 4-LANE MAJOR ARTERIAL
- 4-LANE COLLECTOR
- 3-LANE TOWN COLLECTOR
- 2-LANE COLLECTOR
- 2-LANE COUNTY ROAD
- OTHER ROAD
- MODIFIED 4-LANE INDUSTRIAL/COMMERCIAL COLLECTOR
- 4-LANE MODIFIED COLLECTOR

XX – INTERSECTION ID #, SEE FIGURE 21 FOR INTERSECTION LANE CONFIGURATIONS

NOTE: INTERSECTION NUMBERS ARE NOT SEQUENTIAL

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FIGURE 20

CUMULATIVE (2020) W/ SR-905 [PHASES 1A&1B] ROADWAY SEGMENT CONDITIONS

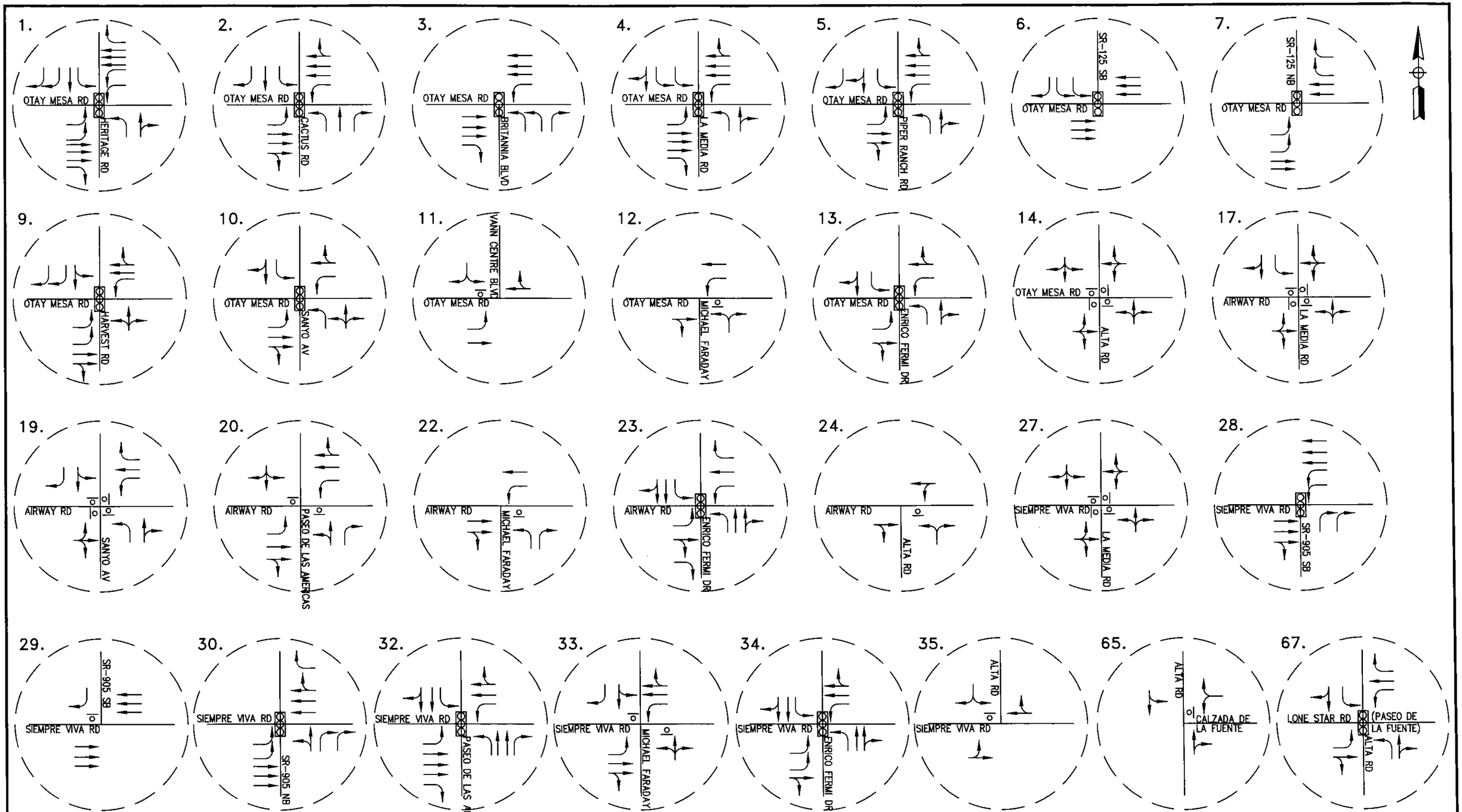

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FIGURE 21
CUMULATIVE (2020) W/ SR-905 [PHASES 1A&1B]
INTERSECTION GEOMETRICS

The trip distribution for the California Crossings project was based on a *Retail Site Selection Analysis* prepared by CBRE rather than a Select Zone distribution assignment generated by SANDAG. The *Retail Site Selection Analysis* estimated that approximately 70% of the customer base for California Crossings would come from cross border traffic from Mexico, while the SANDAG Select Zone forecast only estimated that 14% of the customer base for California Crossings would come from Mexico. Therefore, the results obtained from the SANDAG 2020 model forecast were modified to adjust the distribution for the California Crossings Project to reflect the findings of the *Retail Site Selection Analysis*.

Since the Otay Crossings Commerce Park project site was included in the SANDAG model forecast at 13% of its proposed development, the traffic generated by 13% of the Otay Crossings Commerce Park project was subtracted off from the SANDAG model forecasts to obtain the Cumulative (Year 2020) without project conditions. Figures 22 and 23 provide the cumulative (2020) with SR-905 Phases 1A & 1B without project traffic volumes and Figures 24 and 25 provide the cumulative (2020) with SR-905 Phases 1A & 1B with project traffic volumes utilized in this analysis.

CUMULATIVE (YEAR 2020) WITH SR-905 1A &1B LEVEL OF SERVICE

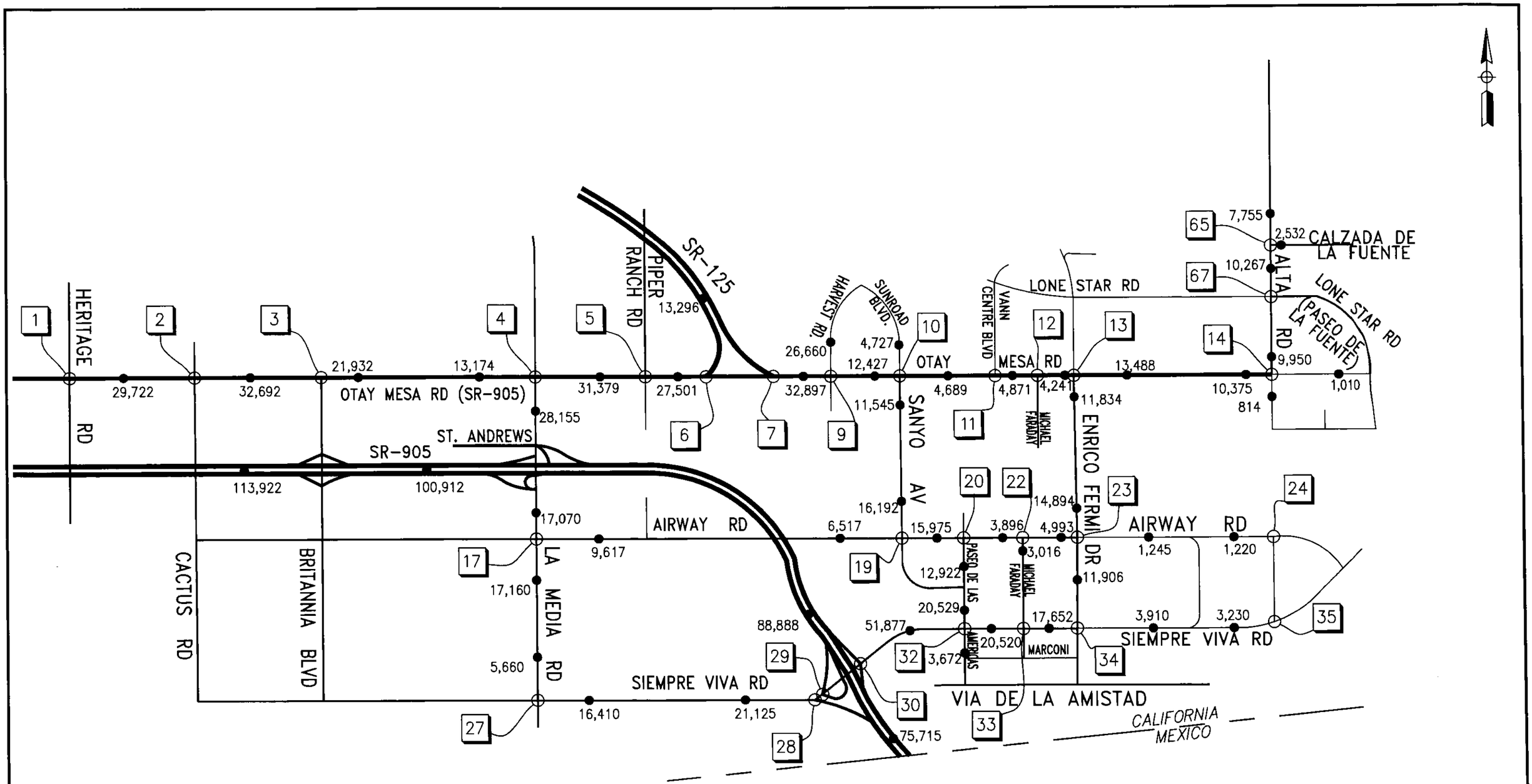
Roadway Segments

Table 33 summarizes the daily roadway segment level of service analysis under cumulative (2020) with SR-905 (Phases 1A & 1B). As shown in Table 33, the following roadway segments operate at LOS E under cumulative (2020) with SR-905 (Phases 1A & 1B) with or without project conditions:

- Old Otay Mesa Road between Enrico Fermi Drive and Alta Road; and
- Enrico Fermi Drive between Otay Mesa Road and Airway Road.

The segment of Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road operates at LOS E under cumulative conditions with and without the addition of the proposed project. If the proposed project is fully occupied (the 2020 forecast assumed Otay Crossings Commerce Park, TM 5405 is developed at 13%), it would add 20,428 ADT to the segment of Otay Mesa Road between Enrico Fermi Drive and Alta Road. Therefore, the project is considered to be part of a significant cumulative impact to the segment of Otay Mesa Road between Enrico Fermi Drive and Alta Road. See Section IX for a discussion on how the developer will mitigate its significant cumulative impacts.

The segment of Enrico Fermi Drive between Otay Mesa Road (Old Otay Mesa Road) and Airway Road operates at LOS E under E under cumulative conditions with and without the addition of the proposed project. If the proposed project is fully occupied (the 2020 forecast assumed Otay Crossings Commerce Park, TM 5405 is developed at 13%), it would add 14,895 ADT to the segment of Enrico Fermi Drive between Otay Mesa Road (Old Otay Mesa Road) and Airway Road. Therefore, the project is considered to be part of a significant cumulative impact to the segment of Enrico Fermi Drive between Otay Mesa Road (Old Otay Mesa Road) and Airway Road. See Section IX for a discussion on how the developer will mitigate its significant cumulative impacts.



LEGEND

● Z,ZZZ – AVERAGE DAILY TRAFFIC

XX – INTERSECTION ID #, SEE FIGURE 23 FOR INTERSECTION PEAK HOUR TURNING VOLUMES

NOTE: INTERSECTION NUMBERS ARE NOT SEQUENTIAL

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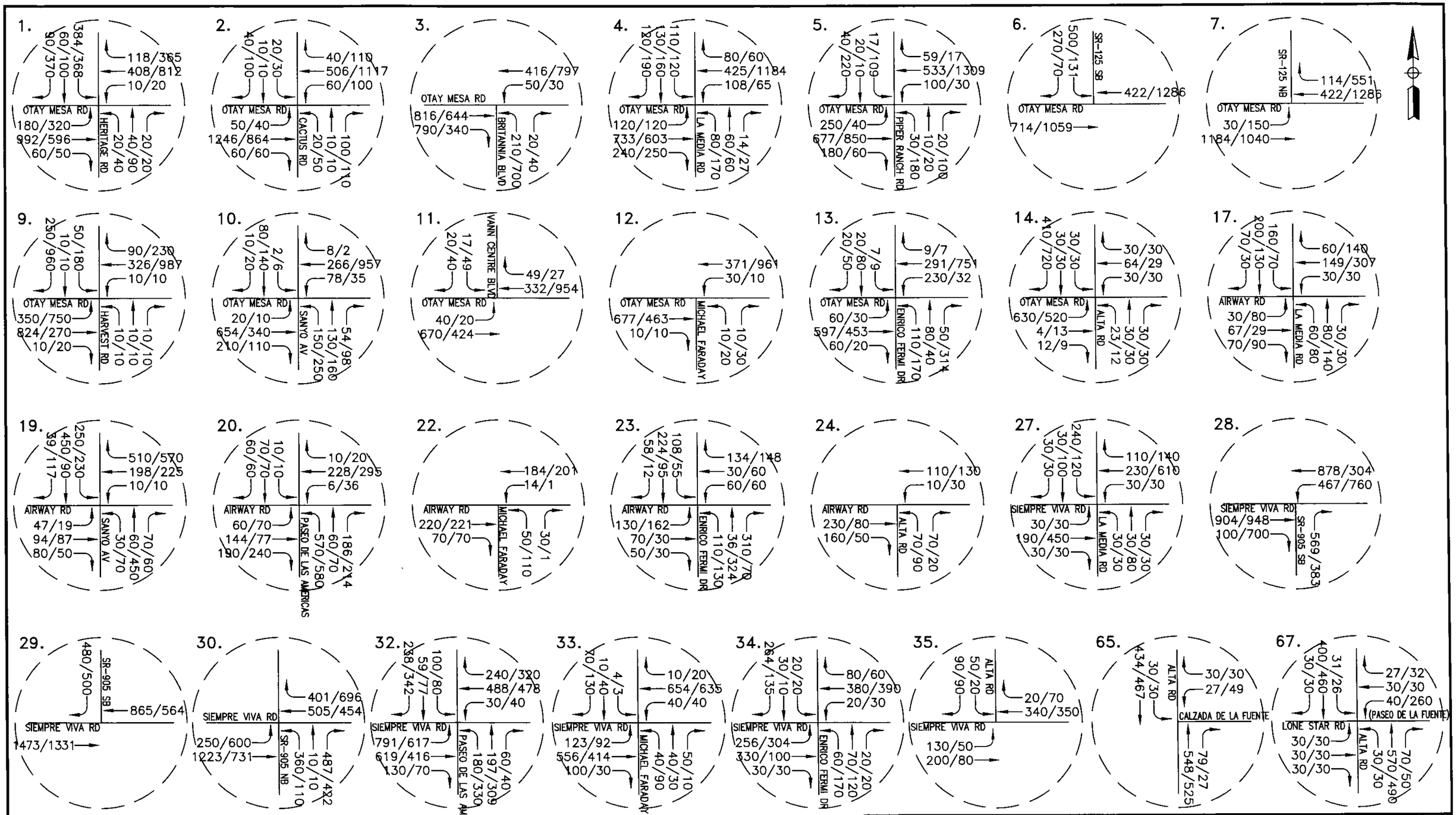
FIGURE 22

CUMULATIVE (2020) W/ SR-905 [PHASES 1A&1B] W/O PROJECT DAILY VOLUMES



LEGEND

→ – DIRECTION OF TRAVEL

XX/YY – AM/PM PEAK HOUR TRAFFIC VOLUMES

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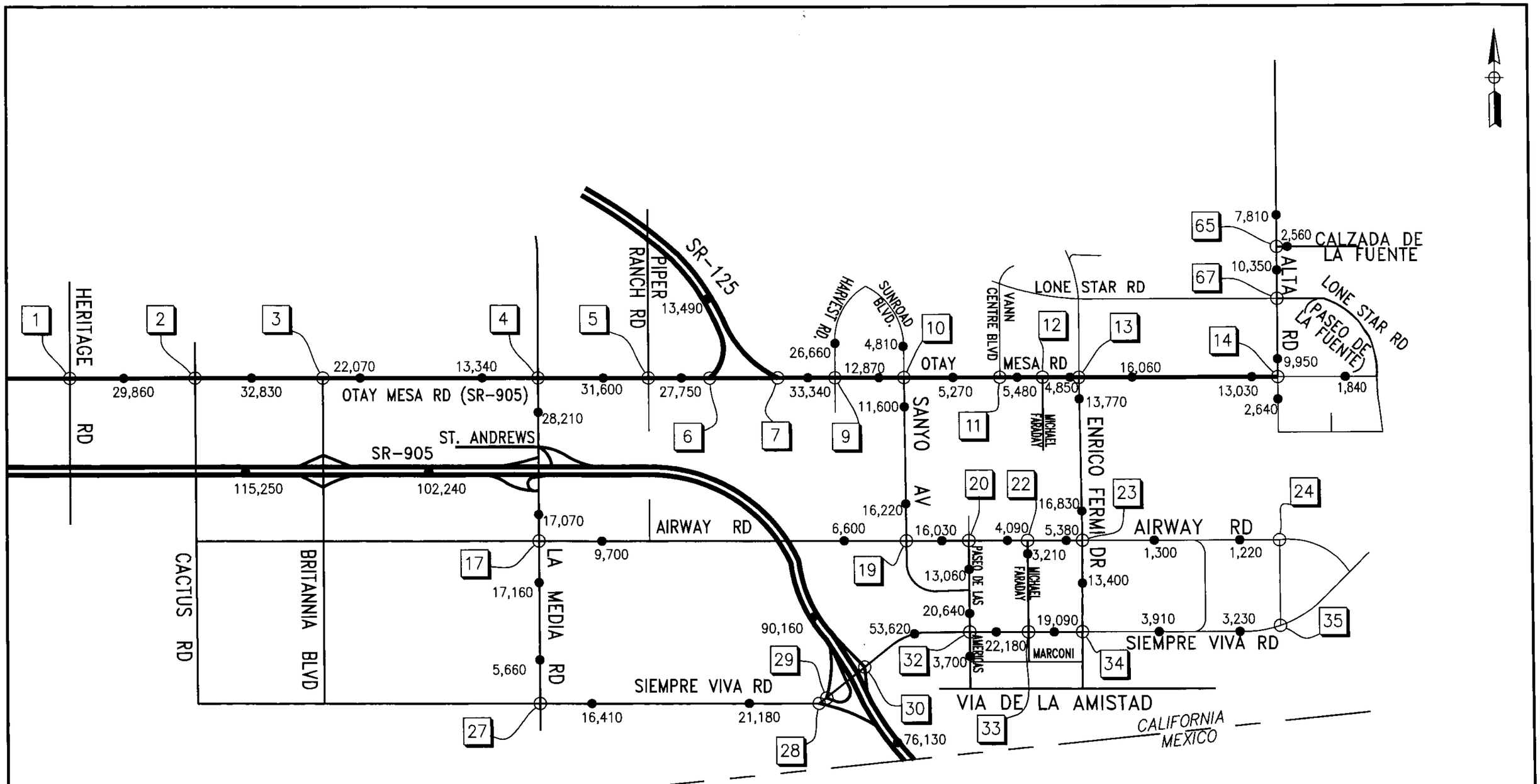
FIGURE 23

CUMULATIVE (2020) W/ SR-905 [PHASES 1A&1B]

W/O PROJECT PEAK HOUR TRAFFIC VOLUMES



LEGEND

● Z,ZZZ – AVERAGE DAILY TRAFFIC

XX – INTERSECTION ID #, SEE FIGURE 25 FOR INTERSECTION PEAK HOUR TURNING VOLUMES

NOTE: INTERSECTION NUMBERS ARE NOT SEQUENTIAL

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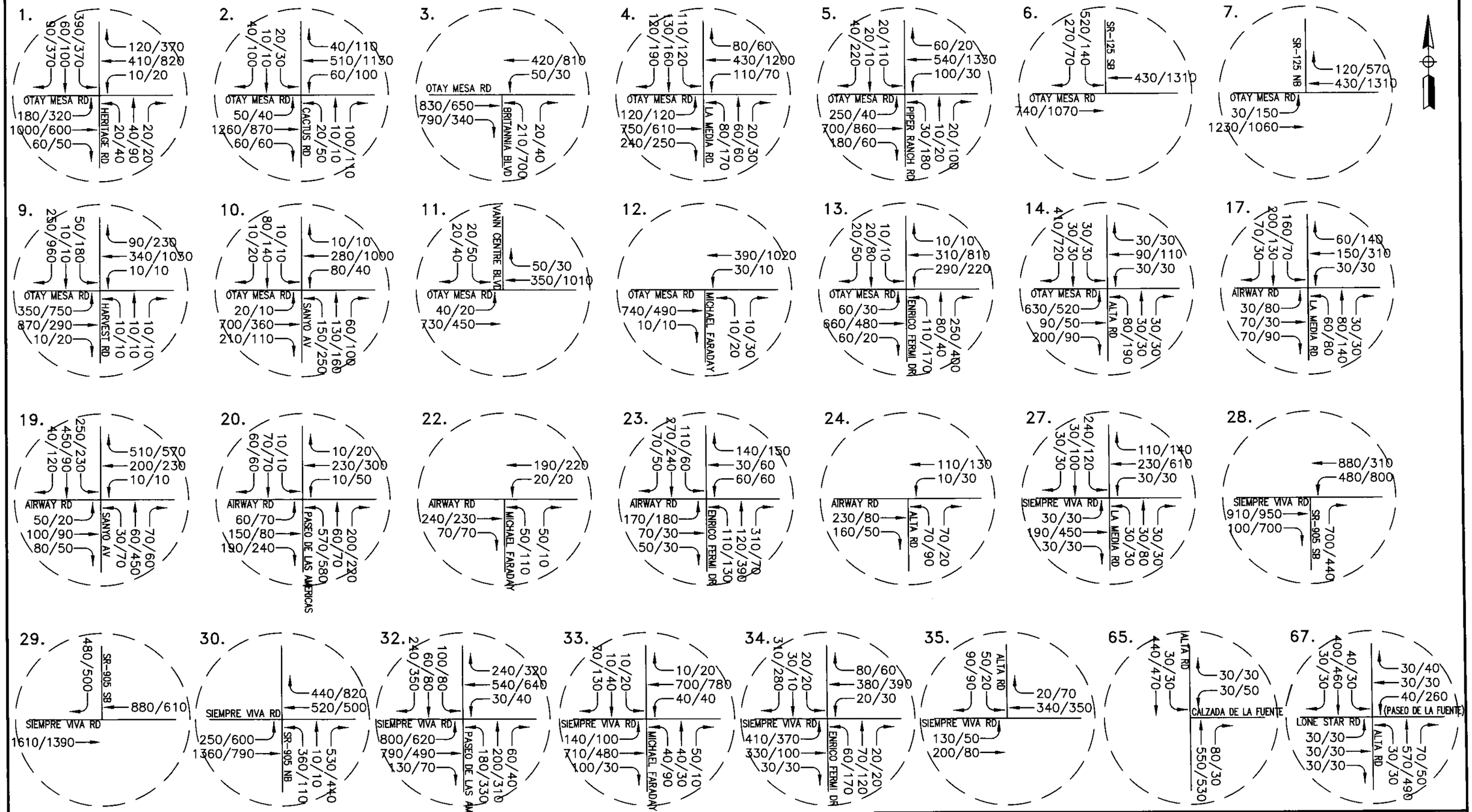
FIGURE 24

CUMULATIVE (2020) W/ SR-905 [PHASES 1A&1B] W/PROJECT DAILY VOLUMES



LEGEND

→ – DIRECTION OF TRAVEL

XX/YY – AM/PM PEAK HOUR TRAFFIC VOLUMES

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FIGURE 25

CUMULATIVE (2020) W/ SR-905 [PHASES 1A&1B] W/PROJECT PEAK HOUR TRAFFIC VOLUMES

Table 33 – Cumulative (2020) With SR-905 1A &1B Roadway Segment Daily LOS Summary

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	Cumulative w/o Project			Cumulative With Project						
				ADT	V/C	LOS	ADT	V/C	LOS	Δ ADT	Δ V/C	Proj.Trips (d)	Impact?
Otay Mesa Rd													
Heritage Rd to Cactus Rd	**City**	6P	60,000	29,722	0.50	B	29,860	0.50	B	138	0.00	1,064	No
Cactus Rd to Britannia Blvd	**City**	6P	60,000	32,692	0.54	B	32,830	0.55	B	138	0.01	1,064	No
Britannia to La Media Rd	**City**	6P	60,000	21,932	0.37	A	22,070	0.37	A	138	0.00	1,277	No
La Media Rd to Piper Ranch Rd	**City**	5M	45,000 (a)	31,379	0.70	C	31,600	0.70	C	221	0.00	1,702	No
Piper Ranch Rd to SR-125	**County**/City	6P	57,000	27,501	0.48	B	27,750	0.49	B	249	0.00	1,915	No
Old Otay Mesa Rd													
SR-125 to Harvest Rd	**County**/City	5M	47,000(a)	32,897	0.70	C	33,340	0.71	C	443	0.01	3,405	No
Harvest Rd to Sanyo Av	**County**/City	4M	37,000	12,427	0.34	A	12,870	0.35	A	443	0.01	3,405	No
Sanyo Av to Vann Centre Blvd	**County**/City	LC	16,200	4,689	0.29	C	5,270	0.33	C	581	0.02	4,469	No
Vann Centre Blvd to Enrico Fermi Dr	**County**/City	LC	16,200	4,871	0.30	C	5,480	0.34	C	609	0.02	4,681	No
Enrico Fermi Dr to Alta Rd	**County**	LC	16,200	**13,488**	**0.83**	**E**	**16,060**	**0.99**	**E**	**2,572**	**0.02**	**20,428**	**Yes**
Airway Road													
La Media Rd to SR-905	City	2C	15,000	9,617	0.64	C	9,700	0.65	C	83	0.01	638	No
SR-905 to Sanyo Av	City	2C	10,000	6,517	0.65	C	6,600	0.66	C	83	0.01	638	No
Sanyo Av to Paseo De Las Americas	City	4M	40,000	15,975	0.40	B	16,030	0.40	B	55	0.01	426	No
Paseo De Las Americas to Michael Faraday	**County**/City	4M	37,000	3,896	0.11	A	4,090	0.11	A	194	0.01	1,490	No
Michael Faraday to Enrico Fermi Dr	**County**/City	LC	16,200	4,993	0.31	C	5,380	0.33	C	387	0.02	2,979	No
Enrico Fermi Dr to Airway Pl	County	4C	34,200	1,245	0.04	A	1,300	0.04	A	55	0.04	426	No
Airway Pl to Alta Rd	County	LC	16,200	1,220	0.08	A	1,220	0.08	A	0	0.07	426	No
Siempre Viva Road													
Drucker Ln to SR-905	City	6P	60,000	21,125	0.35	A	21,180	0.35	A	55	0.00	426	No
SR-905 to Paseo De Las Americas	City	6P	60,000	51,877	0.86	D	53,620	0.89	D	1,743	0.05	13,406	No
Paseo De Las Americas to Michael Faraday	City	4C	30,000	20,520	0.68	D	22,180	0.74	D	1,660	0.10	12,767	No
Michael Faraday to Enrico Fermi Dr	City	4C	30,000	17,652	0.59	C	19,090	0.64	C	1,438	0.11	11,065	No
La Media Road													
Otay Mesa Rd to St. Andrews/SR-905 WB Ramp	City	4C(m)	35,000(b)	28,155	0.80	D	28,210	0.81	D	55	0.01	426	No
SR-125													
North of Otay Mesa Rd	SBX	4-FWY	(c)	13,296	0.15	A	13,490	0.15	A	194	0.01	1,490	No
Existing State Route 905													
South of Siempre Viva Rd	City/**Caltrans**	4-FWY	(c)	75,715	0.86	D	76,130	0.86	D	415	0.00	3,192	No
New State Route 905													
Britannia to La Media	Caltrans	6-FWY	(c)	100,912	0.76	C	102,240	0.77	C	1,328	0.01	10,214	No
La Media to Siempre Viva Rd	Caltrans	6-FWY	(c)	88,888	0.67	C	90,160	0.68	C	1,272	0.01	9,788	No
Sanyo Avenue													
Otay Mesa Rd to Airway Rd	City	4C	30,000	16,192	0.54	C	16,220	0.54	C	28	0.01	426	No
Enrico Fermi Drive													
Otay Mesa Rd to Airway Rd	County	TC	19,000	**14,894**	**0.78**	**E**	**16,830**	**0.89**	**E**	**1,936**	**0.05**	**14,895**	**Yes**
Airway Rd to Siempre Viva Rd	City	4M	40,000	11,906	0.30	A	13,400	0.34	A	1,494	0.00	11,491	No
Alta Road													
Calzada De La Fuente to Lone Star Rd (Paseo De La Fuente)	County	TC	19,000	10,267	0.54	D	10,350	0.54	D	83	0.00	638	No
Lone Star Rd (Paseo De La Fuente) to Otay Mesa Rd	County	LC	16,200	9,950	0.61	D	9,950	0.61	D	0	0.00	0	No

City = Capacity of City segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of County segments is based on the upper limits of LOS E per the County of San Diego;
SBX = South Bay Expressway; **Bold** = Jurisdiction which capacity & significance criteria is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio;
Δ ADT = Increase in ADT due to addition of 13% of project traffic; ΔV/C = Increase (Decrease) in V/C due to addition of 13% of project traffic; 6-FWY = 6-Lane Freeway; 4-FWY = 4-Lane Freeway; 6P = 6-Lane Prime Arterial; 5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector;4C(m) = Modified 4-Lane Collector; TC = Town Collector; 2C= 2-Lane Collector; LC = Light Collector;
Impact = Identifies whether there is a significant cumulative impact
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity 45,000 for City and 47,000 for County at LOS E (half-way between a 4-lane Major & 6-Lane Prime Arterial).
(b) This segment of La Media Road provides 2 Northbound through lanes, 3 Southbound through lanes, 1 Southbound right turn lane, and a painted median; hence the roadway capacity was assumed to be 35,000 ADT at LOS E (half-way between a 4-lane Collector & 4-Lane Major Arterial)
(c) Capacity based on Caltrans District 11 & HCM procedures
(d) Project Traffic is representative of what the project would assign to the roadway network if 100% of the project was developed by the year 2020, See Figure 9, umulative analysis assumes Otay Crossings Commerce Park is developed at 13%

Intersections

Synchro Analysis

Table 34 summarizes the cumulative (2020) with SR-905 (Phases 1A & 1B) peak hour intersection level of service analysis. (A copy of the Synchro worksheets for cumulative conditions are provided in Appendix J.)

As shown in Table 34, the following intersections operate at an unacceptable LOS F under cumulative (2020) with SR-905 Phases 1A & 1B with or without project conditions during at least one of the peak hours:

- Otay Mesa Road/Vann Centre Boulevard;
- Otay Mesa Road/Alta Road;
- Airway Road/Sanyo Avenue;
- Airway Road/Paseo De Las Americas; and
- Siempre Viva Road/Michael Faraday Drive.

The Otay Mesa Road/Vann Centre Boulevard intersection operates at LOS F during the PM peak hour, if the project is fully occupied (the 2020 forecast assumes Otay Crossing Commerce Park, TM 5405 is developed at 13%), it would add 9 peak hour trips to the southbound approach, and 664 peak hour trips to the overall intersection during the PM peak hour. Therefore, the proposed project is considered to be part of the significant cumulative impact at the Otay Mesa Road/Vann Centre Boulevard intersection.

The Otay Mesa Road/Alta Road intersection operates at LOS F during both the AM and PM peak hours, if the project is fully occupied (the 2020 forecast assumes Otay Crossing Commerce Park, TM 5405 is developed at 13%), it would add 2,739 peak hour trips to the overall intersection during the AM peak hour and 2,896 peak hour trips to the overall intersection during the PM peak hour. Therefore, the proposed project is considered to be part of the significant cumulative impact at the Otay Mesa Road/Alta Road intersection.

The Airway Road/Sanyo Avenue intersection operates at LOS F during both the AM and PM peak hours under cumulative (2020) without project conditions. The addition of the traffic generated by 13% of the Otay Crossing Commerce Park, TM 5405 project site increases the cumulative without project delay by 1.1 seconds during the AM peak hour and 0.9 seconds during the PM peak hour. The increase in delay during the AM peak hour exceeds the one (1) second allowed per the City of San Diego's thresholds for significance for an intersection operating at LOS F. Therefore, the proposed project is considered to be part of the significant impact at the Airway Road/Sanyo Avenue intersection under cumulative (2020) conditions. Per the City of San Diego's significance standards, this impact is considered to be a direct project impact.

The Airway Road/Paseo De Las Americas intersection operates at LOS F during both the AM and PM peak hour, if the project is fully occupied (the 2020 forecast assumes Otay Crossing Commerce Park, TM 5405 is developed at 13%), it would add 14 trips to the northbound approach during the AM peak hour and 200 peak hour trips to the overall intersection during the AM peak hour and it would add 6 trips to the northbound approach and 211 peak hour trips to the overall intersection during the PM peak hour. Therefore, the proposed project is considered to be part of the significant cumulative impact at the Airway Road/Paseo De Las Americas intersection.

Table 34 – Cumulative (2020) With SR-905 1A &1B Intersection LOS Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Cumulative w/o Project				Cumulative With Project											
				AM Peak		PM Peak		AM Peak						PM Peak					
				Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Proj. Trips[(a)]	Proj. Trips[(b)]	Cum Impact	Delay	LOS	Δ Delay	Proj. Trips[(a)]	Proj. Trips[(b)]	Cum Impact
Otay Mesa Rd (E-W) @ Heritage Rd (N-S)	**City**/ Caltrans	Sig	Int	22.2	C	21.5	C	22.5	C	0.3	18	143	No	22.2	C	0.7	19	150	No
Otay Mesa Rd (E-W) @ Cactus Rd(N-S)	**City**/ Caltrans	Sig	Int	5.1	A	10.8	B	5.1	A	0.0	18	143	No	10.8	B	0.0	19	151	No
Otay Mesa Rd (E-W) @ Britannia Blvd (N-S)	**City**/ Caltrans	Sig	Int	8.3	A	11.2	B	8.6	A	0.3	18	143	No	12.6	B	1.4	19	151	No
Otay Mesa Rd (E-W) @ La Media Rd (N-S)	**City**/ Caltrans	Sig.	Int	10.3	B	22.5	C	11.3	B	1.0	30	229	No	23.7	C	1.2	31	241	No
Otay Mesa Rd (E-W)@ Piper Ranch Rd (N-S)	**County**/ City/Caltrans	Sig.	Int	9.8	A	8.4	A	10.0	A	0.2	34	257	No	8.7	A	0.3	35	272	No
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	**County**/ City/SBX	Sig	Int	9.9	A	6.6	A	11.2	B	1.3	54	410	No	7.3	A	0.7	44	337	No
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	**County**/ City/SBX	Sig	Int	2.8	A	3.4	A	3.0	A	0.2	60	456	No	3.3	A	(0.1)	63	482	No
Otay Mesa Rd (E-W) @ Harvest Rd (N-S)	**County**/ City	Sig	Int	13.5	B	23.9	C	14.0	B	0.5	60	457	No	23.3	C	(0.6)	63	482	No
Otay Mesa Rd (E-W) @ Sanyo Av (N-S)	**County**/ City	Sig	Int	17.1	B	43.1	D	18.9	B	1.8	78	600	No	52.6	D	9.5	82	632	No
Otay Mesa Rd (E-W) @ Vann Centre Blvd (N-S)	**County**/ City	OWSC	SB	18.0	C	**56.5**	**F**	20.6	C	2.6	3	22	No	**73.0**	**F**	**16.5**	**1**	**9**	**Yes**
Otay Mesa Rd (E-W) @ Enrico Fermi Dr (N-S)	County	Sig	Int	19.8	B	16.4	B	28.2	C	8.4	346	2,653	No	22.6	C	6.2	364	2,806	No
Otay Mesa Rd (E-W) @ Alta Rd (N-S)	County	AWSC	EB	**122.2**	**F**	**68.7**	**F**	**261.3**	**F**	**139.1**	**274**	**2,105**	**Yes**	**230.0**	**F**	**161.3**	**118**	**908**	**Yes**
			WB	12.2	B	12.0	B	13.9	B	1.7	26	198		**17.5**	C	5.5	81	621	
			NB	11.7	B	11.6	B	13.9	B	2.2	57	436		**22.6**	**C**	11.0	178	**1,367**	
			SB	28.8	D	**166.5**	**F**	34.8	D	6.0	0	0		**279.3**	F	**112.8**	**0**	0	
			Int	**71.8**	**F**	**113.9**	**F**	**146.3**	**F**	**74.5**	**357**	**2,739**		**203.4**	**F**	**89.5**	**377**	**2,896**	
Airway Rd (E-W) @ La Media Rd (N-S)	City	AWSC	EB	11.9	B	13.0	B	12.0	B	0.1	3	22	No	13.0	B	0.0	1	9	No
			WB	13.7	B	26.6	D	13.8	B	0.1	1	7		27.1	D	0.5	3	21	
			NB	12.3	B	15.8	C	12.4	B	0.1	0	0		15.9	C	0.1	0	0	
			SB	13.4	B	11.9	B	13.5	B	0.1	0	0		12.0	B	0.1	0	0	
			Int	13.1	B	19.0	C	13.1	B	0.0	4	29		19.3	C	0.3	4	30	

(a) Project Traffic is representative of what the project would assign to the roadway network if 13% of the project was developed by the year 2020, See Figure 8, cumulative analysis assumes Otay Crossings Commerce Park is developed at 13%
(b) Project Traffic is representative of what the project would assign to the roadway network if 100% of the project was developed by the year 2020, See Figure 9, cumulative analysis assumes Otay Crossings Commerce Park is developed at 13%
LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled; Int = Intersection;
Δ Delay = Increase (Decrease) Delay due to the addition of adding 13% of the project traffic
NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; Err = Delay is too high for the software to calculate; **Bold** = Jurisdiction which significance criteria is based on

Table 34 (Continued) – Cumulative (2020) With SR-905 1A &1B Intersection LOS Summary

Intersections	Jurisdiction	Traffic Control	Critical Move	Cumulative w/o Project				Cumulative											
				AM Peak		PM Peak		AM Peak						PM Peak					
				Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Proj. Trips[a]	Proj. Trips[b]	Cum Impact	Delay	LOS	Δ Delay	Proj. Trips[a]	Proj. Trips[b]	Cum Impact
Airway Rd (E-W) @ Sanyo Ave (N-S)	City	AWSC	EB	20.6	C	20.8	C	21.5	C	0.9	9	66	**Yes**	21.2	C	0.4	4	28	**No**
			WB	**62.3**	**F**	**164.5**	**F**	**63.6**	**F**	**1.3**	**2**	**13**		**165.5**	**F**	**1.0**	**5**	**41**	
			NB	13.7	B	**189.1**	**F**	13.8	B	0.1	0	0		**191.2**	**F**	**2.1**	**0**	**0**	
			SB	**310.2**	**F**	**45.7**	**E**	**312.8**	**F**	**2.6**	**1**	**7**		**46.0**	**E**	**0.3**	**3**	**21**	
			Int	**152.7**	**F**	**134.1**	**F**	**153.8**	**F**	**1.1**	**12**	**86**		**135.0**	**F**	**0.9**	**12**	**90**	
Airway Rd (E-W) @ Paseo De Las Americas (N-S)	**County**/ City	TWSC	NB	**613.6**	**F**	**7525.2**	**F**	**683.3**	**F**	**69.7**	**14**	**110**	**Yes**	**7473.4**	**F**	**(51.8)**	**6**	**47**	**Yes**
Airway Rd (E-W) @ Michael Faraday (N-S)	**County**/ City	OWSC	NB	12.9	B	15.6	C	13.7	B	0.8	20	154	No	16.7	C	1.1	9	66	No
Airway Rd (E-W) @ Enrico Fermi Dr (N-S)	**County**/ City	Sig	Int	18.6	B	22.8	C	21.4	C	2.8	260	1,996	No	24.1	C	1.3	274	2,111	No
Siempre Viva Rd (E-W) @ SR-905 SB to EB Siempre Viva (N-S)	City/ **Caltrans**	Sig	Int	8.9	A	16.2	B	9.3	A	0.4	152	1,165	No	16.5	B	0.3	105	806	No
Siempre Viva Rd (E-W) @ SR-905 SB to WB Siempre Viva (N-S)	City/ **Caltrans**	OWSC	SB	31.3	D	18.0	C	32.2	D	0.9	0	0	No	18.9	C	0.9	0	0	No
Siempre Viva Rd (E-W) @SR-905 NB Ramp (N-S)	City/ **Caltrans**	Sig	Int	12.8	B	14.7	B	13.9	B	1.1	234	1,798	No	14.7	B	0.0	247	1,901	No
Siempre Viva Rd (E-W)@ Paseo De Las Americas (N-S)	City	Sig	Int	46.5	D	42.8	D	47.3	D	0.8	238	1,827	No	51.9	D	9.1	251	1,931	No
Siempre Viva Rd (E-W) @Michael Faraday (N-S)	City	TWSC	NB	**644.7**	**F**	**612.1**	**F**	**Err**	**F**	**-**	**0**	**0**	**Yes**	**Err**	**F**	**-**	**0**	**0**	**Yes**
			SB	**55.5**	**F**	**25.8**	**D**	**Err**	**F**	**-**	**6**	**40**		**58.3**	**F**	**32.5**	**17**	**124**	
Siempre Viva Rd (E-W) @Enrico Fermi Dr (N-S)	**County**/ City	Sig	Int	15.8	B	28.0	C	17.4	B	1.6	200	1,540	No	28.2	C	**0.2**	211	1,629	No
Alta Rd (N-S) @ Calzada De La Fuente (E-W)	County	OWSC	WB	16.7	C	18.5	C	16.7	C	0.0	3	86	No	18.8	C	**0.3**	1	90	No
Alta Rd (N-S) @ Paseo De La Fuente (E-W)	County	Sig	Int	11.1	B	21.7	C	14.2	B	3.1	12	86	No	23.5	C	1.8	12	90	No

(a) Project Traffic is representative of what the project would assign to the roadway network if 13% of the project was developed by the year 2020, See Figure 8, cumulative analysis assumes Otay Crossings Commerce Park is developed at 13%
(b) Project Traffic is representative of what the project would assign to the roadway network if 100% of the project was developed by the year 2020, See Figure 9, cumulative analysis assumes Otay Crossings Commerce Park is developed at 13%
LOS=Level of Service; Delay is measured in seconds/vehicle; sig=signalized; AWSC=All Way Stop Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled; Int = Intersection;
Δ Delay = Increase (Decrease) Delay due to the addition of adding 13% of the project traffic
NB = Northbound Approach; SB = Southbound Approach; EB = Eastbound Approach; WB = Westbound Approach
SBX = South Bay Expressway; E-W = East-West Roadway; N-S = North-South Roadway; Err = Delay is too high for the software to calculate; **Bold** = Jurisdiction which significance criteria is based on

The Siempre Viva Road/Michael Faraday Drive intersection operates at LOS F during both the AM and PM peak hours under cumulative (2020) without project conditions. The addition of the traffic generated by 13% of the Otay Crossing Commerce Park, TM 5405 project site increases the cumulative without project delay on the southbound left-through movement by 32.5 seconds during the PM peak hour. The increase in delay exceeds the one (1) second allowed per the City of San Diego's thresholds for significance for an intersection operating at LOS F. Therefore, the proposed project is considered to be part of the significant impact at the Siempre Viva Road/Michael Faraday Drive intersection under cumulative (2020) conditions. Per the City of San Diego's significance standards, this impact is considered to be a direct project impact.

ILV Analysis

Table 35 summarizes the cumulative (2020) with SR-905 [Phases 1A & 1B] ILV analysis. As shown in Table 35, the Siempre Viva Road/SR-905 SB Ramp to EB Siempre Viva Road intersection operates under stable flow during the AM peak hour and under unstable flow during the PM peak hour under cumulative (2020) with SR-905 [Phases 1A & 1B] with project conditions. All other intersections operate under stable flow during the AM and PM peak hours. A copy of the ILV worksheets can be found in Appendix J.

Table 35 – Cumulative (2020) w/ SR-905 [Phases 1A & 1B] ILV Analysis

Intersection	Cumulative w/o Project				Cumulative With Project			
	AM Peak Hour		PM Peak Hour		AM Peak		PM Peak	
	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition	ILV/Hr	Operating Condition
Otay Mesa Rd (E-W) @ SR-125 SB (N-S)	508	Stable Flow	499	Stable Flow	517	Stable Flow	507	Stable Flow
Otay Mesa Rd (E-W) @ SR-125 NB (N-S)	592	Stable Flow	718	Stable Flow	615	Stable Flow	730	Stable Flow
Siempre Viva (E-W) @ SR-905 SB to EB Siempre Viva (N-S)	737	Stable Flow	1,114	Stable Flow	807	Stable Flow	1,220	Unstable Flow
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	778	Stable Flow	859	Stable Flow	824	Stable Flow	930	Stable Flow

ILV/Hour = Intersecting Lane Vehicles Per Hour;
<1,200 ILV/Hour = Stable Flow; 1,200 - 1,500 ILV/Hour = Unstable Flow; 1,500 ILV/Hour = Capacity, Stop and Go Operation
E-W = East-West Roadway; N-S = North-South Roadway

SECTION VI – YEAR 2030 CONDITIONS

The 2030 roadway conditions and traffic forecast for the East Otay Mesa area are based on the recent study prepared by the County for amendment of the East Otay Mesa Specific Plan. A description of East Otay Mesa Specific Plan Amendment 2006 and the traffic assessment update to the amendment are provided in this section of the study.

EAST OTAY MESA SPECIFIC PLAN AMENDMENT 2007

The Board of Supervisors for County of San Diego approved the East Otay Mesa Specific Plan Amendment on August 1, 2007. There were three types of amendments adopted for the East Otay Mesa Specific Plan Subareas 1 and 2. The amendments were to the circulation plan, bicycle network, and regulatory standards relating to site plan requirements, fencing detail, driveway location criteria, and sidewalk design. The following summarizes the General Plan Circulation Element and Specific Plan changes that directly impact the roadway network in the vicinity of the proposed project:

Circulation Network

Figure 26 illustrates the recently adopted circulation plan for 2030 conditions in the East Otay Mesa area in the County of San Diego.

Under the proposed project, the Subarea 1 and Subarea 2 circulation network has been revised to include the following changes to Circulation Element Roads:

1. ***Ellis Road:*** Delete (segment between Lone Star Road and Otay Mesa Road) from the General Plan Circulation Element and replace it with the extension of Sanyo Avenue (to be renamed Sunroad Boulevard) from Lone Star Road to Otay Mesa Road. With the extension of Sunroad Boulevard, Ellis Road is no longer necessary. Also, the alignment of Ellis Road conflicts with the extension of SR-125 at Otay Mesa Road.

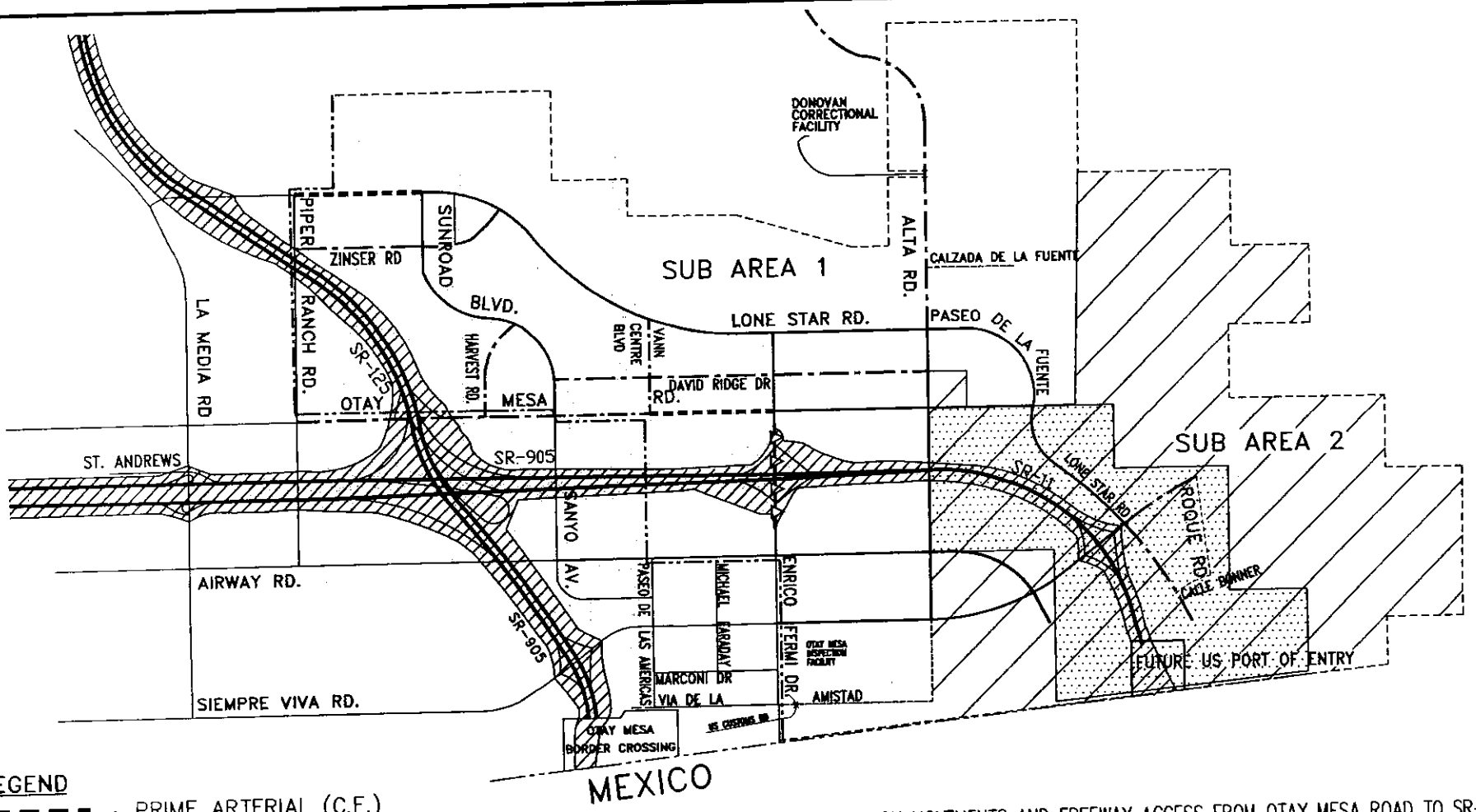
2. ***Sunroad Boulevard:*** Extend northerly from Otay Mesa Road to Lone Star Road. This extension will replace Ellis Road and provide a direct connection from Lone Star Road southerly to Airway Road.

3. ***Enrico Fermi Drive:*** Between Otay Mesa Road and SR-11, change road classification from four-lane (4L) Major to an Enhanced 4L Major. Additional turn lanes will be needed to accommodate traffic at the Enrico Fermi Drive/SR-11 interchange due to the deletion of Michael Faraday Drive.

4. ***Otay Mesa Road:*** Delete Bike Route from Piper Ranch Road to Enrico Fermi Drive on Otay Mesa Road. This change is required since the 69kv utility poles will not be placed underground and those utility poles contain a critical fiber optic communications line for the State and County prisons that cannot be interrupted.

5. ***Lone Star Road/Loop Road:*** Extend Lone Star Road easterly to intersect with Siempre Viva Road easterly of SR-11. Loop Road as a separate road classification will be deleted. This section is being redesigned due to the latest design of SR-11 and its relocated interchange with Lone Star Road and Siempre Viva Road.

6. ***Siempre Viva Road:*** Extend Siempre Viva Road easterly to intersect with the new extension of Lone Star Road. This section is being redesigned due to the latest design of SR-11 and its relocated interchange with Lone Star Road and Siempre Viva Road.



LEGEND

- PRIME ARTERIAL (C.E.)
- ENCHANCED MAJOR ROAD(C.E.)(REQUIRES ADDITIONAL RIGHT-OF-WAY TO ACCOMODATE TURN MOVEMENTS AND FREEWAY ACCESS FROM OTAY MESA ROAD TO SR-11)
- MAJOR ROAD (C.E.)
- 4-LANE COLLECTOR ROAD (C.E.)
- 4-LANE ROAD (S.P.)
- 2-LANE ROAD (S.P.)
- CITY ROAD/OTHER ROAD
- CITY/COUNTY BOUNDARY
- SUB AREA BOUNDARY
- FREEWAY RIGHT-OF-WAY
- PROJECT SITE

NOTE:
C.E. - CIRCULATION ELEMENT ROAD
S.P. - SPECIFIC PLAN ROAD

Darnell & ASSOCIATES, INC.

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FIGURE 26
ADOPTED CIRCULATION PLAN FOR EAST OTAY MESA (2030 CONDITIONS)

7. ***Airway Road:*** Extend easterly to intersect with the new extension of Siempre Viva Road. This section is being redesigned due to the latest design of SR-11 and Siempre Viva Road.

8. ***Alta Road***: No amendment to the circulation element; however, the Specific plan will include conceptual geometrics to reflect a modified street section of Alta Road north of Otay Mesa Road.

9. ***SR-11:*** Realign SR-11 Right-of-way to represent the latest Caltrans design and U.S. Port of Entry location. This represents the latest design for SR-11 and assists in the implementation of the supporting EOM circulation system.

Under the proposed project, the Subarea 1 and Subarea 2 circulation network has been revised to include the following changes to Specific Plan Roads:

10. ***Tech Center Way:*** Delete from Ellis Road extending east of Sanyo Avenue (Sunroad Boulevard). This section is no longer needed due to the redesign of Zinser Road.

11. ***Zinser Road:*** Extend Zinser Road easterly from the proposed Sunroad Boulevard to Lone Star Road. This extension provides a direct connection between Piper Ranch Road and Lone Star Road.

12. ***Harvest Road:*** Extend northerly from current the David Ridge Drive to Sunroad Boulevard. This provides an alternate connection between Otay Mesa Road and Sunroad Boulevard.

13. ***David Ridge Drive:*** Delete westerly from Sunroad Boulevard (existing Sanyo Avenue). Based on the design of the Sunroad Business Park, this roadway is no longer needed.

14. ***Vann Centre Boulevard:*** Extend Vann Centre Boulevard northerly from David Ridge Drive to Lone Star Road. With the deletion of Michael Faraday Drive, this provides an alternate north-south route from Otay Mesa Road to Lone Star Road.

15. ***Michael Faraday Drive:*** Delete from Lone Star Road to Airway Road. This deletion is necessary since it would potentially conflict with the ramp at Enrico Fermi Drive and the crossing at SR-11 and the circulation alternatives being proposed in this amendment would be more cost effective.

16. Due to the latest design of SR-11 and its relocated interchange with Lone Star Road and Siempre Viva Road, the easterly extensions of Airway Road and Siempre Viva Road from Lone Star Road (existing Loop Road) to Roque Road are realigned. Siempre Viva Road extends easterly to end at Roque Road. Calle Bonner connects Lone Star Road to Roque Road. The easterly extensions of Airway Road and Siempre Viva Road from Lone Star Road (existing Loop Road) to Roque Road are Specific Plan Roads.

Bicycle Network

Under the proposed project, the Subarea 1 and Subarea 2 bicycle network system has been revised to include the following:

1. Addition of bicycle lane on Sunroad Boulevard from David Ridge Drive to Lone Star Road;

2. Addition of bicycle lane to Zinser Road from Lone Star Road to Piper Ranch Road;

3. Addition of bicycle lane to Enrico Fermi Drive from Lone Star Road to Siempre Viva Road to provide connectivity for bike lanes on Lone Star Road, David Ridge Drive, Airway Road, and Siempre Viva Road;

4. Addition of bicycle lane to Alta Road from Otay Mesa Road to Siempre Viva Road to provide additional connectivity for bike lanes on Lone Star Road, David Ridge Drive, Airway Road, and Siempre Viva Road;

5. Deletion of bicycle lane on Otay Mesa Road from Piper Ranch Road to Enrico Fermi Drive since construction of this roadway segment per the County's standards of a six-lane (6-L) prime arterial is constrained due to existence of high voltage transmission lines and existing building along the southerly side of the road and realignment to the northerly side would require additional right-of-way and appropriate transition east of Enrico Fermi Drive. In addition, there would be a large volume of traffic including trucks crossing the location of the on and off ramps for SR-125, hence this segment of Otay Mesa Road is not an ideal location for a bike lane;

6. Deletion of bicycle lane on David Ridge Drive westerly of Sunroad Boulevard (existing Sanyo Avenue) since that section of the road is being deleted;

7. Deletion of bicycle lane on Michael Faraday Drive from Lone Star Road to Airway Road since that section of the road is being deleted;

8. Realignment of roadway network and bicycle lanes on Lone Star Road, Airway Road, and Siempre Viva Road;

These changes have been approved due to an overall update of the circulation system and the need to provide alternative bicycle connections when an existing route was deleted.

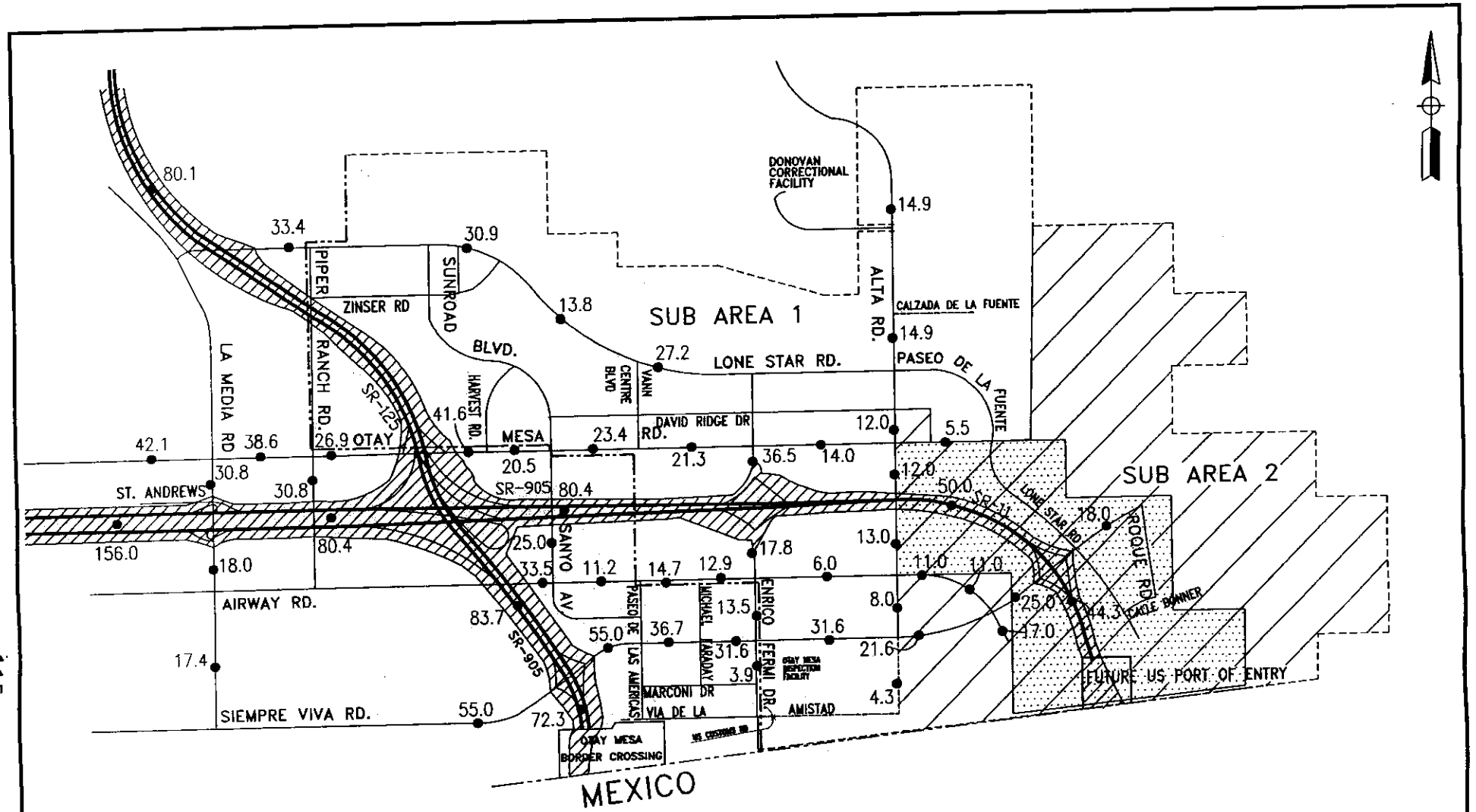
TRAFFIC ASSESSMENT UPDATE FOR THE EAST OTAY MESA SPECIFIC PLAN AMENDMENT 2007

In June 2006, the County retained the services of Darnell & Associates (D&A) to provide an update to the traffic assessment for the Specific Plan Amendment 2002. The report provides a program-level analysis to update the traffic assessment for the East Otay Mesa Specific Plan prepared by the Department of Public Works in May 2002. The amendment to the Specific Plan was adopted by the Board of Supervisors on August 1, 2007. The amendment also includes the traffic forecast for build out of land uses in the EOMSPA including the changes in circulation plan described previously. The build out forecast provided in the traffic assessment update for the EOMSPA includes the retention of previously approved land uses. Since the project is consistent with the EOMSP, the traffic from the proposed project is included in the build out forecast.

Figure 27 provides the 2030 traffic forecast for East Otay Mesa area including build out of the proposed project (Units 1-5).

YEAR 2030 ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

As shown in Table 36, all roadway segments in the proposed circulation plan for the EOMSPA operate at acceptable level of service under 2030 conditions. Since all roadway segments operate at LOS D or better under 2030 conditions with and without build out of the proposed project (Units 1-5) conditions, the project does not have an impact under 2030 conditions.



LEGEND

XX.X – AVERAGE DAILY TRAFFIC VOLUMES IN THOUSAND (INCLUDES PROJECT TRAFFIC)

– CITY/COUNTY BOUNDARY

– SUB AREA BOUNDARY

– FREEWAY RIGHT-OF-WAY

– PROJECT SITE

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FIGURE 27

ADOPTED CIRCULATION PLAN TRAFFIC FORECAST-2030 + PROJECT (UNITS 1-5)

Table 36 – 2030 + Project Build Out (Units 1-5) Roadway Segment Daily LOS Summary

Roadway Segment	Jurisdiction	Class	Capacity (LOS E)	2030 w/o Project			2030 + Project Build Out (Units 1-5)					
				ADT	V/C	LOS	Proj. Tr	ADT	V/C	LOS	ΔV/C	Sig
Otay Mesa Road												
Britannia Blvd to La Media Rd	City	6P	60,000	41,249	0.69	C	851	42,100	0.70	C	0.01	No
La Media Rd to Piper Ranch Rd	City	6P	60,000	37,749	0.63	C	851	38,600	0.64	C	0.01	No
Piper Ranch Rd to SR-125	**County**/City	6P	57,000	26,049	0.46	B	851	26,900	0.47	B	0.01	No
SR-125 to Harvest Rd	**County**/City	6P	57,000	40,789	0.72	C	851	41,640	0.73	C	0.01	No
Harvest Rd to Sanyo Av	**County**/City	6P	57,000	19,649	0.34	A	851	20,500	0.36	A	0.02	No
Sanyo Av to Vann Centre Blvd	**County**/City	6P	57,000	21,910	0.38	A	1,490	23,400	0.41	B	0.03	No
Vann Centre Blvd to Enrico Fermi Dr	County	6P	57,000	19,810	0.35	A	1,490	21,300	0.37	A	0.02	No
Enrico Fermi Dr to Alta Rd	County	4M	37,000	11,872	0.32	A	2,128	14,000	0.38	A	0.06	No
Airway Road												
SR-905 to Sanyo Av	City	4M	40,000	33,075	0.83	D	425	33,500	0.84	D	0.01	No
Sanyo to Paseo De Las Americas	City	4M	40,000	10,562	0.26	A	638	11,200	0.28	A	0.02	No
Paseo De Las Americas to Michael Faraday Dr	**County**/City	4M	37,000	14,062	0.38	A	638	14,700	0.40	A	0.02	No
Michael Faraday Dr to Enrico Fermi Dr	**County**/City	4M	37,000	12,262	0.33	A	638	12,900	0.35	A	0.02	No
Enrico Fermi Dr to Alta Rd	County	4M	37,000	5,149	0.14	A	851	6,000	0.16	A	0.02	No
Siempre Viva Road												
SR-905 NB to Paseo de las Americas	City	6P	60,000	52,872	0.88	D	2,128	55,000	0.92	D	0.04	No
Paseo de las Americas to Michael Faraday Dr	City	6P	60,000	34,572	0.58	B	2,128	36,700	0.61	C	0.03	No
Michael Faraday Dr to Enrico Fermi Dr	City	6P	60,000	29,472	0.49	B	2,128	31,600	0.53	B	0.04	No
Enrico Fermi Dr to Alta Rd	County	4M	37,000	23,860	0.64	B	2,340	26,200	0.71	C	0.07	No
La Media Road												
Otay Mesa Rd to Saint Andrews-SR-905 WB ramp	City	6P	60,000	30,800	0.51	B	0	30,800	0.51	B	0.00	No
Saint Andrews-SR-905 WB ramp to SR-905 EB ramp	City	6P	60,000	30,800	0.51	B	0	30,800	0.51	B	0.00	No
SR-905 EB ramp to Airway Rd	City	6P	60,000	18,000	0.30	A	0	18,000	0.30	A	0.00	No
SR-125												
North of Otay Mesa Rd	SBX	4-Fwy	(b)	76,908	0.84	D	3,192	80,100	0.88	D	0.04	No
Existing SR-905												
Otay Mesa Rd to Siempre Viva Rd	Caltrans	6-Fwy	(b)	83,275	0.63	C	425	83,700	0.63	C	0.00	No
South of Siempre Viva Rd	Caltrans	6-Fwy	(b)	71,023	0.54	B	1,277	72,300	0.55	B	0.01	No
Sanyo Avenue												
Otay Mesa Rd to Airway Rd	City	4C	30,000	24,787	0.83	D	213	25,000	0.83	D	0.00	No
Enrico Fermi Drive												
Otay Mesa Rd to Airway Rd	County	5M(a)	47,000	36,287	0.77	C	213	36,500	0.78	C	0.01	No
Airway Rd to Siempre Viva Rd	City	4M	40,000	13,287	0.33	A	213	13,500	0.34	A	0.01	No
Alta Road												
Calzada De La Fuente to Paseo De La Fuente	County	4C	34,200	12,772	0.37	A	2,128	14,900	0.44	B	0.07	No
Paseo De La Fuente to Otay Mesa	County	4M	37,000	9,872	0.27	A	2,128	12,000	0.32	A	0.05	No
New SR-905 Facility												
West of La Media Rd	Caltrans	8-Fwy	(b)	148,765	0.84	D	7,235	156,000	0.89	D	0.05	No
East of La Media Rd	Caltrans	8-Fwy	(b)	73,165	0.42	B	7,235	80,400	0.46	B	0.04	No

City = Capacity of city segments is based on the upper limits of LOS E per the City of San Diego; County = Capacity of county segments is based on the upper limits of LOS E per the County of San Diego;
SBX = South Bay Expressway;
Bold = Jurisdiction which capacity is based on; ADT= Average Daily Traffic; LOS= Level of Service; V/C = Volume-to LOS E Capacity Ratio; Fwy = Freeway; 6P = 6-Lane Prime Arterial; 5M = 5-Lane Major Arterial; 4M = 4-Lane Major Arterial; 4C = 4-Lane Collector.
(a) Additional lanes may be provided to accommodate turning movements and freeway access; hence the roadway capacity was assumed to be 47,000 ADT at LOS E (half way between a 4M & 6P).
(b) Capacity based on Caltrans District 11 & HCM procedures, See Appendix L for LOS calculations.

SECTION VII – PROJECT ACCESS AND INTERNAL CIRCULATION

PROJECT ACCESS

The proposed project site is located on 311.5 acres at the southeast corner of Otay Mesa Road (Old Otay Mesa Road) and Alta Road in the Otay Mesa Area of San Diego County. As shown in Figure 2, Section I, the project site can be accessed via Otay Mesa Road (Old Otay Mesa Road), Alta Road, and Airway Road. It is proposed that with the development of Units 1-3, the project site will provide access off the Otay Mesa Road/Alta Road and Otay Mesa Road/Paseo De La Fuente-Lone Star Road (formerly Loop Road) intersections. Subsequently, with the development of Units 4-5, the project site will provided additional access off the Alta Road/Airway Road intersection. The proposed Paseo De La Fuente-Lone Star Road (formerly Loop Road) and SR-11 also traverse the project site under cumulative and future conditions providing additional access to the project site. The roadway segments of Calle Ventner, Street C, and Street D are non-circulation element roadways proposed on the project site to facilitate internal circulation. Additionally, Street A and B are cul-de-sac streets that provide access to lots.

INTERNAL TRIP DISTRIBUTION/INTERNAL TRAFFIC

Figures 28 – 33 provide an illustration of the internal circulation/trip distribution percentages and project related traffic volumes for each unit of development of the project for existing conditions. Since the internal roadways do not currently exist, the project traffic volumes illustrated in Figures 28 – 33 for Unit 1, Units 1-2, Units 1-3, Units 1-4, and Units 1-5 under existing conditions are also representative of the existing plus project traffic volume conditions. Figure 34 provides an illustration of the internal circulation/trip distribution percentages and project related traffic volumes for each unit of development of the project for 2030 conditions.

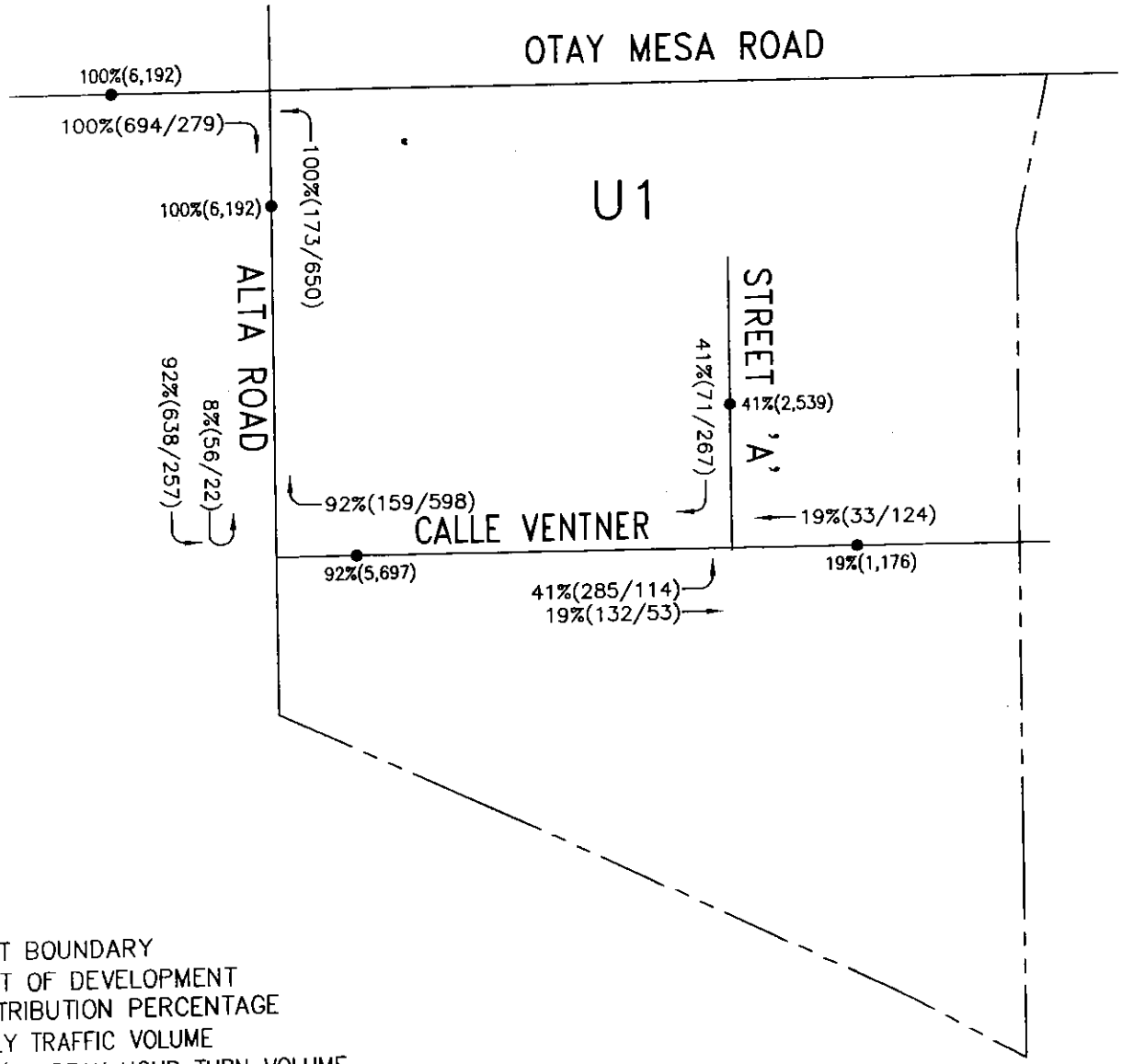
Figure 35 provides an illustration of the internal project related traffic volumes for cumulative (2020) with SR-905 [Phases 1A & 1B]. It should be noted that the cumulative (2020) with SR-905 [Phases 1A & 1B] volumes are lower than the existing plus project volumes due to the SANDAG 2020 Model run that has assumed 13% of Otay Crossings would be constructed by the year 2020.

Figure 36 illustrates the 2030 plus Units 1-5 project daily traffic volumes on the internal roadway network.

INTERNAL LEVEL OF SERVICE ANALYSIS

Internal – Roadway Segments

Although the project site can provide additional access via the segments of Airway Road between Alta Road and Siempre Viva Road and Siempre Viva Road between Airway Road and Lone Star Road, this additional access route is not required immediately and was thus not included in the analysis until the development of Units 4 and 5. In addition, to constructing the off-site segments of Airway Road between Alta Road and Siempre Viva Road and Siempre Viva Road between Airway Road and Lone Star Road with the development of Units 4 and 5 (if not previously constructed by the Otay Business Park Development [TM 5505]), the project will be required to construct on-site improvements to the County circulation element roadways of Otay Mesa Road, Siempre Viva Road, Alta Road, and Lone Star Road along with the non circulation element roadways in order to facilitate internal circulation within the project site. The *Public Facility Element* for the County of San Diego also requires that all on-site County Circulation Element roads operate at Level of Service C or better. (A copy of excerpts from the County's *Public Facility Element* can be found in Appendix A.)



LEGEND

- UNIT BOUNDARY
- UI – UNIT OF DEVELOPMENT
- ● WW% – DISTRIBUTION PERCENTAGE
- ● Z,ZZZ – DAILY TRAFFIC VOLUME
- XX/YY – AM/PM PEAK HOUR TURN VOLUME
- → – DIRECTION OF TRAVEL

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FIGURE 28

UNIT 1 INTERNAL CIRCULATION/DISTRIBUTION & PROJECT TRAFFIC (EXISTING CONDITIONS)

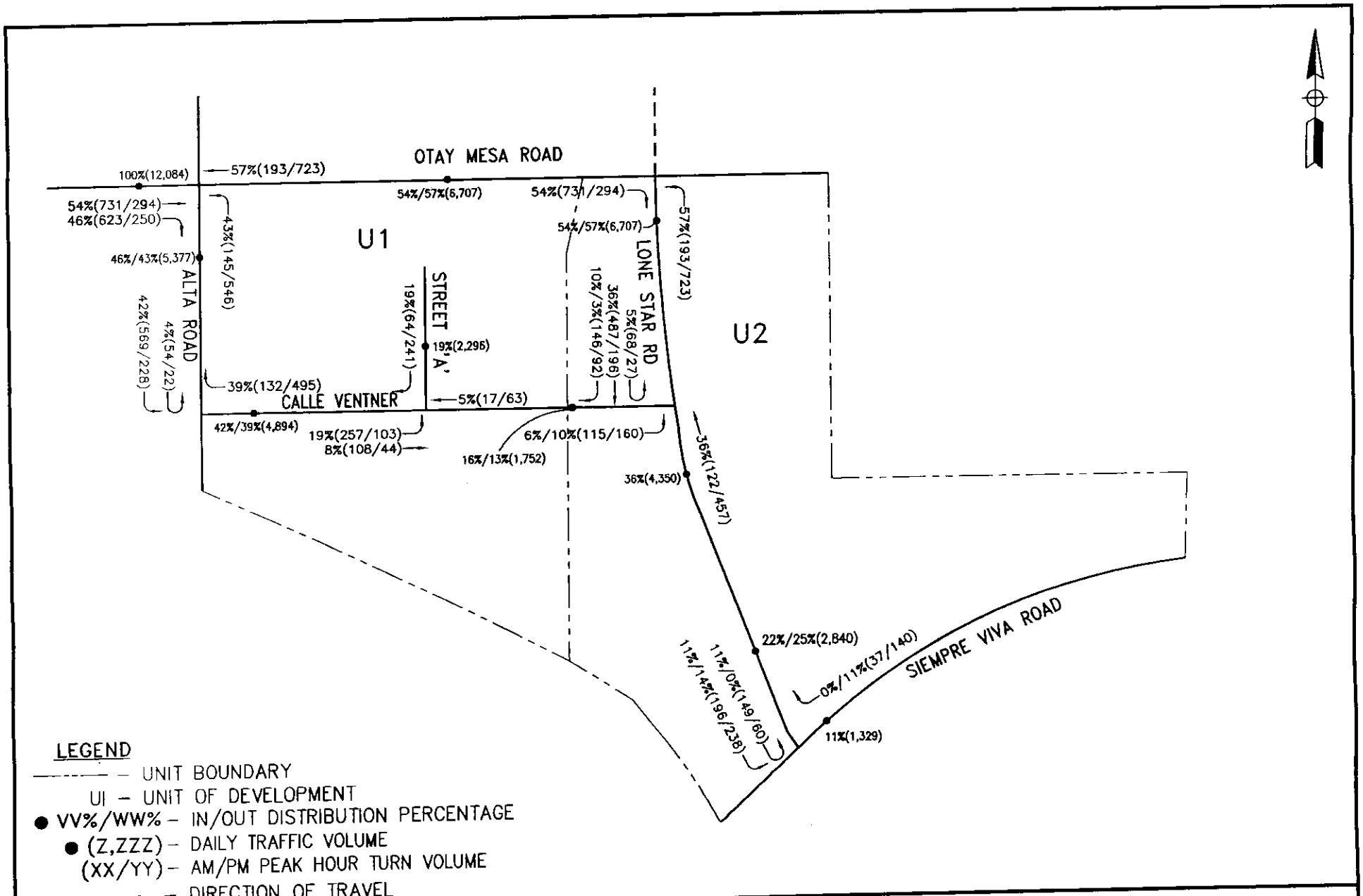

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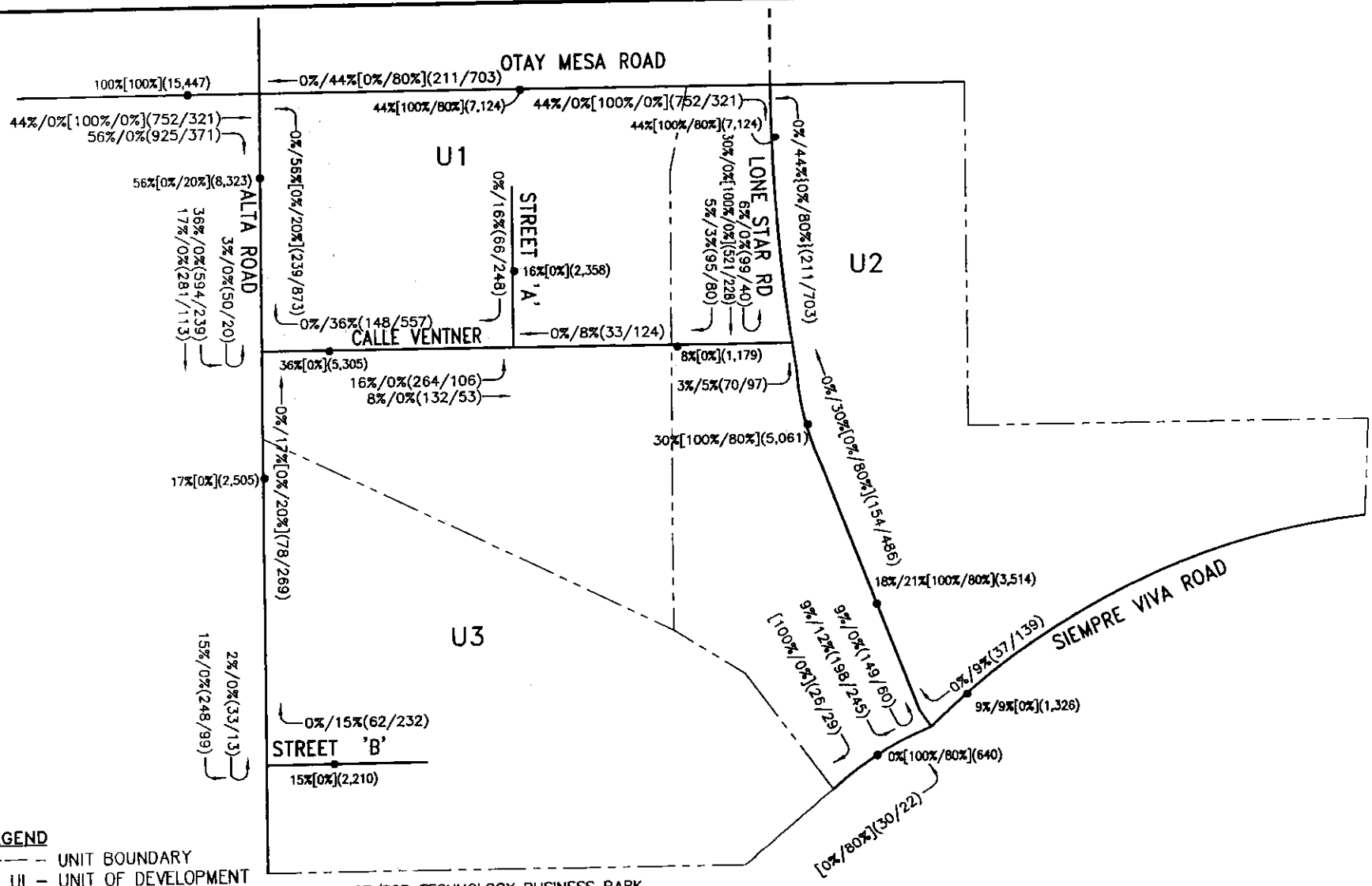
FIGURE 29

UNITS 1-2 INTERNAL CIRCULATION/DISTRIBUTION & PROJECT TRAFFIC (EXISTING CONDITIONS)



LEGEND

- UNIT BOUNDARY
- UI – UNIT OF DEVELOPMENT
- ●VV%/WW% – IN/OUT DISTRIBUTION PERCENTAGE/FOR TECHNOLOGY BUSINESS PARK
- [VV%/WW%]– UNIT 3 TRUCK DISTRIBUTION PERCENTAGES
- ● (Z,ZZZ) – DAILY TRAFFIC VOLUME
- (XX/YY) – AM/PM PEAK HOUR TURN VOLUME
- DIRECTION OF TRAVEL

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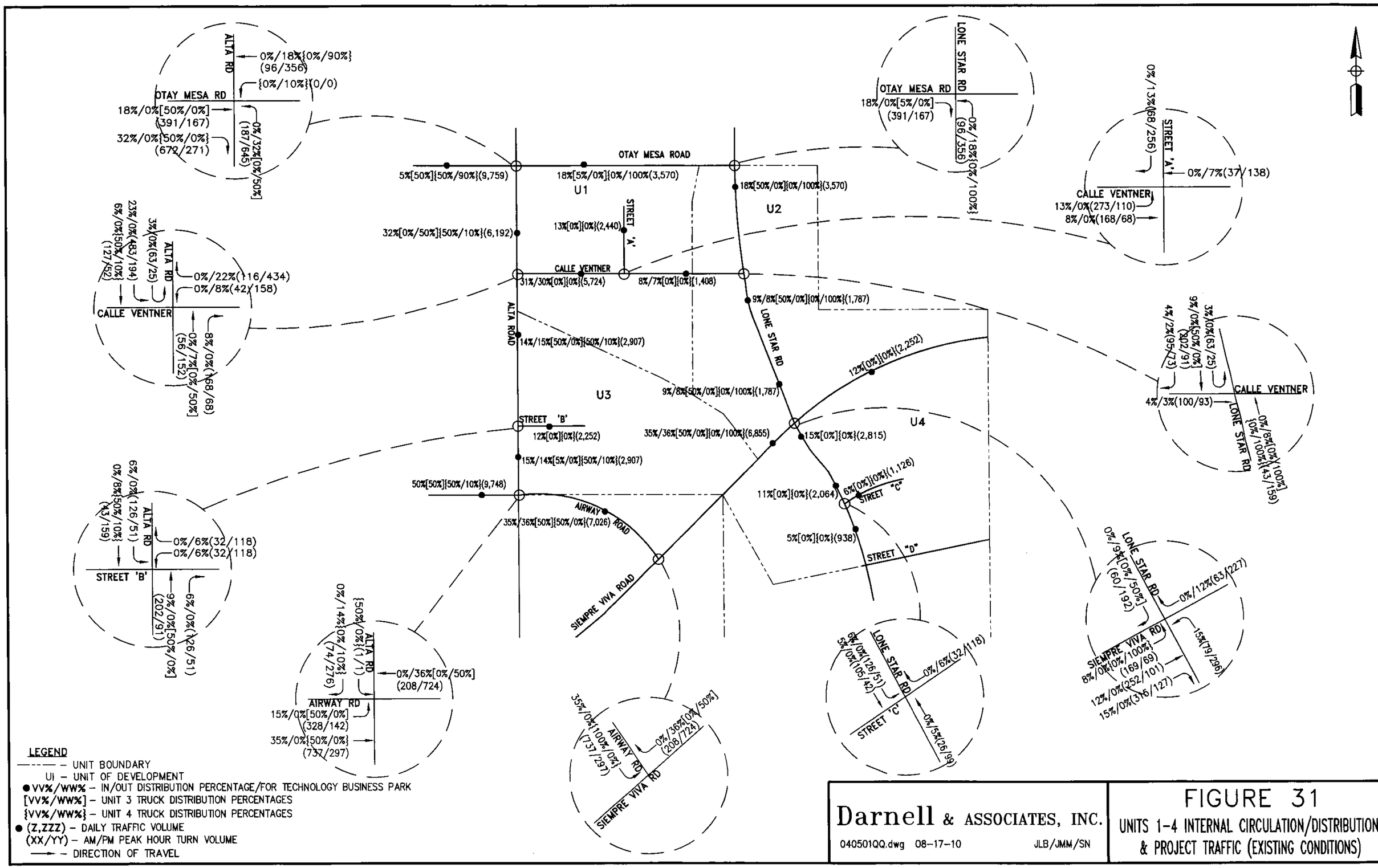
FIGURE 30

UNITS 1-3 INTERNAL CIRCULATION/DISTRIBUTION & PROJECT TRAFFIC (EXISTING CONDITIONS)



LEGEND

- ——— – UNIT BOUNDARY
- UI – UNIT OF DEVELOPMENT
- ● VV%/WW% – IN/OUT DISTRIBUTION PERCENTAGE/FOR TECHNOLOGY BUSINESS PARK
- [VV%/WW%] – UNIT 3 TRUCK DISTRIBUTION PERCENTAGES
- {VV%/WW%} – UNIT 4 TRUCK DISTRIBUTION PERCENTAGES
- ● (Z,ZZZ) – DAILY TRAFFIC VOLUME
- (XX/YY) – AM/PM PEAK HOUR TURN VOLUME
- ⟶ – DIRECTION OF TRAVEL

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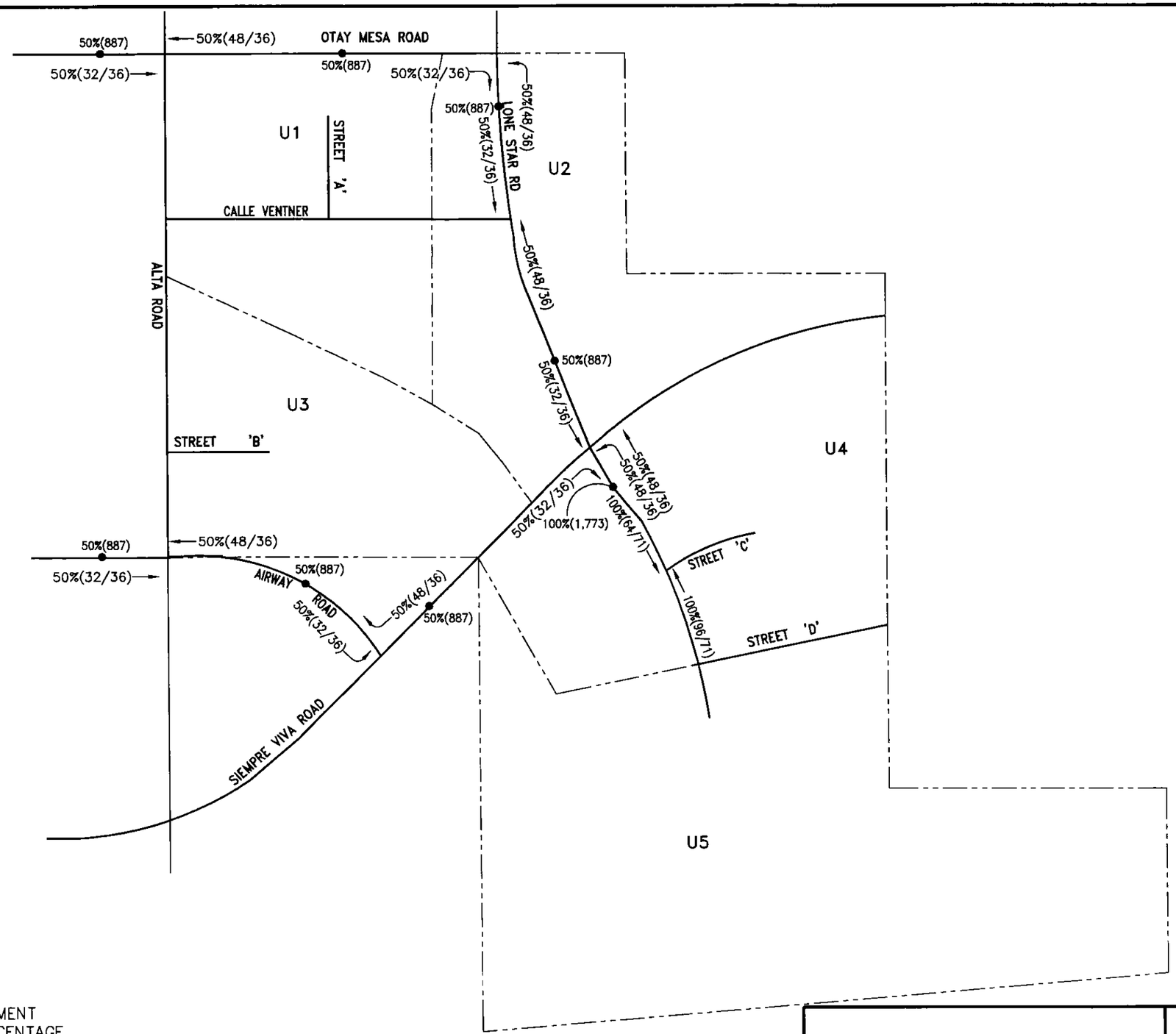
FIGURE 31

UNITS 1-4 INTERNAL CIRCULATION/DISTRIBUTION & PROJECT TRAFFIC (EXISTING CONDITIONS)



LEGEND

- UNIT BOUNDARY
- UI – UNIT OF DEVELOPMENT
- ● WW% – DISTRIBUTION PERCENTAGE
- ● Z,ZZZ – DAILY TRAFFIC VOLUME
- XX/YY – AM/PM PEAK HOUR TURN VOLUME
- → – DIRECTION OF TRAVEL

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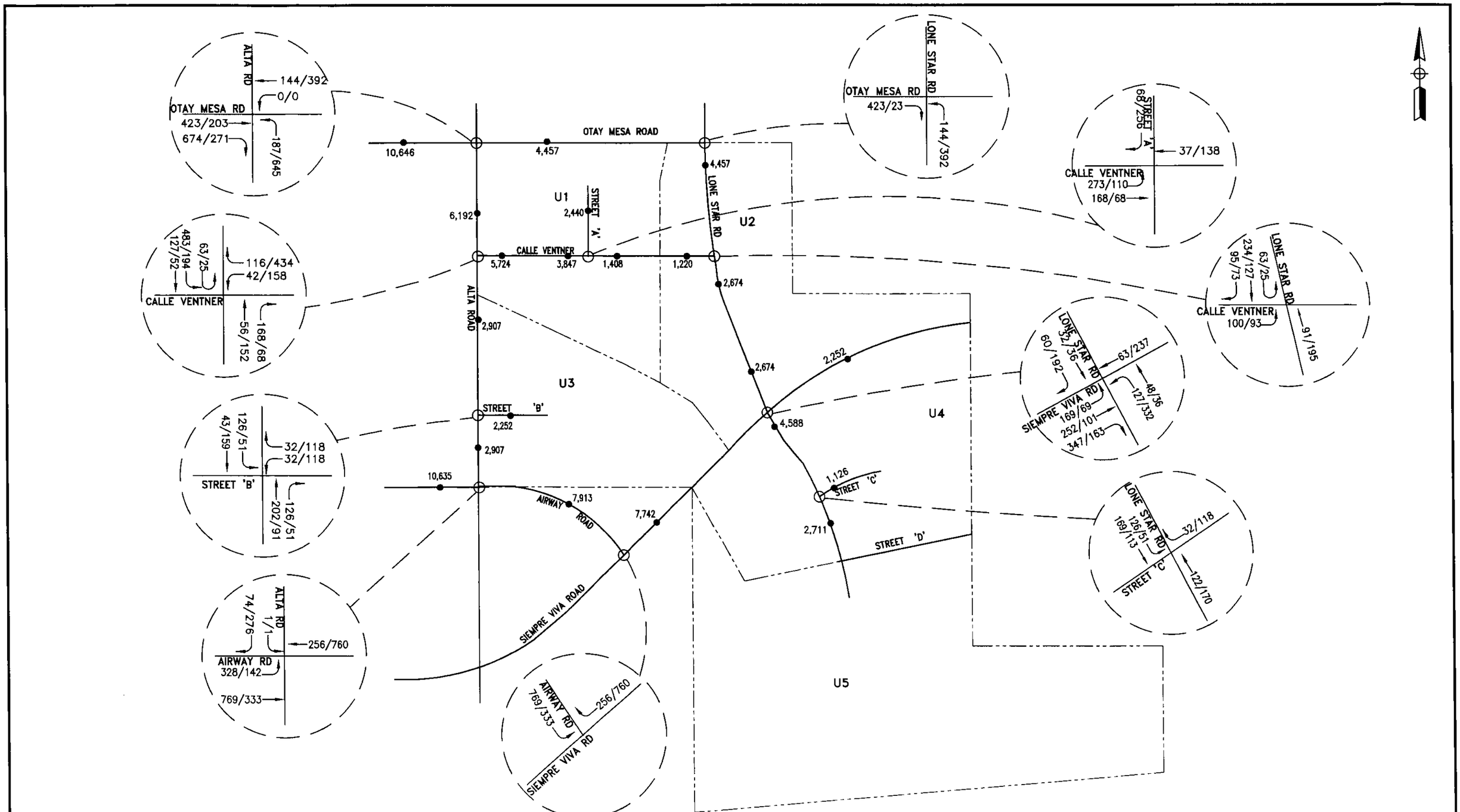
FIGURE 32

UNIT 5 ONLY INTERNAL CIRCULATION/DISTRIBUTION & PROJECT TRAFFIC (EXISTING CONDITIONS)



LEGEND

- UNIT BOUNDARY
- UI – UNIT OF DEVELOPMENT
- ●Z,ZZZ – DAILY TRAFFIC VOLUME
- XX/YY – AM/PM PEAK HOUR TURN VOLUME
- → – DIRECTION OF TRAVEL

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FIGURE 33

UNITS 1-5 INTERNAL CIRCULATION PROJECT RELATED TRAFFIC VOLUMES (EXISTING CONDITIONS)

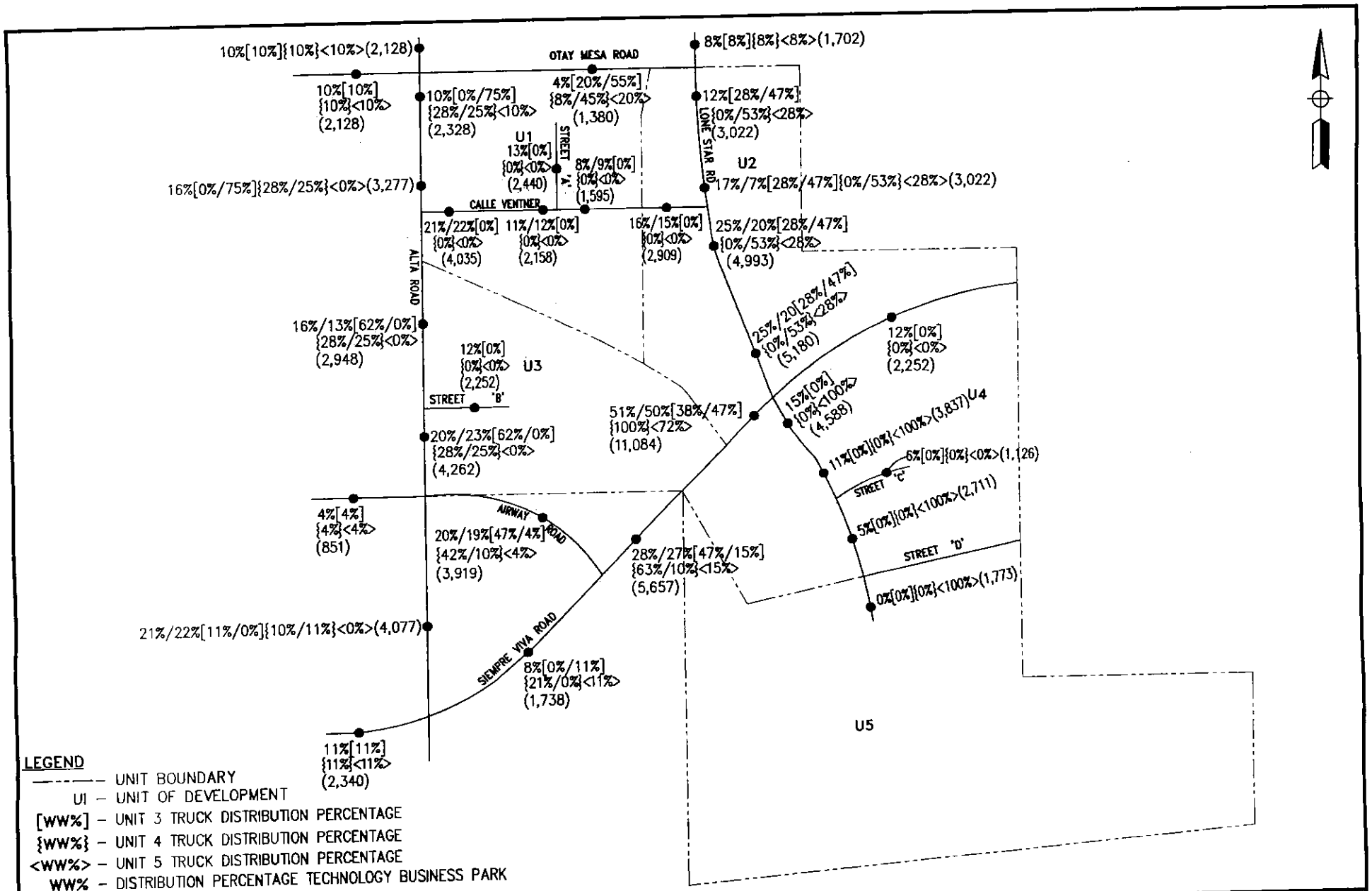

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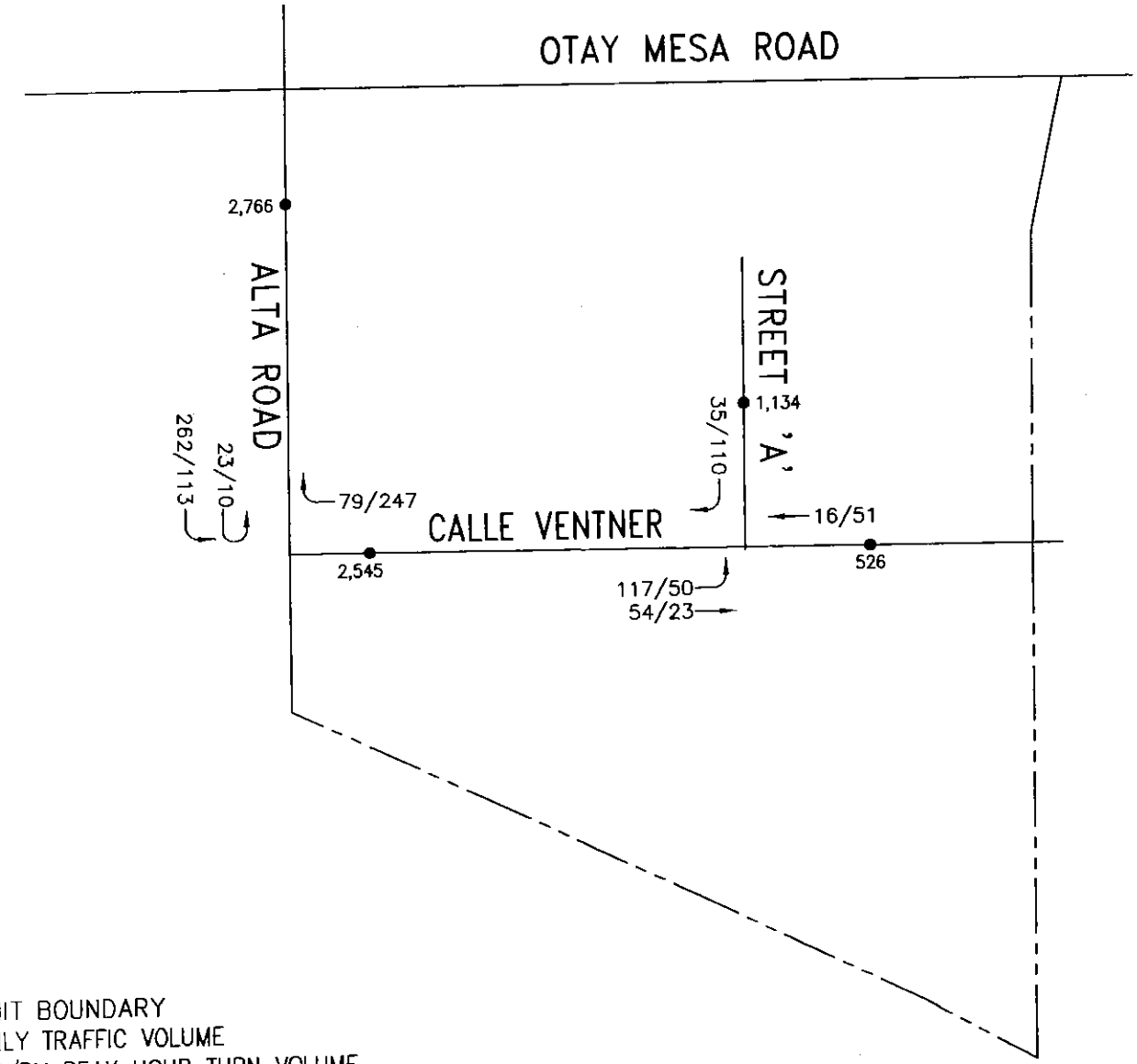
FIGURE 34

INTERNAL CIRCULATION/DISTRIBUTION & PROJECT TRAFFIC (2030 CONDITIONS)



LEGEND

- UNIT BOUNDARY
- ● Z,ZZZ – DAILY TRAFFIC VOLUME
- XX/YY – AM/PM PEAK HOUR TURN VOLUME
- → – DIRECTION OF TRAVEL

NOTE: REPRESENTS ONLY 13% OF PROJECT TRAFFIC

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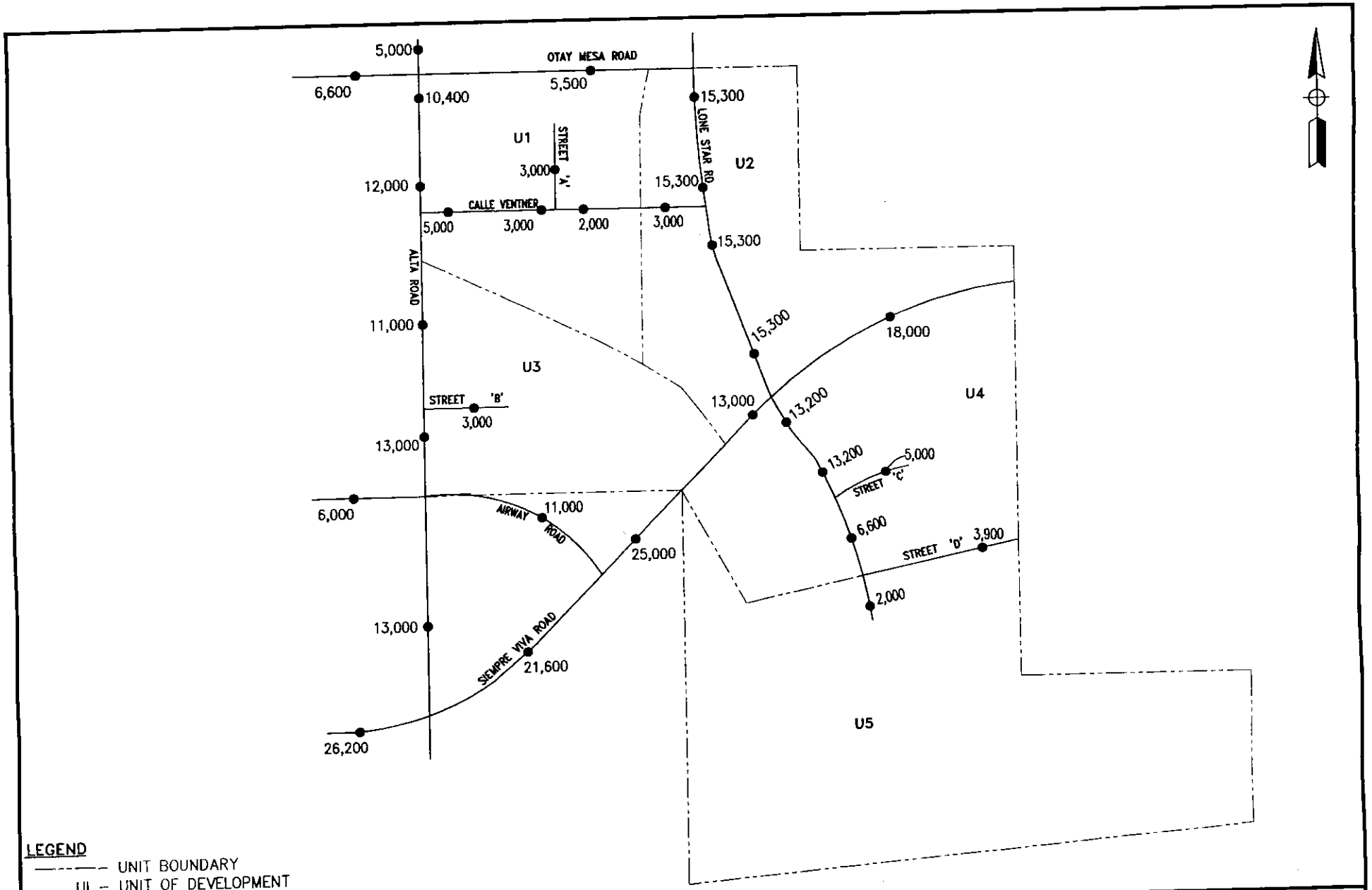
FIGURE 35

CUMULATIVE (YEAR 2020) W/ SR-905 [PHASES 1A &1B] INTERNAL TRAFFIC VOLUMES



LEGEND

——·——· UNIT BOUNDARY

UI – UNIT OF DEVELOPMENT

●Z,ZZZ – DAILY TRAFFIC VOLUME

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FIGURE 36

2030 + UNITS 1-5 INTERNAL TRAFFIC VOLUMES

It should be noted that the segments of Otay Mesa Road between Alta Road and Lone Star Road, Siempre Viva Road between Airway Road and Lone Star Road, Alta Road between Otay Mesa Road and Airway Road, and Lone Star Road between Otay Mesa Road and its terminus are classified as bike routes with class two bike lanes. Since no parking is provided along these roadways, no additional right-of-way is required to accommodate the bike-lanes.

The project proposes construction of various on-site and off-site roadways within the project; the classification at 2030 is provided in Table 37. Table 37 also provides the roadway improvements required to facilitate the project's access under existing plus each unit of development and 2030 conditions in order to maintain an acceptable LOS at all on-site circulation element roads. It should be noted that Street „C', Street „D', and the extension of Siempre Viva Road have been provided to provide access to the adjacent properties to the east of the project. The Subarea 2 Otay Mesa Specific Plan designated these areas as residential with a density of 1 dwelling unit per twenty acres.

The site plan shown in Figure 2, provided in Section I, identifies the approximate location of the driveways for each of the lots. The exact driveway locations will be refined once the project moves further along in the design process.

Table 38 provides a summary of the existing plus project levels of service at the internal roadways. As shown in Table 38, all internal roadways will operate at an acceptable LOS D or better if designed based on the recommendations summarized in Table 37 under existing plus each unit of development.

It should be noted that as shown in Figure 2, Section I, Street „A' and Street „B' end with cul-de-sacs. Per the County of San Diego's Public Road Standards, the recommended capacity for LOS C for a two (2) - lane industrial/commercial cul-de-sac is 1,000 ADT. Due to the projected volumes on Street „A' and Street „B' it is recommended that the applicant design/construct Street „A' and Street „B' to the standards of a two (2) - lane industrial/commercial collector as shown in Table 37.

Internal – Intersections

The following intersections were analyzed under existing conditions plus each unit of development, conditions to determine the required lane configurations and traffic control needed to provide acceptable levels of service:

- Otay Mesa Road/Paseo De La Fuente-Lone Star Road;
- Airway Road/Alta Road [(a);]
- Siempre Viva Road/Alta Road [(a);]
- Siempre Viva Road/Airway Road;
- Siempre Viva Road/Lone Star Road;
- Alta Road/Calle Ventner;
- Alta Road/Street „B';
- Lone Star Road/Calle Ventner;
- Lone Star Road/Street „C';
- Lone Star Road/Street „D'; and
- Calle Ventner/Street „A'.

(a) These intersections are located adjacent to the project, but are located off-site

Table 37 – Summary of On-Site & Off-Site Roadway Segment Improvements						
Roadway Segment	Existing Plus Project Conditions					Ultimate Classification Per EOMSP
	Unit 1	Units 1-2	Units 1-3	Units 1-4	Units 1-5	
Off-Site Roadway Segments						
Otay Mesa Road						
Alta to Lone Star Rd	N/A	LC	TC	TC	TC	4M
Alta Road						
Otay Mesa to Calle Ventner	LC	LC	TC	TC	TC	4M
Calle Ventner to Street „B'	N/A	N/A	LC	LC	LC	4M
Street „B' to Airway	N/A	N/A	N/A	LC	LC	4M
Airway to Siempre Viva	N/A	N/A	N/A	N/A	N/A	4M
Airway Road						
Alta to Siempre Viva	N/A	N/A	N/A	LC	LC	4M
On-Site Roadway Segments						
Lone Star Road						
Otay Mesa to Calle Ventner	N/A	LC	TC	TC	TC	4M
Calle Ventner to Siempre Viva	N/A	LC	LC	LC	LC	4M
Siempre Viva to Street „C'	N/A	N/A	N/A	2 I/C	LC	4M
South of Street „C'	N/A	N/A	N/A	2 I/C	2 I/C	4M
Calle Ventner						
Alta to Street „A'	2 I/C[(a)]	2 I/C[(a)]	2 I/C[(a)]	2 I/C[(a)]	2 I/C[(a)]	Non-CE (2 I/C[(a)])
Street „A' to Lone Star	2 I/C[(a)]	2 I/C[(a)]	2 I/C[(a)]	2 I/C[(a)]	2 I/C[(a)]	Non-CE (2 I/C[(a)])
Siempre Viva Road						
Alta to Airway	N/A	N/A	N/A	N/A	N/A	4M
Airway to Lone Star	N/A	N/A	2 I/C	LC	LC	4M
East of Lone Star Rd	N/A	2 I/C	2 I/C	2 I/C	2 I/C	4M
Street 'A'						
North of Calle Ventner	2 I/C	2 I/C	2 I/C	2 I/C	2 I/C	Non-CE (2 I/C)
Street 'B'						
East of Alta	N/A	N/A	2 I/C	2 I/C	2 I/C	Non-CE (2 I/C)
Street 'C'						
East of Lone Star	N/A	N/A	N/A	2 I/C	2 I/C	Non-CE (LC)

EOMSP = East Otay Mesa Specific Plan; 4M = 4-lane Major Road; 4C = 4-Lane Collector Road; TC = Town Collector; LC = Light Collector; 2- I/C = 2-Lane Industrial Commercial Collector;
Non CE = Non Circulation Element Road; N/A = Not Applicable because this roadway segment will not be constructed until a later Unit of development
(a) The roadway classification is a 2-lane Industrial/Commercial Collector with the capacity equivalent to that of a Light Collector.

Table 38 – Existing + Project Off-Site/On-Site Roadway Segment Daily LOS Summary				
Roadway Segment	Recommended Classification	Capacity (LOS E)	ADT	LOS
Existing + Project Unit 1				
Alta Road Otay Mesa Rd to Calle Ventner	Light Collector	16,200	6,192	C
Calle Ventner Alta Rd to Street „A' East of Street „A'	 2L Industrial/Commercial Collector 2L Industrial/Commercial Collector	 16,200[(b)] 16,200[(b)]	 5,697 1,176	 C A
Street 'A' North of Calle Ventner	2L Industrial/Commercial Collector	4,500	2,539	<C
Existing + Project Units 1-2				
Otay Mesa Road Alta Rd to Lone Star Rd	Light Collector	16,200	6,707	C
Siempre Viva Road East of Lone Star Rd	2L Industrial/Commercial Collector	4,500	1,329	<C
Alta Road Otay Mesa Rd to Calle Ventner	Light Collector	16,200	5,377	C
Lone Star Road Otay Mesa Rd to Calle Ventner Calle Ventner to Siempre Viva Rd	 Light Collector Light Collector	 16,200 16,200	 6,707 4,350	 C C
Calle Ventner Alta Rd to Street „A' Street „A' to Lone Star Rd	 2L Industrial/Commercial Collector 2L Industrial/Commercial Collector	 16,200[(b)] 16,200[(b)]	 4,894 1,752	 C A
Street 'A' North of Calle Ventner	2L Industrial/Commercial Collector	4,500	2,296	<C
Existing + Project Units 1-3				
Otay Mesa Road Alta Rd to Lone Star Rd	Town Collector	19,000	7,124	C
Siempre Viva Road West of Lone Star Rd East of Lone Star Rd	 2L Industrial/Commercial Collector 2L Industrial/Commercial Collector	 1,000 4,500	 640 1,326	 <C <C
Alta Road Otay Mesa Rd to Calle Ventner Calle Ventner to Street 'B'	 Town Collector Light Collector	 19,000 16,200	 8,323 2,505	 C B
Lone Star Road Otay Mesa Rd to Calle Ventner Calle Ventner to Siempre Viva Rd	 Town Collector Light Collector	 19,000 16,200	 7,124 5,061	 C C
Calle Ventner Alta Rd to Street „A' Street „A' to Lone Star Rd	 2L Industrial/Commercial Collector 2L Industrial/Commercial Collector	 16,200[(b)] 16,200[(b)]	 5,305 1,179	 C A
Street 'A' North of Calle Ventner	2L Industrial/Commercial Collector	4,500	2,358	<C
Street 'B' East of Alta Rd	2L Industrial/Commercial Collector	4,500	2,210	<C

County = Capacity of County segments is based on the upper limits of LOS E per the County of San Diego;
ADT= Average Daily Traffic; LOS= Level of Service; <C Operates at better than LOS C; >C Operates over recommended capacity for LOS C
(a) Levels of Service are typically not applied to industrial/commercial collector roads, The capacity shown here is the recommended capacity to maintain LOS C
(b) The roadway classification is a 2-lane Industrial Commercial Collector with the equivalence capacity of a Light Collector.

Table 38 (Continued) – Existing + Project Off-Site/On-Site Roadway Segment Daily LOS Summary				
Roadway Segment	Recommended Classification	Capacity (LOS E)	ADT	LOS
Existing + Project Units 1-4				
Otay Mesa Road				
Alta Rd to Lone Star Rd	Town Collector	19,000	3,570	B
Airway Road				
Alta Rd to Siempre Viva Rd	Light Collector	16,200	7,026	C
Siempre Viva Road				
Airway Rd to Lone Star Rd	Light Collector	16,200	6,855	C
East of Lone Star Rd	2L Industrial/Commercial Collector	4,500	2,252	<C
Alta Road				
Otay Mesa Rd to Calle Ventner	Town Collector	19,000	6,192	C
Calle Ventner to Street „B'	Light Collector	16,200	2,907	B
Street 'B' to Airway Rd	Light Collector	16,200	2,907	B
Lone Star Road				
Otay Mesa Rd to Calle Ventner	Town Collector	19,000	3,570	B
Calle Ventner to Siempre Viva Rd	Light Collector	16,200	1,787	A
Siempre Viva Rd to Street 'C'	2L Industrial/Commercial Collector	4,500	2,815	<C
South of Street 'C'	2L Industrial/Commercial Collector	4,500	938	<C
Calle Ventner				
Alta Rd to Street „A'	2L Industrial/Commercial Collector	16,200[(b)]	5,724	C
Street „A' to Lone Star Rd	2L Industrial/Commercial Collector	16,200[(b)]	1,408	A
Street 'A'				
North of Calle Ventner	2L Industrial/Commercial Collector	4,500	2,440	<C
Street 'B'				
East of Alta Rd	2L Industrial/Commercial Collector	4,500	2,252	<C
Street 'C'				
East of Lone Star Rd	2L Industrial/Commercial Collector	4,500	1,126	<C
Existing + Project Build-Out (Units 1-5)				
Otay Mesa Road				
Alta Rd to Lone Star Rd	Town Collector	19,000	4,457	B
Airway Road				
Alta Rd to Siempre Viva Rd	Light Collector	16,200	7,913	D
Siempre Viva Road				
Airway Rd to Lone Star Rd	Town Collector	19,000	7,742	C
East of Lone Star Rd	2L Industrial/Commercial Collector	4,500	2,252	<C
Alta Road				
Otay Mesa Rd to Calle Ventner	Town Collector	19,000	6,192	C
Calle Ventner to Street 'B'	Light Collector	16,200	2,907	B
Street 'B' to Airway Rd	Light Collector	16,200	2,907	B
Lone Star Road				
Otay Mesa Rd to Calle Ventner	Town Collector	19,000	4,457	B
Calle Ventner to Siempre Viva Rd	Light Collector	16,200	2,674	B
Siempre Viva Rd to Street 'C'	4L Industrial/Commercial Collector	13,500	4,588	<C
Street 'C' to Street 'D'	2L Industrial/Commercial Collector	4,500	2,711	<C
South of Street 'D'	2L Industrial/Commercial Collector	4,500	1,773	<C
Calle Ventner				
Alta Rd to Street „A'	2L Industrial/Commercial Collector	16,200[(b)]	5,724	C
Street „A' to Lone Star Rd	2L Industrial/Commercial Collector	16,200[(b)]	1,408	A
Street 'A'				
North of Calle Ventner	2L Industrial/Commercial Collector	4,500	2,440	<C
Street 'B'				
East of Alta Rd	2L Industrial/Commercial Collector	4,500	2,252	<C
Street 'C'				
East of Lone Star Rd	2L Industrial/Commercial Collector	4,500	1,126	<C

County = Capacity of County segments is based on the upper limits of LOS E per the County of San Diego;
ADT= Average Daily Traffic; LOS= Level of Service; <C Operates at better than LOS C; >C Operates over recommended capacity for LOS C; I/C = Industrial/Commercial
(a) Levels of Service are typically not applied to industrial/commercial collector roads, The capacity shown here is the recommended capacity to maintain LOS C
(b) The roadway classification is a 2-lane Industrial Commercial Collector with the equivalence capacity of a Light Collector.

Figures 37 – 41 illustrate the recommended lane configurations and traffic control for the internal intersections under existing plus each unit of development conditions. Dual left turn lanes were provided at all locations where the peak hour turning volume exceeded 300 vehicles. Table 39 provides a summary of the levels of service at the internal intersections. Appendix K provides the Synchro analysis worksheets for the internal intersection analysis for the existing plus project conditions.

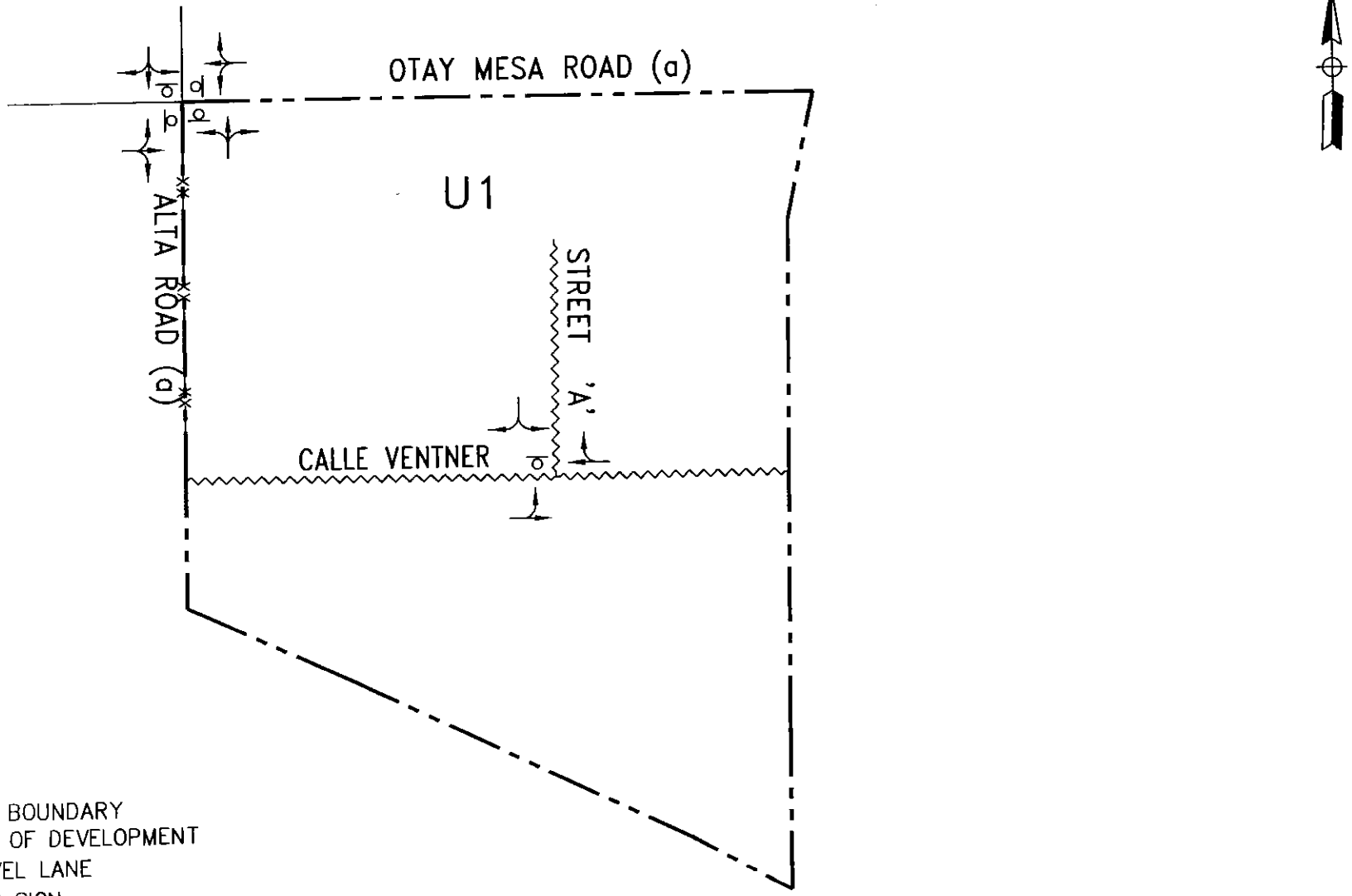
As shown in Table 39, all internal intersection will operate at an acceptable LOS C or during both peak hours better under existing plus project conditions with the recommended lane configurations and traffic control illustrated in Figures 37 – 41 for each unit of development.

DRIVEWAY LOCATIONS

The specific layout of the buildings for the proposed project has not yet been designed; however, Figure 2 provided in Section I, does show the approximate location of the driveways for each of the lots within the development. As shown on Figure 2, as currently proposed there will be two (2) driveways on Alta Road between Otay Mesa Road and Calle Ventner and one (1) driveway on Alta Road between Calle Ventner and Street „B'. Alta Road is a Circulation Element roadway with an ultimate classification of Major Road. Per comments received from the County of San Diego, the Site Planning and Design Guidelines for Subarea 2 (Section 1.2, page 6) do not allow curb cuts off major roads. Thus, the applicant will either need to process a Modification Request to a Road Standard to allow these proposed driveways on Alta Road or revise the site layout to eliminate the proposed driveways on Alta Road.

The site plan shown on Figure 2 in Section I also shows that as currently designed the project proposes to provide five (5) driveways on Lone Star Road between Otay Mesa Road and Calle Ventner; eight (8) driveways on Lone Star Road between Calle Ventner and Siempre Viva Road; two (2) driveways on Lone Star Road between Siempre Viva Road and Street „C'; one (1) driveway on Lone Star Road south of Street „C'; one (1) driveway on Siempre Viva Road between Airway Road and Lone Star Road, and five (5) driveways on Siempre Viva Road east of Lone Star Road. Lone Star Road and Siempre Viva Road are on-site Circulation Element Roadways. Per the design requirements for the East Otay Mesa Business Park Specific Plan Sub-Area 2, since these roadways are all circulation element roadways, the driveways must have their centerlines separated by at least 300 feet (300'). All other driveways must have their centerlines separated by at least 200 feet (200').

An illustration of site plan showing the dimensions between the proposed driveways is provided in Appendix M. A review of the spacing of the driveways finds that the two (2) driveways on Lone Star Road just south of Otay Mesa Road (one on the east and west side of the roadway), six (6) of the eight (8) proposed driveways along Lone Star Road between Calle Ventner and Siempre Viva Road, the driveway on Lone Star Road immediately south of Siempre Viva Road, the driveway on Lone Star Road south of Street „C', and two (2) of the five driveways on Siempre Viva Road east of Lone Star Road do not meet the 300-foot spacing requirement for non-circulation element roads entering circulation element roads. The developer will either need to revise the locations of the proposed driveways, or process a Modification Request to a Road Standard to allow the currently proposed driveway spacing. With the exception of the western most driveway on Calle Ventner, the southernmost driveway on Street „A', and the driveways proposed on Street „C' all of the driveways proposed on the internal non-circulation element roadways satisfy the minimum 200-foot spacing requirement for a non-circulation element road entering a non-circulation element road.



LEGEND

- UNIT BOUNDARY
- UI – UNIT OF DEVELOPMENT
- TRAVEL LANE
- STOP SIGN
- LIGHT COLLECTOR
- 2-LANE INDUSTRIAL/COMMERCIAL COLLECTOR
- (a) – THE MINIMUM WIDTH OF WHAT IS SHOWING OR 1/2 WIDTH OF A MAJOR ROAD IS REQUIRED

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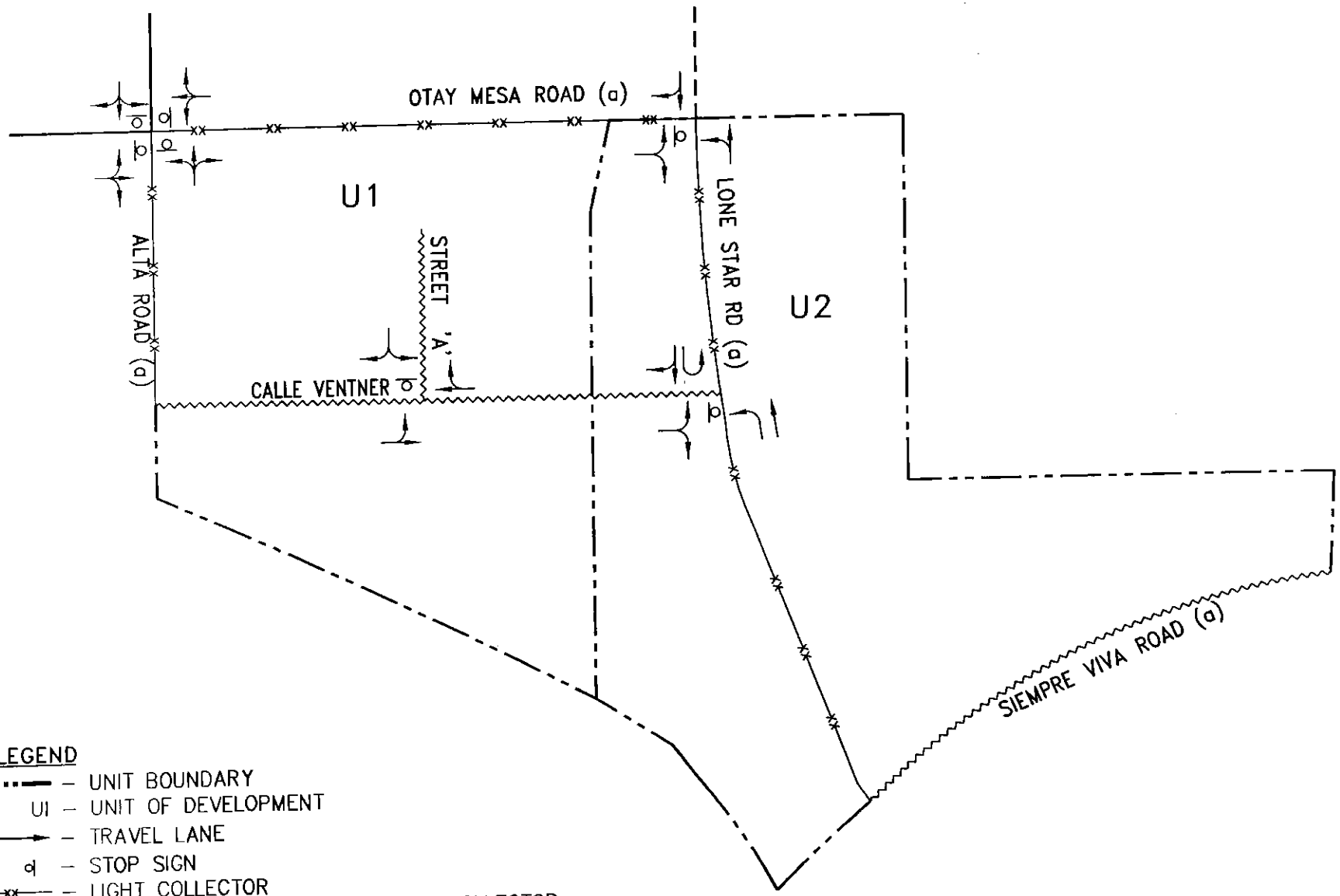
FIGURE 37

EXISTING + UNIT 1 CONDITIONS



LEGEND

- UNIT BOUNDARY
- U1 – UNIT OF DEVELOPMENT
- TRAVEL LANE
- STOP SIGN
- LIGHT COLLECTOR
- 2-LANE INDUSTRIAL/COMMERCIAL COLLECTOR
- (a) – THE MINIMUM WIDTH OF WHAT IS SHOWING OR 1/2 WIDTH OF A MAJOR ROAD IS REQUIRED

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FIGURE 38

EXISTING + UNITS 1-2 CONDITIONS

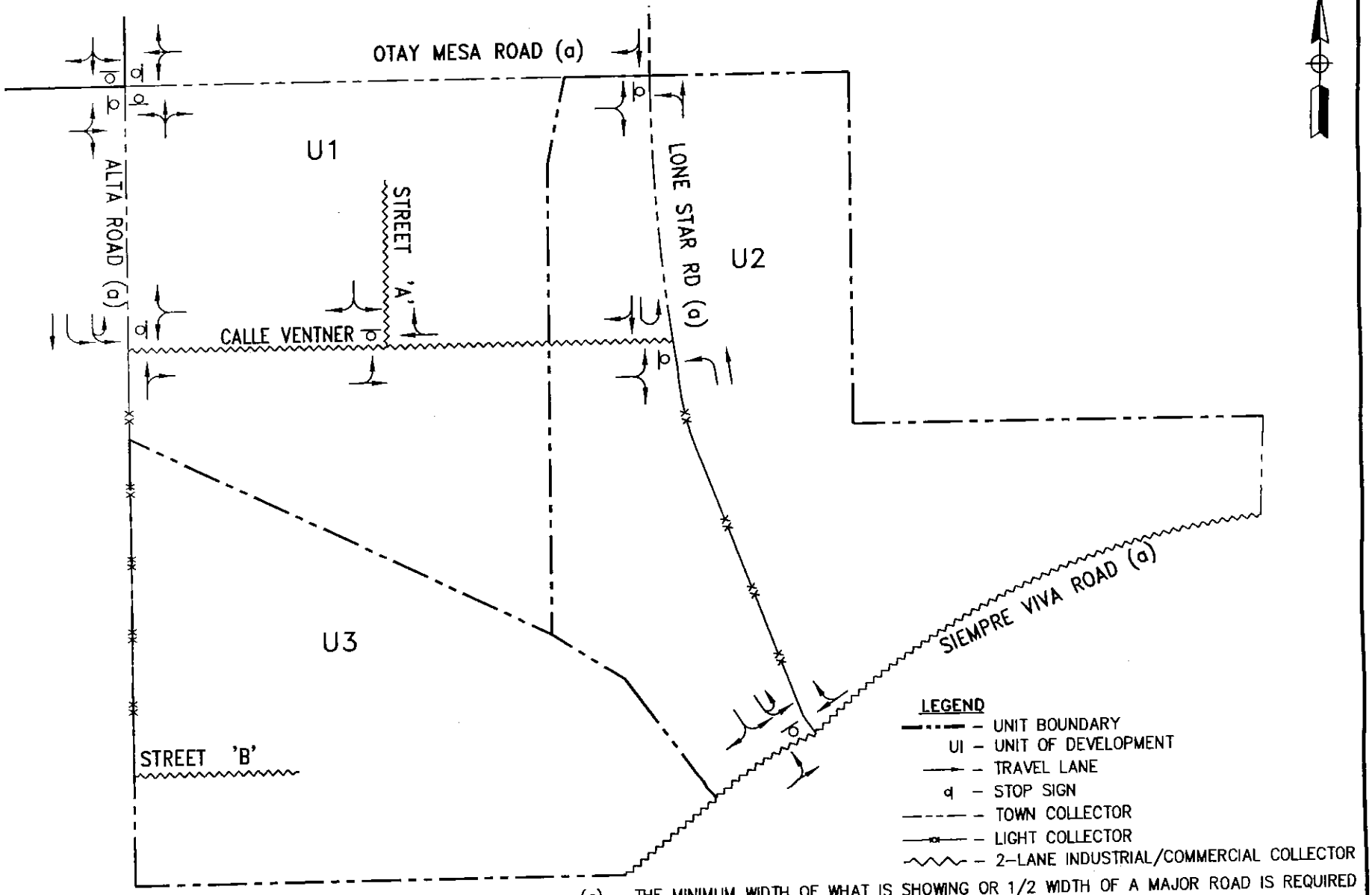

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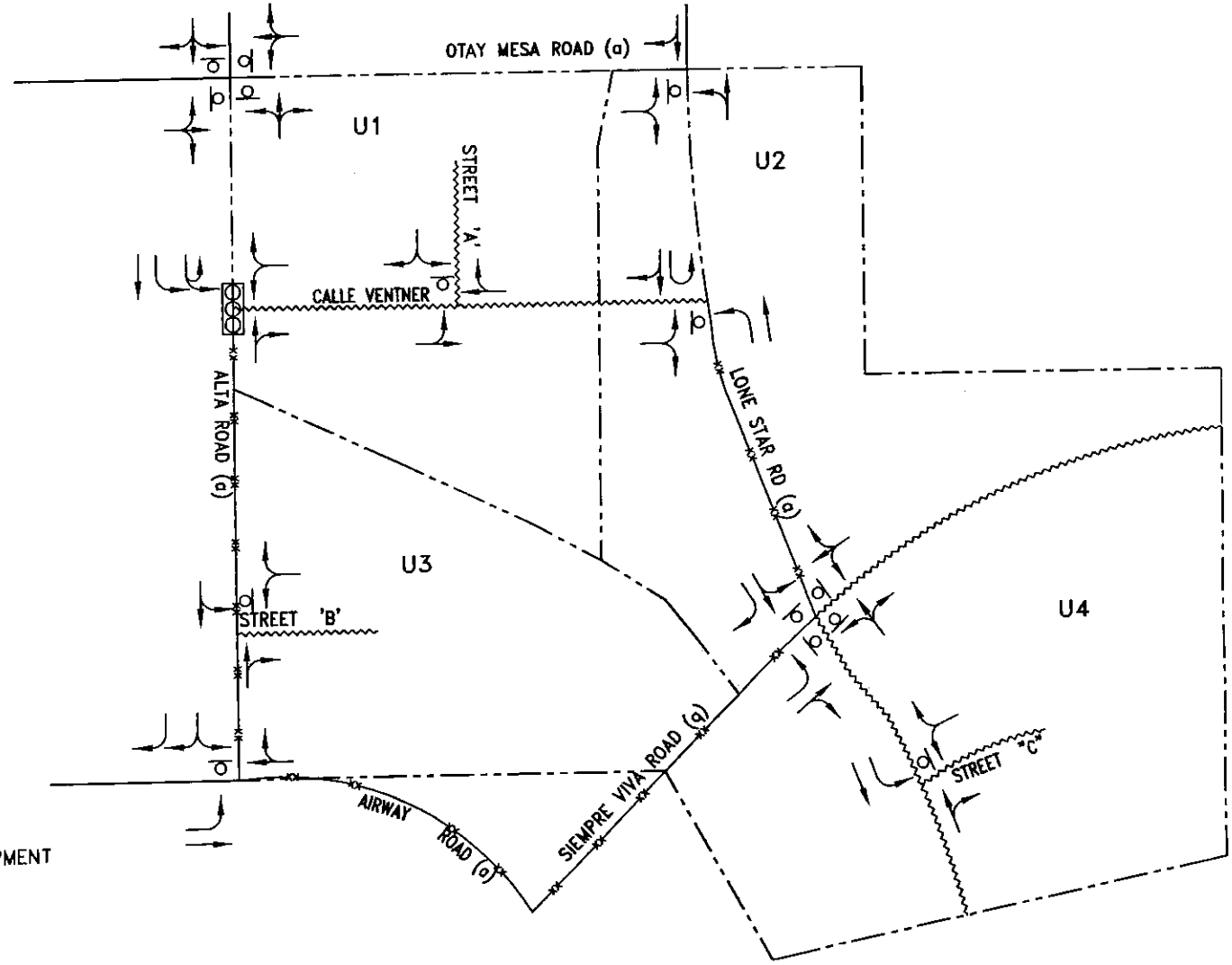
FIGURE 39

EXISTING + UNITS 1-3 CONDITIONS



LEGEND

- UNIT BOUNDARY
- UI – UNIT OF DEVELOPMENT
- TRAVEL LANE
- STOP SIGN
- TRAFFIC SIGNAL
- TOWN COLLECTOR
- LIGHT COLLECTOR
- 2-LANE INDUSTRIAL/COMMERCIAL COLLECTOR

(a) – THE MINIMUM WIDTH OF WHAT IS SHOWING OR 1/2 WIDTH OF A MAJOR ROAD IS REQUIRED

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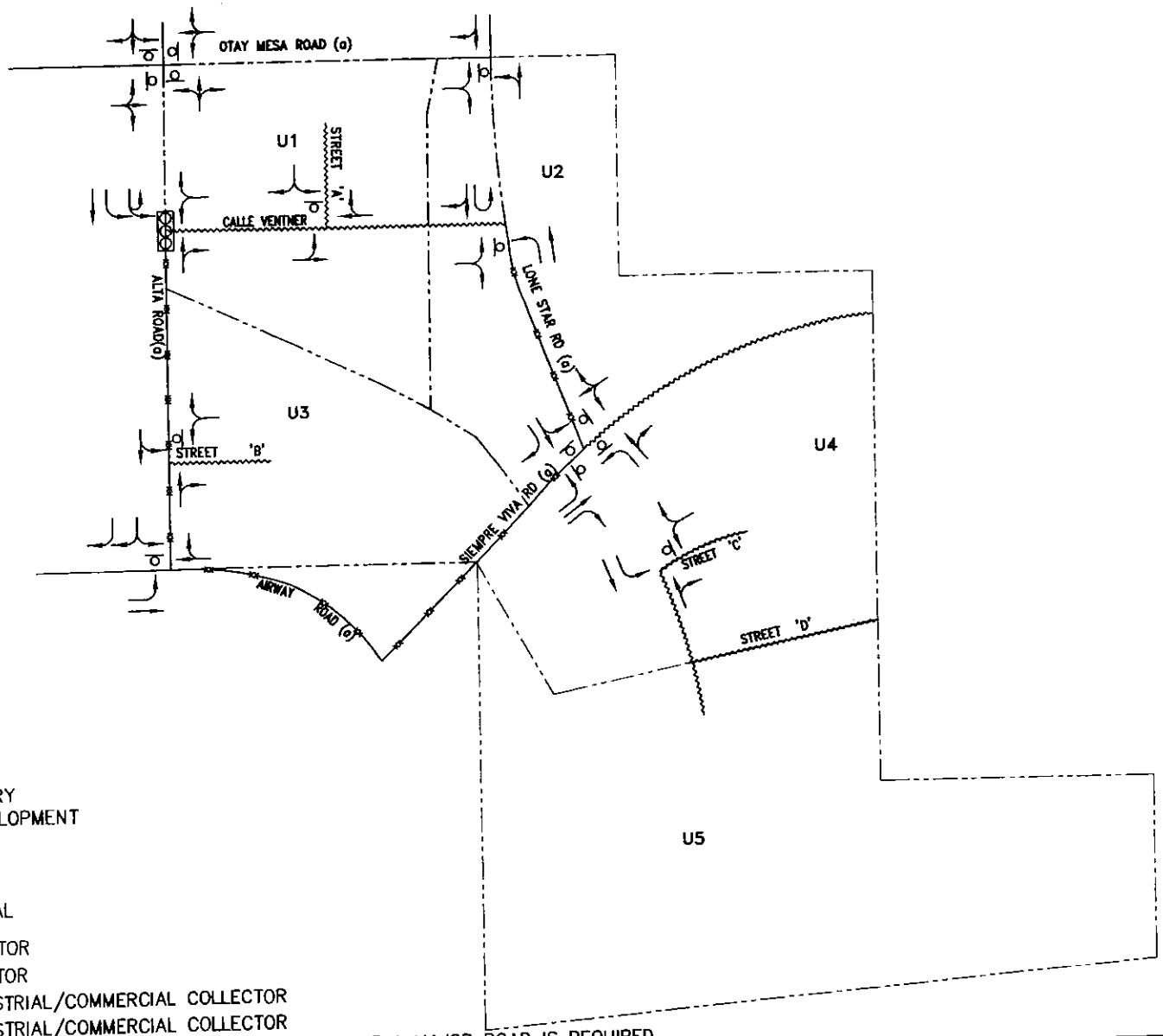
FIGURE 40

EXISTING + UNITS 1-4 CONDITIONS



LEGEND

- UNIT BOUNDARY
- UI – UNIT OF DEVELOPMENT
- TRAVEL LANE
- STOP SIGN
- TRAFFIC SIGNAL
- TOWN COLLECTOR
- LIGHT COLLECTOR
- 4-LANE INDUSTRIAL/COMMERCIAL COLLECTOR
- 2-LANE INDUSTRIAL/COMMERCIAL COLLECTOR

(a) – THE MINIMUM WIDTH OF WHAT IS SHOWING OR 1/2 WIDTH OF A MAJOR ROAD IS REQUIRED

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FIGURE 41

EXISTING + UNITS 1-5 CONDITIONS

Table 39 – Internal Existing + Project Intersection LOS Summary						
Intersection	Traffic Control	Critical Move	AM Peak		PM Peak	
			Delay	LOS	Delay	LOS
Existing + Project Unit 1						
Calle Ventner (E-W) @ Street „A' (N-S)	OWSC	Southbound	8.8	A	0.0	A
Existing + Project Units 1-2						
Otay Mesa Rd (E-W) @ Paseo De La Fuente-Lone Star Rd (N-S)	OWSC	Eastbound	16.8	C	9.7	A
Lone Star Rd (N-S) @ Calle Ventner (E-W)	OWSC	Eastbound	11.3	B	17.3	C
Calle Ventner (E-W) @ Street „A' (N-S)	OWSC	Southbound	8.6	A	9.9	A
Existing + Project Units 1-3						
Otay Mesa Rd (E-W) @ Paseo De La Fuente-Lone Star Rd (N-S)	OWSC	Eastbound	17.7	C	9.9	A
Alta Rd (N-S) @ Calle Ventner (E-W)	OWSC	Westbound	9.4	A	27.0	D
Lone Star Rd (N-S) @ Calle Ventner (E-W)	OWSC	Eastbound	10.6	B	15.3	C
Lone Star Rd (N-S) @ Siempre Viva Rd (E-W)	OWSC	Southbound	9.6	A	10.0	A
Calle Ventner (E-W) @ Street „A' (N-S)	OWSC	Southbound	8.7	A	10.6	B
Existing + Project Units 1-4						
Otay Mesa Rd (E-W) @ Paseo De La Fuente-Lone Star Rd (N-S)	OWSC	Eastbound	10.4	B	9.0	A
Alta Rd (N-S) @ Calle Ventner (E-W)	Signalized	Intersection	17.9	C	23.1	C
Alta Rd (N-S) @ Street „B'	OWSC	Westbound	12.9	B	12.9	B
Alta Rd (N-S) @ Airway Rd (E-W)	OWSC	Southbound	10.3	B	20.6	C
Lone Star Rd (N-S) @ Calle Ventner (E-W)	OWSC	Eastbound	9.9	A	10.7	B
Lone Star Rd (N-S) @ Siempre Viva Rd (E-W)	AWSC	Eastbound	20.1	C	12.5	B
		Westbound	9.6	A	16.5	C
		Northbound	10.9	B	20.3	C
		Southbound	8.5	A	11.7	B
		Intersection	17.9	C	15.6	C
Lone Star Rd (N-S) @ Street „C' (E-W)	OWSC	Westbound	8.6	A	9.4	A
Calle Ventner (E-W) @ Street „A' (N-S)	OWSC	Southbound	8.8	A	10.8	B
Existing + Project Build Out (Units 1-5)						
Otay Mesa Rd (E-W) @ Paseo De La Fuente-Lone Star Rd (N-S)	OWSC	Eastbound	10.7	B	9.2	A
Alta Rd (N-S) @ Calle Ventner (E-W)	Signalized	Intersection	11.5	B	23.1	C
Alta Rd (N-S) @ Street „B'	OWSC	Westbound	12.9	B	12.9	B
Alta Rd (N-S) @ Airway Rd (E-W)	OWSC	Southbound	10.8	B	22.0	C
Lone Star Rd (N-S) @ Calle Ventner (E-W)	OWSC	Eastbound	10.3	B	11.0	B
Lone Star Rd (N-S) @ Siempre Viva Rd (E-W)	AWSC	Eastbound	15.3	C	12.0	B
		Westbound	10.0	B	16.5	C
		Northbound	10.7	B	22.8	C
		Southbound	8.7	A	11.7	B
		Intersection	13.4	B	16.5	C
Lone Star Rd (N-S) @ Street „C' (E-W)	OWSC	Westbound	9.1	A	9.9	A
Calle Ventner (E-W) @ Street „A' (N-S)	OWSC	Southbound	8.8	A	10.8	B

Delay is measured in seconds/vehicle; LOS=Level of Service; sig=signalized; AWSC = All-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled; OWSC=One Way Stop Controlled; sig – Signalized; Int = Intersection; E-W = East-West Roadway; N-S = North-South Roadway

SECTION VIII – CONSTRUCTION TRAFFIC

As previously discussed, grading for the proposed project will be completed in two phases. Grading for Phase 1 will comprise of three final maps (Units 1, 2, and 3) and Grading for Phase 2 will comprise of two final maps (Units 4 and 5). At this time, the schedule for the grading of the project site has not been finalized so it is possible that Phase 1 and Phase 2 of the grading project could occur back-to-back prior to the development/occupancy of any of the Industrial Units, or it is possible that the first three units of the project (Units 1, 2 and 3) may be constructed and occupied prior to or simultaneously with the Phase 2 grading operation.

The grading for the site was developed such that the cut and fill balanced within the site, thus there is no export or import of materials required. Therefore, the construction activities associated with the grading operation will be minimal (i.e. it would only include the construction employees, inspectors, surveyors, and associated deliveries, etc. coming to/from the site.) The traffic generated Phase 2 of the grading operation, would thus be less than that generated by either Unit 4 (4,059 ADT) or Unit 5 (1,773 ADT) of the proposed project, and therefore, the potential impacts associated with Existing plus Units 1-3 + Phase 2 Grading would be less than those previously identified for Existing + Units 1-4.

SECTION IX – RECOMMENDED TRAFFIC MITIGATION MEASURES

TRANSPORTATION IMPACT FEE (TIF)

The County of San Diego has developed an overall programmatic solution that addresses existing and projected future road deficiencies in the unincorporated portions of San Diego County. This program includes the adoption of a Transportation Impact Fee (TIF) program to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. Based on SANDAG regional growth and land use forecasts, the SANDAG Regional Transportation Model was utilized to analyze projected build-out (year 2030) development conditions on the existing circulation element roadway throughout the unincorporated area of the County. Based on the results of the traffic modeling, funding necessary to construct transportation facilities that will mitigate cumulative impacts from new development was identified. Existing roadway deficiencies will be corrected through improvement projects funded by other public funding sources, such as TransNet, gas tax and grants. Potential cumulative impacts to the region's freeways have been addressed in SANDAG's Regional Transportation Plan (RTP). This plan, which considers freeway build out over the next 30 years, will use funds from TransNet, state and federal funding to improve freeways to projected level of service objectives in the RTP.

Full build out the project with the truck parking (Units 1-5) is estimated to generate 21,279 average daily trips. These trips will be distributed on circulation element roadways in the County that were analyzed by the TIF program, some of which currently or are projected to operate at inadequate levels of service. The potential growth represented by the proposed project was included in the growth projects upon which the TIF program is based. Therefore, compliance with the County TIF ordinance, which will be required at issuance of building permits, in combination with other components of the program described above, will mitigate potential cumulative traffic impacts to County Circulation Element Roadways to less than significant. The TIF program provides a mechanism for developers to mitigate their cumulative impacts by paying a specified fee for the use that is being proposed.

The County Board of Supervisors adopted the County of San Diego Traffic Impact Fee (TIF) program in April 2005. The TIF Ordinance Update was adopted by the Board of Supervisors on February 27, 2008. The TIF Program Update 2008 has revised the Otay Fee Schedule for non-residential use. It should be noted that the actual traffic impact fees are subject to change as the TIF ordinance is updated annually as the fees are adjusted to reflect the engineering cost index. Compliance with the County TIF ordinance will mitigate any cumulative impact that the project has on the County roadway facilities located within the Otay Sub region and the South TIF region. The project proposes to comply with County's TIF to mitigate the project's local and regional cumulative impacts within the unincorporated area.

COMMUNITY FACILITIES DISTRICT (CFD)

It should be noted that the East Otay Mesa Property Owners Association (EOMPOA) is currently assessing the formation of a Community Facilities District (CFD) to fund roadway improvements necessary in East Otay Mesa. The CFD would include roadway facilities located in both the City and the County of San Diego. If the CFD is established, it could serve as an additional or alternative mechanism to mitigate direct and cumulative impacts of the projects proposed in the East Otay Mesa on a fair-share basis.

DIRECT IMPACTS

Unit 1 Impacts

Unit 1 Direct Impacts – Roadway Segments

As shown in Section IV, Unit 1 of the proposed project exceeds the significance guidelines on the following roadway segments under existing conditions plus Unit 1 of the proposed project:

- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive; and
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road.

Unit 1 Roadway Segments Direct Impacts Recommended Mitigation Measures

Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive: Prior to recordation of final maps for Unit 1 the applicant shall improve the segment of Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive to a provide a four (4)-lane facility with two (2) lanes in each direction. The segment of Otay Mesa Road between Sanyo Avenue (532 + 00) and the future alignment of Vann Centre Boulevard (STA 549 + 00) will require widening on the north side of the road. The segment of Otay Mesa Road between the future alignment of Vann Centre Boulevard (STA 549 + 00) and Enrico Fermi Drive (STA 572 + 00) will require widening on the north and south side of the road. Striping concepts for the proposed improvements are provided on Sheet 11 in the Preliminary Route Study prepared by Stevens Cresto Engineering, Inc. located in Appendix Q. (See EIR Impact TI-1.)

Otay Mesa Road between Enrico Fermi Drive and Alta Road: Prior to recordation of final maps for Unit 1 the applicant shall re-stripe the segment of Otay Mesa Road from Enrico Fermi Drive (STA 572 + 00) to approximately 1,290 feet (1,290') west of Alta Road (STA 585 + 85) to provide a four (4)-lane facility with two (2) lanes in each direction. Prior to recordation of final maps for Unit 1 the applicant shall widen the north and south side of Otay Mesa Road from approximately 1,290 feet (1,290') west of Alta Road (STA 585 + 85) to Alta Road (STA 599 + 00) to provide a four (4)-lane facility with two (2) lanes in each direction and a painted median. Striping concepts for the proposed improvements are provided in the Preliminary Route Study prepared by Stevens Cresto Engineering, Inc. located in Appendix Q. (See EIR Impact TI-2.)

See Figure 42 for the recommended mitigation measures of the roadway segments for the direct impacts associated with Unit 1 of the proposed project.

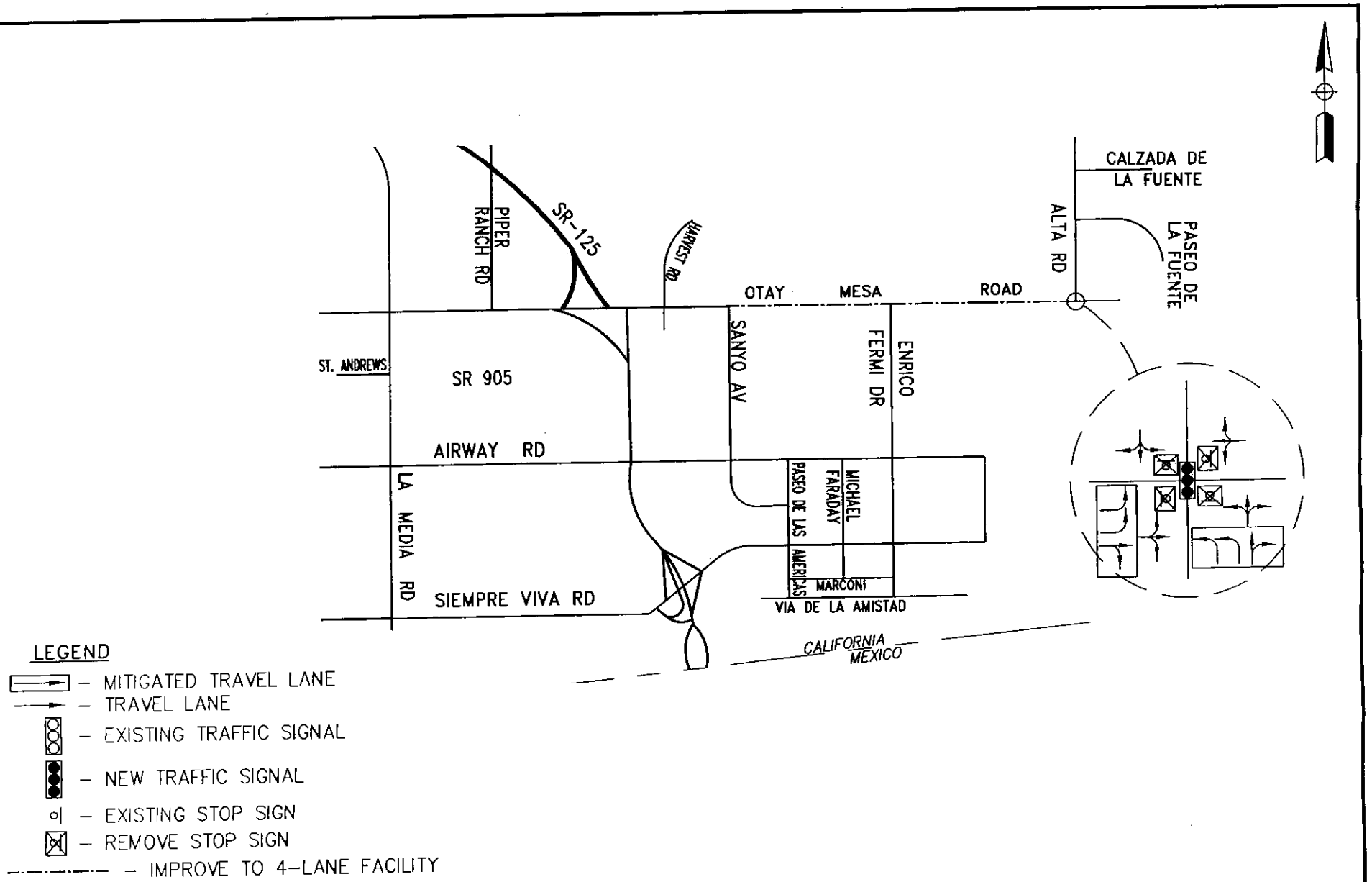

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FIGURE 42

RECOMMENDED MITIGATION – EXISTING + UNIT 1

Unit 1 Direct Impacts – Intersections

As shown in Section IV, Unit 1 of the proposed project is part of a significant impact at the Otay Mesa Road (Old Otay Mesa Road)/Alta Road intersection under existing conditions plus Unit 1 of the proposed project.

Unit 1 Intersections Direct Impacts Recommended Mitigation Measures

Otay Mesa Road (Old Otay Mesa Road)/Alta Road: Prior to recordation of final maps for Unit 1, the applicant shall signalize and widen the Otay Mesa Road/Alta Road intersection to provide the following lane configurations:

- Two (2) eastbound left turn lanes;
- One (1) eastbound shared through-right lane;
- One (1) westbound shared left-through-right lane;
- Two (2) northbound left turn lanes;
- One (1) northbound shared through-right lane; and
- One (1) southbound shared left-through-right lane. (See EIR Impact TI-6.)

See Figure 42 for the recommended mitigation measures of the intersection for the direct impacts associated with Unit 1 of the proposed project.

Units 1-2 Impacts

Units 1-2 Direct Impacts – Roadway Segments

As shown in Section IV, Units 1-2 of the proposed project exceeds the significance guidelines on the following roadway segments under existing conditions plus Units 1-2 of the proposed project:

- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive;
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road; and
- Airway Road between the SR-905 and Sanyo Avenue.

Units 1-2 Roadway Segments Direct Impacts Recommended Mitigation Measures

Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive: The proposed project's mitigation for the direct impacts under existing plus Unit 1 of the proposed project will mitigate the direct impacts under existing plus Units 1-2 of the proposed project. (See EIR Impact TI-1.)

Otay Mesa Road between Enrico Fermi Drive and Alta Road: The proposed project's mitigation for the direct impacts under existing plus Unit 1 of the proposed project will mitigate the direct impacts under existing plus Units 1-2 of the proposed project. (See EIR Impact TI-2.)

Airway Road between the SR-905 and Sanyo Avenue: Prior to recordation of final maps for Unit 2 the applicant shall re-stripe the segment of Airway Road between the SR-905 and Sanyo Avenue to provide a three (3)-lane facility consisting of two (2) eastbound travel lanes and one (1) westbound travel lane. All improvements will fit within the existing cross-section and no pavement widening is required. A copy of the conceptual striping plan is provided on page P-27 in Appendix P. (See EIR Impact TI-3.)

See Figure 43 for the recommended mitigation measures of the roadway segments for the direct impacts associated with Units 1-2 of the proposed project.

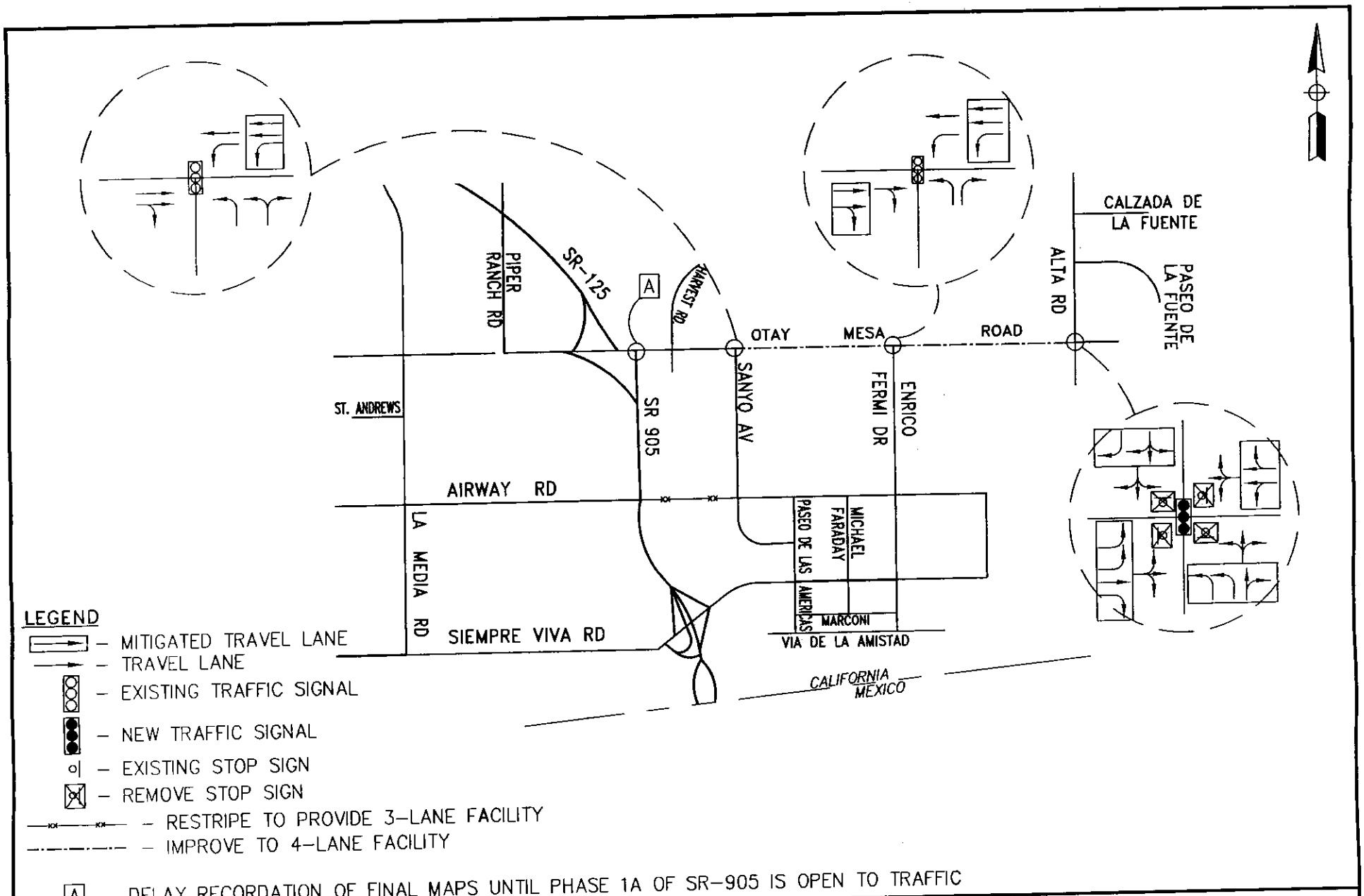

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FIGURE 43

RECOMMENDED MITIGATION – EXISTING + UNITS 1-2

Units 1-2 Direct Impacts – Intersections

As shown in Section IV, Units 1-2 of the proposed project is part of a significant impact at the following intersections under existing conditions plus Units 1-2 of the proposed project:

- Otay Mesa Road/Interim SR-905 Connector;
- Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue;
- Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive; and
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road.

Units 1-2 Intersections Direct Impacts Recommended Mitigation Measures

Otay Mesa Road/Interim SR-905 Connector: Delay recordation of final maps for Unit 2 until Phase 1A of the SR-905 is open to traffic. (See EIR Impact TI-7.)

Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue: Prior to recordation of final maps for Unit 2, the applicant shall widen the Otay Mesa Road/Sanyo Avenue intersection and modify the existing traffic signal to provide the following lane configurations:

- One (1) eastbound through lane;
- One (1) eastbound through-right lane;
- One (1) westbound left turn lane;
- Two (2) westbound through lanes;
- One (1) northbound left turn lane; and
- One (1) northbound left-right turn lane. (See EIR Impact TI-8.)

Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive: Prior to recordation of final maps for Unit 2, the applicant shall widen the Otay Mesa Road/Enrico Fermi Drive intersection modify the existing traffic signal to provide the following lane configurations:

- One (1) eastbound through lane;
- One (1) eastbound through-right lane;
- One (1) westbound left turn lane;
- Two (2) westbound through lanes;
- One (1) northbound left turn lane; and
- One (1) northbound right turn lane. (See EIR Impact TI-9.)

Otay Mesa Road (Old Otay Mesa Road)/Alta Road: Prior to recordation of final maps for Unit 2 the applicant shall widen the Otay Mesa Road/Alta Road intersection and modify the traffic signal (which was required to be installed to mitigate Unit 1 direct impacts) to provide the following lane configurations:

- Two (2) eastbound left turn lanes;
- One (1) eastbound through lane;
- One (1) eastbound right turn lane;
- One (1) westbound shared left-through lane;
- One (1) westbound shared through-right lane;
- Two (2) northbound left turn lanes;
- One (1) northbound shared through-right lane;
- One (1) southbound shared left-through-right lane; and
- One (1) southbound right turn lane. (See EIR Impact TI-6.)

See Figure 43 for the recommended mitigation measures of the intersection for the direct impacts associated with Units 1-2 of the proposed project.

Units 1-3 Impacts

Units 1-3 Direct Impacts – Roadway Segments

As shown in Section IV, Units 1-3 of the proposed project exceeds the significance guidelines on the following roadway segments under existing conditions plus Units 1-3 of the proposed project:

- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive;
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road; and
- Airway Road between the SR-905 and Sanyo Avenue.

Units 1-3 Roadway Segments Direct Impacts Recommended Mitigation Measures

Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive: The proposed project's mitigation for the direct impacts under existing plus Unit 1 of the proposed project will mitigate the direct impacts under existing plus Units 1-3 of the proposed project. (See EIR Impact TI-1.)

Otay Mesa Road between Enrico Fermi Drive and Alta Road: The proposed project's mitigation for the direct impacts under existing plus Unit 1 of the proposed project will mitigate the direct impacts under existing plus Units 1-3 of the proposed project. (See EIR Impact TI-2.)

Airway Road between the SR-905 and Sanyo Avenue: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 of the proposed project will mitigate the direct impacts under existing plus Units 1-3 of the proposed project. (See EIR Impact TI-3.)

See Figure 44 for the recommended mitigation measures of the roadway segments for the direct impacts associated with Units 1-3 of the proposed project.

Units 1-3 Direct Impacts – Intersections

As shown in Section IV, Units 1-3 of the proposed project is part of a significant impact at the following intersections under existing conditions plus Units 1-3 of the proposed project:

- Otay Mesa Road/Interim SR-905 Connector;
- Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue;
- Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive; and
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road.

Units 1-3 Intersections Direct Impacts Recommended Mitigation Measures

Otay Mesa Road/Interim SR-905 Connector: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 to delay the recordation of final maps until Phase 1A of the SR-905 is open to traffic will also mitigate the direct impacts under existing plus Units 1-3 of the proposed project. (See EIR Impact TI-7.)

Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 of the proposed project will mitigate the direct impacts under existing plus Units 1-3 of the proposed project. (See EIR Impact TI-8.)

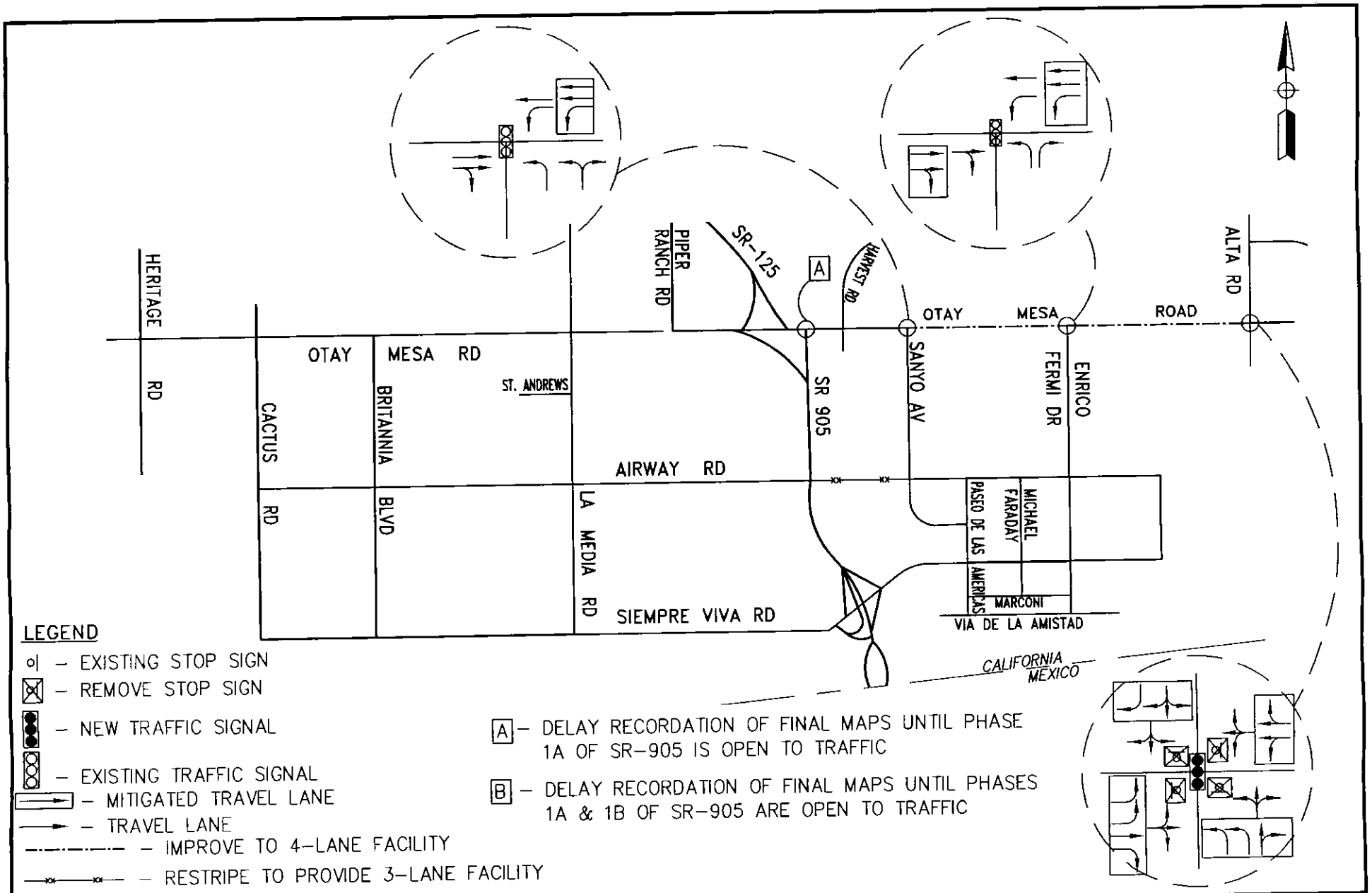

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FIGURE 44

RECOMMENDED MITIGATION – EXISTING + UNITS 1–3

Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 of the proposed project will mitigate the direct impacts under existing plus Units 1-3 of the proposed project. (See EIR Impact TI-9.)

Otay Mesa Road (Old Otay Mesa Road)/Alta Road: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 of the proposed project will mitigate the direct impacts under existing plus Units 1-3 of the proposed project. (See EIR Impact TI-6.)

See Figure 44 for the recommended mitigation measures of the intersection for the direct impacts associated with Units 1-3 of the proposed project.

Units 1-4 Impacts

Units 1-4 Direct Impacts – Roadway Segments

As shown in Section IV, Units 1-4 of the proposed project exceeds the significance guidelines on the following roadway segments under existing conditions plus Units 1-4 of the proposed project:

- Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard;
- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive;
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road; and
- Airway Road between the SR-905 and Sanyo Avenue.

Units 1-4 Roadway Segments Direct Impacts Recommended Mitigation Measures

Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard: Delay recordation of final maps for Unit 4 until Phases 1A and 1B of the SR-905 are open to traffic. (See EIR Impacts TI-4 and TI-5.)

Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive: The proposed project's mitigation for the direct impacts under existing plus Unit 1 of the proposed project will mitigate the direct impacts under existing plus Units 1-4 of the proposed project. (See EIR Impact TI-1.)

Otay Mesa Road between Enrico Fermi Drive and Alta Road: The proposed project's mitigation for the direct impacts under existing plus Unit 1 of the proposed project will mitigate the direct impacts under existing plus Units 1-4 of the proposed project. (See EIR Impact TI-2.)

Airway Road between the SR-905 and Sanyo Avenue: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 of the proposed project will mitigate the direct impacts under existing plus Units 1-4 of the proposed project. (See EIR Impact TI-3.)

See Figure 45 for the recommended mitigation measures of the roadway segments for the direct impacts associated with Units 1-4 of the proposed project.

Units 1-4 Direct Impacts – Intersections

As shown in Section IV, Units 1-4 of the proposed project is part of a significant impact at the following intersections under existing conditions plus Units 1-4 of the proposed project:

- Interim SR-905 (Otay Mesa Road)/Heritage Road;
- Otay Mesa Road/Interim SR-905 Connector;
- Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue;
- Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive; and
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road.

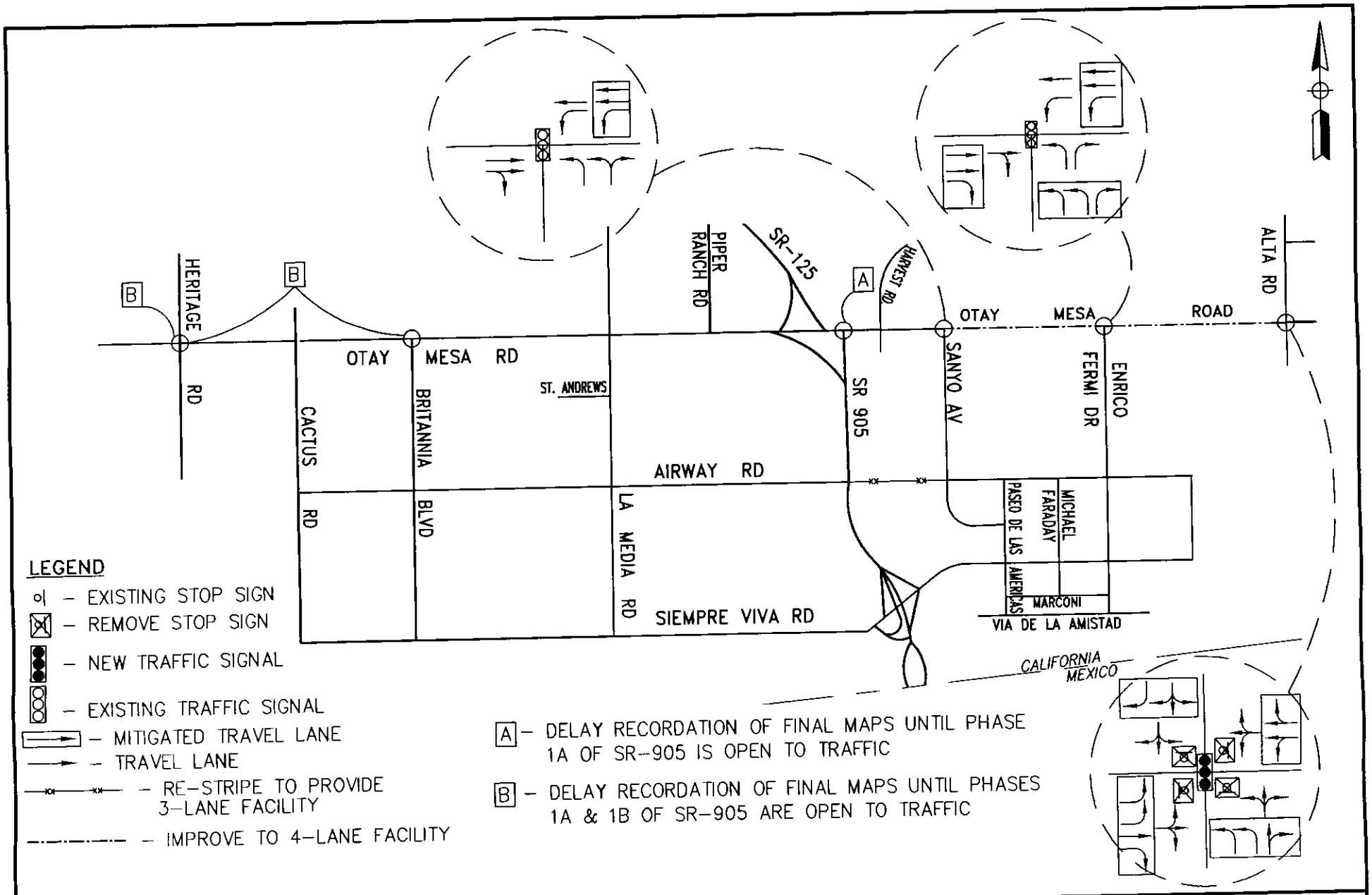

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FIGURE 45

RECOMMENDED MITIGATION – EXISTING + UNITS 1-4

Units 1-4 Intersections Direct Impacts Recommended Mitigation Measures

Interim SR-905 (Otay Mesa Road)/Heritage Road: Delay recordation of final maps for Unit 4 until Phases 1A and 1B of the SR-905 are open to traffic. (See EIR Impact TI-10.)

Otay Mesa Road/Interim SR-905 Connector: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 to delay recordation of final maps until Phase 1A of the SR-905 is open to traffic will also mitigate the direct impacts under existing plus Units 1-4 of the proposed project. (See EIR Impact TI-7.)

Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 of the proposed project will mitigate the direct impacts under existing plus Units 1-4 of the proposed project. (See EIR Impact TI-8.)

Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive: Prior to recordation of final maps for Unit 4, the applicant shall widen the Otay Mesa Road/Enrico Fermi Drive intersection and modify the existing traffic signal to provide the following lane configurations:

- Two (2) eastbound through lanes;
- One (1) eastbound right turn lane;
- One (1) westbound left turn lane;
- Two (2) westbound through lanes;
- Two (2) northbound left turn lanes; and
- One (1) northbound right turn lane. (See EIR Impact TI-9.)

Otay Mesa Road (Old Otay Mesa Road)/Alta Road: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 of the proposed project will mitigate the direct impacts under existing plus Units 1-4 of the proposed project. (See EIR Impact TI-6.)

See Figure 45 for the recommended mitigation measures of the intersection for the direct impacts associated with Units 1-4 of the proposed project.

Units 1-5 Impacts

Units 1-5 Direct Impacts – Roadway Segments

As shown in Section IV, Units 1-5 of the proposed project exceeds the significance guidelines based on daily capacity analysis on the following roadway segments under existing conditions plus Units 1-5 of the proposed project:

- Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard;
- Otay Mesa Road (Old Otay Mesa Road) between Sanyo Avenue and Enrico Fermi Drive;
- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road; and
- Airway Road between the SR-905 and Sanyo Avenue.

Units 1-5 Roadway Segments Direct Impacts Recommended Mitigation Measures

Interim SR-905 (Otay Mesa Road) between Heritage Road and Britannia Boulevard: The proposed project's mitigation for the direct impacts under existing plus Units 1-4 to delay recordation of final maps until Phases 1A and 1B of the SR-905 are open to traffic will also mitigate the direct impacts under existing plus Units 1-5 of the proposed project. (See EIR Impacts TI-4 and TI-5.)

Otay Mesa Road between Sanyo Avenue and Enrico Fermi Drive: The proposed project's mitigation for the direct impacts under existing plus Unit 1 of the proposed project will mitigate the direct impacts under existing plus Units 1-5 of the proposed project. (See EIR Impact TI-1.)

Otay Mesa Road between Enrico Fermi Drive and Alta Road: The proposed project's mitigation for the direct impacts under existing plus Unit 1 of the proposed project will mitigate the direct impacts under existing plus Units 1-5 of the proposed project. (See EIR Impact TI-2.)

Airway Road between the SR-905 and Sanyo Avenue: The proposed project's mitigation for the direct impacts under existing plus Units 1-4 of the proposed project will mitigate the direct impacts under existing plus Units 1-5 of the proposed project. (See EIR Impact TI-3.)

See Figure 46 for the recommended mitigation measures of the roadway segments for the direct impacts associated with Units 1-5 of the proposed project.

Units 1-5 Direct Impacts – Intersections

As shown in Section IV, Units 1-5 of the proposed project is part of a significant impact at the following intersections under existing conditions plus Units 1-5 of the proposed project:

- Interim SR-905 (Otay Mesa Road)/Heritage Road;
- Otay Mesa Road/Interim SR-905 Connector;
- Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue;
- Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive; and
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road.

Units 1-5 Intersections Direct Impacts Recommended Mitigation Measures

Interim SR-905 (Otay Mesa Road)/Heritage Road: The proposed project's mitigation for the direct impacts under existing plus Units 1-4 to delay recordation of final maps until Phases 1A and 1B of the SR-905 are open to traffic will also mitigate the direct impacts under existing plus Units 1-5 of the proposed project. (See EIR Impact TI-10.)

Otay Mesa Road/Interim SR-905 Connector: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 delay recordation of final maps until Phase 1A of the SR-905 is open to traffic will also mitigate the direct impacts under existing plus Units 1-5 of the proposed project. (See EIR Impact TI-7.)

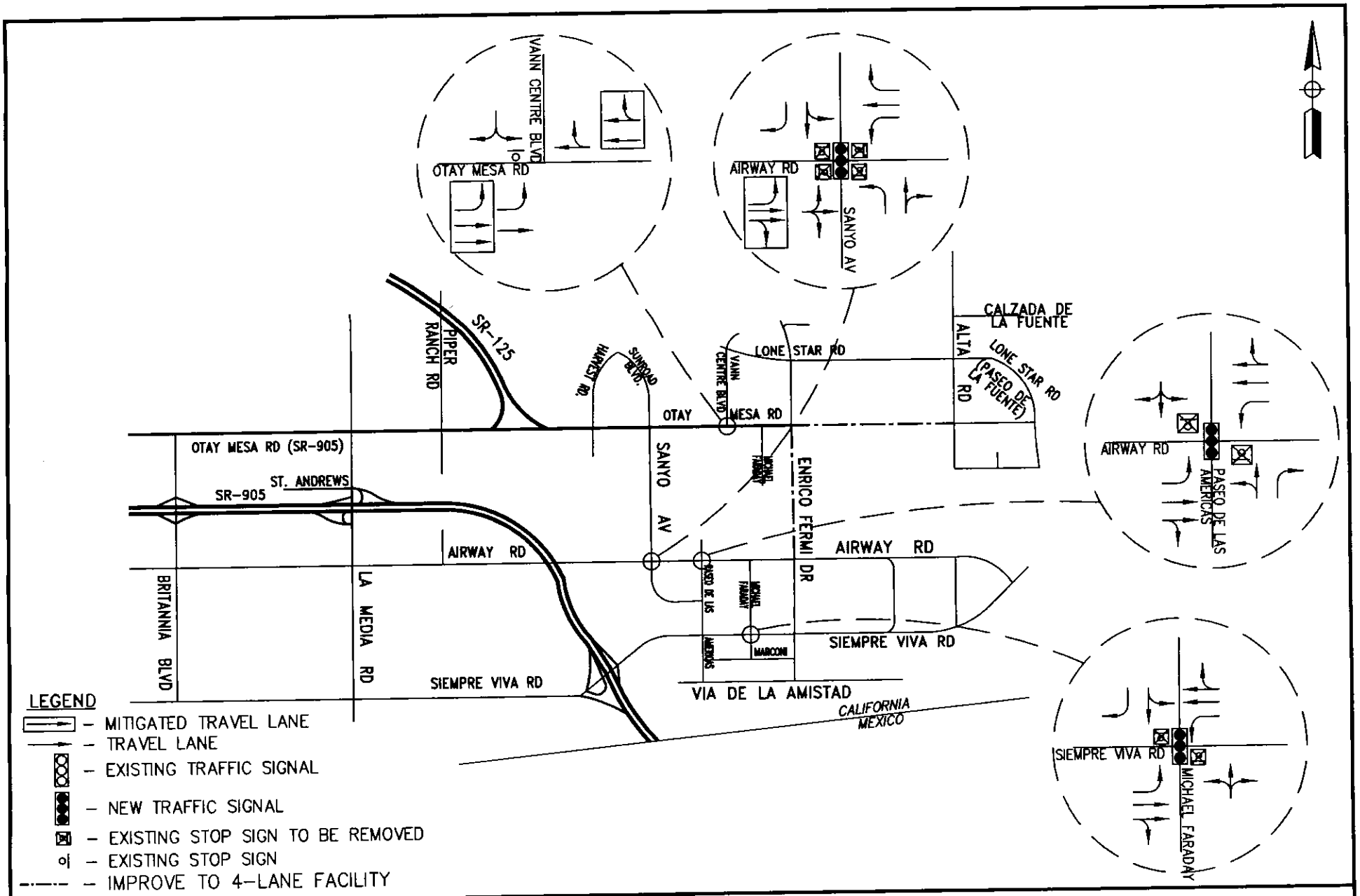

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FIGURE 47

RECOMMENDED MITIGATION - CUMULATIVE (2020) W/ SR-905 [PHASES 1A & 1B]

Otay Mesa Road (Old Otay Mesa Road)/Sanyo Avenue: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 of the proposed project will mitigate the direct impacts under existing plus Units 1-4 of the proposed project. (See EIR Impact TI-8.)

Otay Mesa Road (Old Otay Mesa Road)/Enrico Fermi Drive: The proposed project's mitigation for the direct impacts under existing plus Units 1-4 of the proposed project will mitigate the direct impacts under existing plus Units 1-5 of the proposed project. (See EIR Impact TI-9.)

Otay Mesa Road (Old Otay Mesa Road)/Alta Road: The proposed project's mitigation for the direct impacts under existing plus Units 1-2 of the proposed project will mitigate the direct impacts under existing plus Units 1-5 of the proposed project. (See EIR Impact TI-6.)

See Figure 46 for the recommended mitigation measures of the intersection for the direct impacts associated with Units 1-5 of the proposed project.

CUMULATIVE IMPACTS

Cumulative Impacts – Roadway Segments

As shown in Section V, the proposed project adds traffic to the following roadway segments that operate at an unacceptable level of service under cumulative (2020) with SR-905 conditions and is therefore considered to be part of a significant cumulative impact:

- Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road; and
- Enrico Fermi Drive between Otay Mesa Road (Old Otay Mesa Road) and Airway Road.

Roadway Segments Cumulative Impacts Recommended Mitigation Measures

Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road: The proposed project's mitigation for the direct impacts under existing plus Unit 1 of the proposed project will mitigate the cumulative impacts to Otay Mesa Road (Old Otay Mesa Road) between Enrico Fermi Drive and Alta Road under cumulative (2020) with SR-905 [Phases 1A & 1B]. (See EIR Impact TI-2.)

Enrico Fermi Drive between Otay Mesa Road (Old Otay Mesa Road) and Airway Road: Prior to issuance of building permits for the proposed project, the applicant shall pay the County's TIF towards the improvement of Enrico Fermi Drive between Otay Mesa Road (Old Otay Mesa Road) and Airway Road to a four (4) lane facility with two (2) lanes in each direction. (See EIR Impact TI-12.)

See Figure 47 for the recommended mitigation measures of each roadway segment for cumulative impacts.

Cumulative Impacts – Intersections

As shown in Section V, the proposed project adds traffic to the following intersections that operate at an unacceptable level of service under cumulative (2020) with SR-905 conditions and is therefore considered to be part of a significant cumulative impact:

- Otay Mesa Road (Old Otay Mesa Road)/Vann Centre Boulevard;
- Otay Mesa Road (Old Otay Mesa Road)/Alta Road;
- Airway Road/Sanyo Avenue;
- Airway Road/Paseo De Las Americas; and
- Siempre Viva Road/Michael Faraday Drive.

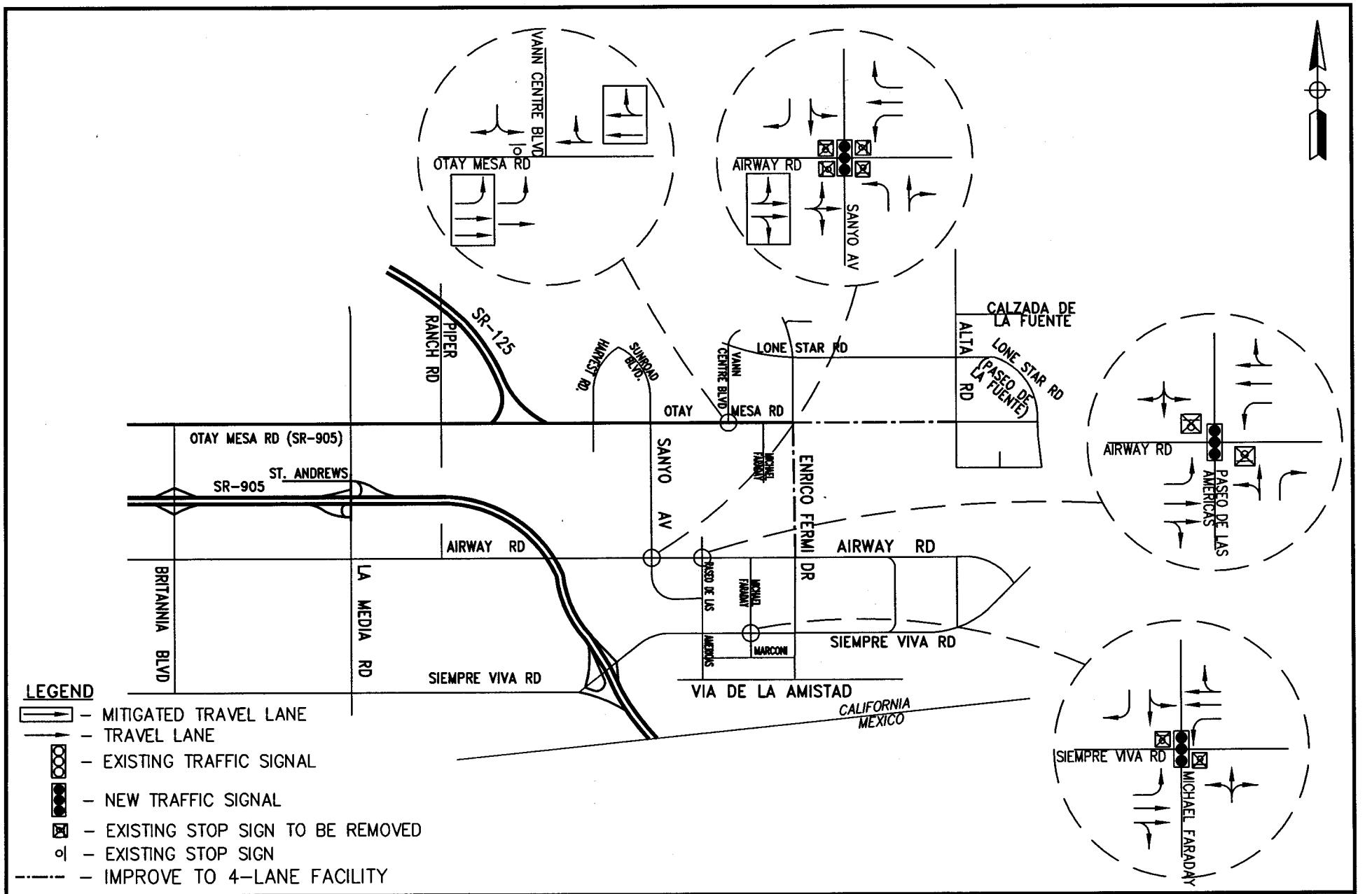

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FIGURE 47

RECOMMENDED MITIGATION – CUMULATIVE (2020) W/ SR-905 [PHASES 1A & 1B]

Intersections Cumulative Impacts Recommended Mitigation Measures

Otay Mesa Road (Old Otay Mesa Road)/Vann Centre Boulevard: Prior to issuance of building permits for the proposed project, the applicant shall pay the County's TIF towards the improvement of Otay Mesa Road (Old Otay Mesa Road)/Vann Centre Boulevard intersection and modifications to provide the following lane configurations:

- One (1) eastbound left turn lane;
- Two (2) eastbound through lanes;
- One (1) westbound through lane;
- One (1) westbound shared through-right lane; and
- One (1) southbound shared left-right lane. (See EIR impact TI-13.)

Otay Mesa Road (Old Otay Mesa Road)/Alta Road: It should be noted that the cumulative analysis of this intersection includes 13% for the Otay Crossings proposed project; therefore, the proposed project's mitigation for direct impacts under existing plus Units 1-5 of the proposed project will mitigate the cumulative impacts under cumulative (2020) with SR-905 [Phases 1A & 1B]. (See EIR Impact TI-6.)

Airway Road/Sanyo Avenue: Prior to issuance of building permits for Unit 1 of the project, the applicant shall to the satisfaction of the Director of Public Works and the City of San Diego improve or agree to improve and provide security for the Airway Road/Sanyo Avenue intersection. The required improvement is to signalize the intersection to provide the following lane configurations:

- One (1) eastbound shared left-through lane;
- One (1) eastbound shared through-right lane;
- One (1) westbound left turn lane;
- One (1) westbound through lane;
- One (1) westbound right turn lane;
- One (1) northbound left turn lane;
- One (1) northbound shared through-right lane;
- One (1) southbound shared left through lane; and
- One (1) southbound right turn lane (See EIR Impact TI-14.)

Airway Road/Paseo De Las Americas: Prior to issuance of building permits, the applicant shall pay the County's TIF towards the signalization of the Airway Road/Paseo De Las Americas intersection to provide the following lane configurations:

- One (1) eastbound left turn lane;
- One (1) eastbound through lane;
- One (1) eastbound shared through-right lane;
- One (1) westbound left turn lane;
- One (1) westbound through lane;
- One (1) westbound shared through-right lane;
- One (1) northbound shared left-through lane;
- One (1) northbound right turn lane; and
- One (1) southbound left-through-right turn lane (See EIR Impact TI-15.)

Siempre Viva Road/Michael Faraday Drive: Prior issuance of building permits for Unit 1 of the project, the applicant shall to the satisfaction of the Director of Public Works and the City of San Diego improve or agree to improve and provide security for the Siempre Viva Road/Michael Faraday Drive intersection. The required improvement is to signalize the intersection to provide the following existing lane configurations:

- One (1) eastbound left turn lane;
- One (1) eastbound through lane;
- One (1) eastbound shared through right lane;
- One (1) westbound left turn lane;
- One (1) westbound through lane;
- One (1) westbound shared through-right lane;
- One (1) northbound shared left-through-right lane;
- One (1) southbound shared left-through lane; and
- One (1) southbound right turn lane (See EIR Impact TI-16.)

See Figure 47 for the recommended mitigation measures of each intersection for cumulative impacts.

FUTURE IMPACTS

The project is consistent with the County's East Otay Mesa Specific Plan Amendment 2007. As shown in Section VII, the project does not have an impact under 2030 conditions in the County or City of San Diego.

PROJECT ACCESS IMPROVEMENTS

If not previously constructed by the Otay Business Park Development (TM 5505), the project applicant for Otay Crossings Commerce Park (TM 5405) will be responsible for constructing the off-site segments of Airway Road between Airway Place and Alta Road, Airway Road between Alta Road and Siempre Viva Road and the segment of Siempre Viva Road between Airway Road and Lone Star Road with the development of Unit 4 and Unit 5 of the proposed project in order to provide access to the project site.

In addition, the project applicant will be responsible for constructing the on-site circulation element roads of Otay Mesa Road, Siempre Viva Road, Alta Road, and Lone Star Road along their project's frontage and the non-circulation element roads within the project site in order to facilitate access within the project site. Tables 40 and 41 provide a summary of the required improvements for the project access and on-site roadway segments and a summary of the required improvements for the required improvements for the internal intersections.

MITIGATION SUMMARY LEVEL OF SERVICE

For convenience of the reader Tables 42, 43, 44 and 45 have been created to summarize the level of service for roadway segments and intersections before and after the recommended mitigation measures.

Table 40 – Summary of Project Access Roadway Segment Improvement Requirements		
Roadway Segment	Scenario	Required Improvement
Otay Mesa Road		
Alta Rd to Lone Star Rd (Paseo De La Fuente)	E+1	Not Applicable
	E+2	Prior to recordation of final maps for Unit 2, the applicant will construct roadway segment to provide 2 travel lanes with 1 lane in each direction.
	E+3	Prior to recordation of final maps for Unit 3, the applicant will widen roadway segment to provide 2 travel lanes with 1 lane in each direction and a TWTL.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+3.
	E+5	Prior to recordation of final maps for Unit5, complete the improvements identified under E+3.
	C/L Ordinance	Prior to recordation of final maps for Unit 2, the applicant will be required to construct the roadway segment to the ½ Width of a Major Road.
Alta Road		
Otay Mesa Rd to Calle Ventner	E+1	Prior to recordation of final maps for Unit 1, the applicant will construct the roadway segment to provide 2 travel lanes with 1 lane in each direction.
	E+2	Complete the project improvements identified under E+1.
	E+3	Prior to recordation of final maps for Unit 3, the applicant will widen the roadway segment to provide 2 travel lanes, with1 lane in each direction and a TWLTL.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+3.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+3.
	C/L Ordinance	Prior to recordation of final maps for Unit 1, the applicant will be required to construct the roadway segment to the ½ Width of a Major Road.
Calle Ventner to Street „B'	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Prior to recordation of final maps the applicant will construct the roadway segment to provide 2 travels lanes with 1 lane in each direction.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+3.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+3.
	C/L Ordinance	Prior to recordation of final maps for Unit 3, the applicant will be required to construct the roadway segment to the ½ Width of a Major Road.
Street „B' to Airway Rd	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Prior to recordation of final maps the applicant will construct the roadway segment to provide 2 travels lanes with 1 lane in each direction.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+4.
	C/L Ordinance	Prior to recordation of final maps for Unit 4, the applicant will be required to construct the roadway segment to the ½ Width of a Major Road.
Airway Rd to Siempre Viva Rd [(a)]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Not Applicable
	E+5	Not Applicable
Airway Road		
Airway Pl to Alta Rd[(a)]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Prior to recordation of final maps for Unit 4, the applicant will construct the roadway segment to provide 2 travel lanes with 1 lane in each direction.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+4.
Alta Rd to Siempre Viva Rd [(a)]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Prior to recordation of final maps for Unit 4, the applicant will construct the roadway segment to provide 2 travel lanes with 1 lane in each direction.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+4.
Siempre Viva Road		
Alta Rd to Airway Rd [(a)]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Not Applicable
	E+5	Not Applicable

E+1 = Existing + Project Unit 1; E+ 2 = Existing + Project Units 1-2; E+ 3 = Existing + Project Units 1-3; E+ 4 = Existing + Project Units 1-4;
E+5 = Existing + Project Units 1-5; C w/o 905 = Cumulative w/o SR-905 + Project; C w/905 = Cumulative w/SR-905 1A & 1B + Project ;
N/A=Not Applicable; C/L Ordinance = Center-Line Ordinance Requirement; TWLTL = Center Two-Way-Left-Turn Lane; Imp = Improvement;
(a) Roadway is located off-site

Table 40 (Continued) – Summary of Project Access Roadway Segment Improvement Requirements		
Roadway Segment	Scenario	Required Improvement
Siempre Viva Road		
Airway Rd to Lone Star Rd	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Prior to recordation of final maps for Unit 3, the applicant will construct the roadway segment to provide 2 travel lanes with 1 lane in each direction.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+3.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+3.
	C/L Ordinance	Prior to recordation of final maps for Unit 3, the applicant will be required to construct the roadway segment to a Major Road.
East of Lone Star Rd	E+1	Not Applicable
	E+2	Prior to recordation of final maps the applicant will construct the roadway segment to the standards of 2-Lane Industrial/Commercial Collector.
	E+3	Prior to recordation of final maps for Unit 3, complete the improvements identified under E+2.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+2.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+2.
	C/L Ordinance	Prior to recordation of final maps for Unit 2, the applicant will be required to construct the roadway segment to the ½ Width of a 4-Lane Industrial/Commercial Collector.
Calle Ventner		
Alta Rd to Street 'A'	E+1	Prior to recordation of final maps for Unit 1, the applicant will construct the roadway segment to the standards of a 2-Lane Industrial/Commercial Collector.
	E+2	Prior to recordation of final maps for Unit 2, complete the improvements identified under E+1.
	E+3	Prior to recordation of final maps for Unit 3, complete the improvements identified under E+1.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+1.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+1.
Street „A' to Lone Star Rd	E+1	Prior to recordation of final maps for Unit 1, the applicant will construct the roadway segment to the standards of a 2-Lane Industrial/Commercial Collector.
	E+2	Prior to recordation of final maps for Unit 2, complete the improvements identified under E+1.
	E+3	Prior to recordation of final maps for Unit 3, complete the improvements identified under E+1.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+1.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+1.
Lone Star Road		
Otay Mesa Rd to Calle Ventner	E+1	Not Applicable
	E+2	Prior to recordation of final maps for Unit 1 the applicant will construct the roadway segment to provide 2 travels lanes with 1 lane in each direction.
	E+3	Prior to recordation of final maps for Unit 2, the applicant will widen the roadway segment to provide 2 travels lanes with 1 lane in each direction and a TWLT.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+3.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+3.
	C/L Ordinance	Prior to recordation of final maps for Unit 2, the applicant will be required to construct the roadway segment to a Major Road.
Calle Ventner to Siempre Viva Rd	E+1	Not Applicable
	E+2	Prior to recordation of final maps for Unit 2, the applicant will construct the roadway segment to provide 2 travels lanes with 1 lane in each direction.
	E+3	Prior to recordation of final maps for Unit 3, complete the improvements identified under E+2.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+2.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+2.
	C/L Ordinance	Prior to recordation of final maps for Unit 2, the applicant will be required to construct the roadway segment to a Major Road.
Siempre Viva Rd to Street „C'	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Prior to recordation of final maps for Unit 4, the applicant will construct the roadway segment to the standards of 2-Lane Industrial/Commercial Collector.
	E+5	Prior to recordation of final maps for Unit 5, the applicant will widen the roadway segment to the standards of a 4-Lane Industrial/Commercial Collector.
	C/L Ordinance	Prior to recordation of final maps for Unit 4, the applicant will be required to construct the roadway segment to the standards of a 4-Lane Industrial/Commercial Collector.
South of Street „C'	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Prior to recordation of final maps for Unit 4, the applicant will construct the roadway segment to the standards of a 2-Lane Industrial/Commercial Collector.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+4.
	C/L Ordinance	Prior to recordation of final maps for Unit 4, the applicant will be required to construct the roadway segment to the standards of a 4-Lane Industrial/Commercial Collector.

E+1 = Existing + Project Unit 1; E+ 2 = Existing + Project Units 1-2; E+ 3 = Existing + Project Units 1-3; E+ 4 = Existing + Project Units 1-4;
E+5 = Existing + Project Units 1-5; C w/o 905 = Cumulative w/o SR-905 + Project; C w/905 = Cumulative w/SR-905 1A & 1B + Project ;
N/A=Not Applicable; C/L Ordinance = Center-Line Ordinance Requirement; TWLTL = Center Two-Way-Left-Turn Lane; Imp = Improvement;
(a) Roadway is located off-site

Table 40 (Continued) – Summary of Project Access Roadway Segment Improvement Requirements		
Roadway Segment	Scenario	Required Improvement
Street 'A'		
North of Calle Ventner	E+1	Prior to recordation of final maps for Unit 1, the applicant will construct the roadway segment to the standards of 2-Lane Industrial/Commercial Collector.
	E+2	Prior to recordation of final maps for Unit 2, complete the improvements identified under E+1.
	E+3	Prior to recordation of final maps for Unit 3, complete the improvements identified under E+1.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+1.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+1.
Street 'B'		
East of Alta Rd	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Prior to recordation of final maps for Unit 3, the applicant will construct the roadway segment to the standards of 2-Lane Industrial/Commercial Collector.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+3.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+3.
Street 'C'		
East of Lone Star Rd	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Prior to recordation of final maps for Unit 4, the applicant will construct the roadway segment to the standards of 2-Lane Industrial/Commercial Collector.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+4.
	2030	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+4; however, maintain the right-of-way for a Light Collector Roadway to allow for future improvements at a later date.

E+1 = Existing + Project Unit 1; E+ 2 = Existing + Project Units 1-2; E+ 3 = Existing + Project Units 1-3; E+ 4 = Existing + Project Units 1-4;
E+5 = Existing + Project Units 1-5; C w/o 905 = Cumulative w/o SR-905 + Project; C w/905 = Cumulative w/SR-905 1A & 1B + Project ;
N/A=Not Applicable; C/L Ordinance = Center-Line Ordinance Requirement; TWLTL = Center Two-Way-Left-Turn Lane; Imp = Improvement;
(a) Roadway is located off-site

Table 41 – Summary of Internal Intersection Improvement Requirements		
Intersection	Scenario	Required Improvement
Otay Mesa Rd [E-W]@ Lone Star Rd (Paseo De La Fuente) [N-S]	E+1	Not Applicable
	E+2	Prior to recordation of final maps for Unit 2, the applicant will install a stop sign on the eastbound approach (west leg) of the intersection to provide OWSC and construct the following lane configurations: 1-EBL-R, 1-NBT-L & 1-SBT-R.
	E+3	Prior to recordation of final maps for Unit 3, complete the improvements identified under E+2.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+2.
	E+5	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+2.
Alta Rd [N-S] @ Calle Ventner [E-W]	E+1	Not Applicable (There is no conflicting movements since it is a curve.)
	E+2	Not Applicable (There is no conflicting movements since it is a curve.)
	E+3	Prior to recordation of final maps for Unit 3, the applicant will install a stop sign on the westbound approach (east leg) of the intersection to provide OWSC and construct the following lane configurations: 1-WBL-R; 1-NBT-R; 1-SBL-U; 1-SBL; & 1-SBT.
	E+4	Prior to recordation of final maps for Unit 4, the applicant shall signalize and widen the intersection to provide the following lane configurations: 1-WBL-R; 1-NBT-R; 1-SBL-U; 1-SBL; & 1-SBT.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+4.
Alta Rd [N-S]@ Street „B' [E-W]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable (There is no conflicting movements since it is a curve.)
	E+4	Prior to recordation of final maps for Unit 4, the applicant will install a stop sign on the westbound approach (east leg) of the intersection to provide OWSC and construct the following lane configurations: 1-WBL-R; 1-NBT-R & 1-SBT-L.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+4.
Alta Rd [N-S] @ Airway Rd [E-W]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Prior to recordation of final maps for Unit 4, the applicant will install a stop sign on the southbound approach (north leg) of the intersection to provide OWSC and construct the following lane configurations: 1-EBL; 1-EBT; 1-EBT-R; 1-SBL-R & 1-SBR.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+4.
Alta Rd [N-S] @ Siempre Viva Rd [E-W]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Not Applicable
	E+5	Not Applicable
Siempre Viva Rd [E-W] @ Airway Road [N-S]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Not Applicable
	E+5	Not Applicable
Lone Star Rd [N-S]@ Calle Ventner [E-W]	E+1	Not Applicable
	E+2	Prior to recordation of final maps for Unit 2, the applicant will install a stop sign on the eastbound approach (west leg) of the intersection to provide OWSC and construct the following lane configurations: 1-EBL-R; 1-NBL; 1-NBT; 1-SBU & 1-SBT-R.
	E+3	Prior to recordation of final maps for Unit 3, complete the improvements identified under E+2.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+2.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+2.
Lone Star Rd [N-W]@ Siempre Viva Rd [E-W]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Prior to recordation of final maps for Unit 3, the applicant will install a stop sign on the southbound approach (north leg) of the intersection to provide OWSC and construct the following lane configurations: 1-EBT-L; 1-WBT-R; 1-SBL-U & 1-SBL-R.
	E+4	Prior to recordation of final maps for Unit 4 install stop signs on all approaches to the intersection to provide AWSC and construct the following lane configurations: 1-EBL; 1-EBT-R; 1-WBT-LR; 1-NBT-LR; 1-SBT-L & 1-SBR.
	E+5	Prior to recordation of final maps for Unit 5 install stop signs on all approaches to the intersection to provide AWSC and construct the following lane configurations: 1-EBL; 1-EBT; 1-EBR; 1-WBT-LR; 1-NBL; 1-NBT-R; 1-SBT-L & 1-SBR.

E+1 = Existing + Project Unit 1; E+ 2 = Existing + Project Units 1-2; E+ 3 = Existing + Project Units 1-3; E+ 4 = Existing + Project Units 1-4; E+ 5 = Existing + Project Units 1-5; OWSC = One-Way Stop-Controlled; AWSC = All-Way Stop-Controlled; EBL = Eastbound Left; EBT-L = Eastbound Shared Through-Left; EBT-LR = Eastbound Shared Through Left-Right; EBT = Eastbound Through; EBT-R = Eastbound Shared Through Right; EBR = Eastbound Right; EBL-R = Eastbound Shared Left-Right; WBL = Westbound Left; WBT-L = Westbound Shared Through-Left; WBT-LR = Westbound Shared Through Left-Right; WBT = Westbound Through; WBT-R = Westbound Shared Through Right; WBR = Westbound Right; WBL-R = Westbound Shared Left-Right; NBL = Northbound Left; NBT-L = Northbound Shared Through-Left; NBT-LR = Northbound Shared Through Left-Right; NBT = Northbound Through; NBT-R = Northbound Shared Through-Right; NBR = Northbound Right; NBL-R = Northbound Shared Left-Right; SBL-U = Southbound Shared Left-U Turn; SBL = Southbound Left; SBT-L = Southbound Shared Through-Left; SBT-LR = Southbound Shared Through Left-Right; SBT = Southbound Through; SBT-R = Southbound Shared Through-Right; SBR = Southbound Right; SBL-R = Southbound Shared Left-Right; N-S = North-South Roadway; E-W = East-West Roadway;

Table 41 (Continued) – Summary of Internal Intersection Improvement Requirements		
Intersection	Scenario	Required Improvement
Lone Star Rd [N-S] @ Street „C' [E-W]	E+1	Not Applicable
	E+2	Not Applicable
	E+3	Not Applicable
	E+4	Prior to recordation of final maps for Unit 4, the applicant will install a stop sign on the westbound approach (east leg) of the intersection to provide OWSC and construct the following lane configurations: 1-WBL-R; 1-NBT-R; 1-SBL & 1-SBT.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+4.
Calle Ventner [E-W] @ Street „A' [N-S]	E+1	Prior to recordation of final maps for Unit 1, the applicant will install a stop sign on the southbound approach (north leg) of the intersection to provide OWSC and construct the following lane configurations: 1-EBT-L; 1-WBT-R & 1-SBL-R
	E+2	Prior to recordation of final maps for Unit 2, complete the improvements identified under E+1.
	E+3	Prior to recordation of final maps for Unit 3, complete the improvements identified under E+1.
	E+4	Prior to recordation of final maps for Unit 4, complete the improvements identified under E+1.
	E+5	Prior to recordation of final maps for Unit 5, complete the improvements identified under E+1.

E+1 = Existing + Project Unit 1; E+ 2 = Existing + Project Units 1-2; E+ 3 = Existing + Project Units 1-3; E+ 4 = Existing + Project Units 1-4;
E+ 5 = Existing + Project Units 1-5; OWSC = One-Way Stop-Controlled; AWSC = All-Way Stop-Controlled;
EBL = Eastbound Left; EBT-L = Eastbound Shared Through-Left; EBT-LR = Eastbound Shared Through Left-Right; EBT = Eastbound Through;
EBT-R = Eastbound Shared Through Right; EBR = Eastbound Right; EBL-R = Eastbound Shared Left-Right; WBL = Westbound Left;
WBT-L = Westbound Shared Through-Left; WBT-LR = Westbound Shared Through Left-Right; WBT = Westbound Through;
WBT-R = Westbound Shared Through Right; WBR = Westbound Right; WBL-R = Westbound Shared Left-Right; NBL = Northbound Left;
NBT-L = Northbound Shared Through-Left; NBT-LR = Northbound Shared Through Left-Right; NBT = Northbound Through;
NBT-R = Northbound Shared Through-Right; NBR = Northbound Right; NBL-R = Northbound Shared Left-Right;
SBL-U = Southbound Shared Left-U Turn; SBL = Southbound Left; SBT-L = Southbound Shared Through-Left;
SBT-LR = Southbound Shared Through Left-Right; SBT = Southbound Through; SBT-R = Southbound Shared Through-Right; SBR = Southbound Right;
SBL-R = Southbound Shared Left-Right; N-S = North-South Roadway; E-W = East-West Roadway;

Table 42 – Summary of Direct Mitigation Roadway Segment Level of Service

Roadway Segments	Jurisdiction	Existing + Unit 1		Existing + Units 1-2		Existing + Units 1-3		Existing + Units 1-4		Existing + Units 1-5	
		Before Mit.	After Mit.	Before Mit.	After Mit.	Before Mit.	After Mit.	Before Mit.	After Mit.	Before Mit.	After Mit.
Interim SR-905 (Otay Mesa Rd)											
Heritage Rd to Cactus Rd	**City**/Caltrans	**F**	(a)	**F**	(a)	**F**	(a)	**F**	C	**F**	C
Cactus Rd to Britannia Blvd	**City**/Caltrans	**F**	(a)	**F**	(a)	**F**	(a)	**F**	C	**F**	C
Britannia Blvd to La Media Rd	**City**/Caltrans	**F**	(a)	**F**	(a)	**F**	(a)	**F**	(a)	**F**	(a)
La Media Rd to Piper Ranch Rd	**City**/Caltrans	**F**	(a)	**F**	(a)	**F**	(a)	**F**	(a)	**F**	(a)
Piper Ranch Rd to SR-125	**County**/City/Caltrans	D	N/A	D	N/A	**E**	(a)	**E**	(a)	**E**	(a)
Otay Mesa Rd (Old Otay Mesa Rd)											
SR-125 to Interim SR-905 Connector	**County**/City/Caltrans	B	N/A	B	N/A	C	N/A	C	N/A	C	N/A
Interim SR-905 Connector to Harvest Rd	**County**/City/Caltrans	A	N/A	B	N/A	B	N/A	B	N/A	B	N/A
Harvest Rd to Sanyo Av	**County**/City/Caltrans	A	N/A	B	N/A	B	N/A	C	N/A	C	N/A
Sanyo Av to Enrico Fermi Dr	**County**/City	**E**	B	**F**	B	**F**	B	**F**	C	**F**	D
Enrico Fermi Dr to Alta Rd	County	**E**	A	**F**	B	**F**	B	**F**	B	**F**	B
Airway Road											
La Media Rd to SR-905	City	C	N/A	C	N/A	C	N/A	C	N/A	C	N/A
SR-905 to Sanyo Av (c)	City	**E**	(c)	**E**	C	**F**	D	**F**	D	**F**	B
Sanyo Av to Paseo de las Americas	County	C	N/A	C	N/A	C	N/A	C	N/A	C	N/A
Paseo de las Americas to Michael Faraday	**County**/City	C	N/A	C	N/A	C	N/A	C	N/A	C	N/A
Michael Faraday Dr to Enrico Fermi Dr	**County**/City	B	N/A	B	N/A	B	N/A	C	N/A	C	N/A
Enrico Fermi Dr to Airway Pl	County	A	N/A	A	N/A	A	N/A	A	N/A	A	N/A
Airway Pl to Alta Rd	County	Does Not Exist		Does Not Exist		Does Not Exist		D	(d)	D	(d)
Siempre Viva Road											
SR-905 NB to Paseo de las Americas	City	B	N/A	B	N/A	B	N/A	B	N/A	B	N/A
Paseo de las Americas to Michael Faraday	City	B	N/A	A	N/A	B	N/A	B	N/A	B	N/A
Michael Faraday to Enrico Fermi Dr	City	A	N/A	A	N/A	A	N/A	A	N/A	A	N/A
East of Enrico Fermi Dr	County	A	N/A	A	N/A	A	N/A	A	N/A	A	N/A
La Media Road											
Otay Mesa Rd to St. Andrews	City	C	N/A	C	N/A	C	N/A	C	N/A	C	N/A
SR-125											
North of Otay Mesa Rd	SBX	A	N/A	A	N/A	A	N/A	A	N/A	A	N/A
Existing SR-905											
Otay Mesa Rd to Siempre Viva Rd	**City**/Caltrans	**E**	(b)	**E**	(b)	**E**	(b)	**E**	(b)	**E**	(b)
South of Siempre Viva Rd	City/**Caltrans**	A	N/A	A	N/A	A	N/A	A	N/A	A	N/A
Sanyo Avenue											
Otay Mesa Rd to Airway Rd	City	A	N/A	A	N/A	A	N/A	A	N/A	A	N/A
Enrico Fermi Drive											
Otay Mesa Rd to Airway Rd	County	A	N/A	A	N/A	B	N/A	D	N/A	D	N/A
Airway Rd to Siempre Viva Rd	City	A	N/A	A	N/A	A	N/A	A	N/A	A	N/A

(a) Arterial Roadway Segment analysis shows that the roadway segment does not have a significant impact.
(b) The project does not add traffic to this segment; thus, there is no significant impact.
(c) The Δv/c does not exceed 0.02 per the City of San Diego's thresholds.
(d) The applicant is responsible for constructing a two (2) lane roadway one (1) in each direction.
Bold = Jurisdiction which capacity is based on; Mit. = Mitigation; N/A = Not Applicable

Table 43 – Summary of Roadway Segments Mitigated Level of Service			
Roadway Segment	Jurisdiction	Cumulative (2020) w/SR-905	
		LOS Before Mitigation	LOS After Mitigation
Interim SR-905 (Otay Mesa Rd)			
Heritage Rd to Cactus Rd	**City**/Caltrans	B	N/A
Cactus Rd to Britannia Blvd	**City**/Caltrans	B	N/A
Britannia Blvd to La Media Rd	**City**/Caltrans	A	N/A
La Media Rd to Piper Ranch Rd	**City**/Caltrans	C	N/A
Piper Ranch Rd to SR-125	**County**/City/Caltrans	B	N/A
Otay Mesa Rd (Old Otay Mesa Rd)			
SR-125 to Harvest Rd	**County**/City/Caltrans	C	N/A
Harvest Rd to Sanyo Av	**County**/City/Caltrans	A	N/A
Sanyo Av to Vann Centre Blvd	**County**/City	C	N/A
Vann Centre Blvd to Enrico Fermi Dr	County	C	N/A
Enrico Fermi Dr to Alta Rd	County	**E**	B
Airway Road			
La Media Rd to SR-905	City	C	N/A
SR-905 to Sanyo Av	City	C	N/A
Sanyo Av to Paseo De Las Americas	City	B	N/A
Paseo De Las Americas to Michael Faraday Dr	**County**/City	A	N/A
Michael Faraday Dr to Enrico Fermi Dr	**County**/City	C	N/A
Enrico Fermi Dr to Airway Pl	County	A	N/A
Airway Pl to Alta Rd	County	A	N/A
Siempre Viva Road			
Drucker Ln to SR-905	City	A	N/A
SR-905 NB to Paseo De Las Americas	City	D	N/A
Paseo De Las Americas to Michael Faraday Dr	City	D	N/A
Michael Faraday Dr to Enrico Fermi Dr	City	C	N/A
La Media Road			
Otay Mesa Rd to St. Andrews	City	D	N/A
SR-125			
North of Otay Mesa Rd	SBX	A	N/A
State Route 905			
Otay Mesa Rd to Siempre Viva Rd	**City**/Caltrans	Does Not Exist	
South of Siempre Viva Rd	City/**Caltrans**	D	N/A
New State Route 905			
Britannia to La Media	Caltrans	C	N/A
La Media to Siempre Viva Rd	Caltrans	C	N/A
Sanyo Avenue			
Otay Mesa Rd to Airway Rd	City	C	N/A
Enrico Fermi Drive			
Otay Mesa Rd to Airway Rd	County	**E**	B
Airway Rd to Siempre Viva Rd	City	A	N/A
Alta Road			
Calzada De La Fuente to Lone Star Rd (Paseo De La Fuente)	County	D	N/A
Lone Star Rd (Paseo De La Fuente) to Otay Mesa Rd	County	D	N/A
N/A = Not Applicable			

Table 44 – Summary of Direct Mitigation Intersection Level of Service

Intersection	Jurisdiction	Existing + Unit 1		Existing + Units 1-2		Existing + Units 1-3		Existing + Units 1-4		Existing + Units 1-5	
		Before Mit. (AM/PM)	After Mit. (AM/PM)	Before Mit. (AM/PM)	After Mit. (AM/PM)	Before Mit. (AM/PM)	After Mit. (AM/PM)	Before Mit. (AM/PM)	After Mit. (AM/PM)	Before Mit. (AM/PM)	After Mit. (AM/PM)
Otay Mesa (E-W) @ Heritage (N-S)	**City**/Caltrans	C/C	N/A	D/D	N/A	D/D	N/A	**E**/D	(a)	**E**/D	(a)
Otay Mesa (E-W) @ Cactus (N-S)	**City**/Caltrans	A/B	N/A	B/B	N/A	C/B	N/A	D/B	N/A	D/B	N/A
Otay Mesa (E-W) @ Britannia (N-S)	**City**/Caltrans	B/B	N/A	B/C	N/A	C/C	N/A	D/C	N/A	D/C	N/A
Otay Mesa (E-W) @ La Media (N-S)	**City**/Caltrans	B/C	N/A	B/C	N/A	B/C	N/A	B/D	N/A	B/D	N/A
Otay Mesa (E-W) @ Piper Ranch (N-S)	**County**/City/ Caltrans	A/A	N/A	A/A	N/A	B/A	N/A	C/A	N/A	C/A	N/A
Otay Mesa (E-W) @ SR-125 SB (N-S)	**County**/City/ SBX	B/A	N/A	B/A	N/A	B/A	N/A	B/A	N/A	B/A	N/A
Otay Mesa (E-W) @ SR-125 NB (N-S)	**County**/City/ SBX	A/A	N/A	A/A	N/A	A/B	N/A	A/D	N/A	A/D	N/A
Otay Mesa (E-W) @ SR-905 (N-S)	**County**/City/ SBX	B/C	N/A	C/**E**	(b)	**E/F**	(b)	**F/F**	(b)	**F/F**	(b)
Otay Mesa (E-W) @ Sanyo (N-S)	**County**/City	A/C	N/A	B/**F**	A/B	A/**F**	A/B	B/**F**	C/C	C/**F**	C/C
Otay Mesa (E-W) @ Enrico Fermi (N-S)	**County**/City	C/B	N/A	**F**/B	B/A	**F/F**	C/B	**F/F**	B/C	**F/F**	B/C
Otay Mesa (E-W) @ Alta (N-S)	**County**/City	**F/F**	B/C	**F/F**	C/D	**F/F**	D/D	**F/F**	C/C	**F/F**	C/C
Airway (E-W) @ La Media	**County**/City	B/B	N/A	B/C	N/A	B/C	N/A	B/B	N/A	B/C	N/A
Airway (E-W) @ Sanyo (N-S)	City	A/A	N/A	A/A	N/A	A/B	N/A	B/B	N/A	B/B	N/A
Airway (E-W) @ Paseo De Las Americas (N-S)	**County**/City	A/B	N/A	A/B	N/A	A/B	N/A	B/B	N/A	B/B	N/A
Airway (E-W) @ Michael Faraday (N-S)	**County**/City	A/A	N/A	A/A	N/A	A/A	N/A	B/B	N/A	B/B	N/A
Airway (E-W) @ Enrico Fermi (N-S)	**County**/City	A/B	N/A	A/A	N/A	A/A	N/A	C/C	N/A	C/C	N/A
Siempre Viva (E-W) @ La Media (N-S)	City	A/B	N/A	A/B	N/A	A/A	N/A	A/B	N/A	A/B	N/A
Siempre Viva (E-W) @ SR-905 SB off to Siempre Viva EB (N-S)	Caltrans	A/A	N/A	A/A	N/A	A/A	N/A	A/A	N/A	A/A	N/A

(a) The assurance that Phases 1A & 1B of SR-905 are under construction will mitigate the direct impact.
(b) The intersection is temporary direct impact that will be removed once it has been assured that Phase 1A of SR-905 is under construction
Bold = Jurisdiction which capacity is based on; Mit. = Mitigation; N/A = Not Applicable; E-W = East-West Roadway; N-S = North-South Roadway

Table 44 (Continued) – Summary of Direct Mitigation Intersection Level of Service

Intersection	Jurisdiction	Existing + Unit 1		Existing + Units 1-2		Existing + Units 1-3		Existing + Units 1-4		Existing + Units 1-5	
		Before Mit. (AM/PM)	After Mit. (AM/PM)	Before Mit. (AM/PM)	After Mit. (AM/PM)	Before Mit. (AM/PM)	After Mit. (AM/PM)	Before Mit. (AM/PM)	After Mit. (AM/PM)	Before Mit. (AM/PM)	After Mit. (AM/PM)
Siempre Viva (E-W) @ SR-905 SB off to Siempre Viva WB (N-S)	Caltrans	B/B	N/A	B/B	N/A	B/B	N/A	B/B	N/A	B/B	N/A
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	Caltrans	B/B	N/A	B/B	N/A	B/B	N/A	B/B	N/A	B/B	N/A
Siempre Viva (E-W) @ Paseo De Las Americas (N-S)	City	C/D	N/A	C/D	N/A	C/D	N/A	C/D	N/A	C/D	N/A
Siempre Viva (E-W) @ Michael Faraday (N-S)	City	C/B	N/A	C/B	N/A	C/B	N/A	C/B	N/A	C/C	N/A
Siempre Viva (E-W) @ Enrico Fermi (N-S)	**County**/City	B/B	N/A	B/B	N/A	B/B	N/A	B/A	N/A	B/B	N/A
Alta (E-W) @ Lonestar (N-S)	County	A/A	N/A	A/A	N/A	A/A	N/A	A/A	N/A	A/A	N/A

(a) The assurance that Phases 1A & 1B of SR-905 are under construction will mitigate the direct impact.
(b) The intersection is temporary direct impact that will be removed once it has been assured that Phase 1A of SR-905 is under construction
Bold = Jurisdiction which capacity is based on; Mit. = Mitigation; N/A = Not Applicable; E-W = East-West Roadway; N-S = North-South Roadway

Table 45 – Summary of Cumulative Mitigation Intersection Level of Service			
Intersection	Jurisdiction	Before Mitigation (AM/PM)	After Mitigation (AM/PM)
Otay Mesa (E-W) @ Heritage (N-S)	**City**/Caltrans	C/C	N/A
Otay Mesa (E-W) @ Cactus (N-S)	**City**/Caltrans	A/B	N/A
Otay Mesa (E-W) @ Britannia (N-S)	**City**/Caltrans	A/B	N/A
Otay Mesa (E-W) @ La Media (N-S)	**City**/Caltrans	B/C	N/A
Otay Mesa (E-W) @ Piper Ranch (N-S)	**County**/City/Caltrans	A/A	N/A
Otay Mesa (E-W) @ SR-125 SB (N-S)	**County**/City/SBX	B/A	N/A
Otay Mesa (E-W) @ SR-125 NB (N-S)	**County**/City/SBX	A/A	N/A
Otay Mesa (E-W) @ Harvest (N-S)	**County**/City	B/C	N/A
Otay Mesa (E-W) @ Sanyo (N-S)	**County**/City	B/D	N/A
Otay Mesa (E-W) @ Vann Centre (N-S)	**County**/City	C/F	B/D
Otay Mesa (E-W) @ Enrico Fermi (N-S)	**County**/City	C/C	N/A
Otay Mesa (E-W) @ Alta (N-S)	**County**/City	**F/F**	B/C
Airway (E-W) @ La Media	**County**/City	B/C	N/A
Airway (E-W) @ Sanyo (N-S)	City	**F/F**	C/D
Airway (E-W) @ Paseo De Las Americas (N-S)	**County**/City	**F/F**	C/C
Airway (E-W) @ Michael Faraday (N-S)	**County**/City	B/C	N/A
Airway (E-W) @ Enrico Fermi (N-S)	**County**/City	C/C	N/A
Siempre Viva (E-W) @ SR-905 SB off to Siempre Viva EB (N-S)	Caltrans	A/B	N/A
Siempre Viva (E-W) @ SR-905 SB off to Siempre Viva WB (N-S)	Caltrans	D/C	N/A
Siempre Viva (E-W) @ SR-905 NB Ramp (N-S)	Caltrans	B/B	N/A
Siempre Viva (E-W) @ Paseo De Las Americas (N-S)	City	D/D	N/A
Siempre Viva (E-W) @ Michael Faraday (N-S)	City	**F/F**	C/C
Siempre Viva (E-W) @ Enrico Fermi (N-S)	**County**/City	B/C	N/A
Alta (E-W) @ Calzada De La Fuente(N-S)	County	C/C	N/A
Alta (E-W) @ Lonestar (N-S)	County	B/C	N/A
Bold = Jurisdiction which capacity is based on; N/A = Not Applicable; E-W = East-West Roadway; N-S = North-South Roadway			

SECTION X – SUMMARY OF FINDINGS AND CONCLUSIONS

- The Otay Crossings Commerce Park project is a Tentative Map (TM) and Preliminary Grading Plan (Tract 5405) for 311.5 acres of land designated for Mixed Industrial, Rural Residential and State Route (i.e., SR-11) use in Subarea 2 of the East Otay Mesa Specific Plan (EOMSP).

- The future route for SR-11 traverses the site and the future U.S. Port-of-Entry is situated on the south portion of the site. The TM will subdivide the property into 59 lots (56 industrial lots and 3 open space lots) ranging in size from 0.90 net acres to 95.4 net acres.

- Grading for the proposed project will be completed in two phases. Grading for Phase 1 comprises of three final maps (units 1, 2, and 3) and Grading for Phase 2 comprises two final maps (units 4 and 5). The project proposes to construct the project in the following timeline: construct Unit 1 by 2011, construct Unit 2 by 2012, construct Unit 3 by 2013, and construct Units 4 and 5 by 2014.

- Since SR-905 Phase 1A is scheduled to be completed by late 2010 and SR-905 Phase 1B is anticipated to be completed by summer 2012; Units 1 and 2 of the proposed project should be completed prior to the completion of SR-905 Phase 1B while Units 3-5 would not be completed until after SR-905 Phase 1B was completed. To assess the worse case scenario, however, this traffic study has assessed the direct traffic impacts of all five (5) units of the proposed units under existing conditions.

- Per the proposed site plan, in the near term when the developer will be utilizing the area set aside for the future SR-11 right-of-way for truck parking, the proposed project is estimated to generate 21,279 daily trips, 2,853 AM peak hour trips, and 3,017 PM peak hour trips. Once the SR-11 is constructed and the truck parking facility is no longer being utilized, the project will generate 18,768 daily trips, 2,627 AM peak hour trips, and 2,816 PM peak hour trips. It should be noted that to assess the worse case scenario, the full trip generation potential was analyzed in this report.

- Please refer to Section IX of this report for a summary of the project's impacts and recommended mitigation measures.