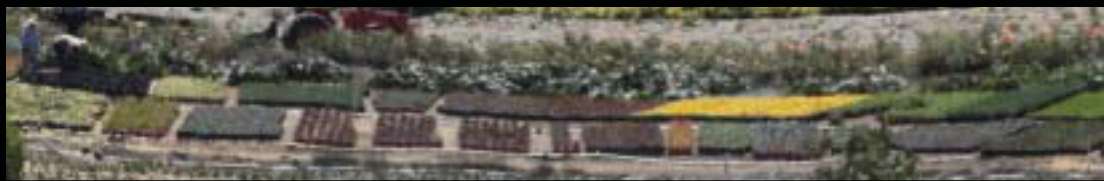
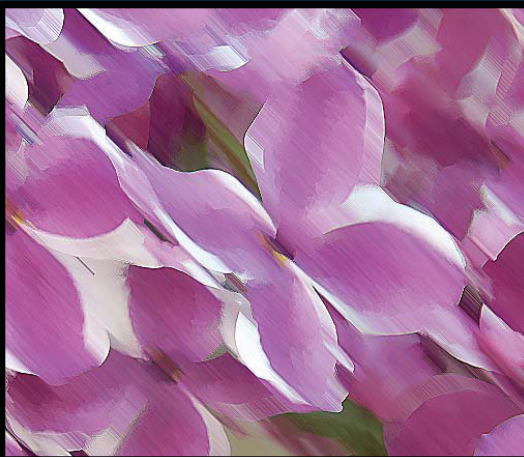


# Lilac Hills Ranch

## Traffic Impact Study

Prepared for

ACCRETIVE INVESTMENT, INC.  
12275 El Camino Real, Ste. 110  
San Diego, CA 92130



REVISED FINAL REPORT  
PROPOSED PROJECT  
JUNE 03, 2014

Prepared by

CHEN  RYAN

CHEN RYAN ASSOCIATES | 239 LAUREL STREET, SUITE 203  
SAN DIEGO, CALIFORNIA 92101

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# Traffic Impact Study

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June 3, 2014  
June 28, 2013

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## Executive Summary

The proposed Lilac Hills Ranch project is located in the Valley Center and Bonsall Community Planning Areas of the unincorporated County of San Diego with State Route 76 to the north, Valley Center proper to the east, the City of Escondido to the south, and Interstate 15 and Old Highway 395 to the west.

The project consists of a mix of residential, commercial and institutional uses, along with parks and open space. Specifically, the project proposes commercial uses comprised of 61,500 square feet of ~~commercial uses~~, local serving small scale specialty retail, 28,500 square feet of office uses; and a 50-room country inn; 903 traditional single-family detached homes; 375 multi-family homes (for-rent and for-sale at 20 or more dwelling units per acre); 468 age-restricted single family homes (senior community); necessary facilities and amenities to serve the senior population (including a senior community center, an assisted living and group residential facility); and civic facilities ~~that include a K-8 school site, 23.8~~include a Community Purpose Facility (CPF) area that would be comprised of a fire station and recreational facility not to exceed a total of 40,000 square feet for the combined CPF area, a K-8 school site, 23.6 acres of public and private neighborhood parks, a private recreational center, and other recreational amenities. An interim fire station with up to 3-staff could be located anywhere within the project site. However, this fire station would be built in place of two equivalent dwelling units and would not result in additional traffic to the overall project. Also planned within the project site are an on-site Recycling and Green Waste Drop-off Facility (RF), a potential Water Reclamation Facility (WRF) and other supporting infrastructure. Open space is proposed to retain some of the existing citrus and avocado groves, along with ~~103~~104.1 acres of sensitive biological/wetland habitat.

The proposed Lilac Hills Ranch project would generate a total of 15, ~~151~~141 external daily trips by buildout of the project, including 1,171 AM peak hour trips and 1, ~~433~~432 PM peak hour trips.

Based on the County of San Diego significance criteria and the SANTEC/ITE Guidelines, the proposed project would result in direct traffic impacts at the following ~~intersections~~four (4) roadway segments:

- Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – 238<sup>th</sup> EDU triggers the need for the construction of a dedicated westbound (Gopher Canyon Road approach) right-turn lane at the intersection of E. Vista Way / Gopher Canyon Road;
- E. Vista Way, between SR-76 and Gopher Canyon Road – 238<sup>th</sup> EDU triggers the need for the construction of a dedicated westbound (Gopher Canyon Road approach) right-turn lane and 476<sup>th</sup> EDU triggers the need for the construction of a dedicated northbound (E. Vista Way approach) right-turn lane at the intersection of E. Vista Way / Gopher Canyon Road;

- E. Vista Way, between Gopher Canyon Road and Osborne Street – 238<sup>th</sup> EDU triggers the need for the construction of a dedicated westbound (Gopher Canyon Road approach) right-turn lane and 476<sup>th</sup> EDU triggers the need for the construction of a dedicated northbound (E. Vista Way approach) right-turn lane at the intersection of E. Vista Way / Gopher Canyon Road; and
- W. Lilac Road, between Old Highway 395 and Main Street – need to be improved to 2.2C as designated in the County’s adopted Mobility Element by 929<sup>th</sup> EDU.

The proposed project would also result in direct traffic impacts at the following five (5) intersections:

- E. Vista Way / Gopher Canyon Road – 238<sup>th</sup> EDU triggers the need for the construction of a dedicated westbound (Gopher Canyon Road approach) right-turn lane at the intersection of E. Vista Way / Gopher Canyon Road. The additional mitigation measure (a dedicated northbound right-turn lane) required for the segment of E. Vista Way, between Gopher Canyon Road and Osborne Street would further improve the operations at this intersection to LOS D during peak hours;
- Old Highway 395 / W. Lilac Road – 585<sup>th</sup> EDU ~~or by 585 project PM peak hour trips since PM peak hour intersection operation dictates~~ triggers the need for signalization; ~~and the construction of the left-turn lane at the westbound W. Lilac Road approach;~~
- Old Highway 395 / Circle R Drive – ~~121<sup>st</sup>~~ 210<sup>th</sup> EDU from combined Phases 4 and 5 or ~~by 121 project (Phases 4 and 5) PM peak hour trips since PM peak hour intersection operation dictates~~ 1,220<sup>th</sup> total EDU triggers the need for signalization; ~~or 1,132<sup>nd</sup> total EDU;~~
- I-15 SB Ramps / Gopher Canyon Road – 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU; ~~and triggers the need for signalization. However, this intersection is a Caltrans facility over which the County does not have jurisdiction. In addition, Caltrans does not have a plan or program in place; therefore, the impacts would remain significant and unavoidable; and,~~
- I-15 NB Ramps / Gopher Canyon Road – 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU ~~triggers the need for signalization. However, this intersection is a Caltrans facility over which the County does not have jurisdiction. In addition, Caltrans does not have a plan or program in place; therefore, the impacts would remain significant and unavoidable.~~

~~Signalization at each of these locations would mitigate the identified direct impacts by the project.~~

~~W. Lilac Road, between Old Highway 395 and Main Street would need to be improved to 2.2C as designated in the County’s adopted Mobility Element by 929<sup>th</sup> EDU or a total of 9,298 project daily trip.~~

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~~Note that the Existing Plus Project (Buildout) scenario includes the project's build-out traffic volumes added to the existing traffic volumes and existing roadway configurations and is shown in Traffic Analysis Phases A-E as required by the County's Guidelines for Determining Significance and Report Format & Content Requirements for Transportation and Traffic.~~

~~In addition to the direct impacts identified above, traffic~~Traffic generated by the proposed project would result in cumulative impacts at ~~a number of nine (9) study area roadways~~roadway segments and ~~11~~ intersections; including:

#### Roadway Segments

- ~~Camino Del Rey, between Old River Road and W. Lilac Road;~~
- Gopher Canyon Road, between Little Gopher Canyon Road and I-15 SB Ramps;
- E. Vista Way, between SR-76 and Gopher Canyon Road;
- E. Vista Way, between Gopher Canyon Road and Osborne Street;
- Cole Grade Road, between Fruitvale Road and Valley Center Road;
- W. Lilac Road, between Old Highway 395 and Main Street;
- Gopher Canyon Road, between E. ~~the project should pay the appropriate~~Vista Way and Little Gopher Canyon Road;
- Pankey Road, between Pala Mesa Drive and SR-76; and
- Lilac Road, between Old Castle Road and Anthony Road.

#### Intersections

- E. Vista Way / Gopher Canyon Road (~~County Traffic Impact Fee {};~~
- Old Highway 395 / W. Lilac Road (County);
- I-15 SB Ramps / Old Highway 395 (Caltrans);
- I-15 NB Ramps / Old Highway 395 (Caltrans);
- I-15 SB Ramps / Gopher Canyon Road (Caltrans);
- I-15 NB Ramps / Gopher Canyon Road (Caltrans);
- SR-76 / Old Highway 395 (Caltrans);
- SR-76 / Pankey Road (Caltrans);
- Old Highway 395 / E. Dulin Road (County);
- Old Highway 395 / Circle R Drive (County); and
- Miller Road / Valley Center Road (County).

~~Generally, cumulative impacts to facilities listed in the County's TIF) or make a fair share contribution in which the~~ would be mitigated through payment of TIF fees. Although the

improvement is ~~a part of~~ not slated for implementation based upon the currently approved Plan of Program TIF Program; it is anticipated that the currently approved TIF Program will be updated by the County to accommodate the land use changes that would result from the project's approval. This update would revise fee rates associated with adding the project's land uses to the program. For facilities not included in the County's TIF program, specific mitigation measures are proposed.

The proposed project would also have cumulative impacts to I-15 between SR-78 and the Riverside County boundary, and these impacts would remain significant and unmitigable.

#### Proposed Mobility Element Classification Changes

The project proposes to downgrade *W. Lilac Road, between Main Street and the planned Road 3* from 2.2C (as classified in the currently adopted General Plan) to 2.2F.

This proposal is supported by the low (less than 6, ~~200~~ 100 ADT) forecast daily traffic volumes when Road 3 is deleted from the Mobility Element system. In October, 2011, after adoption of the County General Plan Update, the San Diego Association of Governments (SANDAG) acquired the 902-acre Rancho Lilac property through its Environmental Mitigation Program (EMP). SANDAG recorded a conservation easement over the entire 902 acres and designated this land as part of a 1,600 acre open space preserve in the State Route 76 corridor in North San Diego County. This acquisition ~~would~~ may prevent implementation of the County's planned Road 3, and make the deletion of Road 3 from the currently adopted Mobility Element a potential roadway network ~~a reasonably expected~~ scenario.

#### Summary of Major Changes to the Traffic Impact Study (TIS)

The following four (4) changes to the public review version of the TIS (dated 6/28/2013) resulted in additional deficient facilities, traffic impacts, and/or General Plan inconsistencies:

- Change 1 – Change to project access. Only the southern portion of the Phase 5 (SFS-5, SFS-6, P-11 and the church as shown in Figure 1-3) can access Mountain Ridge Road. The public review version of the TIS assumed that both Phases 4 and 5 have access to Mountain Ridge Road. Change 1 affects “Existing + Phase D”, “Existing + Phase E”, “Existing + Cumulative Projects + Project”, and “Horizon 2030 + Project” scenarios.
- Change 2 – Change to horizon year traffic volumes. The Lilac Hills Ranch Development occupies portions of three Traffic Analysis Zones (TAZs 157, 183, and 4694) in the currently adopted GP transportation forecast model, and these TAZs generate a total of 4,957 daily trips. The public review version of the TIS assumed that the Lilac Hills Ranch Development would replace approximately 75% (an acreage percentage) of the 4,957 trips which wasn't conservative enough. The TIS is now updated so that the project would only replace 110 rural residential units (1,320 ADT) of the GP approved land uses. The Horizon Year 2030 Base traffic volumes were revised to reflect the adopted GP forecast; while the Horizon Year 2030 Base Plus Project traffic volumes were derived by adding the proposed Lilac Hills Ranch project traffic (subtracting traffic generated by the

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110 units) to the Base Year GP modeled volumes. Change 2 affects both Horizon Year 2030 “Base” and “Base + Project” scenarios.

- Change 3 – Change to existing roadway capacities reflecting field conditions. A 10% capacity reduction is now applied to these roadways that are not built to County public road standards. Since each of these roads provides one lane in each direction (the most important indication of capacity), shoulder width and minimum curve radius do not have significant effects on roadway capacity especially when the substandard sections/curves only represent a small portion of the studied roadway, a 10% reduction was deemed reasonable and adequate. Change 3 affects “Existing”, all five “Existing + Project”, and “Existing + Cumulative Projects + Project” scenarios.
- Change 4 – Change to the cumulative project list. The Sierra (former Merriam Mountains) Development project (#106 in Table 6.1) located west of I-15, between Gopher Canyon Road and Deer Springs Road is expected to request the construction of approximately 2,100 residential units and a small amount of commercial development. The public review version of the TIS (dated 6/28/2013) only included 1,162 DU based on the County GPA Property Specific Workplan list of 56 projects (dated June 28, 2012). Therefore additional traffic was added. In addition, a number of projects from the Valley Center County GPA Property Specific Workplan (VC7, 11, 20A, 20B, 54, 61, 66) list of 56 projects was also added, such as #110 in Table 6.1. These small PSRs represent a total of 261 units of single family rural residential located east of I-15, between W. Lilac Road and Mountain Ridge Road. Change 4 affects the “Existing + Cumulative Projects + Project” scenario.

Changes 1 and 2 above contribute to additional GP inconsistencies under the Horizon Year, including:

- Old Highway 395, between W. Lilac Road and I-15 SB Ramps under Horizon Year with Road 3 scenario; and
- W. Lilac Road, between Old Highway 395 and Main Street under Horizon Year without Road 3 scenario.

Change 3 results in an additional project direct impact at the following location under the “Existing + Project (Phase A)” and “Existing + Project (Phase B)” conditions:

- Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps.

Change 4 results in an additional cumulative impact at the following location under the “Existing + Cumulative Projects + Project” scenario:

- W. Lilac Road, between Old Highway 395 and Main Street.

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## 1.0 Introduction

### 1.1 Purpose of the Report

The purpose of this Traffic Impact Study (TIS) is to identify and document potential traffic impacts related to the development of the Lilac Hill Ranch project. This report also recommends mitigation measures for any identified intersection, roadway or freeway/highway deficiencies associated with the project.

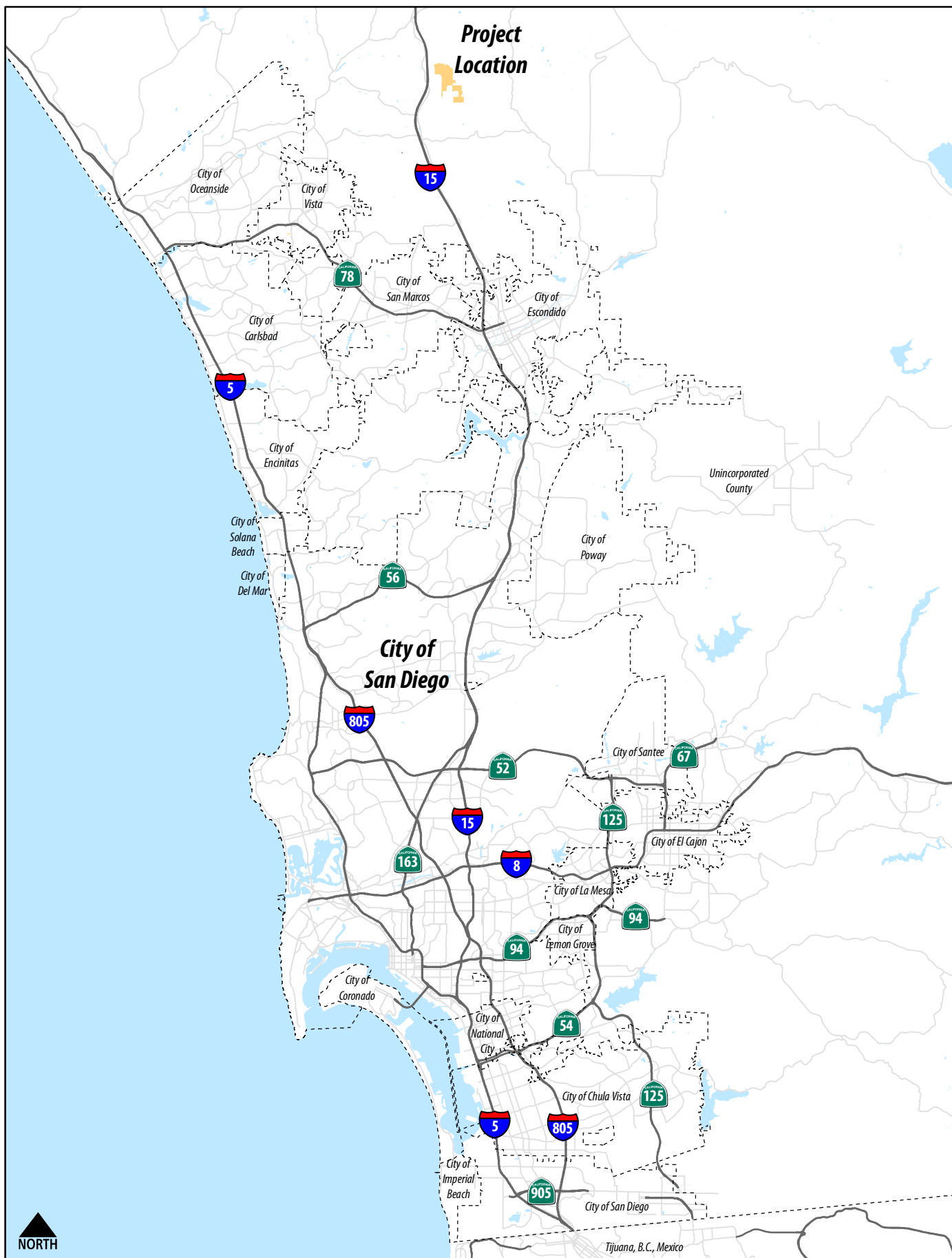
### 1.2 Project Location and Description

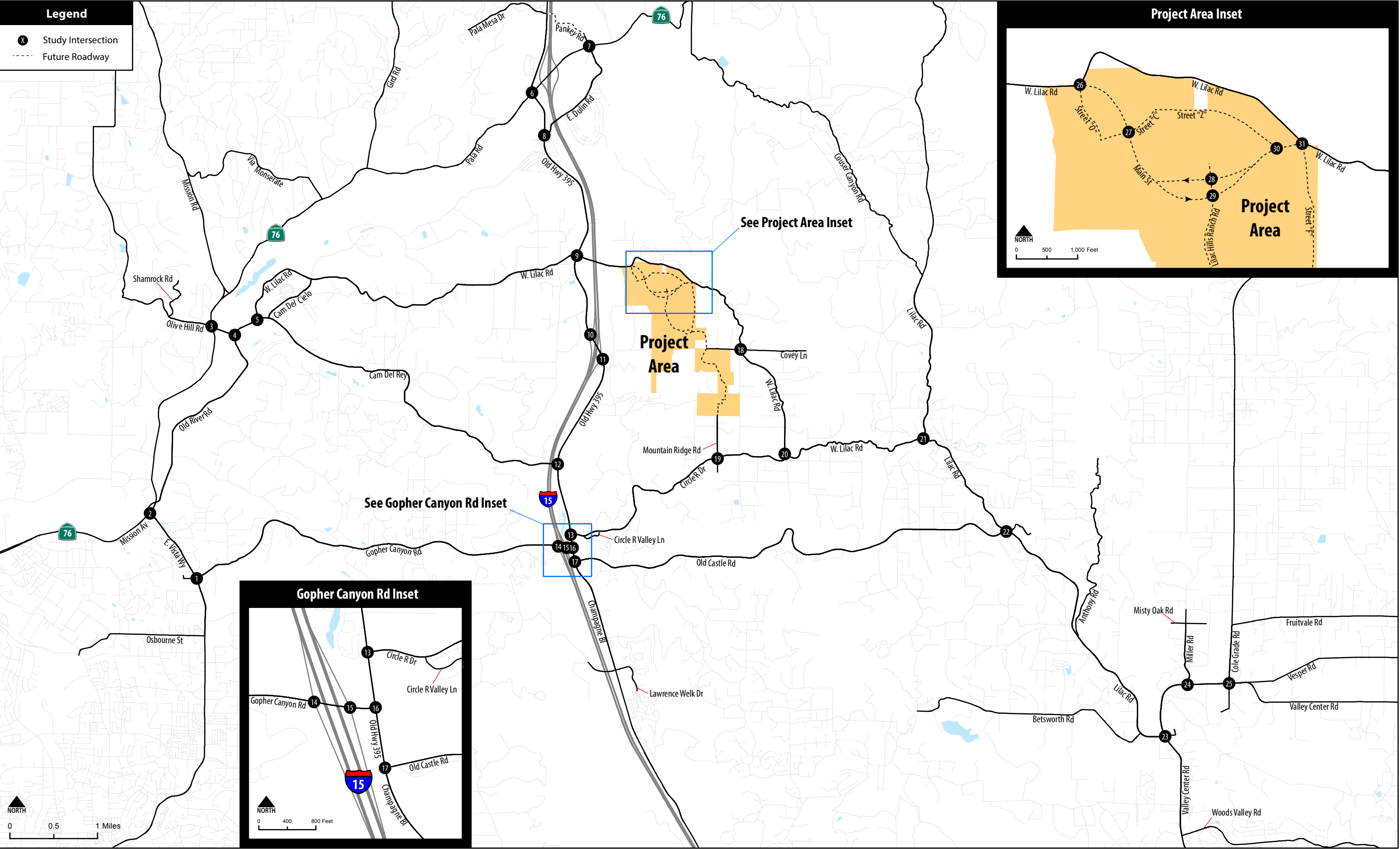
The proposed Lilac Hills Ranch project is located in the Valley Center and Bonsall Community Planning Areas of the unincorporated County of San Diego with State Route 76 to the north, Valley Center proper to the east, the City of Escondido to the south, and Interstate 15 and Old Highway 395 to the west. Project access is provided at W. Lilac Road via Main Street, Circle R Drive via Mountain Ridge Road, (restricted access to only southern half of the Phase 5 (SFS-5 and SFS-6) of the senior community and unrestricted access to the church site), as well as Covey Lane. **Figure 1-1** displays the project's location within the region, while **Figure 1-2** illustrates the project study area.

The project consists of a mix of residential, commercial and institutional uses, along with parks and open space. Specifically, the project ~~would include~~ proposes commercial uses comprised of 61,500 square feet of ~~commercial uses, local serving small scale specialty retail,~~ 28,500 square feet of office uses; ~~and~~ a 50-room country inn; 903 traditional single-family detached homes; 375 multi-family homes (for-rent and for-sale at 20 or more dwelling units per acre); 468 age-restricted single family homes (senior community); necessary facilities and amenities to serve the senior population (including a senior community center, an assisted living and group residential facility); and civic facilities ~~that include a k-8 school site,~~ 23.8 include a Community Purpose Facility (CPF) area that would be comprised of a fire station and recreational facility not to exceed a total of 40,000 square feet for the combined CPF area, a K-8 school site, 23.6 acres of public and private neighborhood parks, a private recreational center, and other recreational amenities. An interim fire station with up to 3-staff could be located anywhere within the project site. However, this fire station would be built in place of two equivalent dwelling units and would not result in additional traffic to the overall project. Also planned within the project site are an on-site Recycling and Green Waste Drop-off Facility (RF), a potential Water Reclamation Facility (WRF) and other supporting infrastructure. Open space is proposed to retain some of the existing citrus and avocado groves, along with ~~103~~ 104.1 acres of sensitive biological/wetland habitat. The project is proposed to be developed in five (5) phases.

The project application includes a General Plan Amendment (GPA 12-001), a Specific Plan (SP12-001), a Master Tentative Map (TM 5571 RPL ~~14~~), an Implementing Tentative Map for Phase 1 (TM 5572 RPL ~~14~~); and a Major Use Permit (MUP 12-005) for the Water Reclamation Facility. The project would be implemented in five phases. Additional discretionary permits will be needed to implement ~~latter~~ later phases, as identified in the Specific Plan.

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Lilac Hills Ranch Traffic Impact Study

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Figure 1-2  
Project Study Area

Figure 1-3 displays the proposed site plan. Detailed land use and trip generation information are described in Chapter 4.

### **Proposed Project Design Exceptions**

Ten (10) design exceptions are proposed (final recommendations of the requests are pending) as part of this project and displayed in **Figures 1-4A and 1-4B**. For purpose of explanation and ease of reading, the following summaries describe the design exception requests and the resulting effects on roadway capacity:

#### **1. West Lilac Road, from Old Highway 395 to the I-15 bridge**

- a. Request to reduce the parkway width (the walkable portion of the right-of-way) from 12 feet to 2 feet on the north side, and from 12 feet to 6 feet on the south side.

- i. A "Parkway" is defined as "the distance measured from the curb face to the property line of a road right-of-way." The actual drivable portion of the road is called the "Pavement Width," which is further defined as "the specified width of pavement of the roadbed and is measured from curb face to curb face. In the absence of curbs, the pavement width is measured from the edges of the roadbed." (County of San Diego Department of Public Works "Public Road Standards," March 12, 2012)

- b. Reduce the north side shoulder from 8 feet to 6 feet.

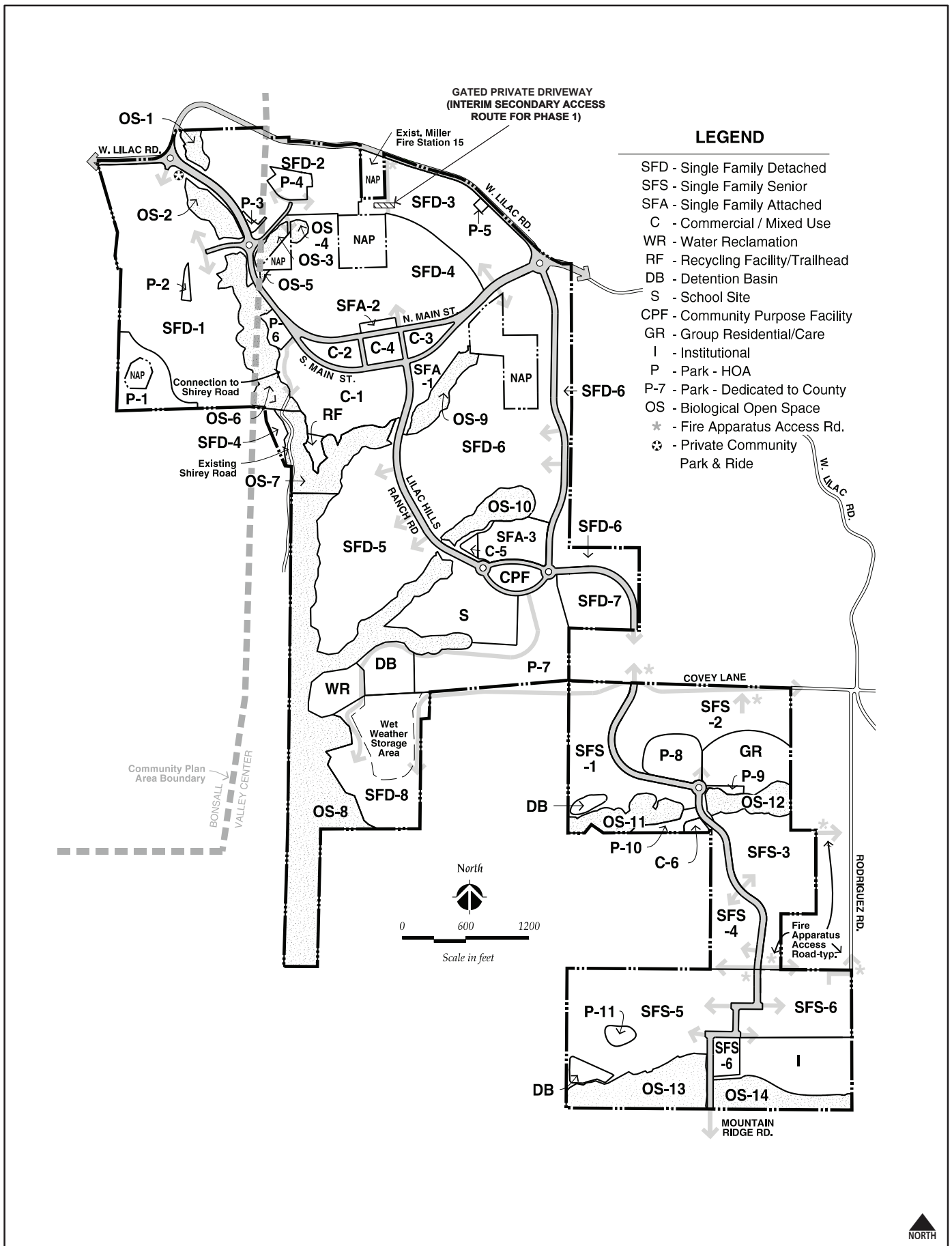
The reduction in parkway width will not affect vehicular travel speed because the travel lanes will be built to the full 12-foot standard. The reduced shoulder width from 8 feet to 6 feet will still allow full size vehicles to pull off to the side of the road on those rare occasions when that is necessary. Therefore, the proposed design exception will not affect roadway capacity and a capacity reduction was not applied.

#### **2. West Lilac Road, over the I-15 bridge**

- a. Reduce the shoulder from 8 feet to 6 feet along the north and from 8 feet to 4 feet along the south.
- b. Reduce the parkway from 12 feet to 0 feet along the north and from 12 feet to 6 feet along the south.

The reduced shoulder widths from 8 feet to 6 feet and 4 feet with full 12-foot travel lanes will still allow vehicles to pull off to the side of the road on those rare occasions when that is necessary. Parkway width is not used by drivers and therefore no negative impact to capacity would occur by reducing the width. Therefore, the proposed design exception will not affect roadway capacity and a capacity reduction was not applied.

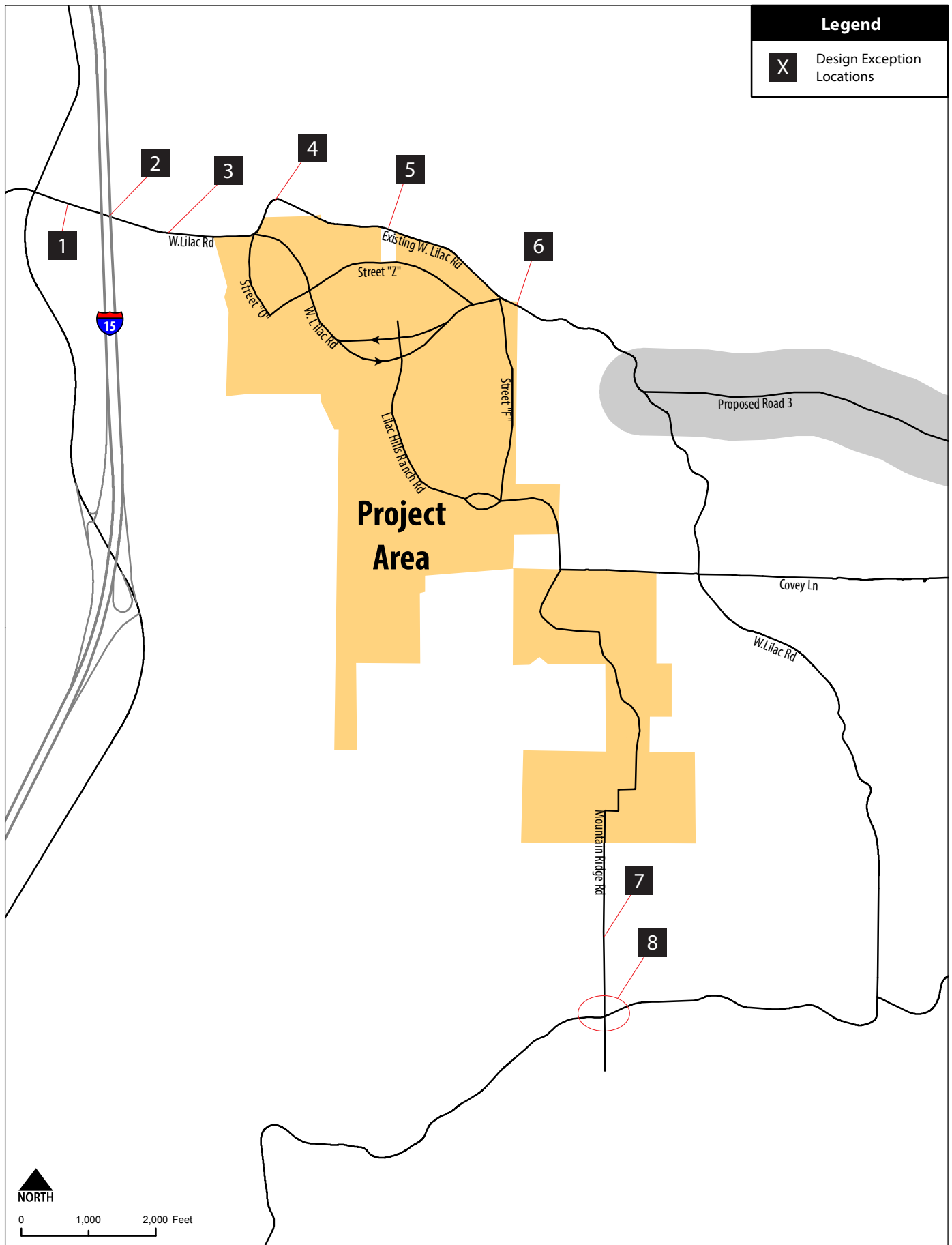
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Lilac Hills Ranch Traffic Impact Study

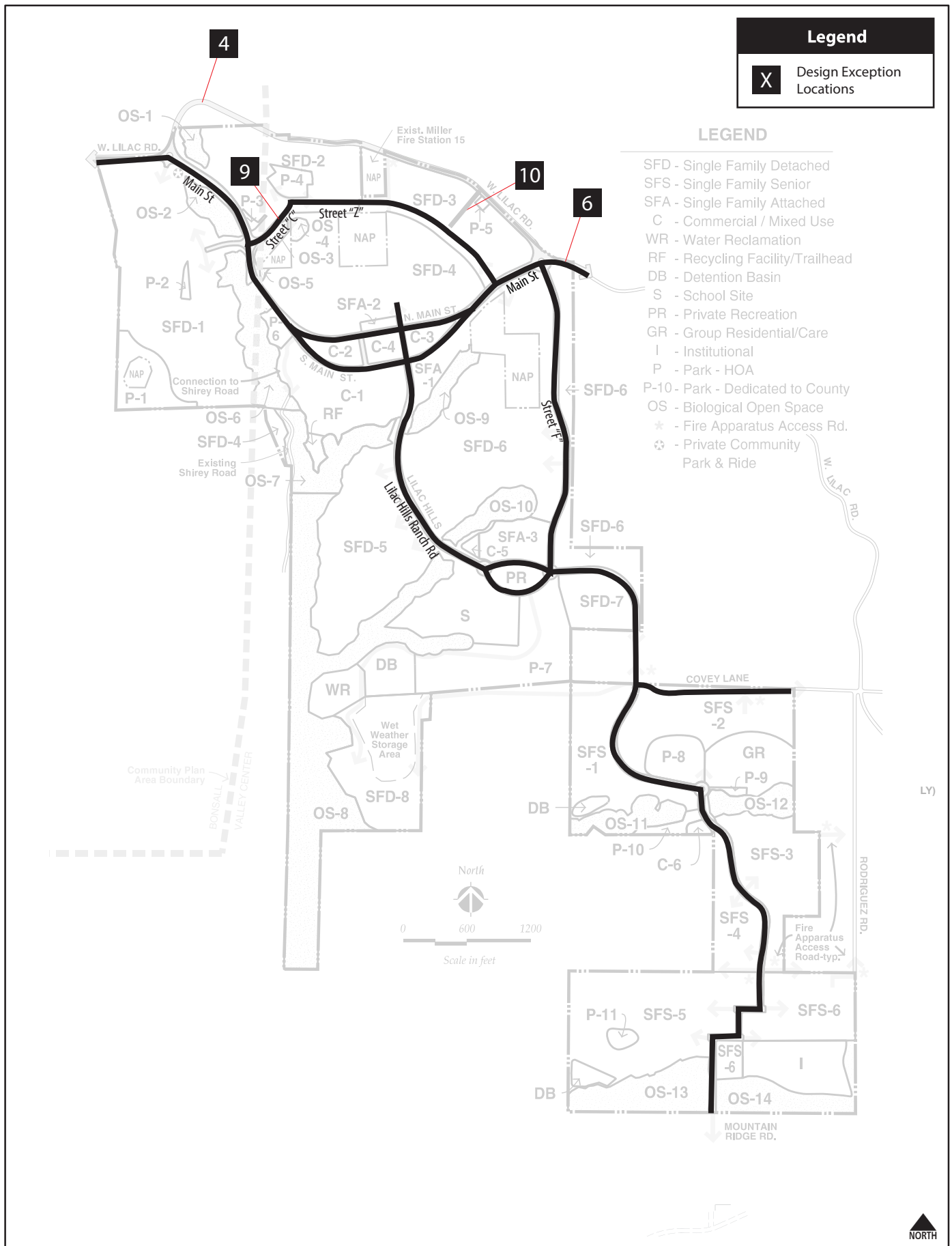
Figure 1-3  
Project Site Plan





Lilac Hills Ranch Traffic Impact Study

Figure 1-4A  
Design Exceptions (1-8)



Lilac Hills Ranch Traffic Impact Study

Figure 1-4B  
 Design Exceptions (9 and 10)

### 3. West Lilac Road, from the I-15 bridge to project boundary

- a. Reduce the shoulder width from 8 feet to 6 feet.
- b. Reduce parkway width from 12 feet to 2 feet on the north side and from 12 feet to 6 feet on the south side.

The reduction in parkway width would not affect vehicular travel and the shoulder width reduction from 8 feet to 6 feet occurs outside of the standard 12-foot vehicle travel lanes; only affecting the shoulders. Therefore it will not change the speed and capacity of this road as it would still provide two full 12-foot travel lanes and two 6-foot shoulders that are still wide enough for vehicles to pull off the road on those rare occasions when that is necessary. **Therefore, the proposed design exception will not affect roadway capacity and a capacity reduction was not applied.**

### 4. West Lilac Road, from the westerly roundabout to the northern project boundary

- c. Reduce the design speed along West Lilac Road for 225 feet from 40 mph to 25 mph as the road enters into the proposed roundabout.
- i. The Transportation Research Board (TRB) in cooperation with US department of Transportation and Federal Highway Administration (FHWA) published the National Cooperative Highway Research Program (NCHRP) Report 672 - *Roundabouts: An Informational Guide (2<sup>nd</sup> Edition)*. The guide states that the operating speed of a roundabout is widely recognized as one of its most important attributes in terms of safety, and speed management is often a combination of managing speeds at the roundabout itself and managing speeds on the approaching roadways. It recommends that the maximum entering design speeds based on a theoretical fastest path should be 20 to 25 mph (32 to 40 km/h) at single-lane roundabouts. Hence, the reduction in design speed would improve safety in and around the westerly roundabout (Street "O"/W. Lilac Road/Main Street). In addition, it has been well documented by the La Jolla Bird Rock roundabouts and other national-level research that 2 lanes of travel (one in each direction) with roundabouts can carry up to 25,000 cars per day, which well exceeds the capacity threshold for a 2.2C facility. Finally, roundabout experts, Reid Middleton, provided a peer review (included as **Appendix A**) on the design and analysis of the proposed roundabouts. Based on their analysis, both roundabouts along W. Lilac Road would operate at LOS A with low volume-to-capacity ratios. **Therefore, the proposed design exception will not affect roadway capacity and a capacity reduction was not applied.**

### 5. West Lilac Road, along the northerly project boundary

- d. Allow the construction of a half-width road improvement.

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e. Allow the northerly half to remain in its existing condition, which deviates from the current standards:

- i. The shoulder width can remain at 0 feet (from the required 2 feet).
- ii. The parkway width can remain at 0 feet (from the required 12 feet).

The southerly half of the roadway will be built to a full 2.2F standard, combined with two standard 12-foot travel lanes. The 2-foot shoulder on the north side and the 12-foot parkway on the north side would require offsite acquisition. However, this exception would not affect capacity due to the short 2,600-foot distance. **Therefore, the proposed design exception will not affect roadway capacity and a capacity reduction was not applied.**

f. Reduce the horizontal design from a minimum 400-foot tangent length (between curves) to an 80-foot tangent length.

- i. A tangent length is the straight segment of road that is found in between two curved pieces of road. The current minimum straight segment of road of existing West Lilac Road is 80 feet rather than 400 feet. This section is controlled by two roundabouts and therefore, the shorter tangent length does not negatively impact capacity. In addition, it has been well documented by the La Jolla Bird Rock roundabouts and other national-level research that 2 lanes of travel with roundabouts can carry up to 25,000 cars per day, which well exceeds the capacity threshold for a 2.2F or 2.2C facility. In addition, roundabout experts, Reid Middleton, provided a peer review (included as Appendix A) on the design and analysis of the proposed roundabouts. Based on their analysis, both roundabouts along W. Lilac Road would operate at LOS A with low volume-to-capacity ratios. **Therefore, the proposed design exception will not affect roadway capacity and a capacity reduction was not applied.**

#### **6. West Lilac Road, east of easterly roundabout**

- g. Add a 4-foot raised median, to allow for a transition from existing West Lilac Road into the proposed roundabout.
- h. Increase the shoulder from 2 feet to 5 feet on the south side to allow for a 5-foot bike lane.
- i. Reduced parkway from 12 feet to 2 feet on the north side.
- j. Reduce the shoulder from 2 feet to 0 feet on the north side.

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- i. The modification only occurs for 240 feet at the project's easterly entrance at West Lilac Road where a roundabout is proposed. Since the modification only occurs for a short distance of 240 feet at the roundabout, no material effect to the carrying capacity of West Lilac Road would occur and a capacity reduction was not applied.

## **7. Mountain Ridge Road**

- k. Design speed reduction from 30 mph to 15 mph.

Mountain Ridge Road is a narrow 20 feet wide road which currently serves a small amount of homes and is proposed to provide access to a small portion of the project site (only the senior residential units in SFS-5 and SFS-6, the park and the church). Since the project will add traffic to Mountain Ridge Road, this road was assessed using two methodologies outlined in the County of San Diego Guidelines for Determining Significance, Traffic and Transportation, June 30, 2009 and modified August 24, 2011 (County Guidelines). The first was from a capacity standpoint as outlined at the end of Section 4.1 (Non Circulation Element Residential Streets). The second was from a hazards standpoint as outlined in Section 4.6 of the County Guidelines.

### **i. CARRYING CAPACITY**

Mountain Ridge Road is an unclassified roadway. Per Section 4.1 of the County Guidelines, Level of Service is not applied to residential streets such as Mountain Ridge Road. Therefore, per County requirements, the post-project volumes on Mountain Ridge Road were compared to the design capacities that are outlined in the County's Private Road Standards.

The current volume on Mountain Ridge Road is 160 ADT. The project will add approximately 840 ADT to Mountain Ridge Road for a total of 1,190 ADT (2030 plus Project, see Table 7.2 from the traffic study). As recommended in Section 4.1 of the County Guidelines, the County private road standard table (Page 8) was used to determine whether adequate capacity exists on Mountain Ridge Road to serve 1,190 ADT. Table on the following page shows a comparison between the County private road parameters that would serve 751-2500 ADT and the proposed Mountain Ridge Road parameters. As can be seen, Mountain Ridge Road will meet all criteria other than vertical design speed once the proposed improvements are implemented. Since the forecasted ADT is only over the 751 minimum threshold by 440 daily trips and Mountain Ridge Road will meet 7 of the 8 criteria, it is concluded that Mountain Ridge Road can accommodate 1,190 ADT. It should also be noted that since 1,190 ADT correlates to about 119 peak hour trips, Mountain Ridge Road will only

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need to accommodate about 2 cars per minute during peak periods, which is a very small amount.

| <u>ADT</u>                           | <u>100 or less</u> | <u>101-750</u> | <u>751-2500</u> | <u>Existing</u>   | <u>Proposed</u>   |
|--------------------------------------|--------------------|----------------|-----------------|-------------------|-------------------|
| <u>Graded Width</u>                  | <u>28ft</u>        | <u>28ft</u>    | <u>28ft</u>     | <u>28ft</u>       | <u>28ft</u>       |
| <u>Improvement Width</u>             | <u>24ft</u>        | <u>24ft</u>    | <u>24ft</u>     | <u>20ft</u>       | <u>24ft</u>       |
| <u>Horizontal Radius</u>             | <u>100ft</u>       | <u>100ft</u>   | <u>100ft</u>    | <u>N/A</u>        | <u>N/A</u>        |
| <u>Vertical Design Speed</u>         | <u>20MPH</u>       | <u>25MPH</u>   | <u>30MPH</u>    | <u>~5MPH(min)</u> | <u>15MPH</u>      |
| <u>Maximum Grade</u>                 | <u>20%</u>         | <u>20%</u>     | <u>20%</u>      | <u>21.00%</u>     | <u>16.60%</u>     |
| <u>Minimum Length-Vertical Curve</u> | <u>40'</u>         | <u>40'</u>     | <u>40'</u>      | <u>80'</u>        | <u>100'</u>       |
| <u>Maximum Angle of Departure</u>    | <u>7%</u>          | <u>7%</u>      | <u>7%</u>       | <u>negligible</u> | <u>negligible</u> |
| <u>Minimum Vertical Clearance</u>    | <u>14.5ft</u>      | <u>14.5ft</u>  | <u>14.5ft</u>   | <u>No limit</u>   | <u>No limit</u>   |

Source: San Diego County Standards for Private Roads, Landmark Consulting

## ii. HAZARDS DUE TO AN EXISTING TRANSPORTATION DESIGN FEATURE

Mountain Ridge Road is a residential serving road with several vertical curves and design speed as low as approximately 5 mph along certain sections. Since the road is not currently built to County private road standards, an assessment according to Section 4.6 of the County Guidelines was completed considering the following factors:

- 1) Design features/physical configurations of access roads may adversely affect the safe movement of all users along the roadway.
- 2) The percentage or magnitude of increased traffic on the road due to the proposed project may affect the safety of the roadway.
- 3) The physical conditions of the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers, may result in conflicts with other users or stationary object.
- 4) Conformance of existing and proposed roads to the requirements of the private or public road standards, as applicable.

The following is a discussion of each of these four individual factors:

- 1) There are several vertical curves along Mountain Ridge Road, some of which have grades exceeding 20%. The design speed along certain sections is only about 5 mph as constructed.

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Therefore, due to the presence of these curves and the design speed below County Standards, it is concluded that the current road may adversely affect the movement of users.

- 2) The project is forecasted to increase the ADT on Mountain Ridge Road from the current 160 ADT to 1,190 ADT. While this is a high percentage increase, an ADT of 1,190 ADT is only about 2 cars per minute during peak periods, and this amount would not significantly contribute to any safety issues along the roadway.
- 3) The presence of several vertical curves was described in Item 1) above. There are no horizontal curves on the roadway, nor are there any slopes, walls, or barriers that could cause conflicts. Therefore, no issues are expected due to this item.
- 4) Table on the previous page shows County private road standards for various roadway types depending on the level of ADT served by the roadway. Two columns were added to the Table. The first is an indication of each of the measurable criteria for Mountain Ridge Road. As can be seen, Mountain Ridge Road meets the standards of a 751-2,500 ADT road in all cases except for the vertical design speed.

Since Mountain Ridge Road currently has design features, namely several vertical curves, that may affect the movement of users (#1) and does not fully conform to County private road standards (#4), it is concluded that a potentially significant impact could occur in terms of roadway hazards. The improvements being made to the existing Mountain Ridge Road are to widen the paved width from 20 feet to 24 feet, as well as lengthening one of the vertical curves to increase the minimum design speed from 5mph to 15 mph.

#### **8. Mountain Ridge Road and Circle R Drive intersection**

- a. Reduce the standard intersection angle from 90 degrees to the pre-existing 72 degrees by eliminating the required taper on the east side and allowing right hand turning movements from westbound Circle R Drive to northbound Mountain Ridge Road across the southbound travel lanes (See **Appendix B**).
- iii. The County Public Road Standards state that the angle between centerlines and intersections is to be at nearly a right angle and in no case less than 70 degrees or greater than 110 degrees. [Angles between 70-80 (or 100-110) degrees will require a taper on the acute angle for right turn movement]. This modification only deletes the need for a taper at the acute intersection angle on Circle R Drive at Mountain Ridge

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Road for the westbound right turn movement. **Not providing this taper would not have a material effect on the carrying capacity of Circle R Drive and a capacity reduction was not applied.**

**9. Street "C"**

a. Design speed reduction from 30 mph to 20 mph for 500 feet

i. Modification 9 involves an internal street which was not analyzed in the traffic study.

**10. Street "E"**

a. Design speed reduction from 25 mph to 20 mph for 300 feet

i. Modification 10 involves an internal street which was not analyzed in the traffic study.

### **1.3 Study Scenarios**

A total of nine (9) scenarios are analyzed in this study, including:

1. Existing Conditions – establishes the existing baseline of traffic operations within the study area.
2. Existing Plus Project (Phase A) Conditions – represents the existing transportation network with the addition of traffic from Phase 1 of the proposed project.
3. Existing Plus Project (Phase B) Conditions – represents the existing transportation network with the addition of traffic from Phases 1 and 4 of the proposed project.
4. Existing Plus Project (Phase C) Conditions – represents the existing transportation network with the addition of traffic from Phases 1, 4 and 2 of the proposed project.
5. Existing Plus Project (Phase D) Conditions – represents the existing transportation network with the addition of traffic from Phases 1, 4, 2 and 5 of the proposed project.
6. Existing Plus Project (Phase E, project buildout) Conditions – represents the existing transportation network with the addition of traffic from buildout of the proposed project.
7. Cumulative Traffic Conditions – represents cumulative traffic conditions, including existing baseline traffic, traffic from anticipated land development projects, and traffic from ~~the~~ buildout of the proposed project.
8. Horizon Year Plan-to-Plan (Proposed vs. Adopted) Analysis – provides a plan-to-plan analysis assessing potential impacts to the adopted County's General Plan Mobility Element

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roadways within the project study area, resulting from proposed changes in development land use, density, and/or intensity associated with the proposed project.

9. Horizon Year Plan-to-Plan (Proposed vs. ~~Reasonably Expected~~ “Without Road 3”) Analysis – In October, 2011, after adoption of the County General Plan Update, the San Diego Association of Governments (SANDAG) acquired the 902-acre Rancho Lilac property through its Environmental Mitigation Program (EMP). SANDAG recorded a conservation easement over the entire 902 acres and designated this land as part of a 1,600 acre open space preserve in the State Route 76 corridor in North San Diego County. This acquisition ~~would~~ may prevent implementation of the County’s planned Road 3. For this reason, an additional plan-to-plan analysis was performed as part of this TIS in order to assess the potential project traffic impacts to the County’s mobility network without Road 3.

## 1.4 Report Organization

Following the Introduction chapter, this report is organized into the following sections:

- 2.0 Analysis Methodology – This chapter describes the methodologies and standards utilized to analyze roadway, intersection, and state highway/freeway traffic conditions. This chapter also documents the traffic forecast modeling process and assumptions for this project.
- 3.0 Existing Conditions – This chapter describes the existing traffic network within the study area and provides analysis results for existing traffic conditions.
- 4.0 Project Description – This chapter describes the proposed project including project traffic generation, trip distribution patterns, and roadway assignments. The project trip distribution was developed via a computer generated “Select Zone” analysis utilizing the Series 12 SANDAG transportation model.
- 5.0 Existing Plus Project Conditions – This chapter describes the existing traffic network with additional traffic generated by the various traffic analysis phases of the proposed project. Mitigation measures, if necessary, for project-related impacts are also identified.
- 6.0 Cumulative Traffic Conditions – This chapter describes cumulative land development projects anticipated to generate additional traffic within the study area. Analysis results are provided for the existing plus cumulative projects plus proposed project condition, along with recommended mitigation measures (if necessary).
- 7.0 Site Access and On-Site Circulation – This chapter presents an assessment of transportation facilities providing access to the proposed project. It also recommends functional classifications for all roadways internal to the project.

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- 8.0 Hazards to Pedestrians and Bicyclists – This chapter describes existing and proposed pedestrian and bicycle facilities in the vicinity of the project site, as well as potential impacts to cyclists and pedestrians.
- 9.0 General Plan Consistency Analyses – This chapter provides two plan-to-plan analyses assessing potential traffic impacts to the County’s General Plan Mobility Element roadways due to changes in the proposed project’s land use, density, and/or intensity. The two plan-to-plan analyses include comparisons of, first, the proposed project and the currently adopted GP (with Road 3); and second, the proposed project and the reasonably expected “Without Road 3” network ~~(without Road 3)~~. The purpose of these analyses is to determine whether the land use changes proposed by this project can be supported by the County’s Mobility Element. If deficiencies are identified, appropriated mitigation measures are recommended.
- 10.0 Findings and Recommendations – This chapter summarizes overall study findings and identifies recommended project-related mitigation measures.
- 11.0 Construction Traffic – This chapter identifies potential traffic impacts associated with the Lilac Hills Ranch project construction traffic.
- 12.0 No-School Alternative – This chapter discusses the “No School” on-site alternative and how this alternative would affect the study area network and operations.
- 13.0 Weekend Church Traffic – This chapter documents potential traffic impacts associated with weekend church traffic, particularly on Sundays.
- 14.0 North County Specific Residential Trip Generation and Effects – This chapter summarizes the North County specific residential trip generation rates survey and discusses how these rates would affect traffic impact identifications.
- 15.0 Transportation Demand Management – This chapter discusses the potential Transportation Demand Management (TDM) program developed in an effort to reduce vehicle trips in favor of alternative modes of transportation.

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## 2.0 Analysis Methodology

The traffic analyses prepared for this study were performed in accordance with County of San Diego traffic impact guidelines, the enhanced California Environmental Quality Act (CEQA) project review process, and SANTEC/ITE Guidelines for TIS in the San Diego region.

The SANTEC/ITE guidelines require delineation of a project study area based on the following criteria:

- All local roadway segments (including all State surface routes), intersections, and mainline freeway locations where the proposed project will add 50 or more peak-hour trips in either direction to the existing roadway traffic.
- All freeway entrance and exit ramps where the proposed project will add a significant number of peak-hour trips to cause any traffic queues to exceed ramp storage capacities.

In addition to the SANTEC/ITE requirements, the project study area also includes all County Mobility Element roadways and intersections where 25 or more peak hour project trips are projected to travel as per County's requirements.

### 2.1 Level of Service Definition

Level of service (LOS) is a quantitative stratification of performance measures (speed, travel time, comfort, etc.) that represent quality of service. Quality of service describes how well a transportation facility or service operates from a traveler's perspective. A vehicle level of service definition generally describes these conditions in terms of such factors as speed, travel time, freedom to maneuver, comfort, convenience, and safety. LOS A represents the best operating conditions from a driver's perspective, while LOS F represents the worst.

**Table 2.1** describes generalized definitions of roadway systems operating at LOS A through F.

### 2.2 Roadway Segment Level of Service Standards and Thresholds

Roadway segment level of service standards and thresholds provide the basis for analysis of arterial roadway segment performance. The analysis of roadway segment level of service is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. **Table 2.2** presents the roadway segment capacity and level of service standards utilized to analyze roadway segments within the unincorporated County of San Diego.

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**TABLE 2.1  
LEVEL OF SERVICE DEFINITIONS**

| LOS | Characteristics  |
|-----|--|
| A   | Primarily free-flow operation. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Controlled delay at the boundary intersections is minimal. The travel speed exceeds 85% of the base free-flow speed.  |
| B   | Reasonably unimpeded operation. The ability to maneuver within the traffic stream is only slightly restricted and control delay at the boundary intersections is not significant. The travel speed is between 67% and 85% of the base free-flow speed.   |
| C   | Stable operation. The ability to maneuver and change lanes at mid-segment locations may be more restricted than at LOS B. Longer queues at the boundary intersections may contribute to lower travel speeds. The travel speed is between 50% and 67% of the base free-flow speed.  |
| D   | Less stable condition in which small increases in flow may cause substantial increases in delay and decreases in travel speed. This operation may be due to adverse signal progression, high volume, or inappropriate signal timing at the boundary intersections. The travel speed is between 40% and 50% of the base free-flow speed.  |
| E   | Unstable operation and significant delay. Such operations may be due to some combination of adverse signal progression, high volume, and inappropriate signal timing at the boundary intersections. The travel speed is between 30% and 40% of the base free-flow speed.   |
| F   | Flow at extremely low speed. Congestion is likely occurring at the boundary intersections, as indicated by high delay and extensive queuing. The travel speed is 30% or less of the base free-flow speed. Also, LOS F is assigned to the subject direction of travel if the through movement at one or more boundary intersections have a volume-to-capacity ratio greater than 1.0. |

Source: Highway Capacity Manual 2010, Chapter 16.

**TABLE 2.2  
COUNTY OF SAN DIEGO  
ROADWAY SEGMENT DAILY CAPACITY AND LEVEL OF SERVICE STANDARDS**

| No.  | Travel Lanes | Design Speed | Road Classification                         | Level of Service (in ADT) |        |        |        |         |
|------|--------------|--------------|---|---------------------------|--------|--------|--------|---------|
|      |              |              |   | A                         | B      | C      | D      | E       |
| 6.1  | 6            | 65 mph       | Expressway                                  | 36,000                    | 54,000 | 70,000 | 86,000 | 108,000 |
| 6.2  | 6            | 65 mph       | Prime Arterial                              | 22,200                    | 37,000 | 44,600 | 50,000 | 57,000  |
| 4.1A | 4            | 55 mph       | Major Road with Raised Median               | 14,800                    | 24,700 | 29,600 | 33,400 | 37,000  |
| 4.1B |              |              | Major Road with Intermittent Turn Lanes     | 13,700                    | 22,800 | 27,400 | 30,800 | 34,200  |
| 4.2A | 4            | 40 mph       | Boulevard with Raised Median                | 18,000                    | 21,000 | 24,000 | 27,000 | 30,000  |
| 4.2B |              |              | Boulevard with Intermittent Turn Lane       | 16,800                    | 19,600 | 22,500 | 25,000 | 28,000  |
| 2.1A | 2            | 45 mph       | Community Collector with Raised Median      | 10,000                    | 11,700 | 13,400 | 15,000 | 19,000  |
| 2.1B |              |              | Community Collector w/ Continuous Turn Lane | 3,000                     | 6,000  | 9,500  | 13,500 | 19,000  |

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**TABLE 2.2**  
**COUNTY OF SAN DIEGO**  
**ROADWAY SEGMENT DAILY CAPACITY AND LEVEL OF SERVICE STANDARDS**

| No.  | Travel Lanes | Design Speed | Road Classification                           | Level of Service (in ADT) |       |       |        |        |
|------|--------------|--------------|---|---------------------------|-------|-------|--------|--------|
|      |              |              |   | A                         | B     | C     | D      | E      |
| 2.1C | 2            | 45 mph       | Community Collector w/ Intermittent Turn Lane | 3,000                     | 6,000 | 9,500 | 13,500 | 19,000 |
| 2.1D |              |              | Community Collector with Improvement Options  | 3,000                     | 6,000 | 9,500 | 13,500 | 19,000 |
| 2.1E |              |              | Community Collector                           | 1,900                     | 4,100 | 7,100 | 10,900 | 16,200 |
| 2.2A | 2            | 40 mph       | Light Collector with Raised Median            | 3,000                     | 6,000 | 9,500 | 13,500 | 19,000 |
| 2.2B |              |              | Light Collector with Continuous Turn Lane     | 3,000                     | 6,000 | 9,500 | 13,500 | 19,000 |
| 2.2C |              |              | Light Collector with Intermittent Turn Lanes  | 3,000                     | 6,000 | 9,500 | 13,500 | 19,000 |
| 2.2D |              |              | Light Collector with Improvement Options      | 3,000                     | 6,000 | 9,500 | 13,500 | 19,000 |
| 2.2E |              |              | Light Collector                               | 1,900                     | 4,100 | 7,100 | 10,900 | 16,200 |
| 2.2F |              |              | Light Collector with Reduced Shoulder         | 5,800                     | 6,800 | 7,800 | 8,700  | 9,700  |
| 2.3A | 2            | 35 mph       | Minor Collector with Raised Median            | 3,000                     | 6,000 | 7,000 | 8,000  | 9,000  |
| 2.3B |              |              | Minor Collector with Intermittent Turn Lane   | 3,000                     | 6,000 | 7,000 | 8,000  | 9,000  |
| 2.3C |              |              | Minor Collector                               | 1,900                     | 4,100 | 6,000 | 7,000  | 8,000  |

Source: County of San Diego Public Road Standards; March 2012

These standards are generally used as long-range planning guidelines to determine the functional classification of roadways. The actual capacity of a roadway facility varies according to its physical attributes. Typically, the performance and level of service of a roadway segment is heavily influenced by the ability of the arterial intersections to accommodate peak hour volumes.

For the purposes of this traffic analysis, LOS D is considered acceptable for Mobility Element roadway segments within the unincorporated County of San Diego.

## 2.3 Peak Hour Intersection Level of Service Standards and Thresholds

This section presents the methodologies used to perform peak hour intersection capacity analysis, including both signalized and unsignalized intersections.

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### 2.3.1 Signalized Intersection Analysis

The signalized intersection analysis utilized in this study conforms to the operational analysis methodology outlined in Chapter 18 of the *HCM 2010*. The *HCM 2010* methodology defines intersection level of service as a function of intersection control delay in terms of seconds per vehicle (sec/veh).

The *HCM 2010* methodology sets 1,900 passenger-cars per hour per lane (pcphpl) as the ideal saturation flow rate at signalized intersections based upon the minimum headway that can be sustained between departing vehicles at a signalized intersection. The service saturation flow rate, which reflects the saturation flow rate specific to the study facility, is determined by adjusting the ideal saturation flow rate for lane width, on-street parking, bus stops, pedestrian volume, traffic composition (or percentage of heavy vehicles), and shared lane movements (e.g. through and right-turn movements sharing the same lane). The level of service criteria used for this technique are described in **Table 2.3**. The computerized analysis of intersection operations was performed utilizing the *Synchro 8.0 Build 802* traffic analysis software (by Trafficware).

TABLE 2.3  
SIGNALIZED INTERSECTION LEVEL OF SERVICE  
HIGHWAY CAPACITY MANUAL OPERATIONAL ANALYSIS METHOD

| Average Stopped Delay Per Vehicle (seconds) | Level of Service (LOS) Characteristics  |
|---|---|
| ≤10.0                                       | <i>LOS A</i> occurs when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping. |
| 10.1 – 20.0                                 | <i>LOS B</i> occurs when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with <i>LOS A</i> .   |
| 20.1 – 35.0                                 | <i>LOS C</i> occurs when progression is favorable or the cycle length is moderate. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.   |
| 35.1 – 55.0                                 | <i>LOS D</i> occurs when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.   |
| 55.1 – 80.0                                 | <i>LOS E</i> occurs when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.  |
| >80.0                                       | <i>LOS F</i> occurs when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.  |

Source: 2010 Highway Capacity Manual, Chapter 18.

### 2.3.2 Unsignalized Intersection Analysis

Unsignalized intersections, including two-way and all-way stop controlled intersections, were analyzed using the Chapters 19 and 20 methodology of the *HCM 2010*. The level of service for a two-way stop controlled (TWSC) intersection is determined by the computed or measured control delay at each minor-street movement. *LOS F* would occur when the volume-to-capacity

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ratio exceeds 1.0, regardless of the control delay. **Table 2.4** summarizes the level of service criteria for unsignalized intersections.

**TABLE 2.4**  
**LEVEL OF SERVICE CRITERIA FOR**  
**STOP CONTROLLED UNSIGNALIZED INTERSECTIONS**

| Average Control Delay (sec/veh) | Level of Service (LOS) |
|---------------------------------|------------------------|
| ≤10.0                           | A                      |
| 10.1 – 15.0                     | B                      |
| 15.1 – 25.0                     | C                      |
| 25.1 – 35.0                     | D                      |
| 35.1 – 50.0                     | E                      |
| >50.0                           | F                      |

Source: 2010 Highway Capacity Manual, Chapters 19 & 20.

County of San Diego considers LOS D during the AM and PM peak hours to be the minimum standard for intersection level of service.

## 2.4 Two-Lane Highway Level of Service Standards and Thresholds

The existing Old Highway 395 is considered a Mobility Element roadway, but operates as a two-lane highway. As directed in Section 4.3 of the County of San Diego Guidelines for Determining Significance, Old Highway 395 is analyzed as a two-lane highway under Existing, Existing Plus Project, and Existing Plus Cumulative Projects Plus Project conditions in this report.

Under “Horizon Year” analyses, Old Highway 395 is treated as a Mobility Element road since the majority of this facility, with exception of the segment between SR-76 and W. Lilac Road, is classified as either a 4-lane Major or 4-lane Boulevard in the County’s General Plan.

**Table 2.5** displays the two-lane highway ADT thresholds for LOS E and LOS F, when signalized intersection spacing is greater than one mile.

**TABLE 2.5**  
**COUNTY OF SAN DIEGO**  
**TWO-LANE HIGHWAY LEVEL OF SERVICE THRESHOLDS**  
**WITH SIGNALIZED INTERSECTION SPACING OVER ONE MILE**

| LOS   | LOS Criteria |
|-------|--------------|
| LOS E | > 16,200 ADT |
| LOS F | > 22,900 ADT |

Source: County of San Diego

Note:  
Where detailed data are 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.

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For two-lane highways where signalized intersection spacing is less than one mile, the level of service is determined by the intersections along the subject highway.

## 2.5 Freeway/State Highway Level of Service Standards and Thresholds

Freeway level of service and performance analysis is based upon procedures developed by Caltrans District 11. The procedure for calculating freeway level of service involves estimating a peak hour volume to capacity (V/C) ratio. Peak hour volumes are estimated from the application of design hour ("K"), directional ("D") and truck ("T") factors to Average Daily Traffic (ADT) volumes. The base capacity is assumed to be 2,350 pc/h/ln.

The resulting V/C is then compared to acceptable ranges of V/C values corresponding to the various levels of service for each facility classification, as shown in **Table 2.6**. The corresponding level of service represents an approximation of existing or anticipated future freeway operating conditions in the peak direction of travel during the peak hour.

TABLE 2.6  
FREEWAY AND STATE HIGHWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

| LOS | V/C       | Congestion/Delay       | Traffic Description  |
|-----|-----------|------------------------|--|
| "A" | <0.41     | None                   | Free flow.   |
| "B" | 0.42-0.62 | None                   | Free to stable flow, light to moderate volumes.  |
| "C" | 0.63-0.79 | None to minimal        | Stable flow, moderate volumes, freedom to maneuver noticeably restricted.  |
| "D" | 0.80-0.92 | Minimal to substantial | Approaches unstable flow, heavy volumes, very limited freedom to maneuver.   |
| "E" | 0.93-1.00 | Significant            | Extremely unstable flow, maneuverability and psychological comfort extremely poor.   |
| "F" | >1.00     | Considerable           | Forced or breakdown flow. Delay measured in average travel speed (MPH). Signalized segments experience delays >60.0 seconds/vehicle. |

Source: SANTEC/ITE Guidelines for TIS in the San Diego Region

LOS D or better is used in this study as the threshold for acceptable freeway operations based upon Caltrans and the SANDAG Regional Growth Management Strategy (RGMS) requirements.

## 2.6 Ramp Intersection Capacity Analysis

Consistent with Caltrans' requirements, all signalized intersections at freeway ramps were analyzed using Intersecting Lane Volume (ILV) procedures as described in Topic 406 of the Caltrans *Highway Design Manual* (HDM). This methodology is based upon an assessment of individual intersections as isolated units, without consideration of the effects of adjacent intersections. For this reason, the ILV analysis is utilized as an additional validation of signalized ramp intersection operations derived from the *HCM 2010* methodology. **Table 2.7** provides values of ILV/hr associated with various traffic flow thresholds.

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**TABLE 2.7  
TRAFFIC FLOW CONDITIONS AT RAMP INTERSECTIONS  
AT VARIOUS LEVELS OF OPERATION**

| <i>ILV/hr</i>                     | Description   |
|-----------------------------------|---|
| <i>&lt;1200: (Under Capacity)</i> | Stable flow with slight, but acceptable delay. Occasional signal loading may develop. Free midblock operations.   |
| <i>1200-1500: (At Capacity)</i>   | Unstable flow with considerable delays possible. Some vehicles occasionally wait two or more cycles to pass through the intersection. Continuous backup occurs on some approaches.  |
| <i>&gt;1500: (Over Capacity)</i>  | Stop-and-go operation with severe delay and heavy congestion <sup>(1)</sup> . Traffic volume is limited by maximum discharge rates of each phase. Continuous backup in varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection. |

Source: Caltrans Highway Design Manual, Topic 406

Note:

(1) The amount of congestion depends on how much the ILV/hr value exceeds 1500. Observed flow rates will normally not exceed 1500 ILV/hr, and the excess will be delayed in a queue.

## 2.7 Ramp Metering Analysis

Ramp metering analysis should be conducted, based upon SANDAG's CMP guidelines, to calculate delays and queues at the study area freeway on-ramps. However, since no ramp meters exist within the project study area, ramp metering analysis is not required and therefore not included in this study.

## 2.8 Determination of Significant Impacts

This section outlines the thresholds for determination of significant project-related impacts to roadways and intersections in the County of San Diego.

### ***County of San Diego Traffic Impact Criteria***

#### **Mobility Element Roads**

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 road segment, unless specific facts show that there are other circumstances that mitigate or avoid such impacts:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Mobility Element Road or State Highway currently operating at LOS E or LOS F as identified in **Table 2.8**, or will cause a Mobility Element Road or State Highway to operate at LOS E or LOS F as a result of the proposed project, or
- The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity.

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**TABLE 2.8**  
**MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION ON ROAD SEGMENTS:**  
**ALLOWABLE INCREASES ON CONGESTED ROAD SEGMENTS**

| Level of Service | Two-Lane Road | Four-Lane Road | Six-Lane Road |
|------------------|---------------|----------------|---------------|
| LOS E            | 200 ADT       | 400 ADT        | 600 ADT       |
| LOS F            | 100 ADT       | 200 ADT        | 300 ADT       |

Source: County of San Diego

Notes:

1. 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 any trips must mitigate a share of the cumulative impacts.
2. 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.

**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 roadway segment:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion ~~on~~<sup>at</sup> a signalized intersection currently operating at LOS E or LOS F as identified in **Table 2.9**, or will cause a signalized intersection to operate at LOS E or LOS F.
- 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.

**TABLE 2.9**  
**MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION ON INTERSECTIONS:**  
**ALLOWABLE INCREASES ON CONGESTED INTERSECTIONS**

| Level of Service | Signalized   | Unsignalized                              |
|------------------|--|---|
| LOS E            | Delay of 2 seconds   | 20 peak hour trips on a critical movement |
| LOS F            | Delay of 1 second, or 5 peak hour trips on a critical movement | 5 peak hour trips on a critical movement  |

Source: County of San Diego

Notes:

1. A critical movement is one that is experiencing excessive queues.
2. By adding proposed project trips to all other trips from a list of projects, this same table is used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
3. 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.

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### **Unsignalized 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 road segment:

- The additional or redistributed ADT generated by the proposed project will add 20 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 20 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 5 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 5 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.

### **Two-Lane Highways when Signalized Intersection Spacing Over One Mile**

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 two-lane highway facility with signalized intersection spacing greater than one mile:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a two-lane highway segment currently operating at LOS E or LOS F, as identified in **Table 2.10**, or will cause a two-lane highway segment to operate at LOS E or LOS F as a result of the proposed project.

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**TABLE 2.10**  
**MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION:**  
**ALLOWABLE INCREASES ON TWO-LANE HIGHWAYS**  
**WITH SIGNALIZED INTERSECTION SPACING OVER ONE MILE**

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

Source: County of San Diego

Note:

Where detailed data are 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.

### **Two-Lane Highways when Signalized Intersection Spacing Under One Mile**

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 two-lane highway facility with signalized intersection spacing less than one mile:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a two-lane highway segment currently operating at LOS E or LOS F, as identified in **Table 2.11**, or will cause a two-lane highway segment to operate at LOS E or LOS F as a result of the proposed project.

**TABLE 2.11**  
**MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION:**  
**ALLOWABLE INCREASES ON TWO-LANE HIGHWAYS**  
**WITH SIGNALIZED INTERSECTION SPACING UNDER ONE MILE**

| LOS   | LOS Criteria  |
|-------|---|
| LOS E | Intersection delay of 2 seconds   |
| LOS F | Intersection delay of 1 second, or 5 peak hour trips on a critical movement |

Source: County of San Diego

Notes:

1. A critical movement is one that is experiencing excessive queues.
2. By adding proposed project trips to all other trips from a list of projects, this same table is used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
3. 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.

### **SANTEC/ITE Guidelines**

Facilities that belong to other jurisdictions or Caltrans, should comply with the traffic study requirements identified in the SANTEC/ITE Guidelines, as summarized in **Table 2.12**.

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**TABLE 2.12**  
**SANTEC/ITE MEASURE OF SIGNIFICANT PROJECT TRAFFIC IMPACTS**

| Level of Service<br>(LOS) with Project           | Allowable Change Due to Impact |                |                  |                |               |               |
|--|--------------------------------|----------------|------------------|----------------|---------------|---------------|
|  | Freeways                       |                | Roadway Segments |                | Intersections | Ramp Metering |
|  | V/C                            | Speed<br>(mph) | V/C              | Speed<br>(mph) | Delay (sec)   | Delay (min.)  |
| E & F (or ramp<br>meter delays<br>above 15 min.) | 0.01                           | 1              | 0.02             | 1              | 2             | 2             |

Source: SANTEC/ITE Guidelines for TIS in the San Diego Region

The project study area included two (2) Caltrans facilities: Interstate 15 and State Route 76. However, based upon the SANTEC/ITE study criteria discussed at the beginning of this chapter as well as a review of the SANDAG “Select Zone” assignments, the proposed project would not add 50 or more peak hour trips in either direction of SR-76. Therefore, SR-76 was not analyzed in this study.

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## 3.0 Existing Conditions

This section describes key roadway, two-lane highway, and freeway segments, intersections, as well as existing daily roadway/highway/freeway and peak hour intersection traffic volumes. Level of service analysis results for all study area facilities under Existing conditions are presented.

### 3.1 Existing Transportation Network

Several regionally and locally significant roadways and freeways traverse the study area. Each of the key transportation facilities, as well as associated study intersections within the study area, is discussed below.

#### Freeway and State Highway Facilities

Two (2) Caltrans freeway/state highway facilities traverse the study area, as follows:

I-15 – I-15 is a grade separated freeway and ranges from 8 to 10 general purpose lanes within the study area. The travel lanes are generally 12 feet wide and the shoulders are generally 10 to 12 feet wide. The 20-mile I-15 Express Lanes Project, funded in part by the TransNet, was completed in January 2012. The Project constructed four (4) managed lanes, between SR-163 and SR-78, with a moveable barrier for maximum flexibility; multiple access points to the general purpose highway lanes; and direct access ramps for high-frequency Bus Rapid Transit (BRT) service. I-15, between SR-78 and Riverside County is planned to be widened with 4 toll lanes as per the 2050 RTP. However, this improvement is not assumed in the Horizon Year analysis since no secured funding sources were identified. Two interchanges (at Old Highway 395 and at Gopher Canyon Road) are located within the study area providing regional access for the proposed project. The posted speed limit is 70 mph along I-15 in the vicinity of the project.

SR-76 – ~~SR-76 is a two-lane undivided highway within~~ Within the study area, ~~except for the segment~~ SR-76 is a four-lane divided highway between ~~Old Highway 395E. Vista Way and the I-15 SB ramps, where this facility has four lanes. It is important to note that this facility,~~ Olive Hill Road; a six-lane divided highway between ~~Melrose Drive~~ Olive Hill Road and S. Mission Road (the SR-76 Middle Segment) is currently under construction and the completion date is anticipated to be early 2013. ~~The SR-76 East Segment;~~ transitioned to a 2-lane undivided highway between S. Mission Road and Old Highway 395; and widened to 6 lanes between Old Highway 395 and just east of I-15 ~~is also~~. It is important to note that SR-76, between S. Mission Road and Old Highway 395 is planned to be widened to four lanes by 2015. Class II bike lanes are planned along SR-76 within the study area.

#### East-West Roadway Facilities

Dulin Road – Dulin Road, east of Old Highway 395, is currently a two-lane undivided roadway with a posted speed limit of 25 mph. On-street parking is provided along both sides of the

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street in the residential area. The facility is classified as a 2.1E Community Collector in the County General Plan Mobility Element.

W. Lilac Road – W. Lilac Road, between Camino Del Rey and Old Highway 395, is generally a two-lane undivided roadway and is classified as a 2.2E Light Collector with Class II bike lanes in the County General Plan Mobility Element. Between Old Highway 395 to Lilac Road, W. Lilac Road is also a two-lane undivided roadway. W. Lilac Road, between Old Highway 395 and the planned Road 3, is classified as a 2.2C Light Collector with intermittent turn lanes in the County General Plan Mobility Element, while the segment between Road 3 and Lilac Road is classified as a 2.2F Light Collector with reduced shoulder. *The project proposes to downgrade W. Lilac Road between Main Street and the planned Road 3 from the classified 2.2C to 2.2F.* A posted speed limit is not provided along this facility. However, a recent travel time survey (as shown in **Appendix AC**) conducted by Chen Ryan Associates indicates that the average travel speed along W. Lilac Road, between the I-15 overpass and Lilac Walk, is approximately 40 mph.

Camino Del Cielo – Camino Del Cielo is a two-lane roadway with a wide median or a two-way left-turn lane between Camino Del Rey and Via Casitas and a two-lane undivided roadway between Via Casitas and W. Lilac Road. This facility has a posted speed limit of 40 mph and is classified as a 2.2E Light Collector in the County General Plan Mobility Element.

Camino Del Rey – Camino Del Rey is generally a two-lane undivided roadway between SR-76 and Old Highway 395, with the exception of the segment (approximately 2,400 feet) east of W. Lilac Road which has either a striped median or a two-way left-turn lane. The posted speed limit along with facility ranges from 45 to 50 mph. Camino Del Rey is classified in the County General Plan Mobility Element as a 4.2B Boulevard with intermittent turn lanes between SR-76 and Camino Del Cielo, and a 2.2C Light Collector between Camino Del Cielo and Old Highway 395. Class II bikes lanes are planned along this facility, between Old River Road and Old Highway 395.

Gopher Canyon Road – Gopher Canyon Road is a two-lane undivided roadway between E. Vista Way and I-15 SB Ramps and a four-lane roadway with a striped median between the I-15 SB Ramps and Old Highway 395. This facility has a posted speed limit of 50 mph and is classified as a 4.1B Major Road with intermittent turn lanes and a Class III bike route in the County General Plan Mobility Element.

Circle R Drive – Circle R Drive is currently a two-lane undivided roadway between Old Highway 395 and W. Lilac Road and is classified as a 2.2E Light Collector. A speed limit was not post along this facility. However, a recent travel speed survey (as shown in **Appendix BD**) conducted by NDS indicates that the average and 85<sup>th</sup> percentile travel speeds along Circle R Drive, east of Mountain Ridge Road, is approximately 35 mph and 40-45 mph, respectively. Circle R Drive provides a restricted access to the senior community (southern access) via Mountain Ridge Road.

Old Castle Road – Old Castle Road, between Old Highway 395 and Lilac Road, is a two-lane undivided roadway with a posted speed limit that varies from 45 mph to 55 mph. This facility is

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classified as a 2.2D Light Collector with improvement options in the County General Plan Mobility Element, and includes a Class III bike route.

Covey Lane – Covey Lane is currently a two-lane undivided private road for its entirety. A speed limit was not post along this facility. However, a recent travel speed survey (as shown in Appendix ~~BD~~) conducted by NDS indicates that the 85<sup>th</sup> percentile travel speeds along Covey Lane are approximately 30-35 mph. It is proposed that this facility, approximately 600 feet west of W. Lilac Road to the Lilac Hills Ranch project boundary, be designated as a public road due to the existing IOD for road improvements in this area. Covey Lane provides an unrestricted access to both the entire community north of Covey Lane and a restricted access to the senior community.

Main Street - The project proposes the construction of a 2-lane private road, “Main Street”, including a one-way couplet between east of Standel Lane and Lilac Walk (see Figure 1-3 for alignment). This road creates two alternative routes to W. Lilac Road and provides primary access to and from the project site as it traverses the town center of the Lilac Hills Ranch project. The design speed along Main Street is proposed to be 30 mph.

#### **North-South Roadway Facilities**

E. Vista Way – E. Vista Way, between SR-76 and Osborne Street, is generally a two-lane roadway with a two-way left-turn lane and a posted speed limit of 50 mph. This facility is classified as a 4.1A Major Road with a raised median and Class II bike lanes in the County General Plan Mobility Element.

Old River Road – Old River Road, between SR-76 and Camino Del Rey is generally a two-lane undivided roadway with the exception of the segment southwest of Golf Club Drive (approximately 1,800 feet), which has a wide raised median and on-street parking along both sides. The post speed limit in this area is 25 mph. Old River Road is classified as a 2.2C Light Collector with intermittent turn lanes in the County General Plan Mobility Element.

Old Highway 395 – Old Highway 395, between Pala Mesa Drive and Old Castle Road, is generally a two-lane roadway that operates as a two-lane highway with passing option and turn pocket/striped median at Pala Mesa Drive, Dulin Road (W), W. Lilac Road, I-15 SB & NB Ramps, Palos Verdes Drive, Camino Del Rey, the RV camp grounds entrance/exit, Circle R Drive, Gopher Canyon Road, and Old Castle Road. Class II bike lanes are marked on both sides of this facility within the study area. A posted speed limit was not observed along this segment. Old Highway 395 is classified as a 4.2B Boulevard with intermittent turn lanes between Pala Mesa Drive and SR-76, a 2.1D Community Collector with improvement options between SR-76 and W. Lilac Road, a 4.2B Boulevard with intermittent turn lanes between W. Lilac Road and I-15 NB Ramps, and a 4.1B Major Road with intermittent turn lanes between I-15 NB Ramps and Old Castle Road in the County General Plan Mobility Element.

Champagne Boulevard – Champagne Boulevard, between Old Castle Road and Lawrence Welk Drive is a two-lane roadway with passing options and turn lanes. The posted speed limit is 55

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mph. Class II bike lanes are marked on both sides of this facility. Champagne Boulevard is classified as a 4.1B Major Road with intermittent turn lanes within the study area in the County General Plan Mobility Element.

Mountain Ridge Road – Mountain Ridge Road, north of Circle R Drive, is a two-lane undivided private road. A speed limit was not post along this facility. However, a recent travel speed survey (as shown in Appendix **BD**) was conducted by NDS and indicates that the average and 85<sup>th</sup> percentile travel speeds along Mountain Ridge Road are approximately 30 mph and 40 mph, respectively. This road connects to Lilac Hills Ranch Road and serves as a restricted access on the southern edge of the project.

Lilac Road – Lilac Road is generally a two-lane roadway with turn lanes at Lilac School driveway, Old Castle Road, Anthony Road, Betsworth Road, and Valley Center Road. The posted speed limit is 55 mph just west of Valley Center Road. Lilac Road is classified as a 2.2E Light Collector between Couser Canyon Road and Old Castle Road, a 2.1C Community Collector with intermittent turn lanes between Old Castle Road and Anthony Road, and a 4.2B Boulevard with intermittent turn lanes between Anthony Road and Valley Center Road in the County General Plan Mobility Element. A Class III bike route is also planned between Old Castle Road and Valley Center Road.

Valley Center Road – Valley Center Road, between Woods Valley Road and Cole Grade Road, is a four-lane roadway with a raised median or a two-way left-turn lane, Class II bike lanes and a posted speed of 45 mph. East of Cole Grade Road, Valley Center Road is a two-lane undivided roadway. Valley Center Road is classified as a 4.2A Boulevard with raised median between Woods Valley Road and Lilac Road, and between Miller Road and Vesper Road, and a 4.1A Major Road with raised median between Lilac Road and Miller Road in the County General Plan Mobility Element.

Miller Road – Miller Road, north of Valley Center Road, is a two-lane undivided roadway and is classified as a 2.3B Minor Collector with intermittent turn lanes and a Class III bike route in the County General Plan Mobility Update. A posted speed limit was not observed along this segment.

Cole Grade Road – Cole Grade Road, between Fruitvale Road and Valley Center Road, is generally a two-lane roadway with a two-way left-turn lane, Class II bike lanes and a posted speed limit of 45 mph. A 25 mph school zone is located just north of Valley Center Road. This facility is classified as a 4.2A Boulevard with raised median in the County General Plan Mobility Element.

**Figure 3-1A** displays existing roadway geometrics for roadway facilities within the project study area.

### Study Intersections

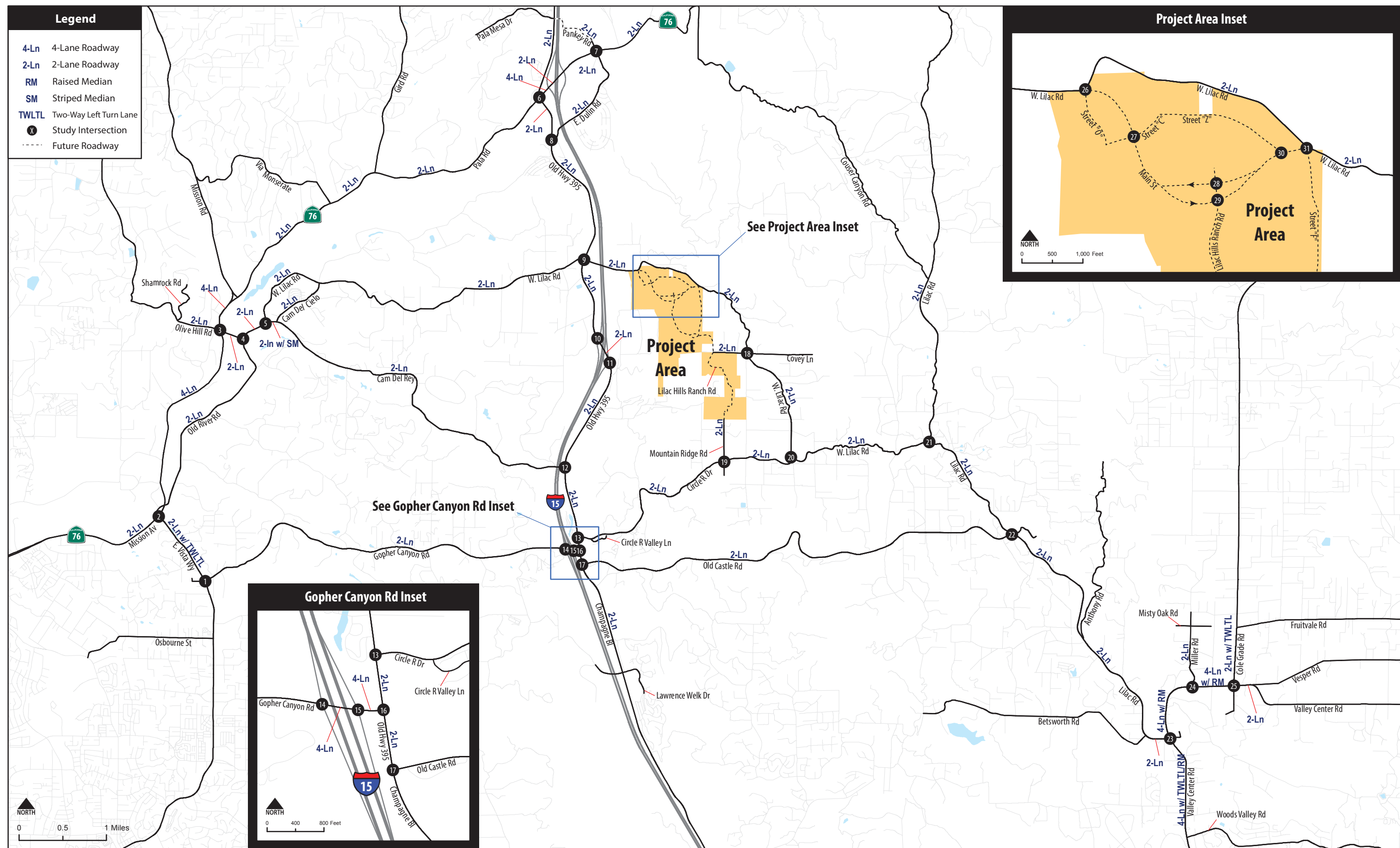
The SANDAG Series 12 Transportation Model was utilized to perform three (3) “Select Zone” assignments which identified the number of project-related peak hour trips distributed across the transportation network. The three “Select Zone” assignments included base year, Horizon

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Year with Road 3, and Horizon Year without Road 3. All intersections and County Mobility Element roadways where the proposed project added 25 or more peak hour trips to the existing traffic were included for analysis, as well as all freeway and state highway segments where the proposed project added 50 or more peak hour trips in either direction.

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# Lilac Hills Ranch Traffic Impact Study

Figure 3-1A  
Roadway Geometrics - Existing Conditions

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A total of thirty-one (31) key study area intersections, including 23 operated by the County of San Diego and 8 operated by Caltrans, were analyzed in this study, as shown below. Caltrans intersections are shown in italicized text.

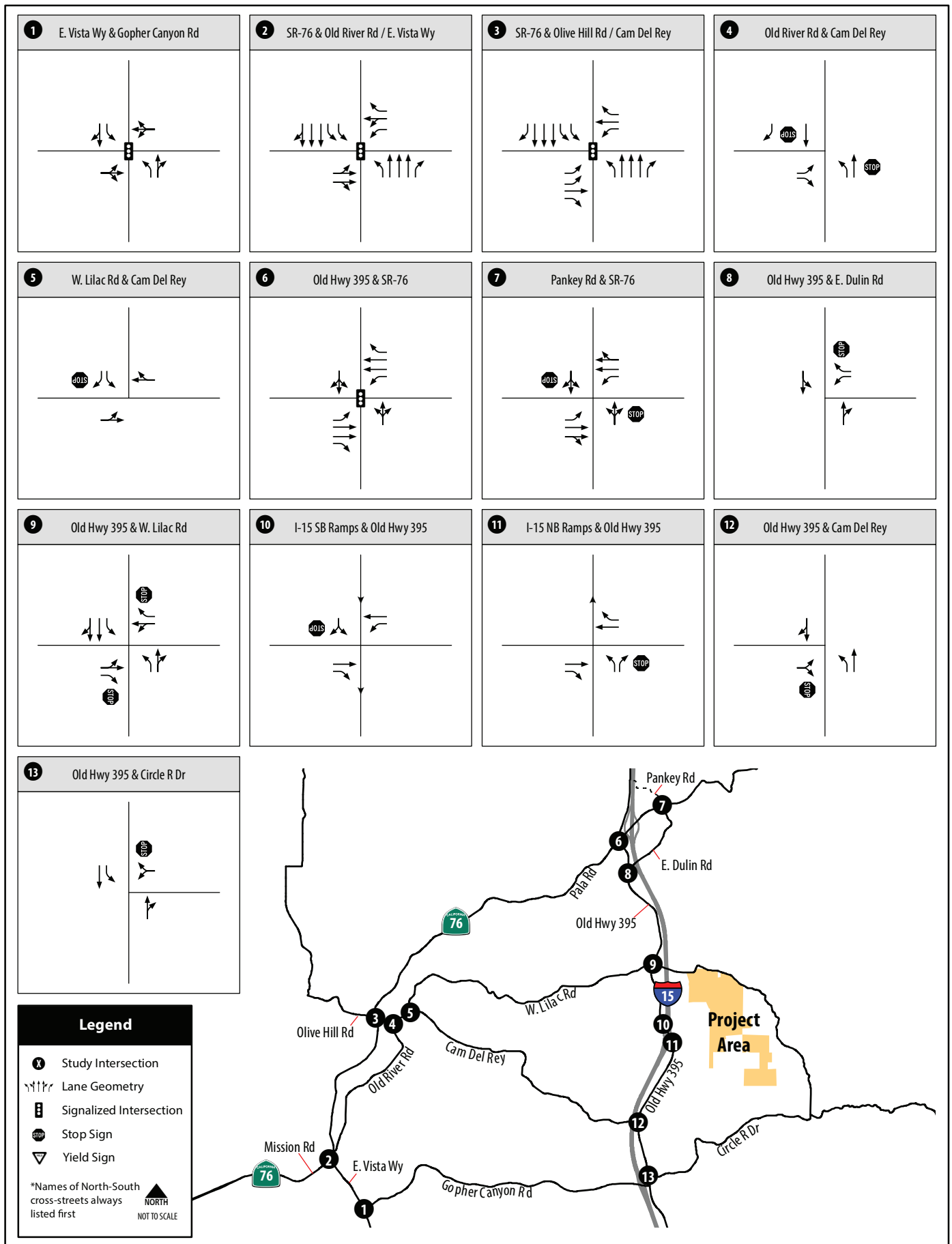
- 1) E. Vista Way / Gopher Canyon Road
- 2) *SR-76 / Old River Road/E. Vista Way (Caltrans)*
- 3) *SR-76 / Olive Hill Road/Camino Del Rey (Caltrans)*
- 4) Old River Road / Camino Del Rey
- 5) W. Lilac Road / Camino Del Rey
- 6) *Old Highway 395 / SR-76 (Caltrans)*
- 7) *Pankey Road / SR-76 (Caltrans)*
- 8) Old Highway 395 / E. Dulin Road
- 9) Old Highway 395 / W. Lilac Road
- 10) *I-15 SB Ramps / Old Highway 395 (Caltrans)*
- 11) *I-15 NB Ramps / Old Highway 395 (Caltrans)*
- 12) Old Highway 395 / Camino Del Rey
- 13) Old Highway 395 / Circle R Drive
- 14) *I-15 SB Ramps / Gopher Canyon Road (Caltrans)*
- 15) *I-15 NB Ramps / Gopher Canyon Road (Caltrans)*
- 16) Old Highway 395 / Gopher Canyon Road
- 17) Old Highway 395 / Old Castle Road
- 18) W. Lilac Road / Covey Lane
- 19) Mountain Ridge Road / Circle R Drive
- 20) W. Lilac Road / Circle R Drive
- 21) Lilac Road / W. Lilac Road
- 22) Lilac Road / Old Castle Road
- 23) Valley Center Rd / Lilac Road
- 24) Miller Road / Valley Center Road
- 25) Cole Grade Road / Valley Center Road

Project Driveways

- 26) Street "O" / W. Lilac Road/Main Street
- 27) Main Street / Street "C"
- 28) Lilac Hills Ranch Road / Main Street North
- 29) Lilac Hills Ranch Road / Main Street South
- 30) Street "Z" / Main Street
- 31) W. Lilac Road/Street "F" / Main Street

Intersections 26 through 31 are project driveways, and are included in the "Plus Project" assessments only. **Figure 3-1B** displays study area intersection lane geometrics under Existing conditions within the study area.

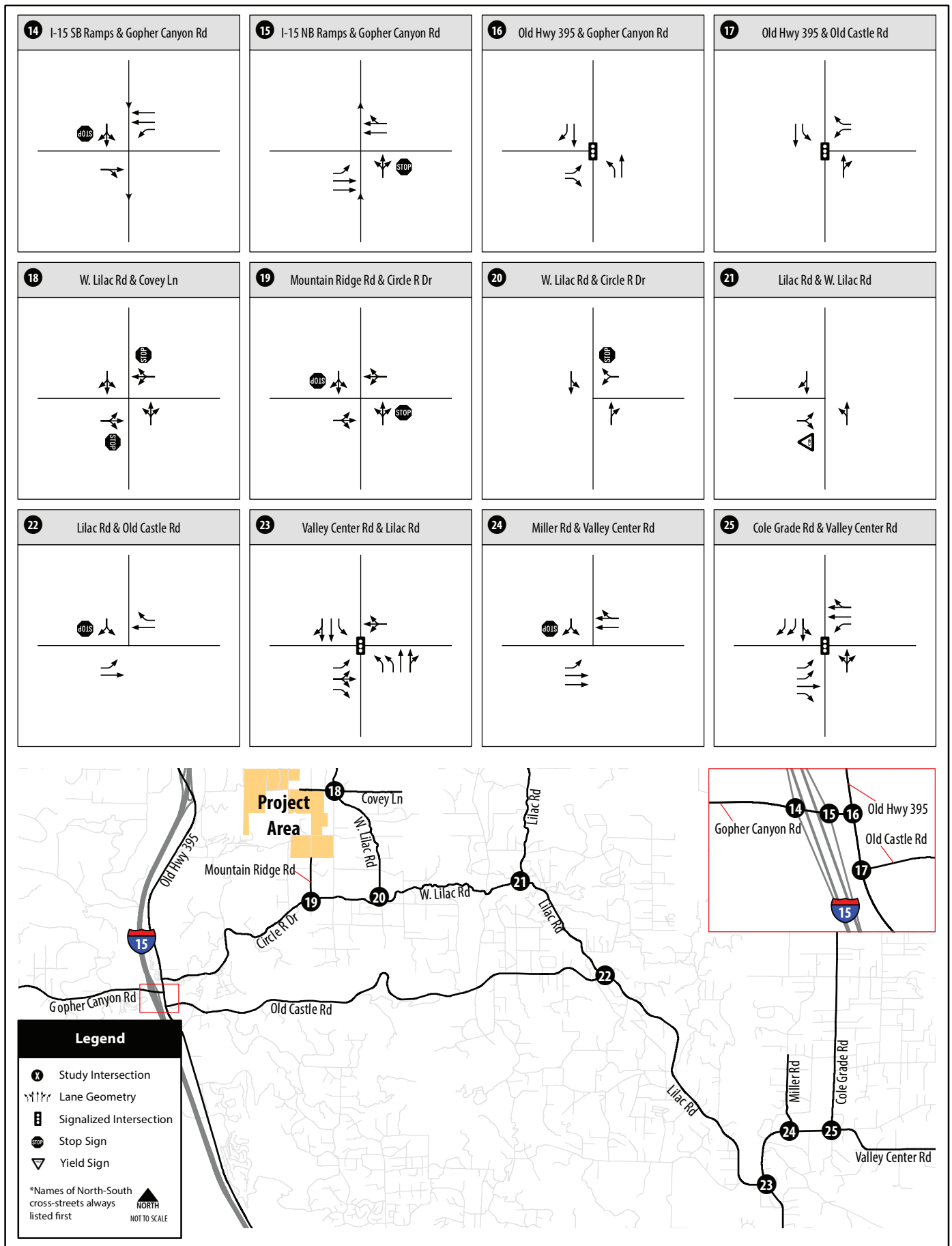
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Lilac Hills Ranch Traffic Impact Study

Figure 3-1B (Intersections 1-13)  
Intersection Geometrics - Existing Conditions

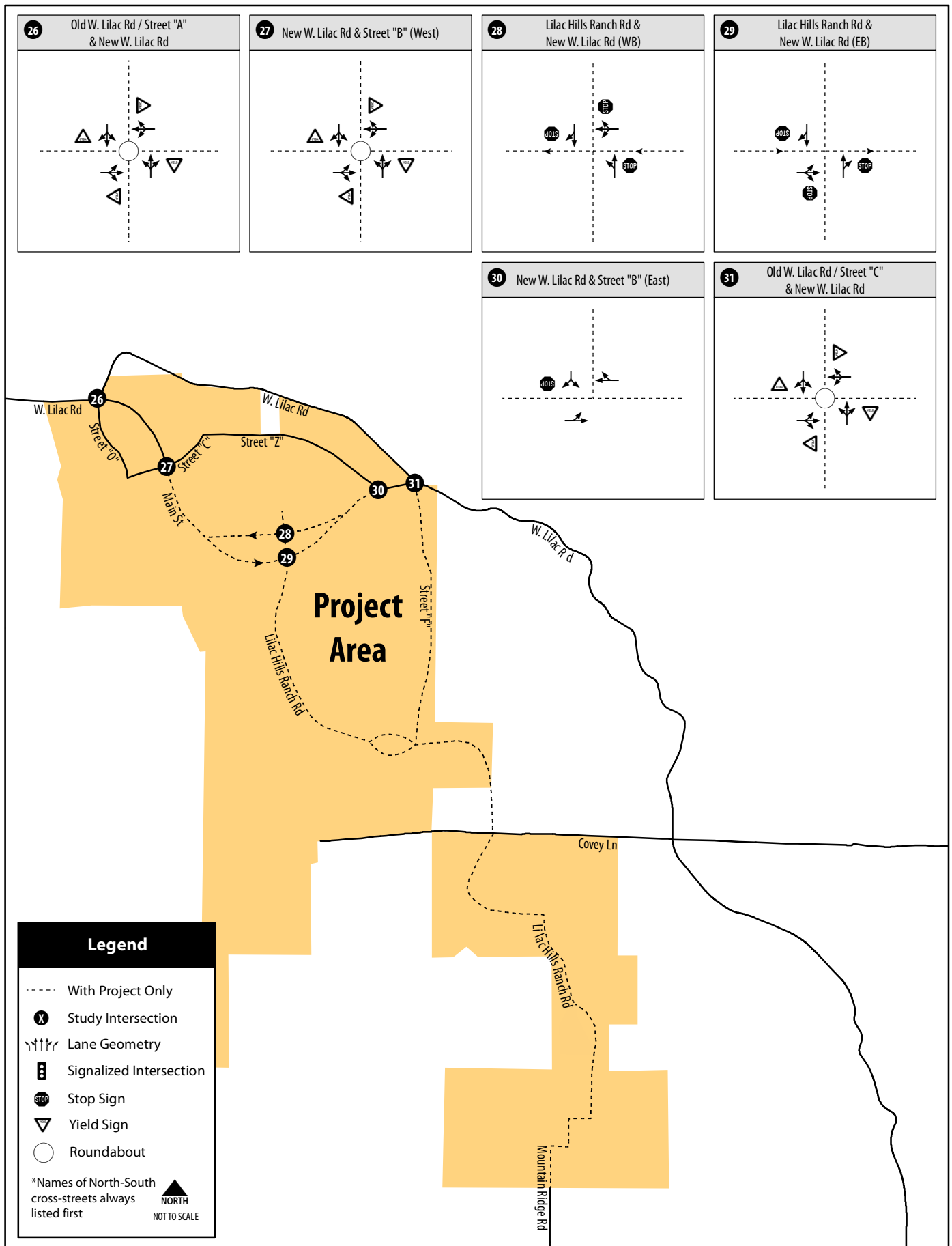




Lilac Hills Ranch Traffic Impact Study

Figure 3-1B (Intersections 14-25)  
Intersection Geometries - Existing Conditions





Lilac Hills Ranch Traffic Impact Study

Figure 3-1B (Intersections 24-31)  
Intersection Geometrics - Existing Conditions

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## 3.2 Existing Intersection and Roadway Volumes

**Figure 3-2A** displays Average Daily Traffic (ADT) volumes for study area roadway and freeway segments. **Figure 3-2B** shows existing AM/PM peak hour traffic volumes for the key study area intersections. Roadway segment and study area intersection traffic count dates are referenced in the analysis tables in the following sections. The freeway segment counts were obtained from Caltrans. The traffic count data summary sheets are provided in **Appendix CE**.

## 3.3 Existing Level of Service Analysis

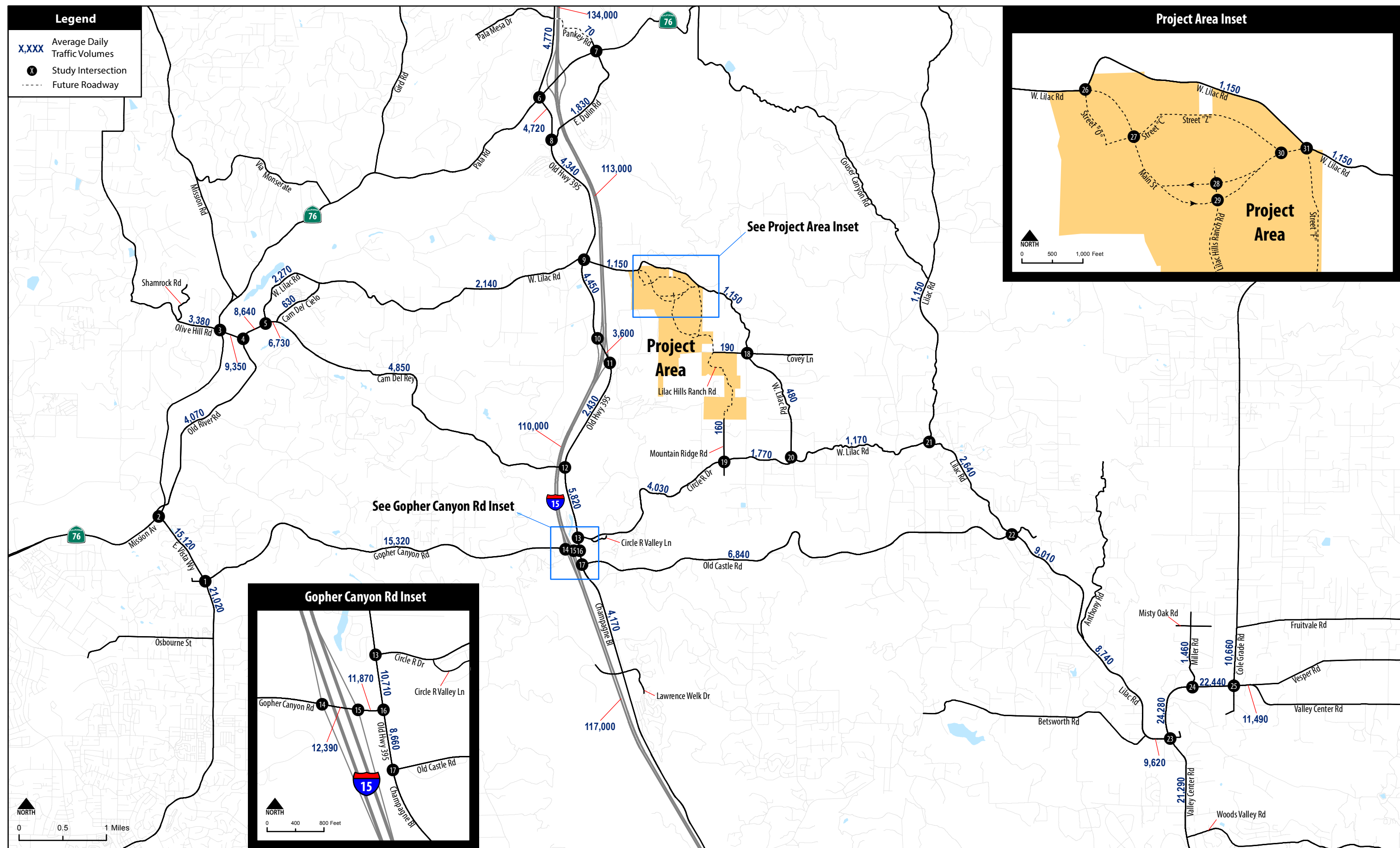
Level of service analyses under Existing conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment, intersection, two-lane highway, freeway segment, and ramp intersection level of service results are discussed separately below.

### Roadway Segment Analysis

**Table 3.1** Roadway segment analysis is based on the comparison of average daily traffic (ADTs) to the County of San Diego's Roadway Segment Daily Capacity and Level of Service Standards. However, a number of the roadways within the study area are not fully built to County public road standards. Although not required by the County of San Diego's Guidelines for Determining Significance and Report Format for Transportation and Traffic, a conservative approach was taken to reduce road capacities for purposes of this analysis.

In order to determine the amount of capacity reduction to use in the analysis, several factors were considered. Most important, all of the roads considered for capacity reductions provide one lane in each direction and the number of lanes is the best indication of capacity. In terms of reduced shoulder width, since the shoulder is outside the traveled way, is rarely utilized by drivers, and the fact that the reduced shoulder width is present on only a small portion of the studied roadway, a large capacity reduction would not occur. In terms of minimum curve radii, since the curves are only present on a small portion of the studied roadway, a large capacity reduction would be inappropriate.

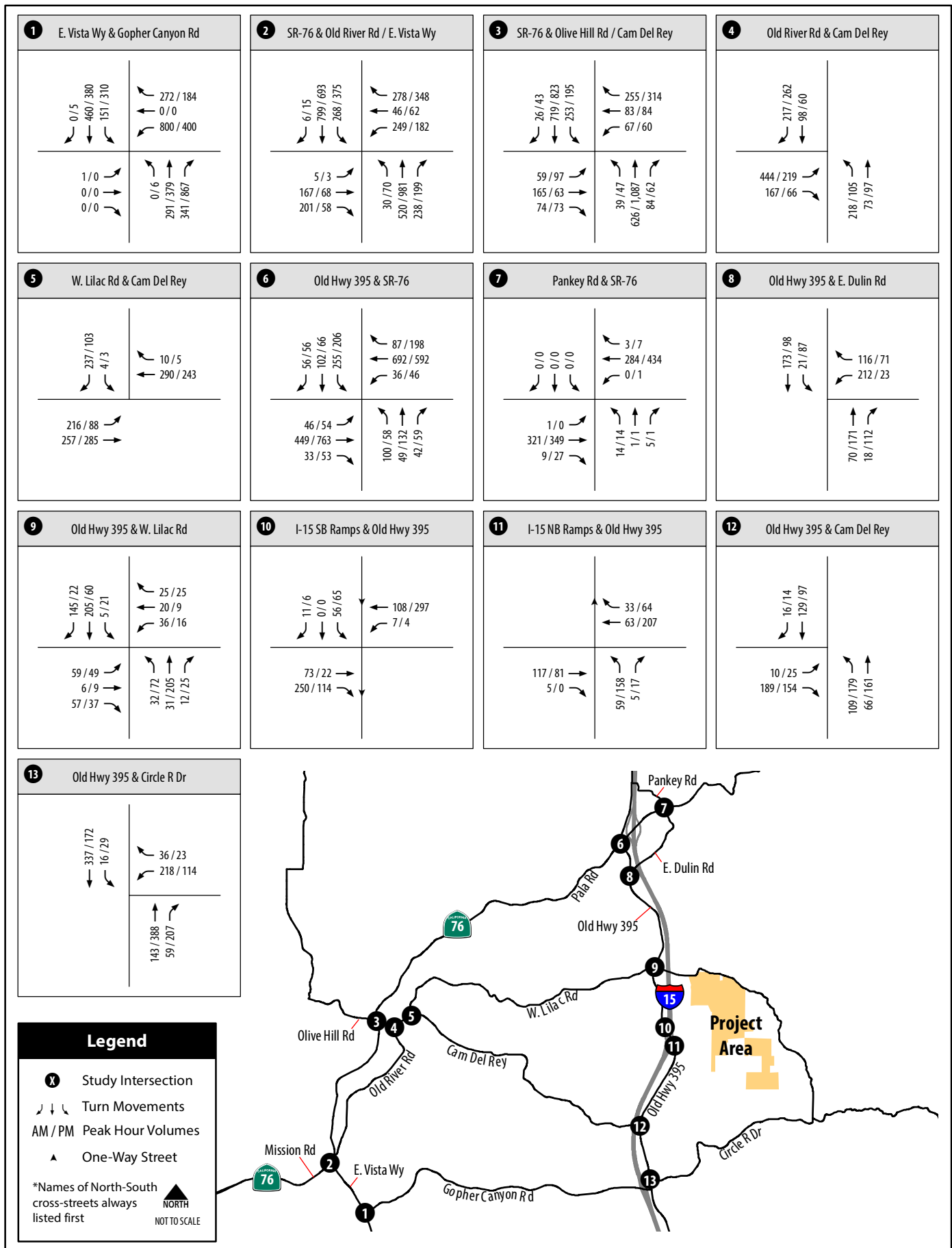
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# Lilac Hills Ranch Traffic Impact Study

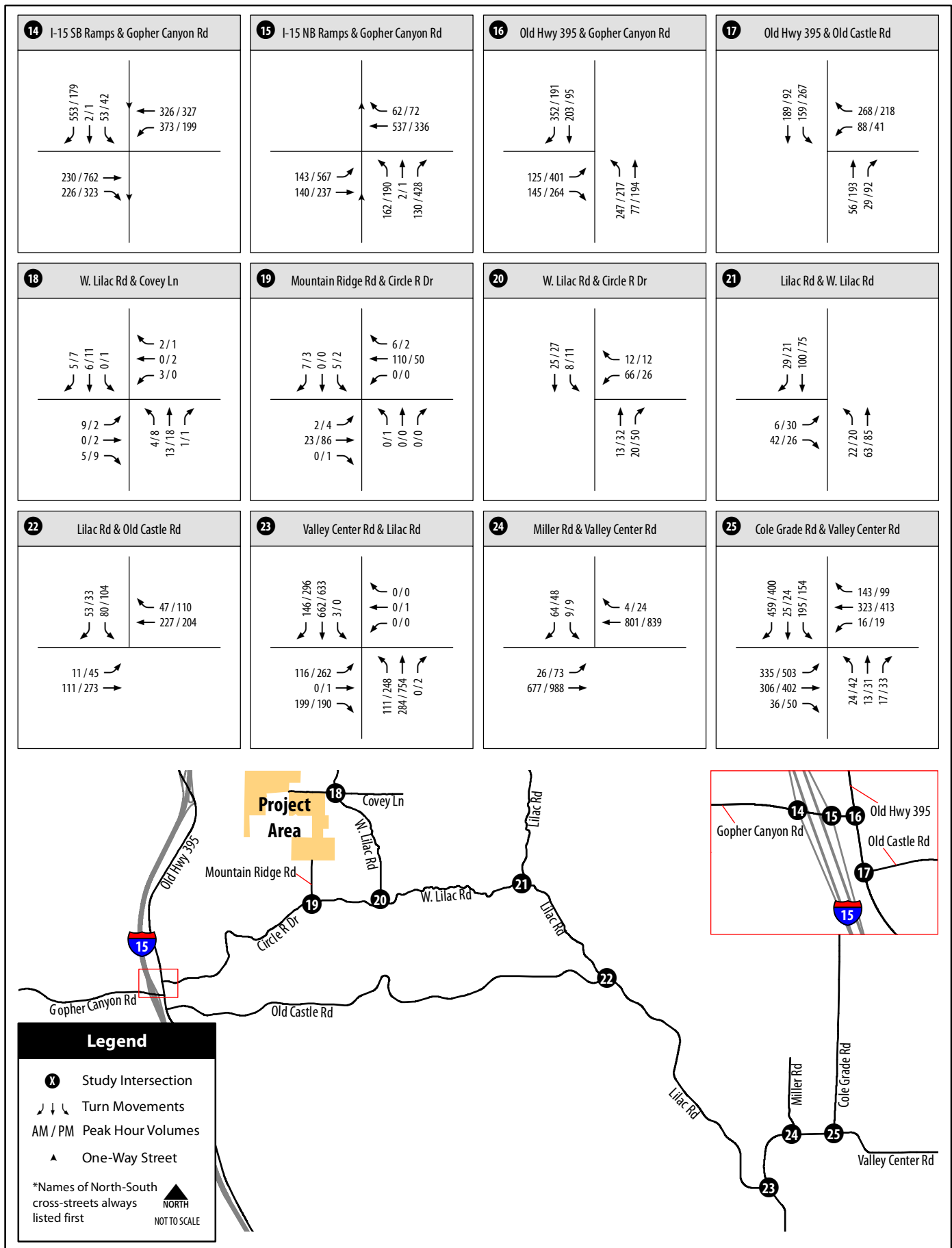
Figure 3-2A

**Roadway Average Daily Traffic Volumes -  
Existing Conditions**



Lilac Hills Ranch Traffic Impact Study

Figure 3-2B (Intersections 1-13)  
Intersection Peak Hour Traffic Volumes -  
Existing Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 3-2B (Intersections 14-25)  
Intersection Peak Hour Traffic Volumes -  
Existing Conditions

As shown in Tables 1 and 2 (as shown below) of the County's Public Road Standards, the only difference in design features between 2.2E and 2.2F roads is 8' vs. 2' shoulders. The LOS D threshold for a 2.2E road is estimated to be approximately 20% higher than a 2.2F road.

| MOBILITY ELEMENT ROADS |                                     |                   | LEVELS OF SERVICE |        |        |         |         |
|------------------------|-------------------------------------|-------------------|-------------------|--------|--------|---------|---------|
| Road Classification    |                                     | # of Travel Lanes | A                 | B      | C      | D       | E       |
| Light Collector        | w/ Raised Median (2.2A)             | 2                 | <3,000            | <6,000 | <9,500 | <13,500 | <19,000 |
|                        | w/ Continuous Left Turn Lane (2.2B) | 2                 | <3,000            | <6,000 | <9,500 | <13,500 | <19,000 |
|                        | w/ Intermittent Turn Lane (2.2C)    | 2                 | <3,000            | <6,000 | <9,500 | <13,500 | <19,000 |
|                        | w/ Passing Lane (2.2D)              | 2                 | <3,000            | <6,000 | <9,500 | <13,500 | <19,000 |
|                        | No Median (2.2E)                    | 2                 | <1,900            | <4,100 | <7,100 | <10,900 | <16,200 |
|                        | w/ Reduced Shoulder (2.2F)          | 2                 | <5,800            | <6,800 | <7,800 | <8,700  | <9,700  |

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| MOBILITY ELEMENT ROAD CLASSIFICATIONS |                      |              |                      |              |                             |               |                   |                      |                         |
|---------------------------------------|----------------------|--------------|----------------------|--------------|-----------------------------|---------------|-------------------|----------------------|-------------------------|
| ROAD CLASSIFICATION                   | # LANES / LANE WIDTH | MEDIAN WIDTH | ROAD SURFACING WIDTH | R.O.W. WIDTH | PAVED SHOULDERS (# / WIDTH) | PARKWAY WIDTH | MIN. CURVE RADIUS | MAX. DESIRABLE GRADE | MIN. DESIGN SPEED (MPH) |
| Light Collector                       |                      |              |                      |              |                             |               |                   |                      |                         |
| With Raised Median (2.2A)             | 2 / 12'              | 14'          | 54'                  | 78'          | 2 / 8'                      | 12'           | 500'              | 9%                   | 40                      |
| With Continuous Left Turn Lane (2.2B) | 2 / 12'              | 14'          | 54'                  | 78'          | 2 / 8'                      | 12'           | 500'              | 9%                   | 40                      |
| With Intermittent Turn Lanes (2.2C)   | 2 / 12'              | -            | 40' - 54'            | 64' - 78'    | 2 / 8'                      | 12'           | 500'              | 9%                   | 40                      |
| With Improvement Options (2.2D)       | 2 / 12'              | -            | 40' - 54'            | 88'          | 2 / 8'                      | 17' - 24'     | 500'              | 9%                   | 40                      |
| No Median (2.2E)                      | 2 / 12'              | -            | 40'                  | 64'          | 2 / 8'                      | 12'           | 500'              | 9%                   | 40                      |
| With Reduced Shoulder (2.2F)          | 2 / 12'              | -            | 28'                  | 52'          | 2 / 2'                      | 12'           | 500'              | 9%                   | 40                      |

For the reasons discussed above, a full 20% capacity reduction would be inaccurate and inappropriate. Therefore, it was determined that one-half of the reduction, 10%, would be the appropriate capacity reduction to apply.

**Table 3.1** displays the reduced roadway thresholds for key study area segments. Based on field and aerial review and analysis of County roadway standards, a 10% capacity reduction was applied to the roadways listed in Table 3.1 for purposes of analysis in this TIS. Please note that reduced shoulders are also presented along Lilac Road, between Old Castle Road and Anthony Road, however, roadway capacity reduction was not applied since passing opportunities are provided along sections of this facility, which increases the capacity of a two-lane roadway.

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**TABLE 3.1**  
**REDUCED ROADWAY THRESHOLDS FOR KEY SEGMENTS**

| Roadway                   | From                       | To                         | Original LOS D Thresholds | Reduced LOS D Thresholds |
|---------------------------|----------------------------|----------------------------|---------------------------|--------------------------|
| <u>E. Dulin Road</u>      | <u>Old Highway 395</u>     | <u>SR-76</u>               | <u>10,900</u>             | <u>9,800</u>             |
| <u>W. Lilac Road</u>      | <u>Camino Del Rey</u>      | <u>Camino Del Cielo</u>    | <u>8,700</u>              | <u>7,800</u>             |
| <u>W. Lilac Road</u>      | <u>Camino Del Cielo</u>    | <u>Old Highway 395</u>     | <u>8,700</u>              | <u>7,800</u>             |
| <u>W. Lilac Road</u>      | <u>Main Street</u>         | <u>Street "F"</u>          | <u>8,700</u>              | <u>7,800</u>             |
| <u>W. Lilac Road</u>      | <u>Street "F"</u>          | <u>Covey Lane</u>          | <u>8,700</u>              | <u>7,800</u>             |
| <u>W. Lilac Road</u>      | <u>Covey Lane</u>          | <u>Circle R Drive</u>      | <u>8,700</u>              | <u>7,800</u>             |
| <u>W. Lilac Road</u>      | <u>Circle R Drive</u>      | <u>Lilac Road</u>          | <u>8,700</u>              | <u>7,800</u>             |
| <u>Camino Del Rey</u>     | <u>Old River Road</u>      | <u>W. Lilac Road</u>       | <u>10,900</u>             | <u>9,800</u>             |
| <u>Camino Del Rey</u>     | <u>Camino Del Cielo</u>    | <u>Old Highway 395</u>     | <u>8,700</u>              | <u>7,800</u>             |
| <u>Gopher Canyon Road</u> | <u>E. Vista Way</u>        | <u>I-15 SB Ramps</u>       | <u>10,900</u>             | <u>9,800</u>             |
| <u>Circle R Drive</u>     | <u>Old Highway 395</u>     | <u>Mountain Ridge Road</u> | <u>10,900</u>             | <u>9,800</u>             |
| <u>Circle R Drive</u>     | <u>Mountain Ridge Road</u> | <u>W. Lilac Road</u>       | <u>10,900</u>             | <u>9,800</u>             |
| <u>Old Castle Road</u>    | <u>Old Highway 395</u>     | <u>Lilac Road</u>          | <u>10,900</u>             | <u>9,800</u>             |
| <u>Old River Road</u>     | <u>SR-76</u>               | <u>Camino Del Rey</u>      | <u>10,900</u>             | <u>9,800</u>             |
| <u>Pankey Road</u>        | <u>Pala Mesa Drive</u>     | <u>SR-76</u>               | <u>10,900</u>             | <u>4,500*</u>            |
| <u>Lilac Road</u>         | <u>Couser Canyon Road</u>  | <u>W. Lilac Road</u>       | <u>8,700</u>              | <u>7,800</u>             |
| <u>Lilac Road</u>         | <u>W. Lilac Road</u>       | <u>Old Castle Road</u>     | <u>8,700</u>              | <u>7,800</u>             |

Source: Chen Ryan Associates: May 2014

Note:

\*A section of Pankey Road is currently unpaved; hence, the LPR threshold of 4,500 ADT is utilized.

**Table 3.2** displays the level of service analysis results for the key study area Mobility Element roadway segments under Existing conditions.

**TABLE 3.2**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING CONDITIONS**

| Roadway       | From             | To               | Cross-Section | LOS Threshold (LOS D)          | Traffic Count Date | Average Daily Traffic (ADT) | Level of Service (LOS) |
|---------------|------------------|------------------|---------------|--------------------------------|--------------------|-----------------------------|------------------------|
| E. Dulin Road | Old Highway 395  | SR-76            | 2-Ln          | <del>10,900</del> <u>9,800</u> | Dec-12             | 1,830                       | <del>AB</del> <u>A</u> |
| W. Lilac Road | Camino Del Rey   | Camino Del Cielo | 2-Ln          | <del>8,700</del> <u>7,800</u>  | Dec-12             | 2,270                       | A                      |
| W. Lilac Road | Camino Del Cielo | Old Highway 395  | 2-Ln          | <del>8,700</del> <u>7,800</u>  | Mar-12             | 2,140                       | A                      |
| W. Lilac Road | Old Highway 395  | Main Street      | 2-Ln          | 8,700                          | Oct-12             | 1,150                       | A                      |

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**TABLE 3.12**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING CONDITIONS**

| Roadway             | From                | To                  | Cross-Section | LOS Threshold (LOS D)          | Traffic Count Date | Average Daily Traffic (ADT) | Level of Service (LOS) |
|---------------------|---------------------|---------------------|---------------|--------------------------------|--------------------|-----------------------------|------------------------|
| W. Lilac Road       | Main Street         | Street "F"          | 2-Ln          | <del>8,700</del> 7,800         | Oct-12             | 1,150                       | A                      |
| W. Lilac Road       | Street "F"          | Covey Lane          | 2-Ln          | <del>8,700</del> 7,800         | Oct-12             | 1,150                       | A                      |
| W. Lilac Road       | Covey Lane          | Circle R Drive      | 2-Ln          | <del>8,700</del> 7,800         | Mar-11             | 480                         | A                      |
| W. Lilac Road       | Circle R Drive      | Lilac Road          | 2-Ln          | <del>8,700</del> 7,800         | Mar-11             | 1,170                       | A                      |
| Camino Del Cielo    | Camino Del Rey      | W. Lilac Road       | 2-Ln          | 10,900                         | Dec-12             | 630                         | A                      |
| Olive Hill Road     | Shamrock Road       | SR-76               | 2-Ln          | 8,700                          | Dec-12             | 3,380                       | A                      |
| Camino Del Rey      | SR-76               | Old River Road      | 2-Ln          | 10,900                         | Sep-11             | 9,350                       | D                      |
| Camino Del Rey      | Old River Road      | W. Lilac Road       | 2-Ln          | <u>9,800</u>                   | Dec-12             | 8,640                       | D                      |
| Camino Del Rey      | W. Lilac Road       | Camino Del Cielo    | 2-In w/ SM    | 13,500                         | Dec-12             | 6,730                       | C                      |
| Camino Del Rey      | Camino Del Cielo    | Old Highway 395     | 2-Ln          | <del>8,700</del> 7,800         | Dec-12             | 4,850                       | A                      |
| Gopher Canyon Road  | E. Vista Way        | I-15 SB Ramps       | 2-Ln          | <del>10,900</del> 9,800<br>0   | Dec-12             | 15,320                      | <del>EE</del>          |
| Gopher Canyon Road  | I-15 SB Ramps       | I-15 NB Ramps       | 4-Ln          | 30,800                         | Nov-11             | 12,390                      | A                      |
| Gopher Canyon Road  | I-15 NB Ramps       | Old Highway 395     | 4-Ln          | 30,800                         | Nov-11             | 11,870                      | A                      |
| Circle R Drive      | Old Highway 395     | Mountain Ridge Road | 2-Ln          | <del>10,900</del> 9,800<br>0   | Aug-11             | 4,030                       | <del>BC</del>          |
| Circle R Drive      | Mountain Ridge Road | W. Lilac Road       | 2-Ln          | <del>10,900</del> 9,800<br>0   | Mar-11             | 1,770                       | <del>AB</del>          |
| Old Castle Road     | Old Highway 395     | Lilac Road          | 2-Ln          | <del>10,900</del> 9,800<br>0   | Mar-11             | 6,840                       | <del>GD</del>          |
| E. Vista Way        | SR-76               | Gopher Canyon Road  | 2-Ln w/ TWLTL | 13,500                         | Dec-12             | 15,120                      | E                      |
| E. Vista Way        | Gopher Canyon Road  | Osborne Street      | 2-Ln w/ TWLTL | 13,500                         | Dec-12             | 21,020                      | F                      |
| Old River Road      | SR-76               | Camino Del Rey      | 2-Ln          | <del>10,900</del> 9,800<br>0   | Dec-12             | 4,070                       | <del>BC</del>          |
| Champagne Boulevard | Old Castle Road     | Lawrence Welk Drive | 2-Ln          | 10,900 <del>13,500</del><br>00 | Mar-12             | 4,170                       | <del>BC</del>          |

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**TABLE 3.12**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING CONDITIONS**

| Roadway            | From               | To                 | Cross-Section    | LOS Threshold (LOS D)   | Traffic Count Date | Average Daily Traffic (ADT) | Level of Service (LOS) |
|--------------------|--------------------|--------------------|------------------|-------------------------|--------------------|-----------------------------|------------------------|
| Pankey Road        | Pala Mesa Drive    | SR-76              | 2-Ln             | <del>10,900</del> 1,500 | Dec-12             | 70                          | A                      |
| Lilac Road         | Couser Canyon Road | W. Lilac Road      | 2-Ln             | <del>8,700</del> 7,800  | Dec-12             | 1,150                       | A                      |
| Lilac Road         | W. Lilac Road      | Old Castle Road    | 2-Ln             | <del>8,700</del> 7,800  | Mar-11             | 2,640                       | A                      |
| Lilac Road         | Old Castle Road    | Anthony Road       | 2-Ln             | 10,900                  | Sep-11             | 9,010                       | D                      |
| Lilac Road         | Anthony Road       | Betsworth Road     | 2-Ln             | 10,900                  | Sep-11             | 8,740                       | D                      |
| Lilac Road         | Betsworth Road     | Valley Center Road | 2-Ln             | 13,500                  | Sep-11             | 9,620                       | D                      |
| Valley Center Road | Woods Valley Road  | Lilac Road         | 4/Ln w/ TWLTL/RM | 27,000                  | Dec-12             | 21,290                      | C                      |
| Valley Center Road | Lilac Road         | Miller Road        | 4-Ln w/ RM       | 33,400                  | Sep-11             | 24,280                      | B                      |
| Valley Center Road | Miller Road        | Cole Grade Road    | 4-Ln w/ RM       | 27,000                  | Sep-11             | 22,440                      | C                      |
| Valley Center Road | Cole Grade Road    | Vesper Road        | 2-Ln             | 13,500                  | Sep-11             | 11,490                      | D                      |
| Miller Road        | Misty Oak Road     | Valley Center Road | 2-Ln             | <del>8</del> 7,000      | Sep-11             | 1,460                       | A                      |
| Cole Grade Road    | Fruitvale Road     | Valley Center Road | 2-Ln w/ TWLTL    | 13,500                  | Sep-11             | 10,660                      | D                      |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

RM = Raised Median.

SM = Striped Median.

TWLTL = Two-Way Left-Turn Lane.

~~Changes in this table are associated with "Change 3" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".~~

As shown in the table, all study roadways are currently operating at acceptable LOS D or better under Existing conditions, with the following three (3) exceptions:

- Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – LOS ~~EE~~;
- E. Vista Way, between SR-76 and Gopher Canyon Road – LOS E; and
- E. Vista Way, between Gopher Canyon Road and Osborne Street – LOS F.

~~• E. Vista Way, between SR-76 and Gopher Canyon Road – LOS E; and~~

~~E. Vista Way, between Gopher Canyon Road and Osborne Street – LOS F.~~

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## Intersection Analysis

**Table 3.23** displays intersection level of service and average vehicle delay results for the key study area intersections under Existing conditions. Level of service calculation worksheets for Existing conditions are provided in **Appendix DF**.

**TABLE 3.23**  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING CONDITIONS

| Intersection                              | Traffic Control | Traffic Count Date | AM Peak Hour          |               | PM Peak Hour          |               |
|---|-----------------|--------------------|-----------------------|---------------|-----------------------|---------------|
|   |                 |                    | Avg. Delay (sec.)     | LOS           | Avg. Delay (sec.)     | LOS           |
| 1. E. Vista Way / Gopher Canyon Road      | Signal          | Nov-11             | <del>24.3</del> 172.8 | <del>CF</del> | <del>48.7</del> 212.0 | <del>DF</del> |
| 2. SR-76 / Old River Road/E. Vista Way    | Signal          | Nov-08             | <del>73.9</del> 23.7  | <del>EC</del> | <del>52.3</del> 32.0  | <del>DC</del> |
| 3. SR-76 / Olive Hill Road/Camino Del Rey | Signal          | Sep-11             | <del>43</del> 21.6    | <del>DC</del> | <del>60.8</del> 34.5  | <del>EC</del> |
| 4. Old River Road / Camino Del Rey        | OWSC            | Nov-12             | 23.2                  | D             | 12.2                  | B             |
| 5. W. Lilac Road / Camino Del Rey         | OWSC            | Jan-11             | 15.47                 | C             | 11.0                  | B             |
| 6. Old Highway 395 / SR-76                | Signal          | Mar-11             | <del>43</del> 29.0    | <del>DC</del> | <del>42.2</del> 39.8  | D             |
| 7. Pankey Road / SR-76                    | TWSC            | Dec-11             | 12.5                  | B             | 15.2                  | C             |
| 8. Old Highway 395 / E. Dulin Road        | OWSC            | Mar-11             | <del>14.6</del> 12.8  | B             | 11.2                  | B             |
| 9. Old Highway 395 / W. Lilac Road        | TWSC            | Mar-11             | <del>18.5</del> 14.7  | C             | 13.3                  | B             |
| 10. I-15 SB Ramps / Old Highway 395       | OWSC            | Mar-11             | 10.6                  | B             | 12.1                  | B             |
| 11. I-15 NB Ramps / Old Highway 395       | OWSC            | Mar-11             | 9.98                  | A             | 11.2                  | B             |
| 12. Old Highway 395 / Camino Del Rey      | OWSC            | Mar-11             | 10.1                  | B             | 11.0                  | B             |
| 13. Old Highway 395 / Circle R Drive      | OWSC            | Mar-11             | 20.4                  | C             | 22.5                  | C             |
| 14. I-15 SB Ramps / Gopher Canyon Road    | OWSC            | Nov-11             | 468.2                 | F             | 173.0                 | F             |
| 15. I-15 NB Ramps / Gopher Canyon Road    | OWSC            | Nov-11             | 30.5                  | D             | 1945.4                | F             |
| 16. Old Highway 395 / Gopher Canyon Road  | Signal          | Mar-11             | <del>16.1</del> 11.0  | B             | <del>8.8</del> 14.7   | <del>AB</del> |
| 17. Old Highway 395 / Old Castle Road     | Signal          | Mar-11             | 13.9                  | B             | 15.7                  | B             |
| 18. W. Lilac Road / Covey Lane            | TWSC            | Oct-12             | 8.8                   | B             | 9.43                  | A             |
| 19. Mountain Ridge Road / Circle R Drive  | TWSC            | Mar-11             | 9.3                   | A             | 9.6                   | A             |
| 20. W. Lilac Road / Circle R Drive        | OWSC            | Mar-11             | 9.3                   | A             | 9.3                   | A             |
| 21. Lilac Road / W. Lilac Road            | OWSC            | Mar-11             | 9.6                   | A             | 9.9                   | A             |
| 22. Lilac Road / Old Castle Road          | OWSC            | Mar-11             | 11.8                  | B             | 17.8                  | C             |
| 23. Valley Center Rd / Lilac Road         | Signal          | Mar-11             | 10.5                  | B             | 22.6                  | C             |

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**TABLE 3.23**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING CONDITIONS**

| Intersection                             | Traffic Control | Traffic Count Date | AM Peak Hour      |     | PM Peak Hour      |     |
|--|-----------------|--------------------|-------------------|-----|-------------------|-----|
|  |                 |                    | Avg. Delay (sec.) | LOS | Avg. Delay (sec.) | LOS |
| 24. Miller Road / Valley Center Road     | OWSC            | Sep-11             | 16.9              | C   | 25. <del>20</del> | D   |
| 25. Cole Grade Road / Valley Center Road | Signal          | Sep-11             | 31.1              | C   | 34.9              | C   |

Source: Chen Ryan Associates; May ~~2013~~2014

**Notes:**

Bold letter indicates unacceptable LOS E or F.

AWSC = All-Way Stop Controlled.

TWSC = Two-Way Stop Controlled.

OWSC = One-Way Stop Controlled.

For OWSC and TWSC intersections, the delay shown is the worst delay experienced by any of the approaches.

As shown in the table, all of the study area intersections are currently operating at acceptable LOS D or better, with the following ~~four (4)~~ three (3) exceptions:

- ~~SR-76 / Old River Road~~/E. Vista Way (~~Caltrans~~)/ Gopher Canyon Road – LOS ~~EF~~ during both the AM and PM peak ~~hour~~hours;
- ~~SR-76 / Olive Hill Road/Camino Del Rey (Caltrans) – LOS E during the PM peak hour;~~
- I-15 SB Ramps / Gopher Canyon Road (Caltrans) – LOS F during both the AM and PM peak hours; and
- I-15 NB Ramps / Gopher Canyon Road (Caltrans) – LOS F during the PM peak hour.

**Two-Lane Highway Analysis**

**Table 3.34** displays two-lane highway level of service analysis results for Old Highway 395 under Existing conditions. The two-lane highway level of service analysis was performed utilizing the methodology presented in Chapter 2.0.

**TABLE 3.34**  
**TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS**  
**EXISTING CONDITIONS**

| 2-Ln Highway    | From            | To            | LOS Threshold (LOS D) | Traffic Count Date | Average Daily Traffic (ADT) | Level of Service (LOS) |
|-----------------|-----------------|---------------|-----------------------|--------------------|-----------------------------|------------------------|
| Old Highway 395 | Pala Mesa Drive | SR-76         | 16,200                | Mar-12             | 4,770                       | D or better            |
| Old Highway 395 | SR-76           | E. Dulin Road | 16,200                | Mar-11             | 4,720                       | D or better            |

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**TABLE 3.34**  
**TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS**  
**EXISTING CONDITIONS**

| 2-Ln Highway    | From               | To                 | LOS Threshold (LOS D) | Traffic Count Date | Average Daily Traffic (ADT) | Level of Service (LOS) |
|-----------------|--------------------|--------------------|-----------------------|--------------------|-----------------------------|------------------------|
| Old Highway 395 | E. Dulin Road      | W. Lilac Road      | 16,200                | Mar-11             | 4,340                       | D or better            |
| Old Highway 395 | W. Lilac Road      | I-15 SB Ramps      | 16,200                | Mar-11             | 4,450                       | D or better            |
| Old Highway 395 | I-15 SB Ramps      | I-15 NB Ramps      | 16,200                | Mar-11             | 3,600                       | D or better            |
| Old Highway 395 | I-15 NB Ramps      | Camino Del Rey     | 16,200                | Mar-11             | 2,430                       | D or better            |
| Old Highway 395 | Camino Del Rey     | Circle R Drive     | 16,200                | Mar-11             | 5,820                       | D or better            |
| Old Highway 395 | Circle R Drive     | Gopher Canyon Road | 16,200                | Mar-11             | 10,710                      | D or better            |
| Old Highway 395 | Gopher Canyon Road | Old Castle Road    | 16,200                | Mar-11             | 8,660                       | D or better            |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

As shown, all of the study area segments along Old Highway 395 are currently operating at acceptable LOS D or better.

### Freeway Segment Analysis

**Table 3.45** displays freeway level of service analysis results for I-15 under Existing conditions. The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0.

As shown in **Table 3.45**, all study area segments along I-15 currently operate at acceptable LOS D or better under Existing conditions.

### Ramp Intersection Capacity Analysis

Consistent with Caltrans requirements, the signalized intersections along SR-76 within the study area were analyzed under Existing conditions using the ILV procedures as described in Chapter 2.0. Note that ramp intersections along I-15 are stop-controlled and were therefore not analyzed in this study. ILV analysis results are displayed in **Table 3.56** and analysis worksheets for the Existing conditions are provided in **Appendix EG**.

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**TABLE 3.45**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING CONDITIONS**

| Freeway | Segment                                      | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | Peak Hour Factor (PHF) | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS |
|---------|--|---------|-------------|------------------|-------------------|--------------------------|------------------------|--------------------|------------------|-------|-----|
| I-15    | Riverside County Boundary to Old Highway 395 | 134,000 | 8.4%        | 11,321           | 0.64              | 4                        | 0.95                   | 6.75%              | 1,957            | 0.833 | D   |
| I-15    | Old Highway 395 to SR-76                     | 134,000 | 7.4%        | 9,969            | 0.73              | 4                        | 0.95                   | 6.75%              | 1,984            | 0.844 | D   |
| I-15    | SR-76 to Old Highway 395                     | 113,000 | 7.8%        | 8,839            | 0.69              | 4                        | 0.95                   | 8.40%              | 1,661            | 0.707 | C   |
| I-15    | Old Highway 395 to Gopher Canyon Road        | 110,000 | 8.1%        | 8,884            | 0.67              | 4                        | 0.95                   | 8.40%              | 1,627            | 0.692 | C   |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 117,000 | 8.1%        | 9,449            | 0.67              | 4                        | 0.95                   | 13.20%             | 1,770            | 0.753 | C   |
| I-15    | Deer Springs Road to Centre City Parkway     | 117,000 | 8.0%        | 9,400            | 0.66              | 4                        | 0.95                   | 13.20%             | 1,752            | 0.745 | C   |
| I-15    | Centre City Parkway to El Norte Parkway      | 111,000 | 8.0%        | 8,918            | 0.66              | 4                        | 0.95                   | 13.20%             | 1,662            | 0.707 | C   |
| I-15    | El Norte Parkway to SR-78                    | 127,000 | 7.9%        | 9,996            | 0.66              | 4                        | 0.95                   | 10.00%             | 1,836            | 0.781 | C   |
| I-15    | SR-78 to W Valley Parkway                    | 192,000 | 8.1%        | 15,626           | 0.60              | 5+2ML                    | 0.95                   | 10.00%             | 1,480            | 0.630 | B   |
| I-15    | W Valley Parkway to Auto Parkway             | 179,000 | 8.1%        | 14,568           | 0.60              | 5+2ML                    | 0.95                   | 10.00%             | 1,380            | 0.587 | B   |
| I-15    | Auto Parkway to W Citracado Parkway          | 172,000 | 7.8%        | 13,340           | 0.60              | 5+2ML                    | 0.95                   | 10.00%             | 1,256            | 0.534 | B   |
| I-15    | W Citracado Parkway to Via Rancho Parkway    | 196,000 | 7.8%        | 15,201           | 0.60              | 5+2ML                    | 0.95                   | 7.00%              | 1,411            | 0.600 | B   |
| I-15    | Via Rancho Parkway to Bernardo Drive         | 198,000 | 7.4%        | 14,572           | 0.58              | 5+2ML                    | 0.95                   | 7.00%              | 1,312            | 0.558 | B   |
| I-15    | Bernardo Drive to Rancho Bernardo Road       | 201,000 | 7.4%        | 14,793           | 0.58              | 5+2ML                    | 0.95                   | 7.00%              | 1,332            | 0.567 | B   |

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**TABLE 3.45**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING CONDITIONS**

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | Peak Hour Factor (PHF) | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------------------------|--------------------|------------------|-------|-----|
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 209,000 | 7.3%        | 15,345           | 0.54              | 5+2ML                    | 0.95                   | 7.00%              | 1,280            | 0.545 | B   |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 214,000 | 7.3%        | 15,712           | 0.54              | 5+2ML                    | 0.95                   | 7.00%              | 1,311            | 0.558 | B   |

Source: Caltrans, Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:  
 Bold letter indicates unacceptable LOS E or F.  
 ML = Managed Lane.

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**TABLE 3.56**  
**RAMP INTERSECTION CAPACITY ANALYSIS**  
**EXISTING CONDITIONS**

| Intersection                           | Peak Hour | ILV / Hour | Description              |
|--|-----------|------------|--------------------------|
| SR-76 / Old River Road/E. Vista Way    | AM        | 1,503      | >1500: (Over Capacity)   |
|  | PM        | 1,255      | 1200-1500: (At Capacity) |
| SR-76 / Olive Hill Road/Camino Del Rey | AM        | 1,202      | 1200-1500: (At Capacity) |
|  | PM        | 1,370      | 1200-1500: (At Capacity) |
| SR-76 / Old Highway 395                | AM        | 1,001      | <1200: (Under Capacity)  |
|  | PM        | 1,035      | <1200: (Under Capacity)  |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

As shown in the table, all three (3) intersections along SR-76 currently operate at “Under Capacity” and/or “At Capacity”, with the exception of SR-76 / Old River Road/E. Vista Way intersection which operates at “Over Capacity” during the AM peak hour.

### 3.4 Existing Parking, Transit, and On-Site Circulation

The current site for the proposed project generally consists of agricultural uses. Based upon field reviews, parking and on-site circulation are adequately provided. Transit services are not currently provided on or within a ¼ mile of the project site.

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## 4.0 Project Traffic

This section describes the proposed project, including land uses and estimated trip generation, trip distribution, and trip assignment.

### 4.1 Project Description

The proposed Lilac Hills Ranch project is located in the Valley Center and Bonsall Community Planning Areas of the unincorporated County of San Diego with State Route 76 to the north, Valley Center proper to the east, the City of Escondido to the south, and Interstate 15 and Old Highway 395 to the west. Project access is provided at W. Lilac Road via Main Street (unrestricted access to the entire project), Circle R Drive via Mountain Ridge Road (restricted access to only southern half of the Phase 5 (SFS-5 and SFS-6) of the senior community and unrestricted access to the church site), and Covey Lane (unrestricted access to community north of Covey Lane and a restricted access to the senior community). ~~A secondary access is also provided via Birdsong Drive to W. Lilac Road. Gated~~ An additional gated emergency access is provided by Rodriguez Road. Birdsong Drive, between Street "Z" and W. Lilac Road will serve as an interim secondary access route for the initial phase of Phase A (SFD-1 and SFD-2 as shown in Figure 1-3) during construction of Main street. After the construction of Main Street has been completed, between Street "Z" and W. Lilac Road, Birdsong Drive will revert to a private driveway for use by the owner of APN 128-280-56.

The project consists of a mix of residential, commercial and institutional uses, along with parks and open space. The following list outlines the specific trip generating land uses:

#### Residential – a total of 1,746 units

- 903 traditional single-family detached homes;
- 375 multi-family homes (for-rent and for-sale at 20 or more dwelling units per acre);
- 468 age-restricted, single family homes (senior community); and
- Necessary facilities and amenities to serve the senior population, including a senior community center, an assisted living and group residential facility (consists of 200 beds).

#### Commercial – a total of 15.3 acres

- 61,500 square feet of ~~commercial/retail~~ uses which may include a 25,000-square foot general store – local serving, and small scale, and boutique-style specialty retail, restaurants and cafes, a veterinary clinic, and a day care facility;
- 28,500 square feet of office uses; and
- A 50-room country inn.

#### Institutional facilities

- A 10.70-acre church site; and
- A 12.0-acre K-8 school.

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Parks and ~~recreational~~CPF area facilities

- A 40,000 square-foot CPF area comprised of a private recreational center, and potential location for a fire station; and
- 23.86 acres of public and private parks.

A Water Reclamation Facility (WRF)

- 2.4 acres

An on-site Recycling and Green Waste Drop-off Facility (RF)

- 0.6 acres

Interim Fire Station

An interim fire station with up to 3-staff could be located anywhere within the project site. However, this fire station would be built in place of two equivalent dwelling units and would not result in additional traffic to the overall project. A fire station trip generation survey was conducted and discussed in detail later in this chapter.

## **4.2 Project Phasing**

A project site plan by “Specific Plan” phasing is displayed in **Figure 4-1** with associated land use breakdowns listed in **Table 4.1** below. Note that each phase could potentially include sub-phases, however, impact and mitigation are determined based on EDUs and ADTs.

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**TABLE 4.1**  
**PROJECT LAND USE BY SPECIFIC PLAN PHASING**  
**BY SANDAG LAND USE CATEGORY**

| <u>SANDAG Equivalent Land Use</u>                         | Unit    | Phase 1            | Phase 2          | Phase 3              | Phase 4 | Phase 5          |
|---|---------|--------------------|------------------|----------------------|---------|------------------|
| Single Family   | DU      | <del>350</del> 352 | 196              | <del>357</del> 355   | -       | -                |
| Multi-Family  | DU      | -                  | 270              | 105                  | -       | -                |
| Senior Community  | DU      | -                  | -                | -                    | 171     | 297              |
| Assisted Living   | Bed     | -                  | -                | -                    | 200     | -                |
| Specialty <del>Retail</del> / Strip Commercial            | KSF     | -                  | 55.0             | 4.0                  | -       | 2.5              |
| Office  | KSF     | -                  | 25.0             | 3.5                  | -       | -                |
| Country Inn / B&B   | Room    | -                  | 50               | -                    | -       | -                |
| Church  | AC      | -                  | -                | -                    | -       | 10.70            |
| Elementary School (K-5)                                   | Student | -                  | -                | 568                  | -       | -                |
| Middle School (6-8)                                       | Student | -                  | -                | 132                  | -       | -                |
| <u>CPF (Recreation Center / Fire Station)<sup>1</sup></u> | KSF     | -                  | -                | 40.0                 | -       | -                |
| Neighborhood/County Park                                  | AC      | <del>3.24</del> 5  | <del>20</del> .8 | <del>12.0</del> 13.5 | 3.7     | <del>21</del> .1 |
| Water Reclamation   | AC      | -                  | -                | 2.4                  | -       | -                |
| Recycling Center  | AC      | -                  | 0.6              | -                    | -       | -                |

Source: Accretive Investments, Inc., Specific Plan Table 3, Chen Ryan Associates: May 2014

Note: January 2013

<sup>1</sup> A 40,000 square-foot CPF area comprised of a 35,500 SF private recreational facility, and a potential 4,500 SF fire station.

For traffic impact evaluation purposes, a set of “Traffic Analysis (TA)” phases (A–E) were developed to best represent the anticipated construction phasing, as shown in **Table 4.2**. These phases are carried forward and served as the basis for traffic analysis and impact/mitigation identifications in this study. Table 4.2 also discusses the access/spine roads needed for each of the traffic analysis phases. **Figures 4-2.A** through **4-2.E** display the site plans and access requirements for each of the traffic analysis phases A-though E, respectively.

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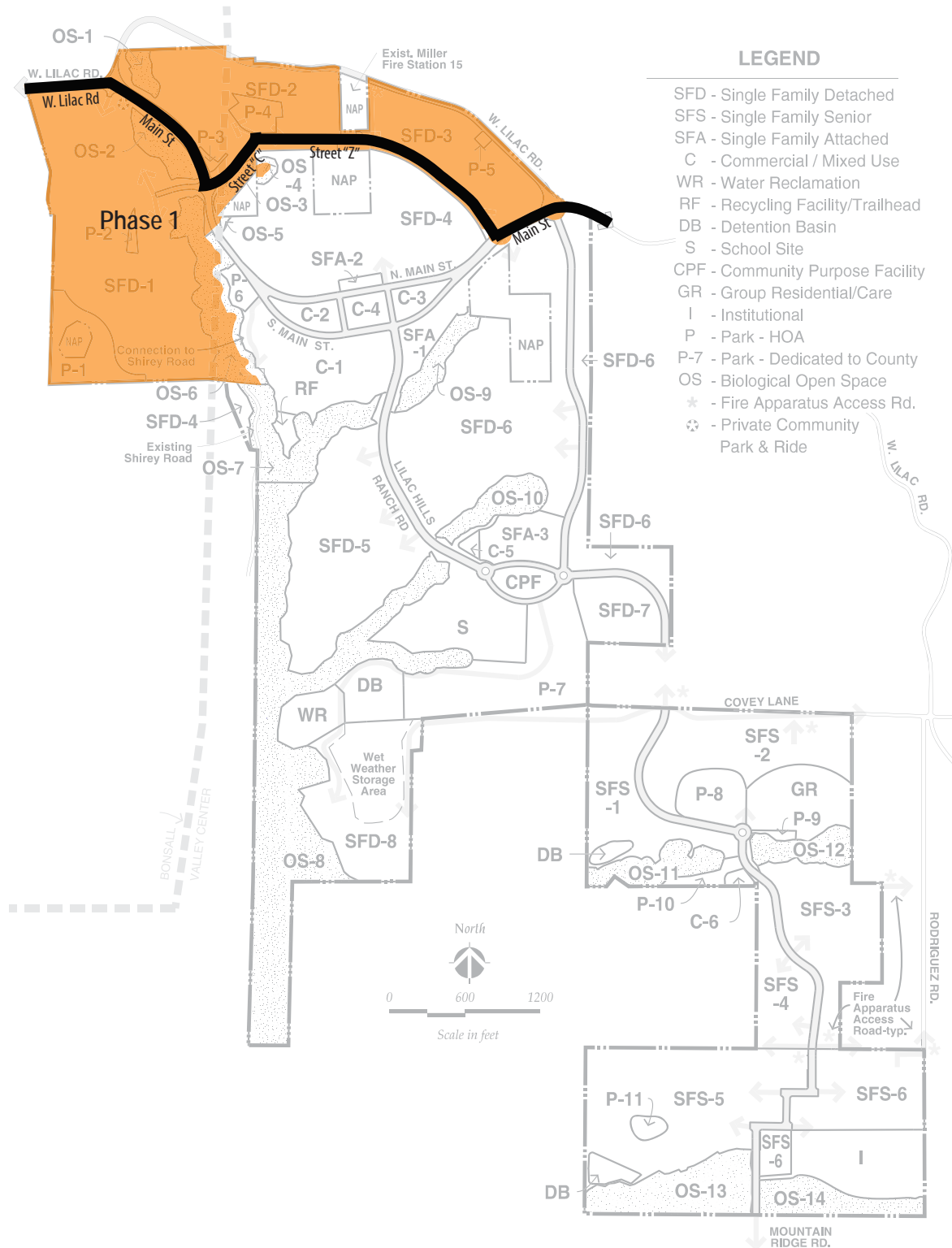
**TABLE 4.2**  
**TRAFFIC ANALYSIS PHASING AND ACCESS REQUIREMENTS**

| Phasing                             | Specific Plan |   |   |   |   | Access / Spine Road   |
|-------------------------------------|---------------|---|---|---|---|---|
|                                     | 1             | 2 | 3 | 4 | 5 |   |
| Traffic Analysis Phase A            | ●             |   |   |   |   | <ul style="list-style-type: none"> <li>- Main St, between West Lilac Rd and St "C";</li> <li>- Main St, between St "Z" and W. Lilac Rd;</li> <li>- St "C" and St "Z"; and</li> <li>- Birdsong Dr. <u>(Interim Access during initial phase of Phase A)</u>, between St "Z" and W. Lilac Rd.</li> </ul> |
| Traffic Analysis Phase B            | ●             |   |   | ● |   | <ul style="list-style-type: none"> <li>- All roads listed in Phase A, <u>with the exception of Birdsong Drive</u>; and</li> <li>- Covey Ln.</li> </ul>  |
| Traffic Analysis Phase C            | ●             | ● |   | ● |   | <ul style="list-style-type: none"> <li>- All roads listed in Phase B; and</li> <li>- Main St, between St "C" and St "Z".</li> </ul>   |
| Traffic Analysis Phase D            | ●             | ● |   | ● | ● | <ul style="list-style-type: none"> <li>- All roads listed in Phase C; and</li> <li>- Lilac Hills Ranch Rd, between Covey Ln and Mountain Ridge Rd.</li> </ul>   |
| Traffic Analysis Phase E (Buildout) | ●             | ● | ● | ● | ● | <ul style="list-style-type: none"> <li>- All roads listed in Phase D;</li> <li>- Lilac Hills Ranch Rd, north of Covey Ln to Main St; and</li> <li>- St "F", between W. Lilac Rd and Lilac Hills Ranch Rd.</li> </ul>  |

Source: Accretive Investments, Inc.; Chen Ryan Associates; January 2013 May 2014

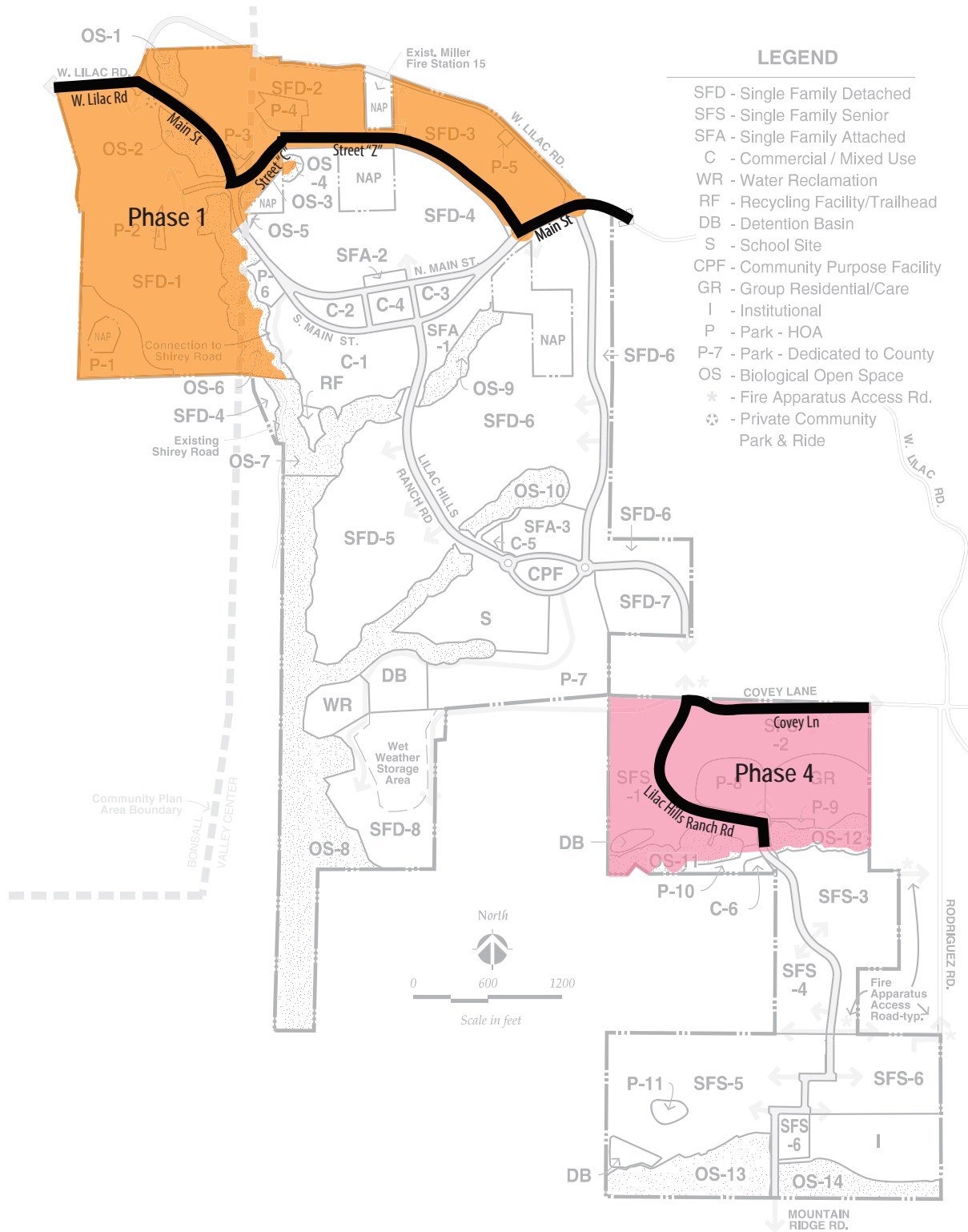
As displayed in the table, TA **Phase A** includes Phase 1 of the "Specific Plan"; TA **Phase B** includes Phases 1 and 4; TA **Phase C** includes Phases 1, 2, and 4; TA **Phase D** includes Phases 1, 2, 4, and 5; and **Phase E** includes all five Specific Plan phases.

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Traffic Analysis Phase A = Specific Phase 1

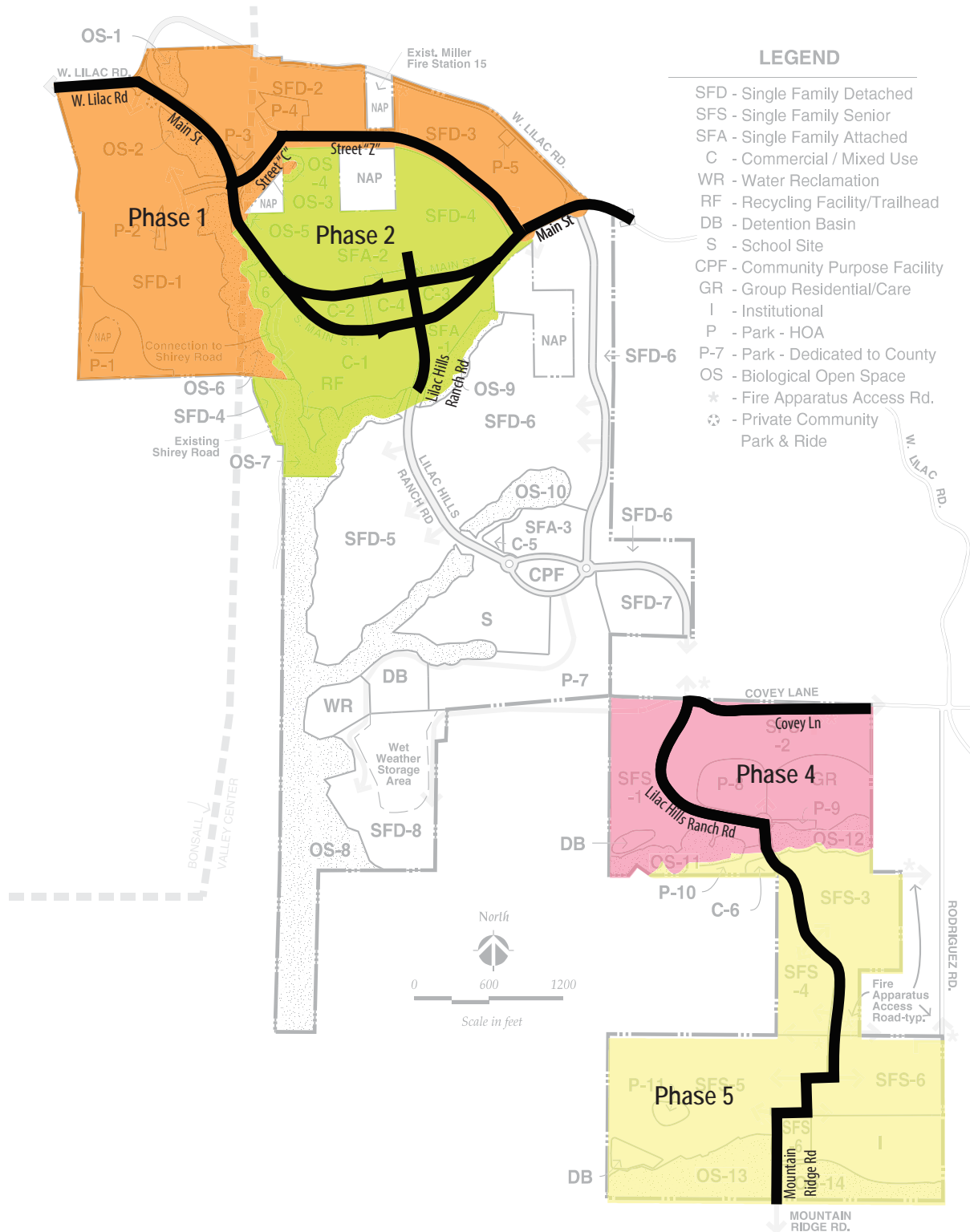




Traffic Analysis Phase B = Specific Phase 1 and Phase 4







Traffic Analysis Phase D = Specific Phase 1, Phase 2, Phase 4 and Phase 5







**Table 4.3** shows the project land use assumptions by traffic analysis phasing which represents the anticipated construction phasing. Phase E indicates project buildout. A number of statistical refinements were made to be consistent with the specific plan.

**TABLE 4.3**  
**PROJECT LAND USES BY TRAFFIC ANALYSIS PHASING**  
**BY SANDAG LAND USE CATEGORY**

| <u>SANDAG Equivalent Land Use</u>                         | Unit    | Phase A                   | Phase B                   | Phase C                    | Phase D                     | Phase E                     |
|---|---------|---------------------------|---------------------------|----------------------------|-----------------------------|-----------------------------|
| Single Family   | DU      | <del>350</del> <u>352</u> | <del>350</del> <u>352</u> | <del>546</del> <u>548</u>  | <del>546</del> <u>548</u>   | 903                         |
| Multi-Family  | DU      | -                         | -                         | 270                        | 270                         | 375                         |
| Senior Community  | DU      | -                         | 171                       | 171                        | 468                         | 468                         |
| Assisted Living   | Bed     | -                         | 200                       | 200                        | 200                         | 200                         |
| Specialty <del>Retail / Strip</del> Commercial            | KSF     | -                         | -                         | 55.0                       | 57.5                        | 61.5                        |
| Office  | KSF     | -                         | -                         | 25.0                       | 25.0                        | 28.5                        |
| Country Inn / B&B   | Room    | -                         | -                         | 50                         | 50                          | 50                          |
| Church  | AC      | -                         | -                         | -                          | <del>10.7</del> <u>10.1</u> | <del>10.7</del> <u>10.1</u> |
| Elementary School (K-5)                                   | Student | -                         | -                         | -                          | -                           | 568                         |
| Middle School (6-8)                                       | Student | -                         | -                         | -                          | -                           | 132                         |
| <u>CPF (Recreation Center / Fire Station)<sup>1</sup></u> | KSF     | -                         | -                         | -                          | -                           | 40.0                        |
| Neighborhood/County Park                                  | AC      | <del>3.2</del> <u>4.5</u> | <del>6.9</del> <u>8.2</u> | <del>9.7</del> <u>10.1</u> | <del>11.8</del> <u>10.1</u> | <del>23.8</del> <u>6</u>    |
| Water Reclamation   | AC      | -                         | -                         | -                          | -                           | 2.4                         |
| Recycling Center  | AC      | -                         | -                         | 0.6                        | 0.6                         | 0.6                         |

Source: Accretive Investments, Inc., Specific Plan Table 3, Chen Ryan Associates; ~~January 2013~~May 2014

Note:

<sup>1</sup> A 40,000 square-foot CPF area comprised of a 35,500 SF private recreational facility, and a potential 4,500 SF fire station.

## 4.3 Project Trip Generation, Distribution, and Assignment

### 4.3.1 Project Trip Generation

Trip generation rates for the proposed Lilac Hills Ranch project were developed utilizing SANDAG's *Guide to Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002). **Tables 4.4** through **4.8** display daily, as well as AM and PM peak hour project trip generation for the five TA phases (A-E), respectively.

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**TABLE 4.4**  
**LILAC HILLS RANCH PROJECT TRIP GENERATION**  
**- PHASE A**  
**BY SANDAG LAND USE CATEGORY**

| SANDAG Equivalent Land Use | Units  | Trip Rate | Daily Trips | AM Peak Hour |                                     | PM Peak Hour |                                       |
|----------------------------|--------|-----------|-------------|--------------|-------------------------------------|--------------|---------------------------------------|
|                            |        |           |             | %            | Trips                               | %            | Trips                                 |
| Single Family              | 350352 | 10 / DU   | 3,500520    | 8%           | 280282<br>(8485-in /<br>196197-out) | 10%          | 350352<br>(245246-in /<br>105106-out) |
| Neighborhood/County Park   | 3.24.5 | 5 / AC    | 1623        | 4%           | 1<br>(91-in / 0-out)                | 8%           | 12<br>(1-in / 1-out)                  |
| Total by Phase A           |        |           | 3,516543    |              | 281283<br>(8486-in /<br>196197-out) |              | 351354<br>(246247-in /<br>106107-out) |

Source: Chen Ryan Associates; January 2013May 2014

As shown in Table 4.4, Phase A of the proposed Lilac Hills Ranch project would generate a total of 3,516543 daily trips, including 281282 AM peak hour trips and 351353 PM peak hour trips. Minor statistical refinements were made to be consistent with the specific plan under Phase A which resulted in an additional 27 daily trips including 2 AM peak hour trips and 3 PM peak hour trips. However, based upon a review of Section 5.1 (Existing Plus Project Phase A Conditions), this minor increase in trip generation would not result in additional deficient facilities or significant traffic impacts. Hence, the traffic impact analysis in Chapter 5 was not modified.

**TABLE 4.5**  
**LILAC HILLS RANCH PROJECT TRIP GENERATION**  
**- PHASE B**  
**BY SANDAG LAND USE CATEGORY**

| SANDAG Equivalent Land Use | Units  | Trip Rate | Daily Trips | AM Peak Hour |                                      | PM Peak Hour |                                       |
|----------------------------|--------|-----------|-------------|--------------|--------------------------------------|--------------|---------------------------------------|
|                            |        |           |             | %            | Trips                                | %            | Trips                                 |
| Single Family              | 546352 | 10 / DU   | 5,4603,520  | 8%           | 437282<br>(13185-in /<br>306197-out) | 10%          | 546352<br>(382246-in /<br>164106-out) |
| Senior Community           | 171    | 4 / DU    | 684         | 5%           | 34<br>(14-in / 21-out)               | 7%           | 48<br>(29-in / 19-out)                |
| Assisted Living            | 200    | 2.5 / Bed | 500         | 4%           | 20<br>(12-in / 8-out)                | 8%           | 40<br>(20-in / 20-out)                |
| Neighborhood/County Park   | 8.2    | 5 / AC    | 41          | 4%           | 2<br>(1-in / 1-out)                  | 8%           | 3<br>(1-in / 2-out)                   |
| Total by Phase B           |        |           | 4,745       | -            | 338<br>(112-in / 226-out)            | -            | 443<br>(296-in / 147-out)             |

Source: Chen Ryan Associates; May 2014

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As shown in Table 4.5, the proposed Lilac Hills Ranch project would generate a total of 4,745 daily trips by the end of Phase B, including 338 AM peak hour trips and 443 PM peak hour trips. Minor statistical refinements were made to be consistent with the specific plan under Phase B which resulted in an additional 26 daily trips including 2 AM peak hour trip and 2 PM peak hour trips. However, based upon a review of Section 5.2 (Existing Plus Project Phase B Conditions), this minor increase in trip generation would not result in additional deficient facilities or significant traffic impacts. Hence, the traffic impact analysis in Chapter 5 was not modified.

**TABLE 4.6**  
**LILAC HILLS RANCH PROJECT TRIP GENERATION - PHASE C**  
**BY SANDAG LAND USE CATEGORY**

| SANDAG Equivalent Land Use          | Units | Trip Rate | Daily Trips | AM Peak Hour |                                 | PM Peak Hour |                                   |
|-------------------------------------|-------|-----------|-------------|--------------|---------------------------------|--------------|-----------------------------------|
|                                     |       |           |             | %            | Trips                           | %            | Trips                             |
| Single Family                       | 548   | 10 / DU   | 5,480       | 8%           | 438<br>(131-in / 307-out)       | 10%          | 548<br>(384-in / 164-out)         |
| Multi-Family                        | 270   | 6 / DU    | 1,620       | 8%           | 130<br>(26-in / 104-out)        | 9%           | 146<br>(102-in / 44-out)          |
| Senior Community                    | 171   | 4 / DU    | 684         | 5%           | 34<br>(14-in / 21-out)          | 7%           | 48<br>(29-in / 19-out)            |
| Assisted Living                     | 200   | 2.5 / Bed | 500         | 4%           | 20<br>(12-in / 8-out)           | 8%           | 40<br>(20-in / 20-out)            |
| Specialty/Retail / Strip Commercial | 55.0  | 40 / KSF  | 2,200       | 3%           | 66<br>(40-in / 26-out)          | 9%           | 198<br>(99-in / 99-out)           |
| Office                              | 25.0  | 14 / KSF  | 350         | 15%          | 53<br>(47-in / 5-out)           | 15%          | 53<br>(11-in / 42-out)            |
| Country Inn / B&B                   | 50    | 9 / Room  | 450         | 8%           | 36<br>(14-in / 22-out)          | 9%           | 41<br>(24-in / 16-out)            |
| Neighborhood/County Park            | 9.70  | 5 / AC    | 4945        | 4%           | 2<br>(1-in / 1-out)             | 8%           | 4<br>(2-in / 2-out)               |
| Recycling Center                    | 0.6   | 6 / AC    | 4           | 11%          | 0<br>(0-in / 0-out)             | 10%          | 0<br>(0-in / 0-out)               |
| Total by Phase C                    |       |           | 11,317333   |              | 778779<br>(285-in / 492493-out) |              | 1,075077<br>(669671-in / 406-out) |

Source: Chen Ryan Associates: January 2013May 2014

As shown in Table 4.6, the proposed Lilac Hills Ranch project would generate a total of 11,317333 daily trips by the end of Phase C, including 778779 AM peak hour trips and 1,075077 PM peak hour trips. Minor statistical refinements were made to be consistent with the specific plan under Phase C which resulted in an additional 16 daily trips including 1 AM peak hour trip and 2 PM peak hour trips. However, based upon a review of Section 5.3 (Existing Plus Project Phase C Conditions), this minor increase in trip generation would not result in additional deficient facilities or significant traffic impacts. Hence, the traffic impact analysis in Chapter 5 was not modified.

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**TABLE 4.7**  
**LILAC HILLS RANCH PROJECT TRIP GENERATION**  
**- PHASE D**  
**BY SANDAG LAND USE CATEGORY**

| SANDAG Equivalent Land Use                     | Units                | Trip Rate | Daily Trips            | AM Peak Hour |   | PM Peak Hour |   |
|--|----------------------|-----------|------------------------|--------------|---|--------------|---|
|  |                      |           |                        | %            | Trips   | %            | Trips   |
| Single Family                                  | <del>546</del> 548   | 10 / DU   | 5,460 <del>480</del>   | 8%           | <del>437</del> 438<br>(131-in / <del>306</del> 307-out) | 10%          | <del>382</del> 384<br>(164-in / 164-out)              |
| Multi-Family                                   | 270                  | 6 / DU    | 1,620                  | 8%           | 130<br>(26-in / 104-out)                                | 9%           | 146<br>(102-in / 44-out)                              |
| Senior Community                               | 468                  | 4 / DU    | 1,872                  | 5%           | 94<br>(37-in / 56-out)                                  | 7%           | 131<br>(79-in / 52-out)                               |
| Assisted Living                                | 200                  | 2.5 / Bed | 500                    | 4%           | 20<br>(12-in / 8-out)                                   | 8%           | 40<br>(20-in / 20-out)                                |
| Specialty <del>Retail</del> / Strip Commercial | 57.5                 | 40 / KSF  | 2,300                  | 3%           | 69<br>(41-in / 28-out)                                  | 9%           | 207<br>(104-in / 104-out)                             |
| Office   | 25.0                 | 14 / KSF  | 350                    | 15%          | 53<br>(47-in / 5-out)                                   | 15%          | 53<br>(11-in / 42-out)                                |
| Country Inn / B&B                              | 50                   | 9 / Room  | 450                    | 8%           | 36<br>(14-in / 22-out)                                  | 9%           | 41<br>(24-in / 16-out)                                |
| Church   | 10. <del>70</del>    | 30 / AC   | <del>324</del> 300     | 5%           | <del>16</del> 15<br>(109-in / 6-out)                    | 8%           | <del>131</del> 24<br>(1312-in / <del>1312</del> -out) |
| Neighborhood/County Park                       | <del>11.8</del> 10.1 | 5 / AC    | <del>59</del> 51       | 4%           | 2<br>(1-in / 1-out)                                     | 8%           | <del>54</del><br>(2-in / 2-out)                       |
| Recycling Center                               | 0.6                  | 6 / AC    | 4                      | 11%          | 0<br>(0-in / 0-out)                                     | 10%          | 0<br>(0-in / 0-out)                                   |
| Total by Phase D                               |                      |           | 12, <del>936</del> 927 |              | 856<br>(320-in / 536-out)                               |              | 1,194<br>(737-in / 457-out)                           |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

As shown in Table 4.7, the proposed Lilac Hills Ranch project would generate a total of 12,~~936~~927 daily trips by the end of Phase D, including 856 AM peak hour trips and 1,194 PM peak hour trips. Minor statistical refinements were made to be consistent with the specific plan under Phase D which resulted in a reduction of 9 daily trips. Since this decrease in trip generation would not change the findings in deficient facilities or significant traffic impacts in Section 5.4 (Existing Plus Phase D Conditions), the traffic impact analysis in Chapter 5 was not modified.

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**TABLE 4.8**  
**LILAC HILLS RANCH PROJECT TRIP GENERATION**  
**- PHASE E - (BUILDOUT)**  
**BY SANDAG LAND USE CATEGORY**

| <u>SANDAG Equivalent Land Use</u>                                | Units | Trip Rate     | Daily Trips        | AM Peak Hour |                                     | PM Peak Hour |   |
|--|-------|---------------|--------------------|--------------|-------------------------------------|--------------|---|
|  |       |               |                    | %            | Trips                               | %            | Trips                                   |
| Single Family  | 903   | 10 / DU       | 9,030              | 8%           | 722<br>(217-in / 506-out)           | 10%          | 903<br>(632-in / 271-out)               |
| Multi-Family   | 375   | 6 / DU        | 2,250              | 8%           | 180<br>(36-in / 144-out)            | 9%           | 203<br>(142-in / 61-out)                |
| Senior Community   | 468   | 4 / DU        | 1,872              | 5%           | 94<br>(37-in / 56-out)              | 7%           | 131<br>(79-in / 52-out)                 |
| Assisted Living  | 200   | 2.5 / Bed     | 500                | 4%           | 20<br>(12-in / 8-out)               | 8%           | 40<br>(20-in / 20-out)                  |
| Specialty <del>Retail</del> / Strip Commercial                   | 61.5  | 40 / KSF      | 2,460              | 3%           | 74<br>(44-in / 30-out)              | 9%           | 221<br>(111-in / 111-out)               |
| Office   | 28.5  | 14 / KSF      | 399                | 15%          | 60<br>(54-in / 6-out)               | 15%          | 60<br>(12-in / 48-out)                  |
| Country Inn / B&B  | 50    | 9 / Room      | 450                | 8%           | 36<br>(14-in / 22-out)              | 9%           | 41<br>(24-in / 16-out)                  |
| Church   | 10.70 | 30 / AC       | <del>324</del> 300 | 5%           | <del>1615</del><br>(109-in / 6-out) | 8%           | <del>2624</del><br>(1312-in / 1312-out) |
| Elementary School (K-5)  | 568   | 1.6 / Student | 909                | 32%          | 291<br>(175-in / 116-out)           | 9%           | 82<br>(33-in / 49-out)                  |
| Middle School (6-8)  | 132   | 1.4 / Student | 185                | 30%          | 56<br>(33-in / 22-out)              | 9%           | 17<br>(7-in / 10-out)                   |
| CPF (Recreation Center) <sup>2</sup> / Fire Station <sup>1</sup> | 40.0  | 22.88 / KSF   | 915                | 12%          | 108<br>(57-in / 51-out)             | 10%          | 95<br>(38-in / 57-out)                  |
| Neighborhood/County Park   | 23.86 | 5 / AC        | <del>119</del> 118 | 4%           | 5<br>(2-in / 2-out)                 | 8%           | 10<br>(5-in / 5-out)                    |
| Water Reclamation  | 2.4   | 6 / AC        | 14                 | 11%          | 2<br>(1-in / 1-out)                 | 10%          | 1<br>(1-in / 1-out)                     |
| Recycling Center   | 0.6   | 6 / AC        | 4                  | 11%          | 0<br>(0-in / 0-out)                 | 10%          | 0<br>(0-in / 0-out)                     |
| Total by Phase E - Buildout                                      |       |               | 19,428406          |              | 1,663<br>(693692-in / 970-out)      |              | 1,829828<br>(1,115-in / 714713-out)     |
| Internal Capture   |       |               | 22%                |              | 30%                                 |              | 22%                                     |
| Total External Trips   |       |               | 15,151             | -            | 1,171<br>(431-in / 739-out)         | -            | 1,433<br>(908-in / 525-out)             |

Source: Specific Plan Table 3, Chen Ryan Associates; January 2013~~May 2014~~

Notes:

<sup>1</sup> A 40,000 square-foot CPF area comprised of a 35,500 SF private recreational facility, and a potential 4,500 SF fire station.

<sup>2</sup> Trip generation rate is based on ITE Trip Generation Manual 8th Edition.

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As shown in Table 4.8, the proposed Lilac Hills Ranch project would generate a total of 19,428,406 daily trips by the end of Phase E (project buildout), including 1,663 AM peak hour trips and 1,829,828 PM peak hour trips. Minor statistical refinements were made to be consistent with the specific plan under Phase E which resulted in a reduction of 22 daily trips. Since this decrease in trip generation would not change the findings in deficient facilities or significant traffic impacts in Section 5.5 (Existing Plus Phase E Conditions), the traffic impact analysis in Chapter 5 was not modified.

In addition to the minor land use changes above, a potential fire station is also proposed on the recreation center site located within the CPF area in Phase 3 (Traffic Analysis Phase E, the final development phase). The fire station is estimated to be 4,500 square feet and staffed with maximum 3-person crews. Since a fire station trip generation rate is not available in both SANDAG's Guide to Vehicular Traffic Generation Rates for the San Diego Region (SANDAG, April 2002) and ITE Trip Generation Manual (8th Edition), a trip generation survey was conducted at existing fire stations in the area of the project. A total of nine fire stations participated in the survey and it was determined that the average daily trip per personnel is 4.34 trips, while the highest is 5.33. The 5.33 trips/personnel rate was chosen to utilize the most conservative trip generation rate. As a result, the 4,500 square-foot Lilac Hills Ranch project fire station is estimated to generate 16 trips per day. The detailed fire station trip generation survey data is included **Appendix H**.

The fire station and recreation center combined would not exceed a total of 40,000 square feet. Since the fire station has a much lower trip generation rate than the recreation center (@ 22.88 trips per 1,000 square feet), the traffic analysis in the TIS evaluated the worst case scenario.

An interim fire station with up to three (3) staff could be located anywhere within the project site. However, this fire station (approximately 16 ADT) would be built in place of two equivalent dwelling units (20 ADT) and would not result in additional traffic to the overall project based on the fire station trip generation survey.

Each trip generation rate includes a number of trip purposes, generally categorized as home based work (HBW), home based other (HBO, consists of shopping, school, recreation, etc.) and non-home based (NHB) trips. For developments with mixed land uses, many of the trips generated would have been served on-site. For example, shopping trips (a part of HBO) would be satisfied by the commercial uses within the project site, as would school trips and recreational trips. The same logic would apply to the trip production/attraction interactions between office and commercial uses. It is a common practice, both nationwide and in the San Diego region, to allow for trip reductions reflecting the internal capture of trips associated with mixed-use developments resulting from the fact that complementary land uses (i.e. residential and commercial) help to serve each other's needs on-site.

The proposed Lilac Hills Ranch project includes residential, commercial, office, school, and recreational uses and not all trips generated would leave the project site given the nature of the project land uses. Estimates for internal versus external trip generation percentages were developed based upon likely origins/destinations of each land use type. ~~For the purpose of this~~

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study, it was assumed that approximately 10% of the trips generated by residential (single-family, multi-family, and senior community), office, and country inn would remain internal to the project site. Other land uses are proposed primarily to support shopping, school, recreational, etc. needs (HBO) for residents of the Lilac Hills Ranch project. As a result, higher internal capture rates were assumed for these land uses, including 50% for commercial, church, recreation center, water reclamation facility, and recycling center, and 80% for school and parks. Project trips were disaggregated into those that would remain within the project site (internally captured), and those that would leave the project site (external trips). Only external trips were distributed and assigned to the study area roadways at project buildout (Phase E).

Table 4.9 displays the proportion of internal and external project trips at project buildout. As shown, a rate of 22% internal trip capture was derived based on interaction among each land use type as described above. As shown in Table 4.8, 22% of daily trips, 30% of AM peak hour trips, and 22% of PM peak hour trips were considered as internal trip capture rates for this TIS. The proposed on-site K-8 school is intended to serve the Lilac Hills Ranch project. A majority of the traffic generated by this school would be internal trips which would not leave the project site. Based on the SANDAG's Guide to Vehicular Traffic Generation Rates for the San Diego Region (SANDAG, April 2002), approximately one-third of school trip generation occurs during the AM peak hour. Therefore, a higher AM peak hour internal capture rate of 30% (vs. 22% for daily and for the PM peak hour) is utilized for the overall project.

For comparison purposes, a SANDAG Select Zone Assignment was conducted with the entire project land uses modeled in one Traffic Analysis Zone (TAZ) and the model output indicated a 28.8% daily internal capture rate for this project. The ITE Multi-Use Trip Generation Calculation was also performed and it resulted in internal capture rates of 22.2% (daily), 35.8% (AM peak), and 22.3% (PM peak). Both the SANDAG model output ~~is~~ and ITE Multi-Use Trip Generation Calculation worksheets are included in **Appendix I**.

#### **Specialty Retail and Single Tenant Office Discussion**

The proposed project could include the following commercial/retail uses as listed in the Project's Specific Plan document. The specific commercial retail tenants are not known at this time.

Lilac Hills Ranch will include an 80,000 square foot mixed-use pedestrian oriented town center. The town center is designed to feature specialty retail stores, such as a butcher shop, bakery, deli, general merchandise store (general store), hardware store, drug store and produce vendors. By using a number of specialty retailers, residents within the community would be able to visit a variety of different businesses without generating additional vehicle trips to travel to different locations to meet their needs. The town center will be centered along a main street with individual merchant storefronts contributing to the pedestrian orientation, contrary to large commercial grocery centers which combine all of these uses under one big-box structure. Other allowable uses within the Town Center include single-family attached residential; commercial and residential mixed-use; restaurants, cafes; a Farmer's Market; a 50-room Country Inn; single tenant offices and flex-office space such as co-merge; veterinary clinic

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with boarding of small animals; public uses, religious institutional; post office, library; quasi-public uses such as a day care facility; transit node; utilities necessary to serve the Specific Plan area and other uses as authorized by the C34 Use Regulation.

As part of the specialty retail, the town center will include a general store of up to 25,000 square feet of leasable area, which is designed as a rural general merchandise store that carries a broad selection of merchandise, staple food items, household goods and specialty items. The store is intended as the place where people from the town and surrounding rural areas come to purchase all their general goods. This differs from a convenience store or grocery store in that it will be the main shop for the community rather than a regional grocery store that typically exceed 50,000 square feet of leasable area. The concept of the general store originated in many historic towns and villages when it was an important feature of a pedestrian-oriented place.

Lilac Hills Ranch will also include two neighborhood centers, supporting up to 2,500 square feet and 7,500 square feet of leasable area respectively. Allowable uses within the Neighborhood Centers include single-family attached residential, neighborhood-serving commercial; schools; retail shops and services; restaurants and cafes; private recreation facilities; veterinary clinic with boarding of small animals; public uses; religious and institutional uses; quasi-public uses such as a day care facility; transit node; post office and library; utilities necessary to serve the Specific Plan area and other uses as authorized by the C34 Use Regulations.

#### **A. SANDAG TRIP RATES**

##### **Specialty Retail**

In analyzing the potential impacts associated with the proposed project, the Lilac Hills Ranch traffic study (TIS) utilized a trip generation rate referred to as "Specialty Retail/Strip Commercial" ("SR/SC") for the future commercial/retail uses. The SR/SC rate is 40 vehicle trips per thousand square feet. This rate was derived utilizing SANDAG's Guide to Vehicular Traffic Generation Rates for the San Diego Region (April 2002).

SANDAG describes the SR/SC type of commercial use in its 9/18/07 land use definitions (See **Appendix J**) as "tourist or specialty commercial shopping areas such as Seaport Village, Marina Village, Ferry Landing at Coronado, Bazaar del Mundo, Flower Hill, Glasshouse Square, The Lumberyard, Park Plaza at the Village, Promenade, Belmont Park, Del Mar Plaza." ([http://www.sandag.org/resources/maps\\_and\\_gis/gis\\_downloads/downloads/codes/Land\\_Use\\_Definitions.html](http://www.sandag.org/resources/maps_and_gis/gis_downloads/downloads/codes/Land_Use_Definitions.html)). Importantly, however, although some of the illustrative examples include "tourist" areas, which differ from the uses proposed as part of the Lilac Hills Ranch project, the majority of the shopping areas listed by SANDAG include high traffic generating land uses including sit down high turnover restaurants that would generate 160 ADT/1,000 SF, fast food restaurants that would generate 700 ADT/1,000 SF, and convenience market (7-Eleven) that would generate 700 ADT/1,000 SF, as well as a variety of other different businesses such as a small general market. The following table describes some of the land uses included in the SANDAG listed example sites:

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| <u>SANDAG Selected Site</u>   | <u>Example Land Uses</u>  |
|-------------------------------|---|
| <u>Seaport Village</u>        | <ul style="list-style-type: none"> <li>• <u>Restaurants (Edgewater Grill, Greek Islands Café, Harbor House, etc.)</u></li> <li>• <u>Banks (ATM Direct, Chase, Wells Fargo, etc.)</u></li> <li>• <u>Shops (The Candy Shack, Wetzel's Pretzels, Crazy Shirts, Destination Travel, Paradise Bakery, etc.)</u></li> </ul>                                     |
| <u>Coronado Ferry Landing</u> | <ul style="list-style-type: none"> <li>• <u>Restaurants (Burger King, Village Pizzeria Bayside, Little Piggy's BBQ, Peohe's Restaurant, etc.)</u></li> <li>• <u>Shops (Art for Wildlife Galleries, Coronado Cupcakery, Bikes &amp; Beyond, Men's Inland Sportswear, Cold Stone Creamery, etc.)</u></li> </ul>   |
| <u>Flower Hill</u>            | <ul style="list-style-type: none"> <li>• <u>Restaurants (Milton's Restaurant, Chipotle Mexican Grill, Burger Lounge, Pannikin Coffee &amp; Tea, etc.)</u></li> <li>• <u>Shops (Yogurt-Land, Geppeto's Toys, Spa Gregories, Corepower Yoga, The Wine Connection, etc.)</u></li> <li>• <u>convenience market with gas pumps (Mobil/Circle K)</u></li> </ul> |
| <u>GlassHouse Square</u>      | <ul style="list-style-type: none"> <li>• <u>Restaurants (Del Taco, In-N-Out Burger, Chuck E Cheese, Panda Express, etc.)</u></li> <li>• <u>Shops (T Mobile, Sleep Train, etc.)</u></li> <li>• <u>convenience market (7-Eleven)</u></li> </ul>   |
| <u>Del Mar Plaza</u>          | <ul style="list-style-type: none"> <li>• <u>Restaurants (Del Mar Rendezvous, Smashburger, Pacifica Breeze Cafe, Pacifica Del Mar, etc.)</u></li> <li>• <u>Shops (White House/Black Market, Haim Salon, Del Mar Chocolate Bar, Sunglass Hut, etc.)</u></li> <li>• <u>Supermarket (Harvest Ranch - since closed)</u></li> </ul>                             |

Despite a number of high traffic generating land uses, SANDAG has assigned a trip rate of 40 ADT/1,000 SF for these types of commercial uses, as opposed to rates of over 100 ADT/1,000 SF that otherwise would apply. However, while the SR/SC rate appears low relative to restaurant or grocery store trip rates, the lower rate accounts for the fact that each use is located within walking distance of the other uses. That is the essence of each of the specialty commercial shopping areas SANDAG listed as examples in describing the rate – one vehicle trip to Seaport Village or Flower Hill, for example, would potentially enable the driver to visit a half dozen different businesses without generating additional vehicle trips, thereby substantially reducing the number of trips that otherwise would be generated if these uses were situated in different locations requiring a separate trip to each location.

Similarly, Lilac Hills Ranch is to be developed into a pedestrian oriented self-sustainable community in which all of the residential units would be located within one-half-mile of the community serving commercial areas, and the commercial areas would include multiple businesses. This plan would similarly promote walking and cycling, and the related reduction of vehicular travel.

Overall, because the project does not propose the type of high traffic generating, high turnover type land uses that in part characterize the commercial uses utilized by SANDAG in calculating the 40/1,000 SF SC/SR rate, the proposed project land uses are expected to generate **less** traffic

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than what the SANDAG defined commercial uses would generate (as described above) and therefore the SR/SC rate is the most appropriate for this analysis.

#### Single Tenant Office

In analyzing the potential impacts associated with the proposed project, the Lilac Hills Ranch traffic study (TIS) utilized a trip generation rate referred to as "Single Tenant Office" for the proposed office uses. The single tenant office rate is 14 vehicle trips per thousand square feet. This rate was derived utilizing SANDAG's Guide to Vehicular Traffic Generation Rates for the San Diego Region (April 2002).

As identified previously, the project proposes single tenant offices and flex-office space such as co-merge. Co-merge/co-working office spaces provide an official work space for tele-commuters, start-ups, consultants, small businesses, and non-profits. These spaces offer a variety of amenities, including but not limited to official mailing addresses and mail boxes, phone routing and event spaces.

Phone interviews were conducted on 3/3/2014 with seven (7) co-merge/co-working office spaces in the San Diego region and the table below displays the location of the office space, the average people that use the office per day, the square feet of the office space, and the average people per thousand square feet (KSF).

| Company Name             | Location                    | Average People Per Day | Sq. Ft        | People Per KSF |
|--------------------------|-----------------------------|------------------------|---------------|----------------|
| <u>Hive-Haus</u>         | <u>East Village</u>         | <u>25</u>              | <u>5,500</u>  | <u>5</u>       |
| <u>PBC Carlsbad</u>      | <u>2173 Salk Ave.</u>       | <u>40</u>              | <u>18,469</u> | <u>3</u>       |
| <u>Ansir Innovations</u> | <u>4685 Convoy St. #210</u> | <u>35</u>              | <u>13,000</u> | <u>3</u>       |
| <u>Co-Merge SD</u>       | <u>330 A Street</u>         | <u>50</u>              | <u>10,000</u> | <u>5</u>       |
| <u>Hera-Hub</u>          | <u>Serrento Valley</u>      | <u>15</u>              | <u>4,800</u>  | <u>4</u>       |
|                          | <u>Mission Valley</u>       | <u>15</u>              | <u>4,000</u>  | <u>4</u>       |
|                          | <u>Carlsbad</u>             | <u>15</u>              | <u>3,700</u>  | <u>5</u>       |

Source: Chen Ryan Associates: May 2014

As shown above, there are roughly 4 people per thousand square foot of office space in the respondent locations. ITE Trip Generation Manual, 9<sup>th</sup> Edition includes a trip generation rate per employee for general office uses (see Appendix J), and this rate is 3.32 per employee. With an average of 4 people per 1KSF as determined based on other similar uses, a trip generation rate of 13.3 trips per 1KSF was derived for co-merge/co-working office. This rate of 13.3 is less than the rate of 14 which is utilized in the TIS for impact assessment.

#### B. VALIDATION EXERCISE

To illustrate the propriety of use of the 40/1,000 SF trip generation rate for the Lilac Hills Ranch commercial/retail uses, the traffic engineer worked with SANDAG to conduct a new select zone

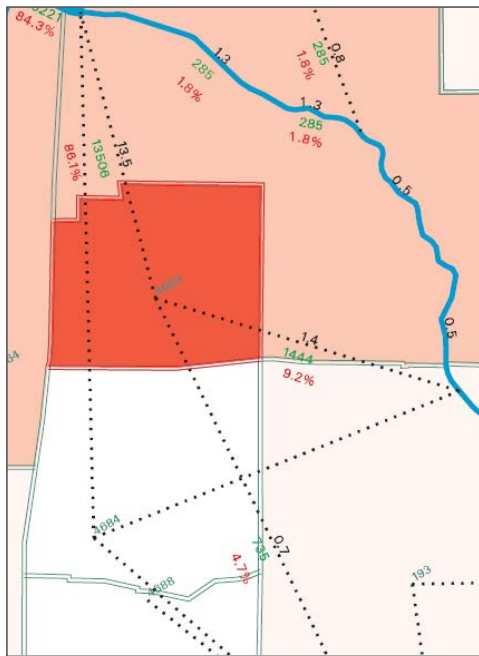
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assignment that replaced 25,000 SF of space analyzed in the TIS at the SR/SC rate of 40/1,000 SF with a "supermarket" trip rate of 150/1,000 SF, which is the rate typically applied to high traffic, large-scale grocery stores such as Von's or Ralphs. The new select zone assignment also replaced 28,500 SF of single-tenant office space analyzed in the TIS at a rate of 14/1,000 SF with 28,500 SF of space analyzed at the "standard commercial office" trip rate of 20/1,000 SF. All other land uses, amounts, and trip rates utilized were unchanged from those in the TIS. The purpose of the analysis was to determine whether use of these higher trip generation rates for these two use types would alter the results of the analysis presented in the TIS.

Below is a screenshot showing the specific land uses that were coded into the model by SANDAG. As shown, the uses included the "LH Supermarket" and "Standard Commercial Office." Based on the land use mix coded into the model for this exercise, SANDAG forecasts an internal capture rate of 30.5%, which reflects the higher attraction rate attributable to a "supermarket" use than "specialty retail/strip commercial" uses.

| ----- Land Use ----- |      |                            |       |        | -----Trips----- |         |
|----------------------|------|----------------------------|-------|--------|-----------------|---------|
| Zone                 | Code | Name                       | Type  | Amount | Person          | Vehicle |
| 4683                 | 112  | LH SENIOR SINGLE FAMILY    | du    | 468.0  | 2902.           | 2025.   |
| 4683                 | 121  | SINGLE FAMILY              | du    | 903.0  | 13003.          | 9076.   |
| 4683                 | 122  | MULTI-FAMILY               | du    | 375.0  | 3225.           | 2264.   |
| 4683                 | 1410 | CONGREGATE CARE            | other | 200.0  | 720.            | 506.    |
| 4683                 | 1512 | LH BED & BREAKFAST         | room  | 50.0   | 815.            | 502.    |
| 4683                 | 2302 | RECYCLING CENTER           | site  | 0.6    | 4.              | 4.      |
| 4683                 | 5014 | LH SUPERMARKET             | ksf   | 25.0   | 5297.           | 3749.   |
| 4683                 | 5030 | STRIP COMMERCIAL           | ksf   | 36.5   | 1832.           | 1331.   |
| 4683                 | 6032 | STANDARD COMMERCIAL OFFICE | ksf   | 28.5   | 744.            | 573.    |
| 4683                 | 6119 | WATER RECLAMATION          | site  | 2.4    | 20.             | 14.     |
| 4683                 | 6132 | CHURCH                     | acre  | 10.0   | 391.            | 301.    |
| 4683                 | 6806 | ELEMENTARY SCHOOL          | site  | 1.0    | 2117.           | 1183.   |
| 4683                 | 7230 | LH YMCA                    | ksf   | 40.0   | 1344.           | 917.    |
| 4683                 | 7613 | LH ACTIVE PARK II          | site  | 23.6   | 182.            | 120.    |
| 4683                 |      | TOTAL                      |       |        | 32597.          | 22564.  |

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External trips  
 $= 13,506 + 1444 + 735$   
 $= 15,685$  daily trips

Internal Capture %  
 $= (22,564 - 15,685) / 22,564$   
 $= 30.5\%$

As shown, the internal capture rate would increase to 30.5% with supermarket and standard commercial office uses.

Once the information was coded into the SANDAG model, the next step was to calculate the number of external trips that would be generated under this scenario, i.e., the number of external trips that would be generated under a scenario assuming a 25,000 SF supermarket and 28,500 SF of standard commercial office space. **Table 4.9** illustrates the calculations undertaken and the results of that process.

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**TABLE 4.9**  
**TRIP GENERATION COMPARISON**

| <u>Scenario</u>  | <u>Total Trip Generation</u> |                |                | <u>External Trip Generation</u> |                |                |
|--|------------------------------|----------------|----------------|---------------------------------|----------------|----------------|
|  | <u>Daily</u>                 | <u>AM Peak</u> | <u>PM Peak</u> | <u>Daily</u>                    | <u>AM Peak</u> | <u>PM Peak</u> |
| <u>Studied in this TIS</u><br><u>(22% internal capture)</u>  | <u>19,406</u>                | <u>1,663</u>   | <u>1,828</u>   | <u>15,141</u>                   | <u>1,171</u>   | <u>1,432</u>   |
| <u>w/ 25 KSF Supermarket &amp; 28.5</u><br><u>KSF Standard Office</u><br><u>(30.5% internal capture)</u> | <u>22,327</u>                | <u>1,802</u>   | <u>2,126</u>   | <u>15,517</u>                   | <u>1,252</u>   | <u>1,478</u>   |
| <u>25 KSF Supermarket</u><br><u>(30.5% internal capture)</u>   | <u>3,750</u>                 | <u>150</u>     | <u>375</u>     | <u>2,606</u>                    | <u>104</u>     | <u>261</u>     |
| <u>Pass-by Reduction</u><br><u>(15% daily/AM &amp; 40% PM)</u>   |                              |                |                | <u>-391</u>                     | <u>-16</u>     | <u>-104</u>    |
| <u>Transit Reduction<sup>1</sup></u><br><u>(5% AM and PM)</u>  |                              |                |                | <u>-131</u>                     | <u>-62</u>     | <u>-69</u>     |
| <u>Final Trip Generation w/ 25</u><br><u>KSF Supermarket &amp; 28.5 KSF</u><br><u>Standard Office</u>    |                              |                |                | <u>14,995</u>                   | <u>1,174</u>   | <u>1,305</u>   |
| <u>Change in Trip Generation</u>   |                              |                |                | <u>-146</u>                     | <u>+3</u>      | <u>-127</u>    |

Source: Chen Ryan Associates- May 2014

Note:

<sup>1</sup>As indicated in Chapter 15 (Transportation Demand Management Program) of this TIS, an interim transit connections would be provided between Lilac Hills Ranch and the planned regional transit system, until such transit system is extended to the community.

As shown in Table 4.9, the number of external trips that would be generated by the project assuming a 25,000 square-foot supermarket and 28,500 square feet of standard commercial office uses (14,995 ADT) would be almost identical to the number of external trips that would be generated under the land uses and trip rates utilized in the TIS (15,141 ADT). Therefore, it can be concluded that the trip rates used in the TIS are reasonable and accurate, and the conclusions reached in the TIS would not change even if different trip rates had been utilized for the commercial retail and office spaces proposed under the project.

#### **Plan-to-Plan Trip Generation**

As described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”, horizon year traffic volumes were revised and this change is referred to as “Change 2”. The Lilac Hills Ranch Development occupies portions of three Traffic Analysis Zones (TAZs 157, 183, and 4694) in the currently adopted GP transportation forecast model, and these TAZs generate a total of 4,957 daily trips. The public review version of the TIS assumed that the Lilac Hills Ranch Development would replace approximately 75% of the 4,957 trips and this assumption turned out to be overly aggressive. It was later identified that the project would only replace 110 rural residential units (1,320 ADT) of the GP approved land uses. The Horizon Year 2030 Base traffic volumes were revised to reflect the adopted GP forecast; while the Horizon Year 2030 Base Plus Project traffic volumes were derived by adding the proposed Lilac

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Hills Ranch project traffic (subtracting traffic generated by the 110 units) to the Base Year GP modeled volumes. **Table 4.10** displays the amount of traffic generated by the proposed project which exceeds the amount generated by the General Plan approved land uses.

#### **4.3.2 Project Trip Distribution**

The distribution of the external project trips was based upon three (3) computer generated “Select Zone” assignments utilizing the Series 12 Year 2050 SANDAG Transportation Model, including 2008 base year, 2050 with Road 3, and without Road 3. The “Select Zone” assignments are included in **Appendix GK**. Separate trip distributions were developed in conjunction with the varying roadway networks assumed under each of the analysis scenarios, as discussed below:

- Existing + Project (phased) – based upon the “2008 base year” assignments with minor adjustments reflecting project access and frontage assumptions for each of the traffic analysis phases. **Appendix HL** includes project trip distribution by phase along project frontage and access roads.

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**TABLE 4.9  
LILAC HILLS RANCH INTERNAL AND EXTERNAL PROJECT TRIPS  
PHASE E—BUILDOUT**

|                            |             |       |                           |                           |     |       |                          |                         |     |       |                           |                           |
|----------------------------|-------------|-------|---------------------------|---------------------------|-----|-------|--------------------------|-------------------------|-----|-------|---------------------------|---------------------------|
| Single-Family              | 903-DU      | 9,030 | 722<br>(217-in / 506-out) | 903<br>(632-in / 271-out) | 10% | 903   | 72<br>(22-in / 51-out)   | 90<br>(63-in / 27-out)  | 90% | 8,127 | 650<br>(195-in / 455-out) | 813<br>(569-in / 244-out) |
| Multi-Family               | 375-DU      | 2,250 | 180<br>(36-in / 144-out)  | 203<br>(142-in / 61-out)  | 10% | 225   | 18<br>(4-in / 14-out)    | 20<br>(14-in / 6-out)   | 90% | 2,025 | 162<br>(32-in / 130-out)  | 182<br>(128-in / 55-out)  |
| Senior Community           | 468-DU      | 1,872 | 94<br>(37-in / 56-out)    | 131<br>(79-in / 52-out)   | 10% | 187   | 9<br>(4-in / 6-out)      | 13<br>(8-in / 5-out)    | 90% | 1,685 | 84<br>(34-in / 51-out)    | 118<br>(71-in / 47-out)   |
| Assisted Living            | 200-bed     | 500   | 20<br>(12-in / 8-out)     | 40<br>(20-in / 20-out)    | 10% | 50    | 2<br>(1-in / 1-out)      | 4<br>(2-in / 2-out)     | 90% | 450   | 18<br>(11-in / 7-out)     | 36<br>(18-in / 18-out)    |
| Specialty/Strip Commercial | 61.5-KSF    | 2,460 | 74<br>(44-in / 30-out)    | 221<br>(111-in / 111-out) | 50% | 1,230 | 37<br>(22-in / 15-out)   | 111<br>(55-in / 55-out) | 50% | 1,230 | 37<br>(22-in / 15-out)    | 111<br>(55-in / 55-out)   |
| Office                     | 28.5-KSF    | 399   | 60<br>(54-in / 6-out)     | 60<br>(12-in / 48-out)    | 10% | 40    | 6<br>(5-in / 1-out)      | 6<br>(1-in / 5-out)     | 90% | 359   | 54<br>(48-in / 5-out)     | 54<br>(11-in / 43-out)    |
| Country Inn / B&B          | 50-room     | 450   | 36<br>(14-in / 22-out)    | 41<br>(24-in / 16-out)    | 10% | 45    | 4<br>(1-in / 2-out)      | 4<br>(2-in / 2-out)     | 90% | 405   | 32<br>(13-in / 19-out)    | 36<br>(22-in / 15-out)    |
| Church                     | 10.7-AC     | 321   | 16<br>(10-in / 6-out)     | 26<br>(13-in / 13-out)    | 50% | 161   | 8<br>(5-in / 3-out)      | 13<br>(6-in / 6-out)    | 50% | 161   | 8<br>(5-in / 3-out)       | 13<br>(6-in / 6-out)      |
| Elementary School (K-5)    | 568 student | 909   | 291<br>(175-in / 116-out) | 82<br>(33-in / 49-out)    | 80% | 727   | 233<br>(140-in / 93-out) | 65<br>(26-in / 39-out)  | 20% | 182   | 58<br>(35-in / 23-out)    | 16<br>(7-in / 10-out)     |
| Middle School (6-8)        | 132 student | 185   | 56<br>(33-in / 22-out)    | 17<br>(7-in / 10-out)     | 80% | 148   | 44<br>(27-in / 18-out)   | 13<br>(5-in / 8-out)    | 20% | 37    | 11<br>(7-in / 4-out)      | 3<br>(1-in / 2-out)       |
| Recreation Center          | 40.0-KSF    | 915   | 108<br>(57-in / 51-out)   | 95<br>(38-in / 57-out)    | 50% | 458   | 54<br>(29-in / 25-out)   | 48<br>(19-in / 29-out)  | 50% | 458   | 54<br>(29-in / 25-out)    | 48<br>(19-in / 29-out)    |
| Neighborhood/ County Park  | 23.8-AC     | 119   | 5<br>(2-in / 2-out)       | 10<br>(5-in / 5-out)      | 80% | 95    | 4<br>(2-in / 2-out)      | 8<br>(4-in / 4-out)     | 20% | 24    | 1<br>(0-in / 0-out)       | 2<br>(1-in / 1-out)       |
| Water Reclamation          | 2.4-AC      | 14    | 2<br>(1-in / 1-out)       | 1<br>(1-in / 1-out)       | 50% | 7     | 1<br>(0-in / 0-out)      | 1<br>(0-in / 0-out)     | 50% | 7     | 1<br>(0-in / 0-out)       | 1<br>(0-in / 0-out)       |
| Recycling Center           | 0.6-AC      | 4     | 0<br>(0-in / 0-out)       | 0<br>(0-in / 0-out)       | 50% | 2     | 0<br>(0-in / 0-out)      | 0<br>(0-in / 0-out)     | 50% | 2     | 0<br>(0-in / 0-out)       | 0<br>(0-in / 0-out)       |

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TABLE 4.9  
LILAC HILLS RANCH INTERNAL AND EXTERNAL PROJECT TRIPS  
PHASE E—BUILDOUT

|       |  |        |                             |                               |     |       |                           |                           |     |        |                             |                             |
|-------|--|--------|-----------------------------|-------------------------------|-----|-------|---------------------------|---------------------------|-----|--------|-----------------------------|-----------------------------|
| Total |  | 19,428 | 1,663<br>(693-in / 970-out) | 1,829<br>(1,115-in / 714-out) | 22% | 4,278 | 492<br>(261-in / 231-out) | 396<br>(207-in / 189-out) | 78% | 15,151 | 1,171<br>(431-in / 739-out) | 1,433<br>(908-in / 525-out) |
|-------|--|--------|-----------------------------|-------------------------------|-----|-------|---------------------------|---------------------------|-----|--------|-----------------------------|-----------------------------|

Source: Chen Ryan Associates, January 2013

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- Existing + Cumulative Projects + Project (buildout) – based on the “Existing Plus Project (Phase E – Buildout)” assignments due to transportation network similarities. Pankey Road, north of SR-76 would be constructed with cumulative projects such as Campus Park, Campus Park West, and Meadowood.
  - Horizon Year with Road 3 Base + Project (buildout) – based on the “2050 with Road 3” assignments with minor adjustments reflecting project access and frontage assumptions for each of the traffic analysis phases. Appendix H<sub>L</sub> includes project trip distribution by phase along project frontage and access roads. Trip generation shown in Table 4.10 above was utilized for this scenario.
  - Horizon Year without Road 3 Base + Project (buildout) – based on the “2050 without Road 3” assignments with minor adjustments reflecting project access and frontage assumptions for each of the traffic analysis phases. Appendix H<sub>L</sub> includes project trip distribution by phase along the project frontage and access roads. Trip generation shown in Table 4.10 above was utilized for this scenario.

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**TABLE 4.10**  
**LILAC HILLS RANCH INTERNAL AND EXTERNAL PROJECT TRIPS**  
**HORIZON YEAR – GP CONSISTENCY ANALYSIS**

| Land Use   | Quantity       | Total Trips   |   |   |            | Internal Trips |   |   |             | External Trips |   |   |
|--|----------------|---------------|---|---|------------|----------------|---|---|-------------|----------------|---|---|
|  |                | Daily         | AM Peak Hour                              | PM Peak Hour                                | % Internal | Daily          | AM Peak Hour                            | PM Peak Hour                            | % External  | Daily          | AM Peak Hour                              | PM Peak Hour                              |
| <u>Lilac Hills Ranch Project</u>                 |                | <u>19,406</u> | <u>1,663</u><br><u>(692-in / 970-out)</u> | <u>1,828</u><br><u>(1,115-in / 713-out)</u> | <u>22%</u> | <u>4,266</u>   | <u>492</u><br><u>(261-in / 231-out)</u> | <u>395</u><br><u>(206-in / 189-out)</u> | <u>78%</u>  | <u>15,141</u>  | <u>1,171</u><br><u>(431-in / 739-out)</u> | <u>1,432</u><br><u>(908-in / 525-out)</u> |
| <u>Rural Residential (General Plan Approved)</u> | <u>-110 DU</u> | <u>-1,320</u> | <u>-106</u><br><u>(-32-in / -74-out)</u>  | <u>-132</u><br><u>(-92-in / -40-out)</u>    | <u>0%</u>  | <u>0</u>       | <u>0</u><br><u>(0-in / 0-out)</u>       | <u>0</u><br><u>(0-in / 0-out)</u>       | <u>100%</u> | <u>-1,320</u>  | <u>-106</u><br><u>(-32-in / -74-out)</u>  | <u>-132</u><br><u>(-92-in / -40-out)</u>  |
| <u>Traffic Added to the GP Network</u>           |                | <u>18,086</u> | <u>1,557</u><br><u>(660-in / 896-out)</u> | <u>1,696</u><br><u>(1,023-in / 673-out)</u> | <u>22%</u> | <u>4,266</u>   | <u>492</u><br><u>(261-in / 231-out)</u> | <u>395</u><br><u>(206-in / 189-out)</u> | <u>78%</u>  | <u>13,821</u>  | <u>1,065</u><br><u>(399-in / 665-out)</u> | <u>1,300</u><br><u>(816-in / 485-out)</u> |

Source: Chen Ryan Associates; May 2014

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**Figures 4-3** through **4-7** display the project trip distribution patterns associated with the existing network for the various traffic analysis phases, respectively. **Figures 4-8** and **4-9** display the project trip distribution patterns associated with the Horizon Year mobility element network with and without Road 3, respectively. Note that the trip distribution figures were modified to reflect the project access “Change 1” as described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”.

#### **4.2.43.3 Project Trip Assignment**

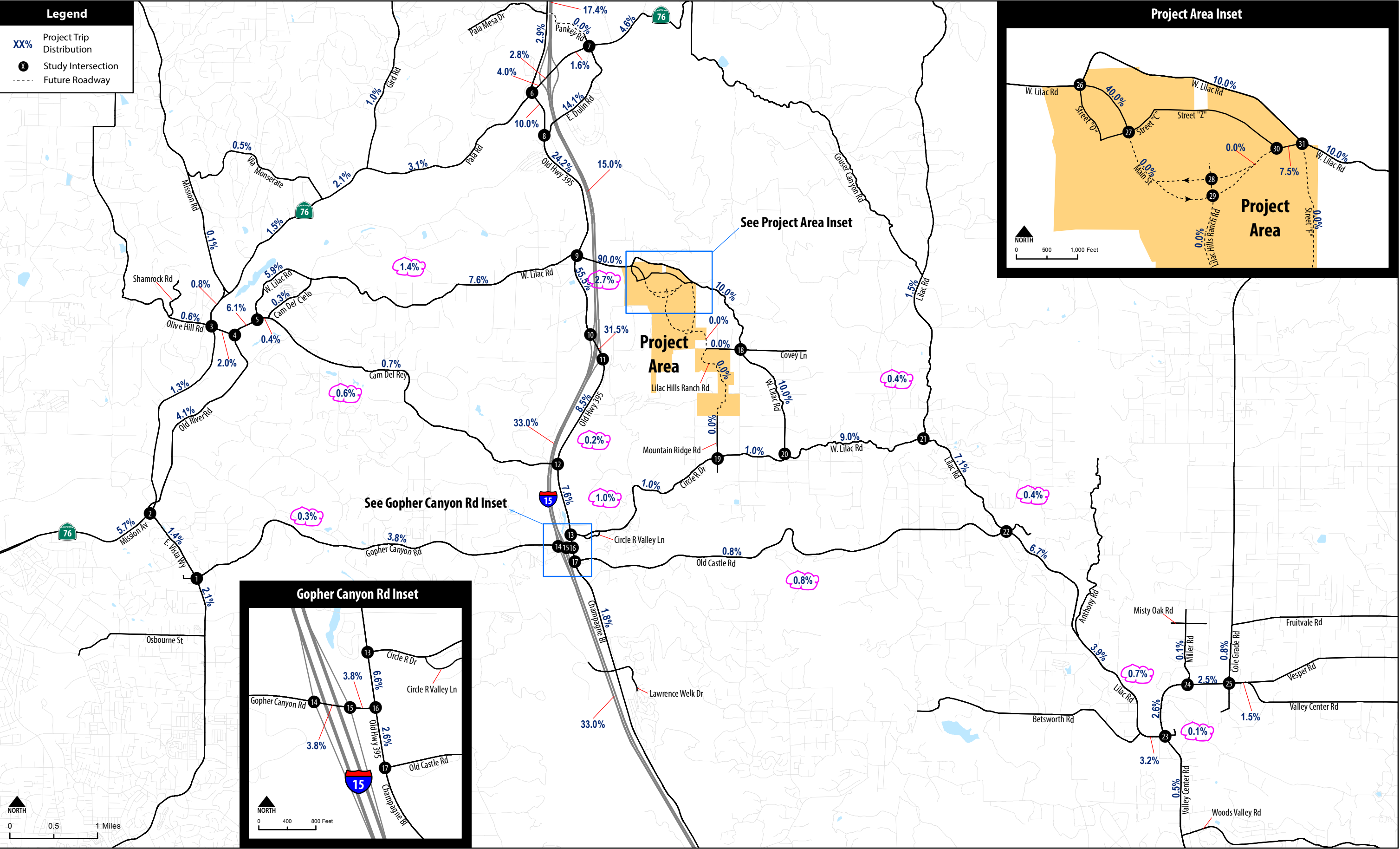
Based upon the project trip distributions, the external daily and AM/PM peak hour project trips were assigned to the various roadway networks. Seven (7) separate sets of trip assignments were developed including the following:

- Project Phase A land uses on the existing network
- Project Phase B land uses on the existing network
- Project Phase C land uses on the existing network
- Project Phase D land uses on the existing network
- Project Buildout land uses on the existing network
- Project Buildout land uses on the Horizon Year mobility element network with Road 3
- Project Buildout land uses on the Horizon Year mobility element network without Road 3

**Figures 4-10A** through **4-14B** display the assignment of project trips to the Existing roadway networks and key study area intersections under the various traffic analysis phases.

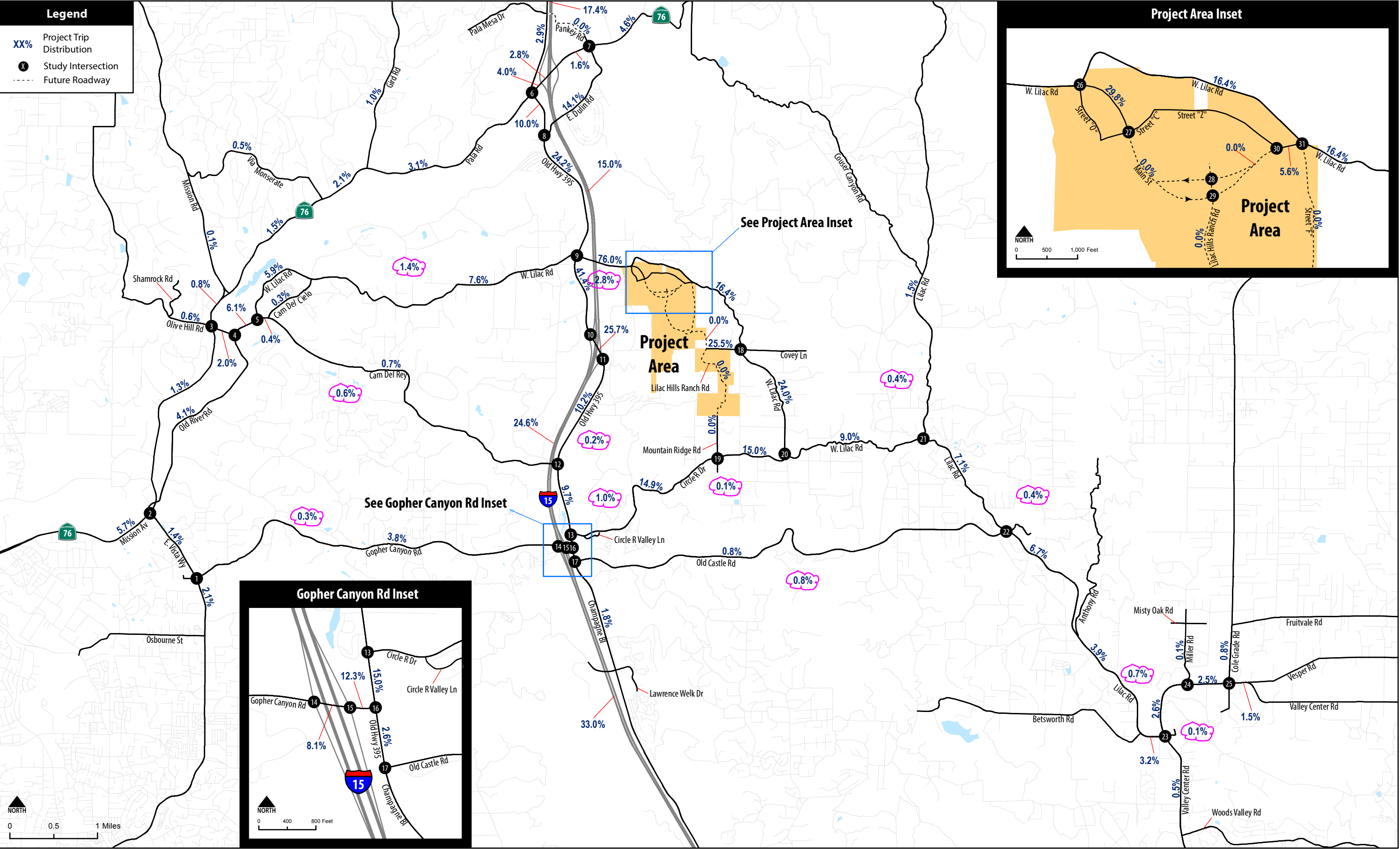
Similarly, **Figures 4-15A** and **4-16A** display the assignment of project trips to the respective Horizon Year (with and without Road 3) roadway networks. Note that the trip assignment figures were modified to reflect the project access “Change 1” as described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”.

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Lilac Hills Ranch Traffic Impact Study

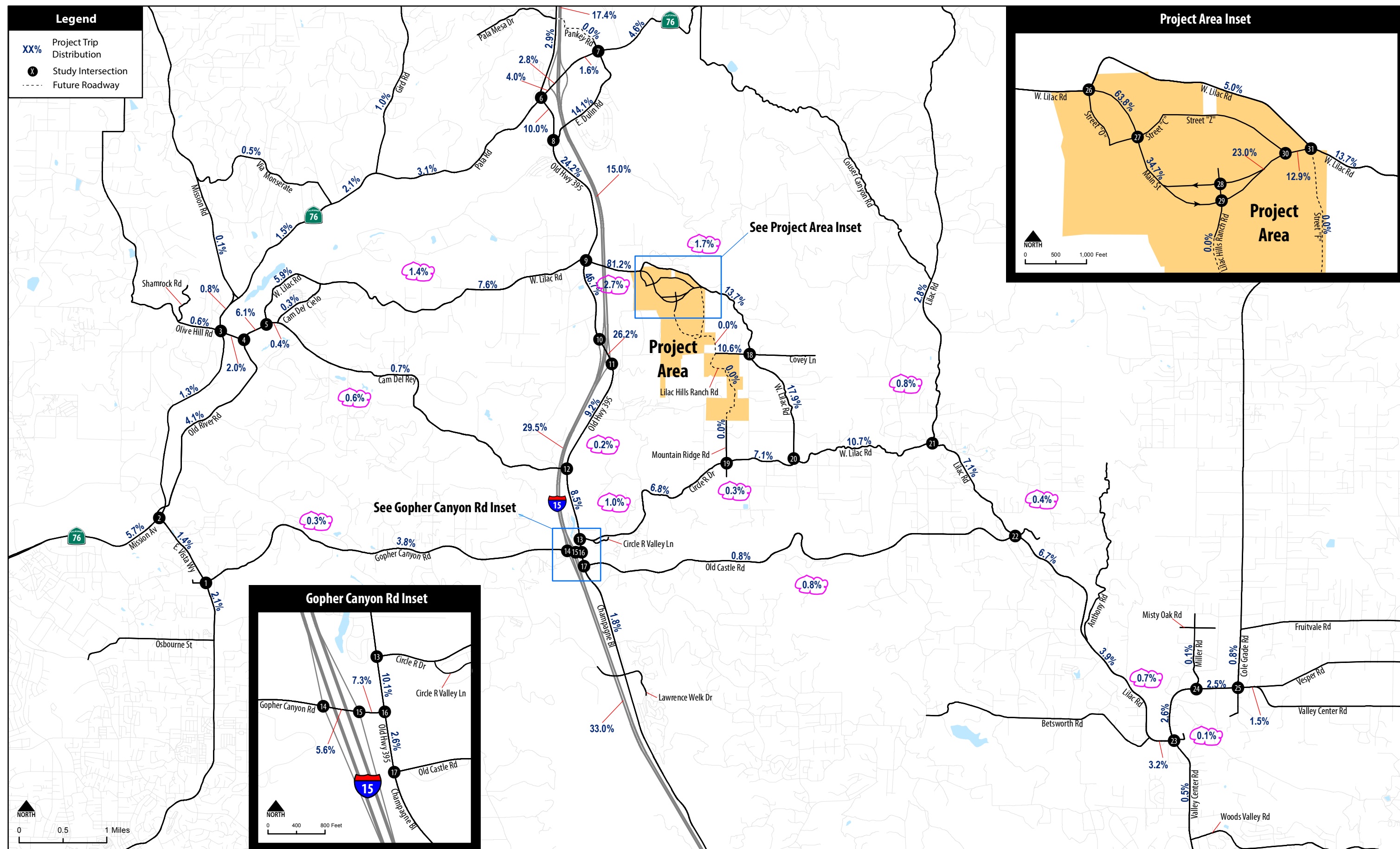
Figure 4-3  
Project Trip Distribution (Phase A) - Existing Network



Lilac Hills Ranch Traffic Impact Study

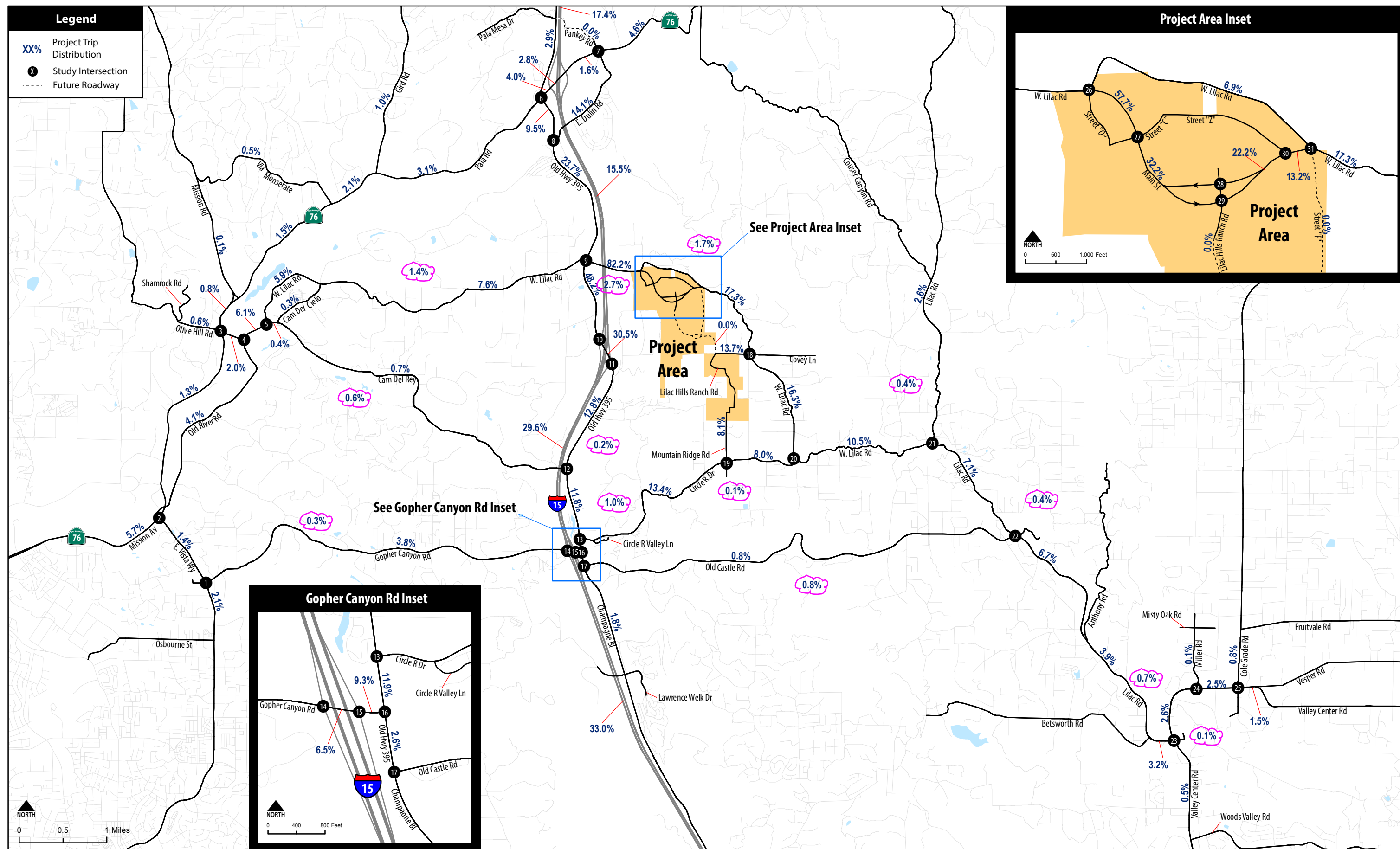
Figure 4-4  
Project Trip Distribution (Phase B) - Existing Network





Lilac Hills Ranch Traffic Impact Study

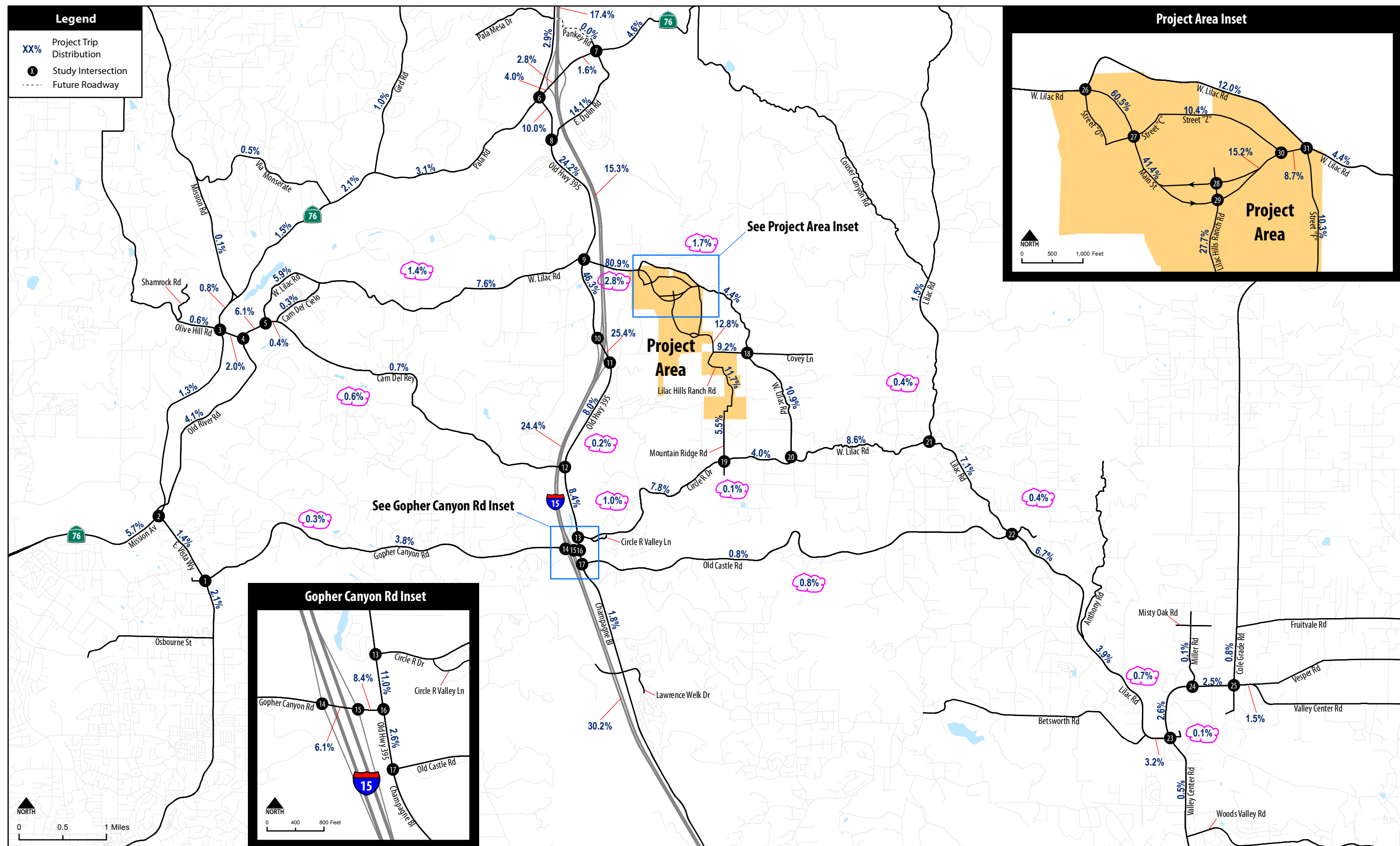
Figure 4-5  
Project Trip Distribution (Phase C) - Existing Network



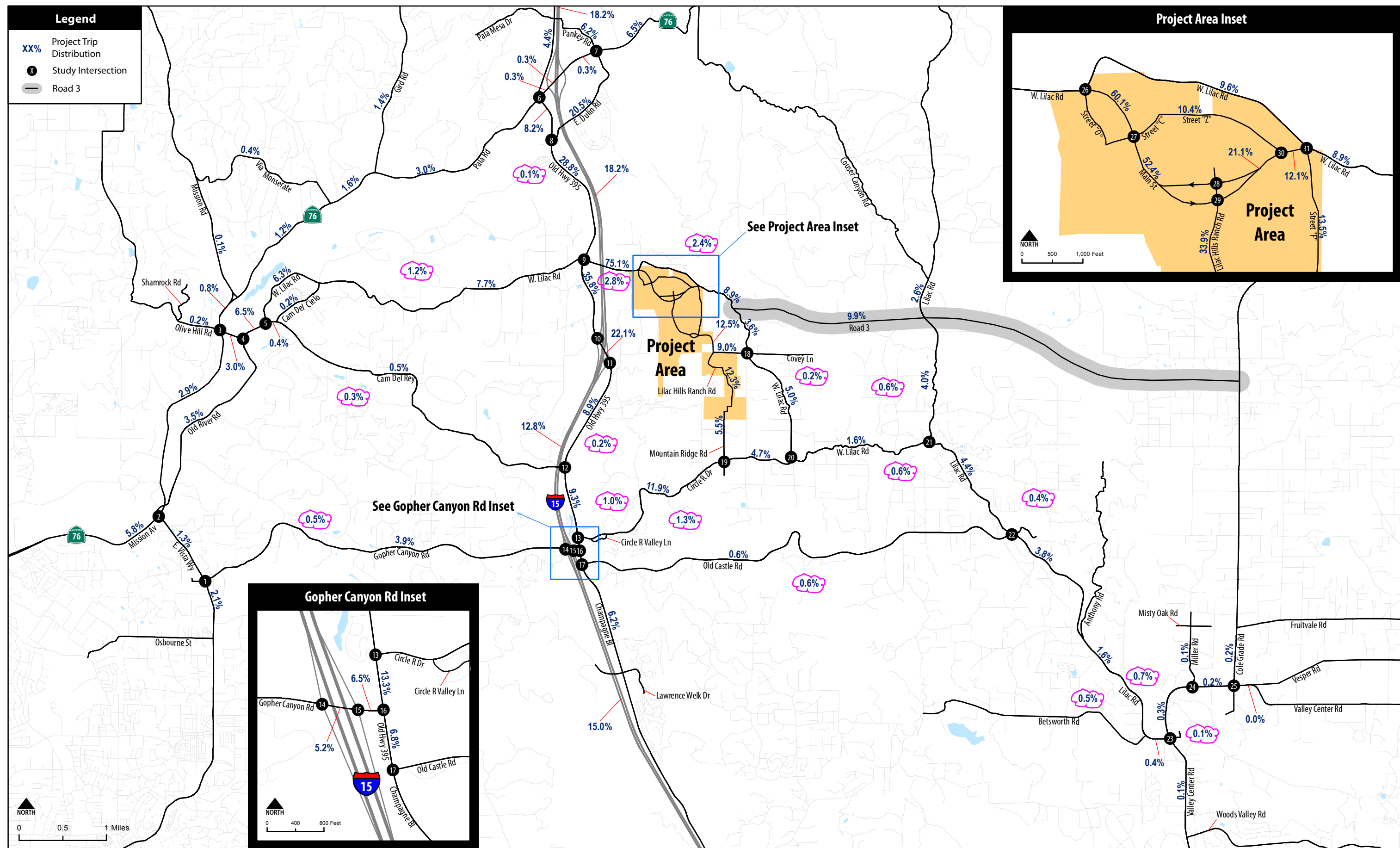
Lilac Hills Ranch Traffic Impact Study

Figure 4-6  
Project Trip Distribution (Phase D) - Existing Network

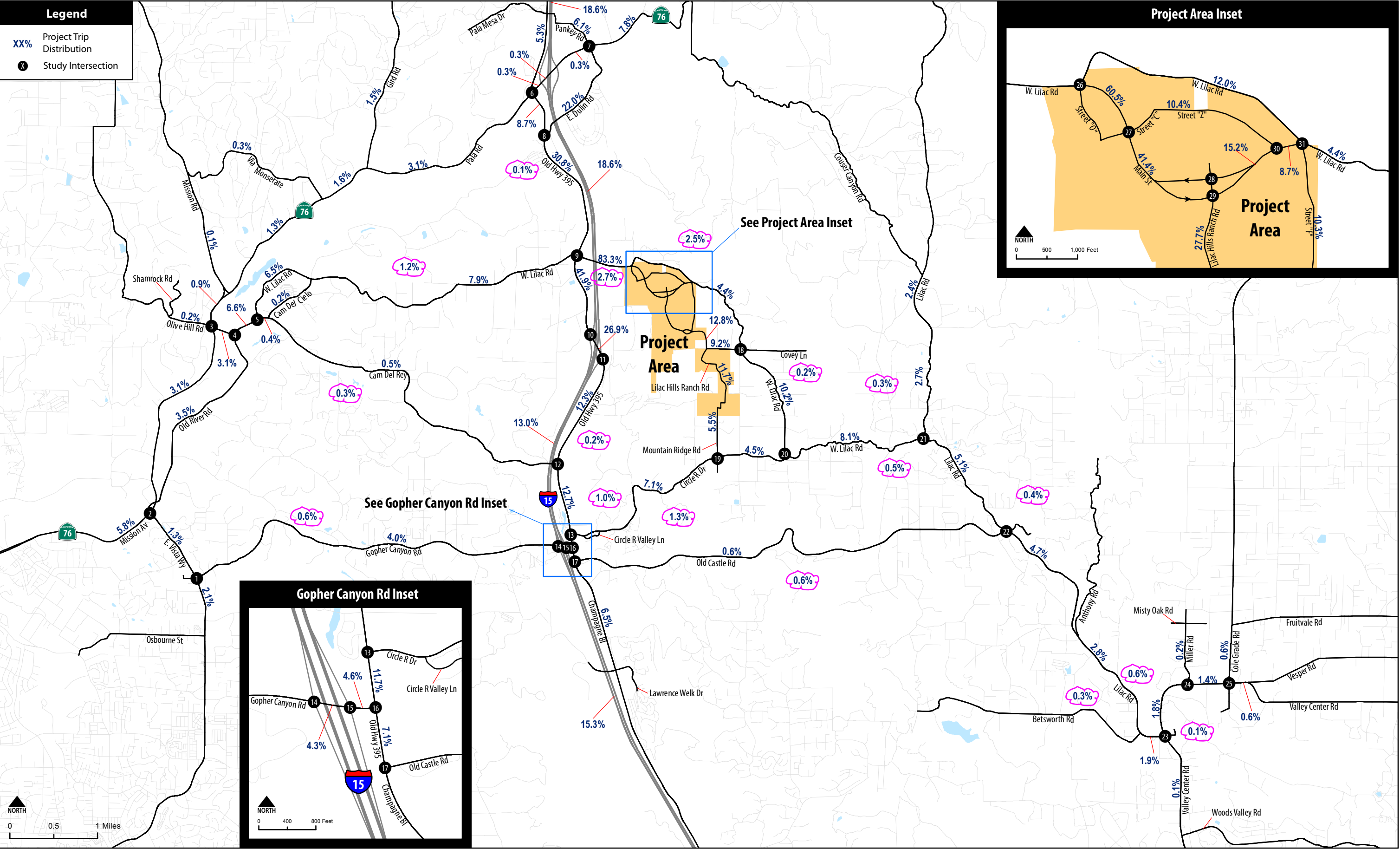




# Lilac Hills Ranch Traffic Impact Study

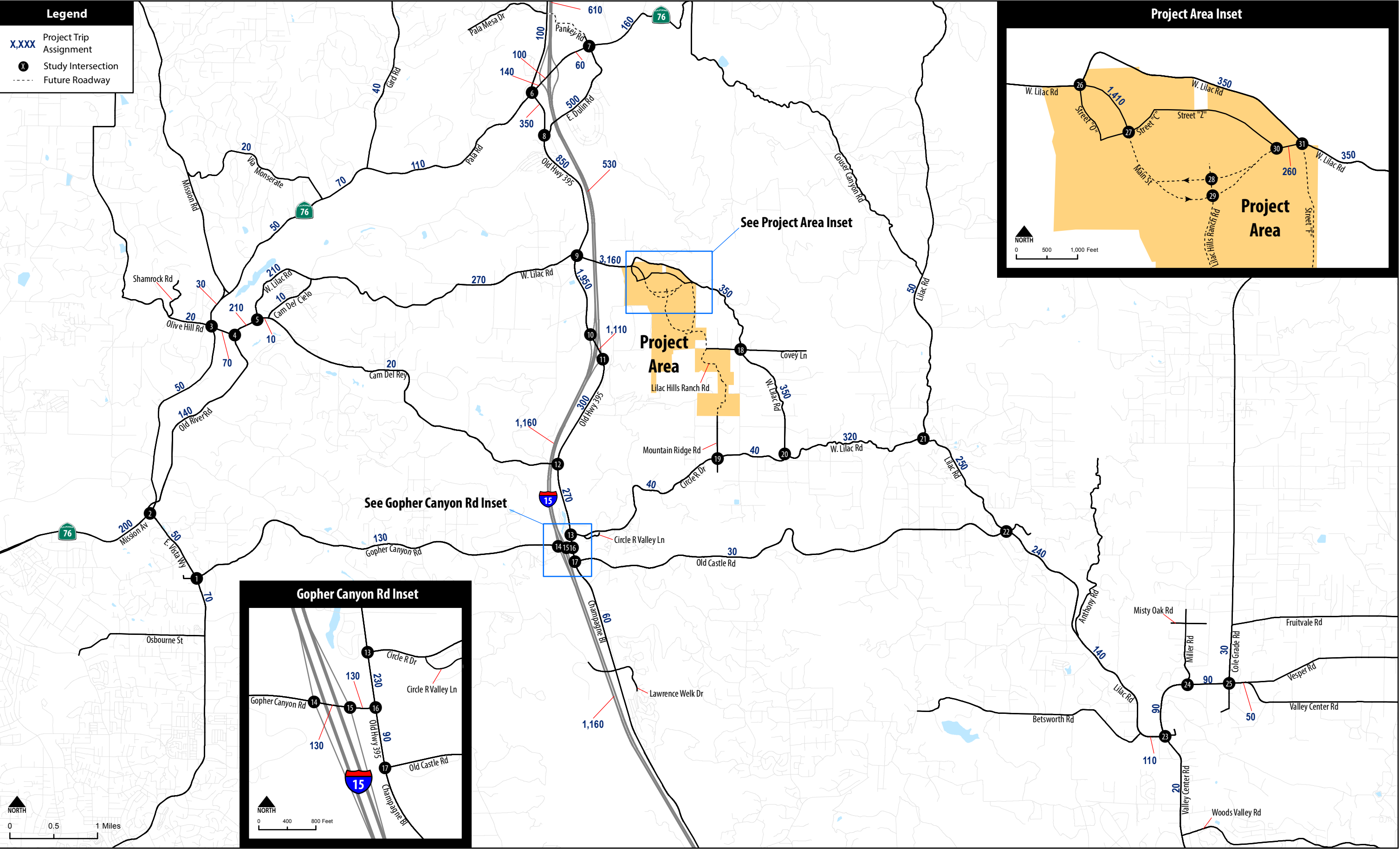






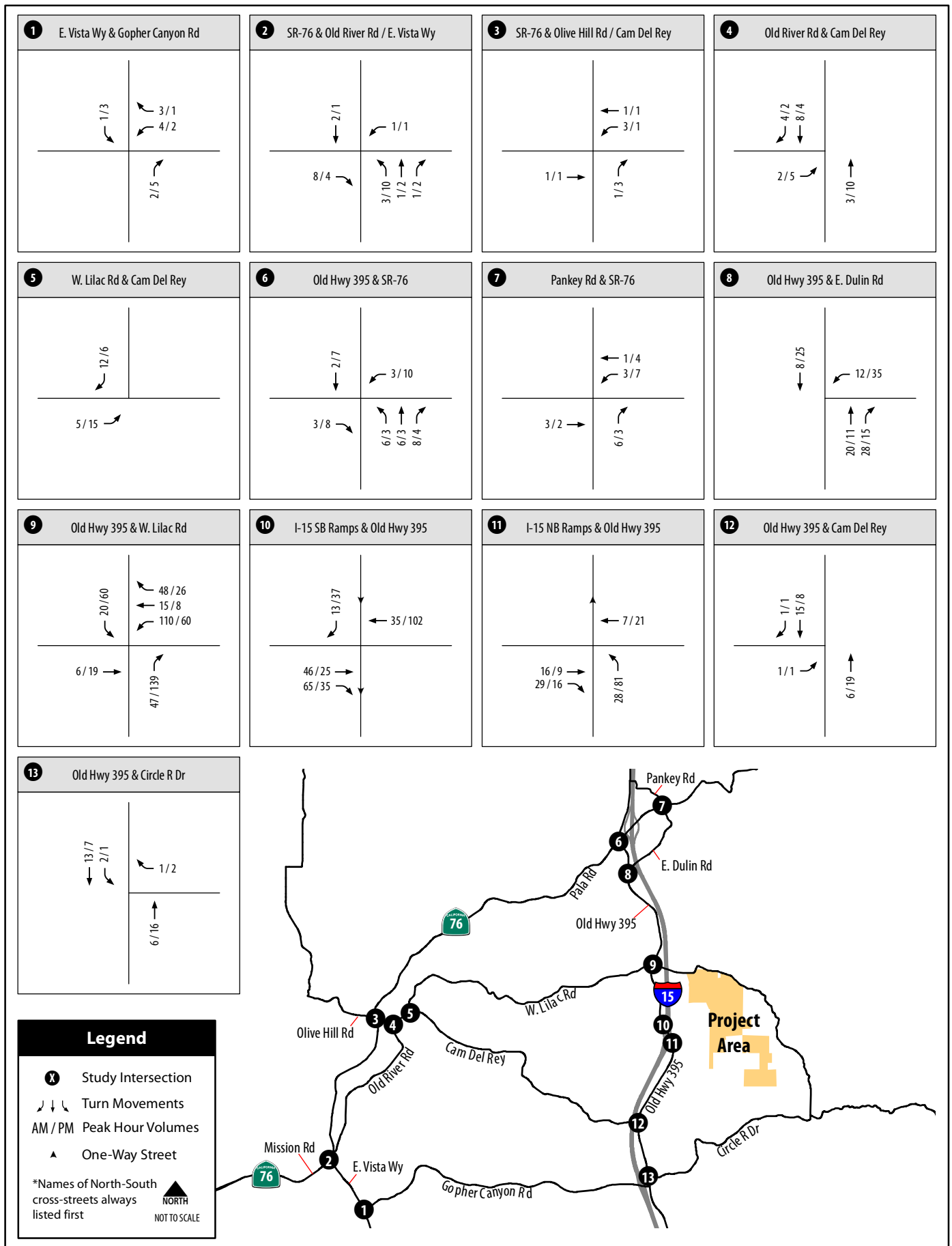
Lilac Hills Ranch Traffic Impact Study

Figure 4-9  
Project Trip Distribution (Buildout) - Horizon Year Network without Road 3



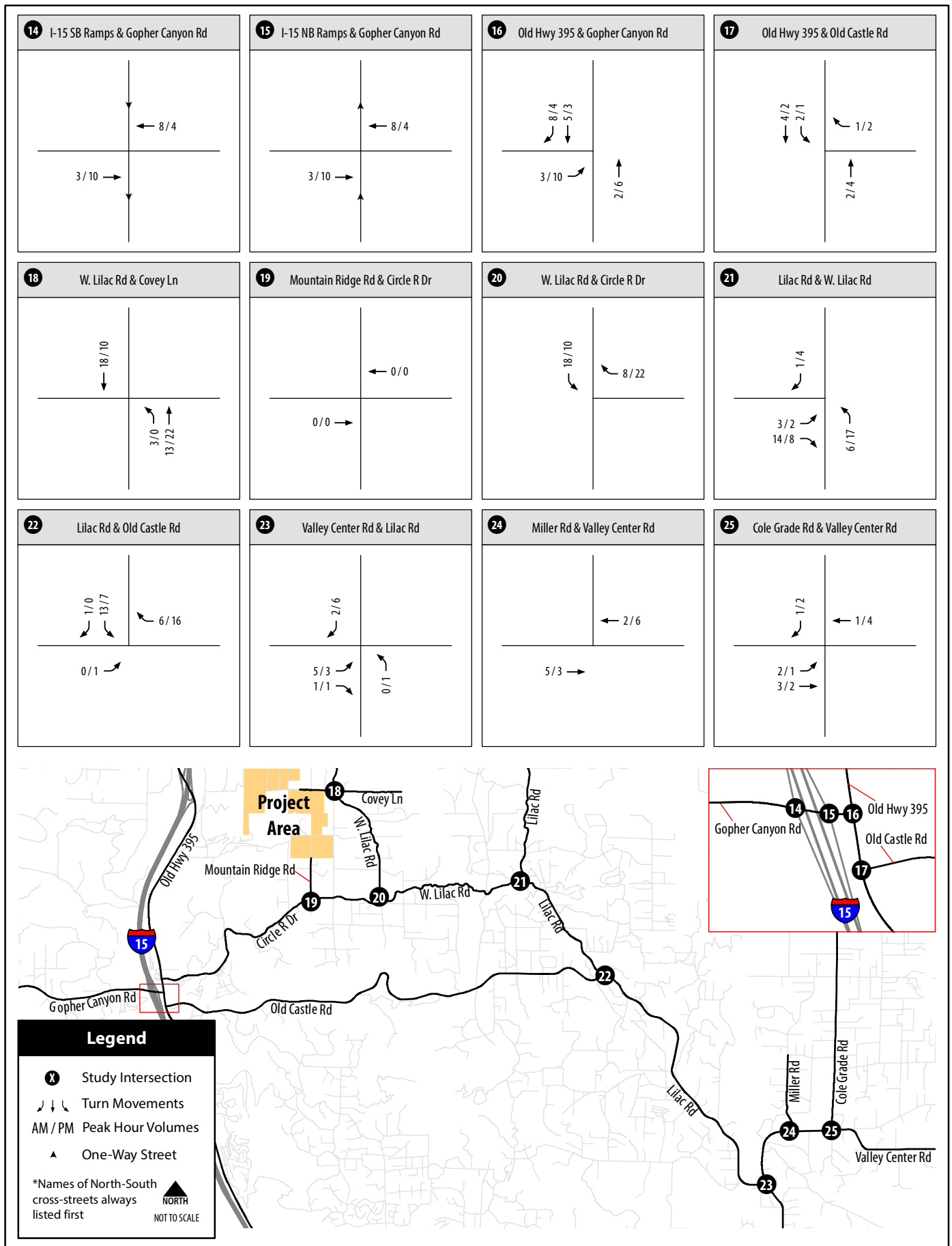
Lilac Hills Ranch Traffic Impact Study

Figure 4-10A  
Project (Phase A) Trip Assignment (Roadway) - Existing Network



Lilac Hills Ranch Traffic Impact Study

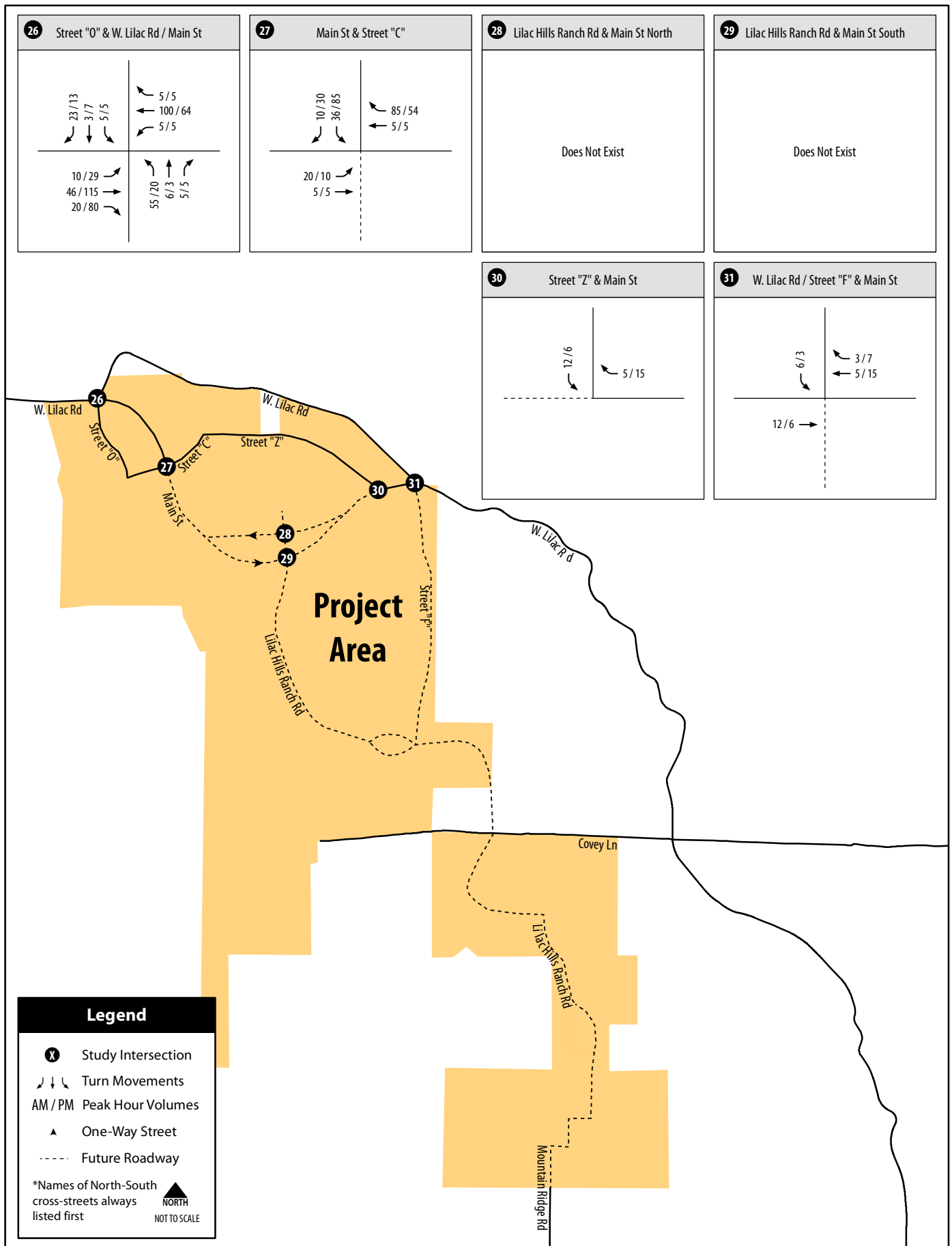
Figure 4-10B (Intersections 1-13)  
Project (Phase A) Trip Assignment (Intersection) -  
Existing Network



Lilac Hills Ranch Traffic Impact Study

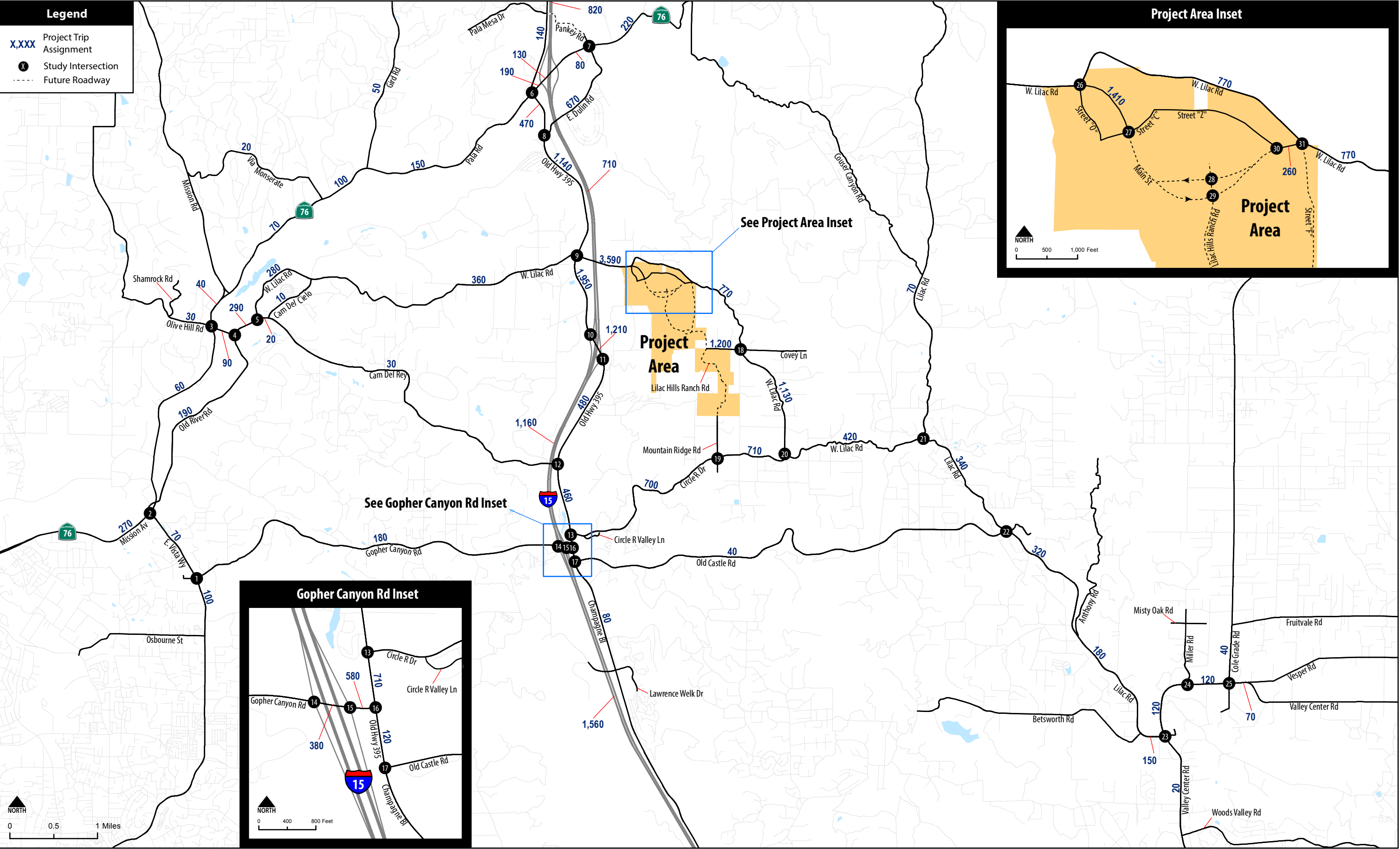
Figure 4-10B (Intersections 14-25)  
Project (Phase A) Trip Assignment (Intersection) -  
Existing Network





Lilac Hills Ranch Traffic Impact Study

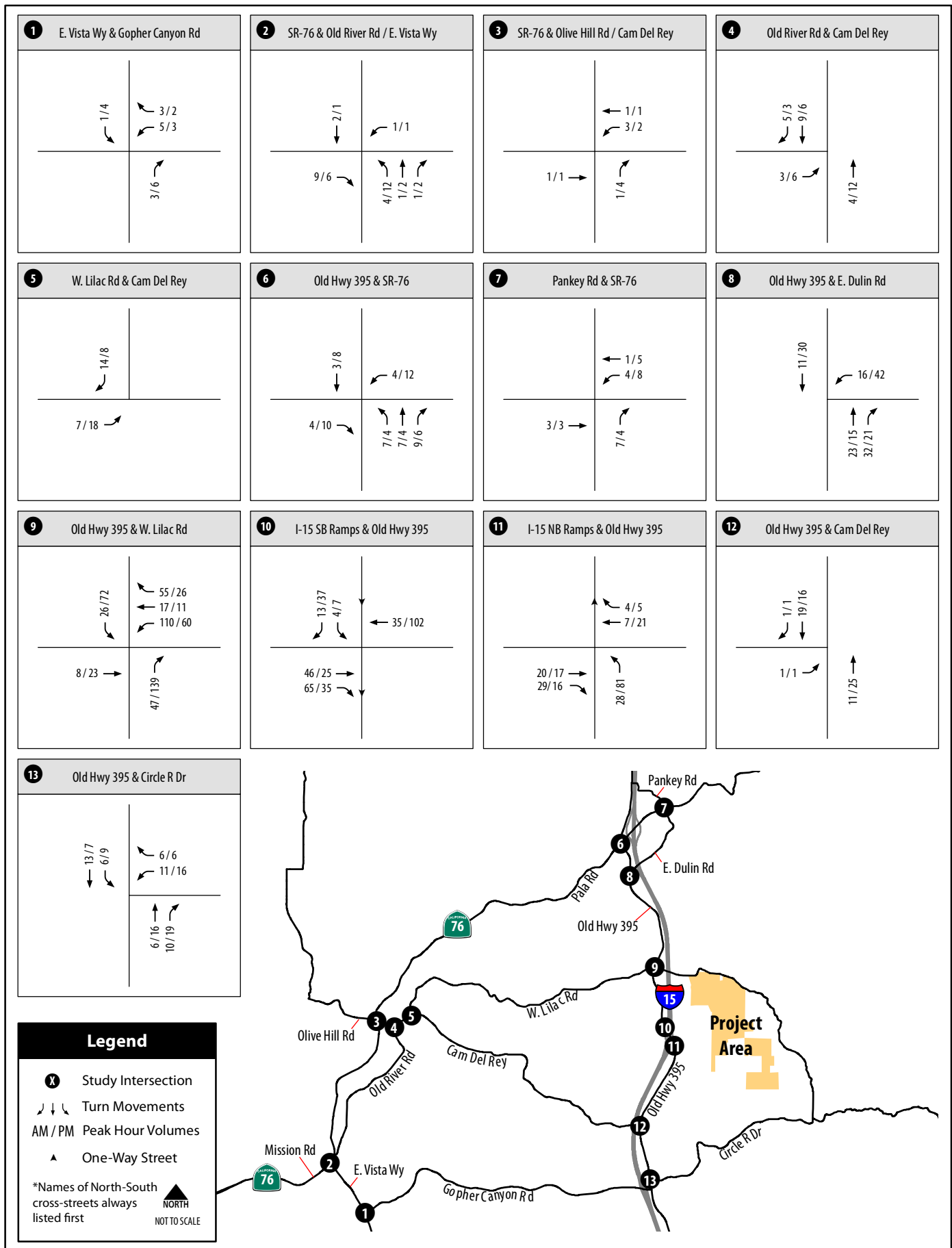
Figure 4-10B (Intersections 26-31)  
Project (Phase A) Trip Assignment (Intersection) -  
Existing Network



Lilac Hills Ranch Traffic Impact Study

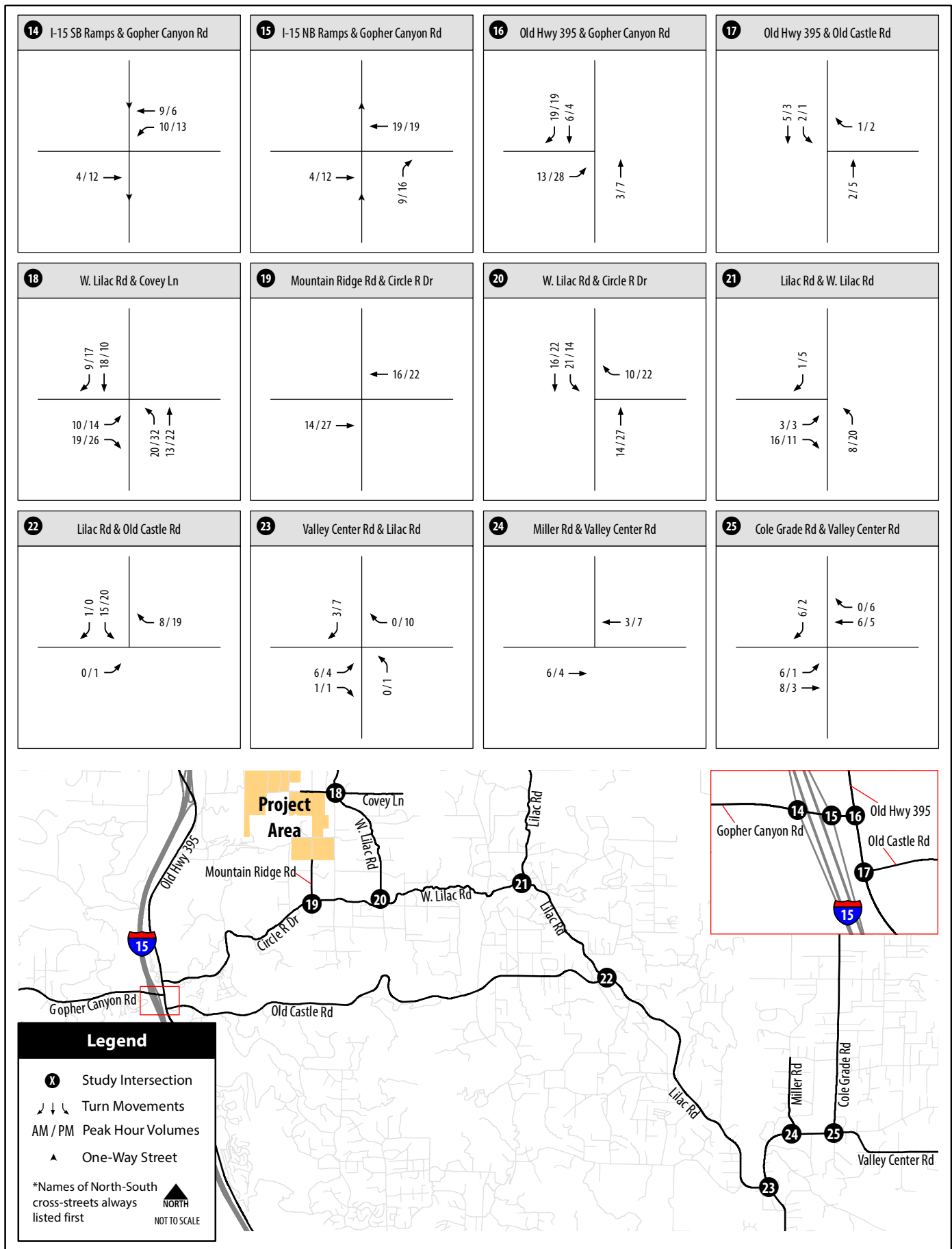
Figure 4-11A  
Project (Phase B) Trip Assignment (Roadway) - Existing Network





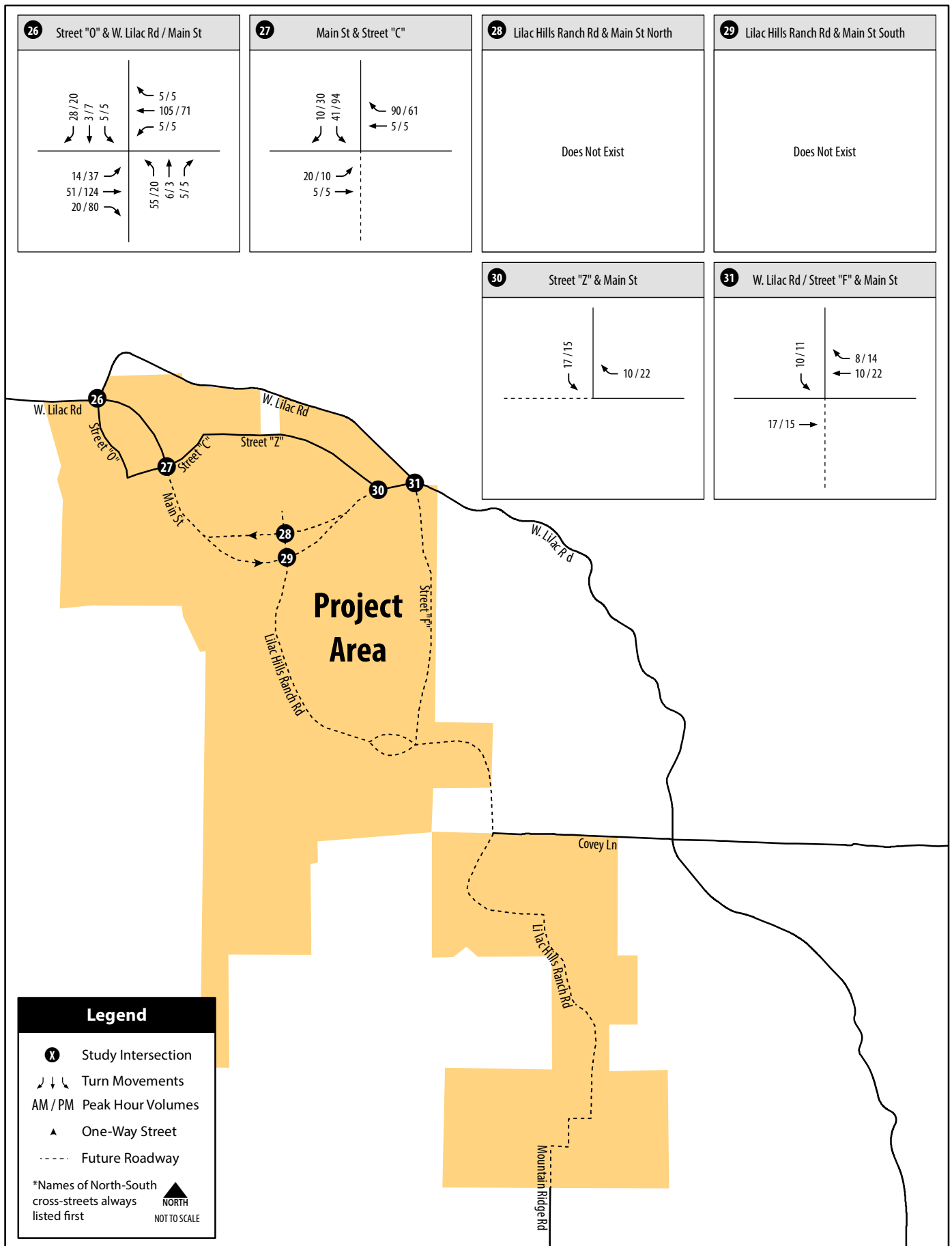
Lilac Hills Ranch Traffic Impact Study

Figure 4-11B (Intersections 1-13)  
Project (Phase B) Trip Assignment (Intersection) -  
Existing Network



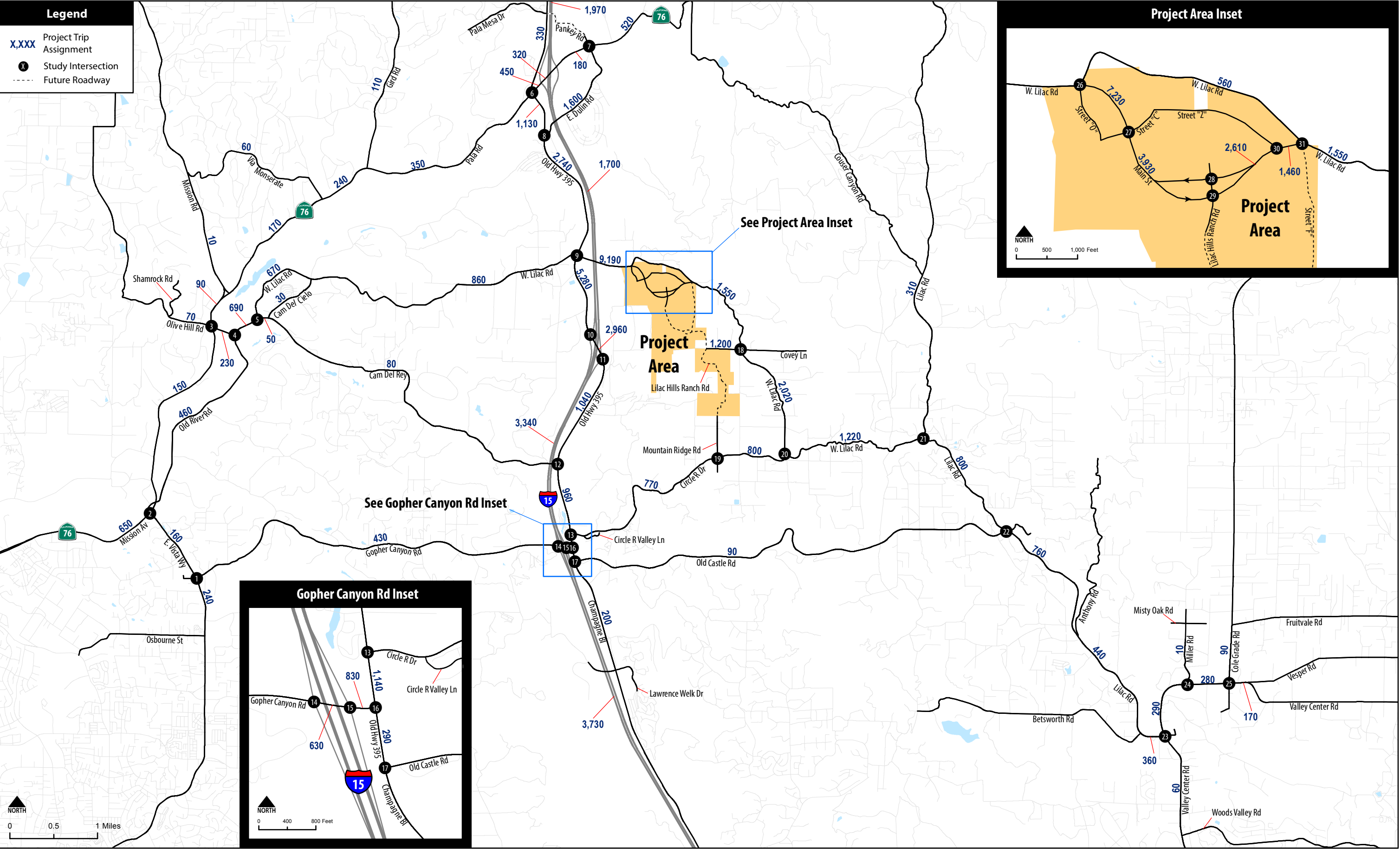
Lilac Hills Ranch Traffic Impact Study

Figure 4-11B (Intersections 14-25)  
Project (Phase B) Trip Assignment (Intersection) -  
Existing Network



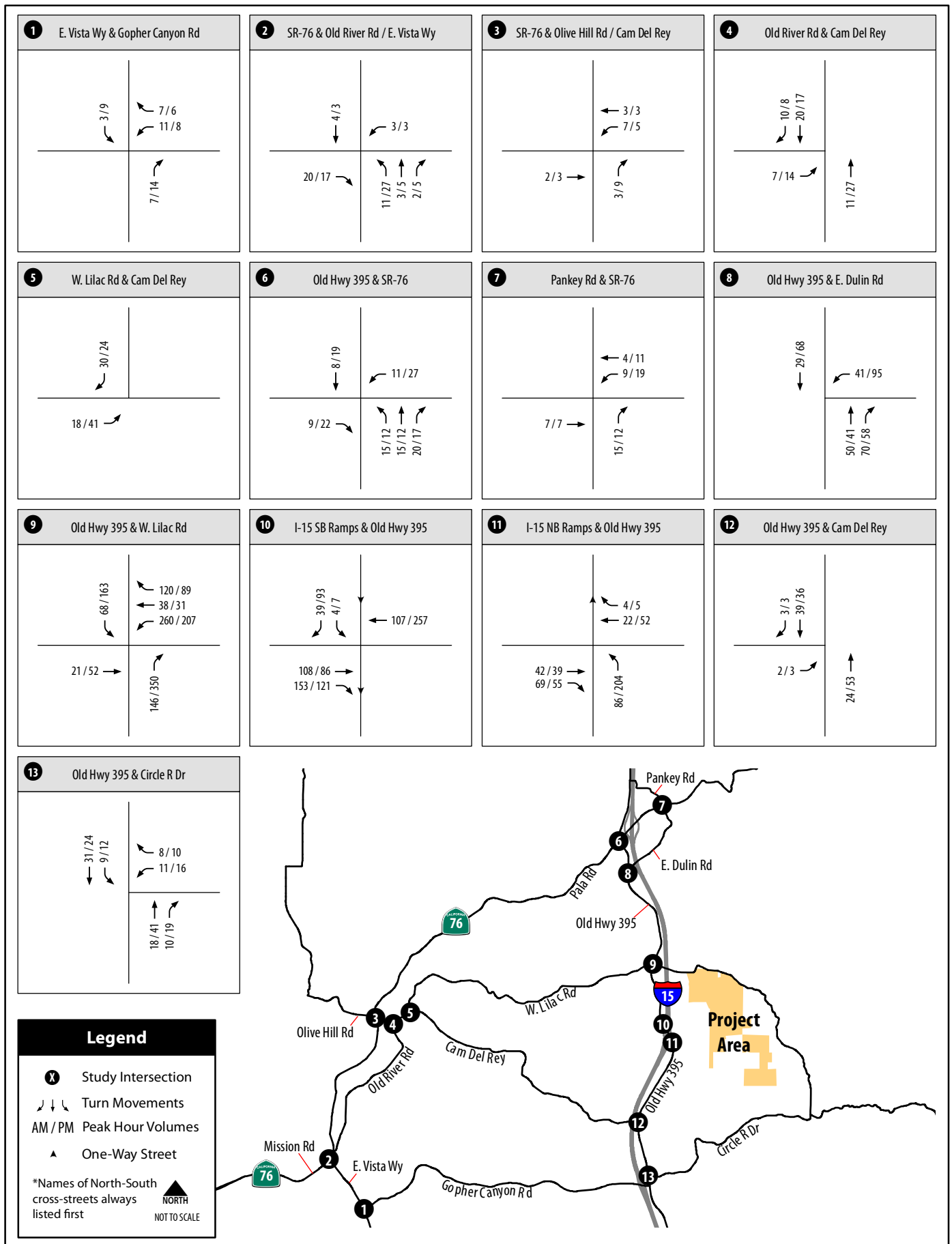
Lilac Hills Ranch Traffic Impact Study

Figure 4-11B (Intersections 26-31)  
Project (Phase B) Trip Assignment (Intersection) -  
Existing Network



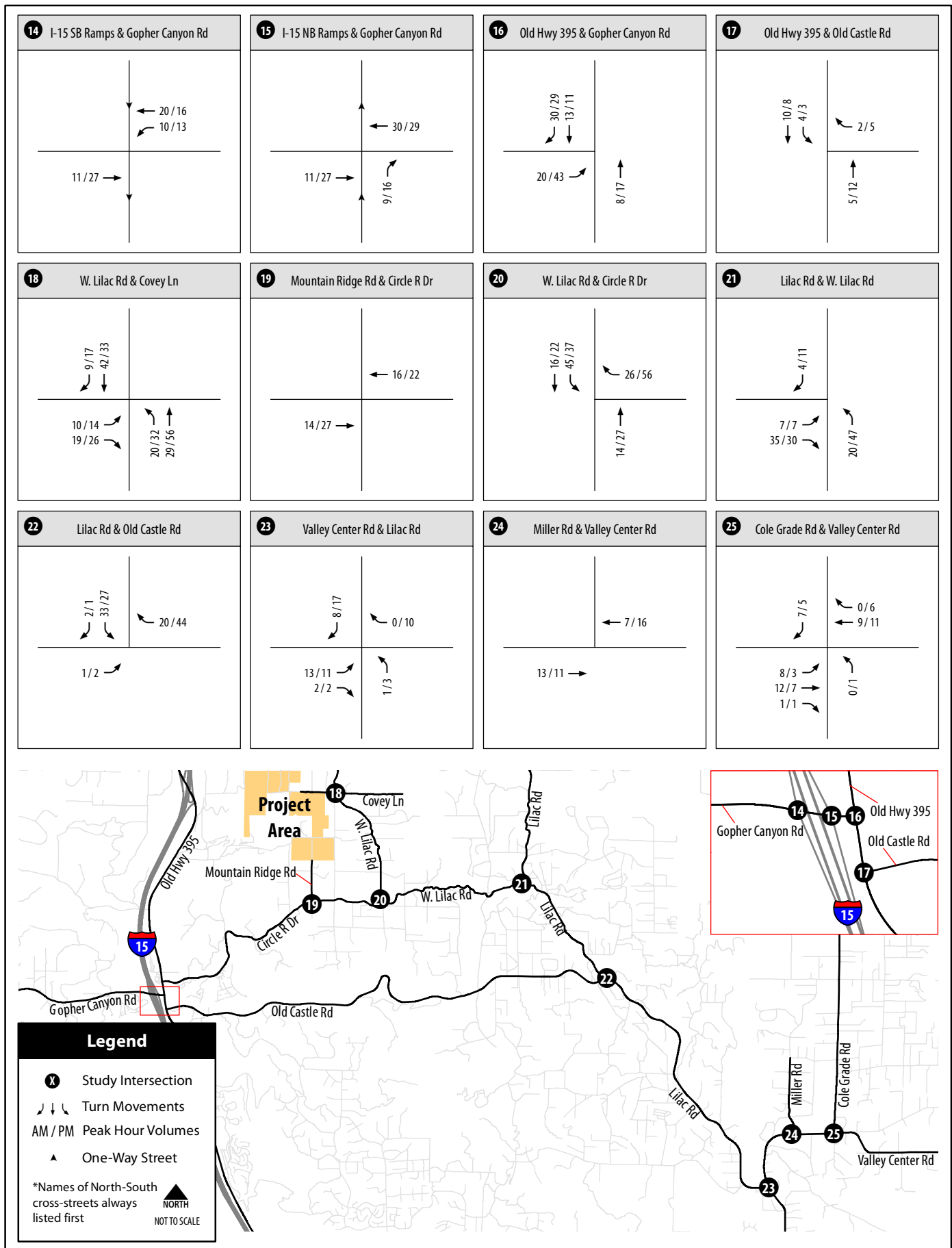
Lilac Hills Ranch Traffic Impact Study

Figure 4-12A  
Project (Phase C) Trip Assignment (Roadway) - Existing Network



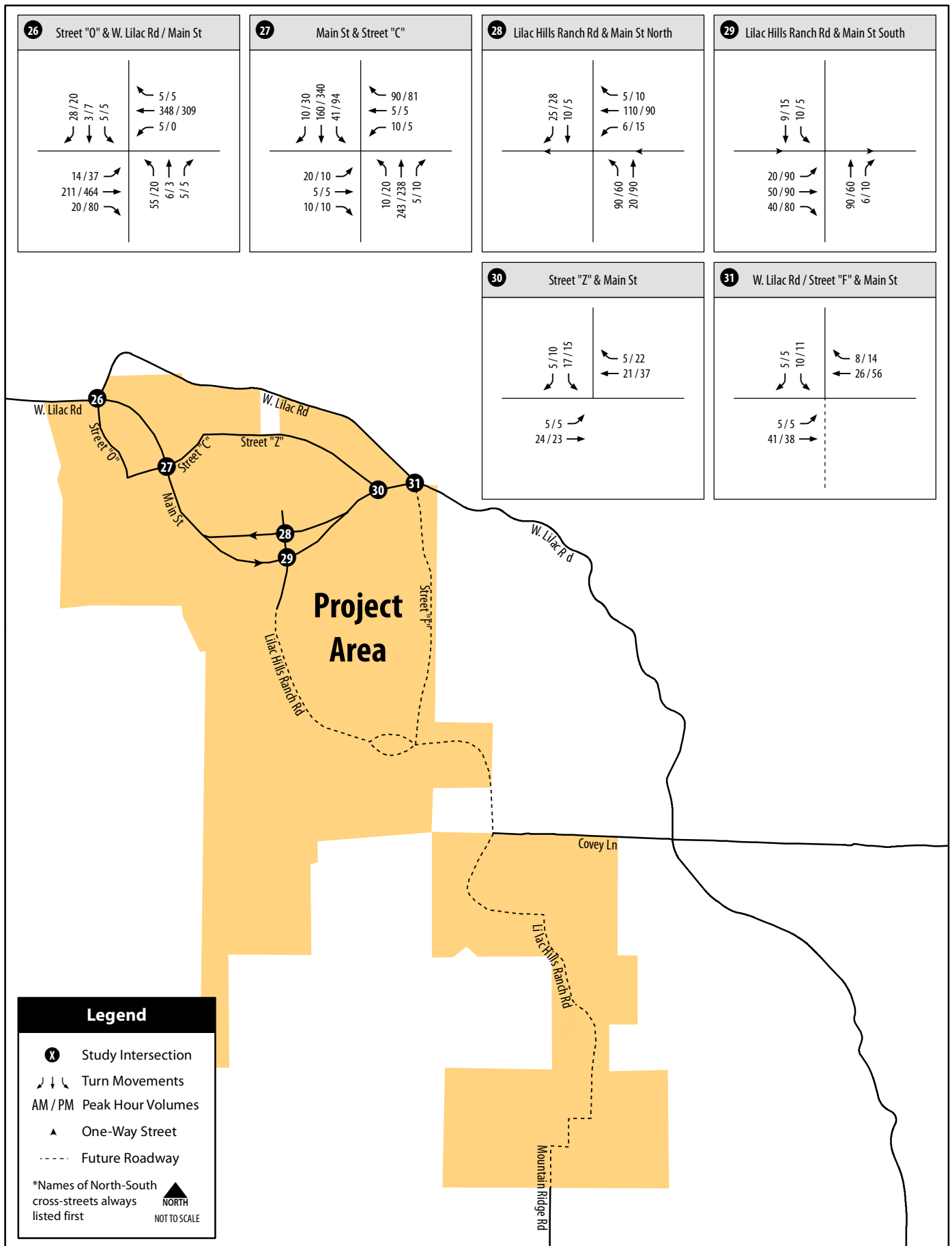
Lilac Hills Ranch Traffic Impact Study

Figure 4-12B (Intersections 1-13)  
 Project (Phase C) Trip Assignment (Intersection) -  
 Existing Network



Lilac Hills Ranch Traffic Impact Study

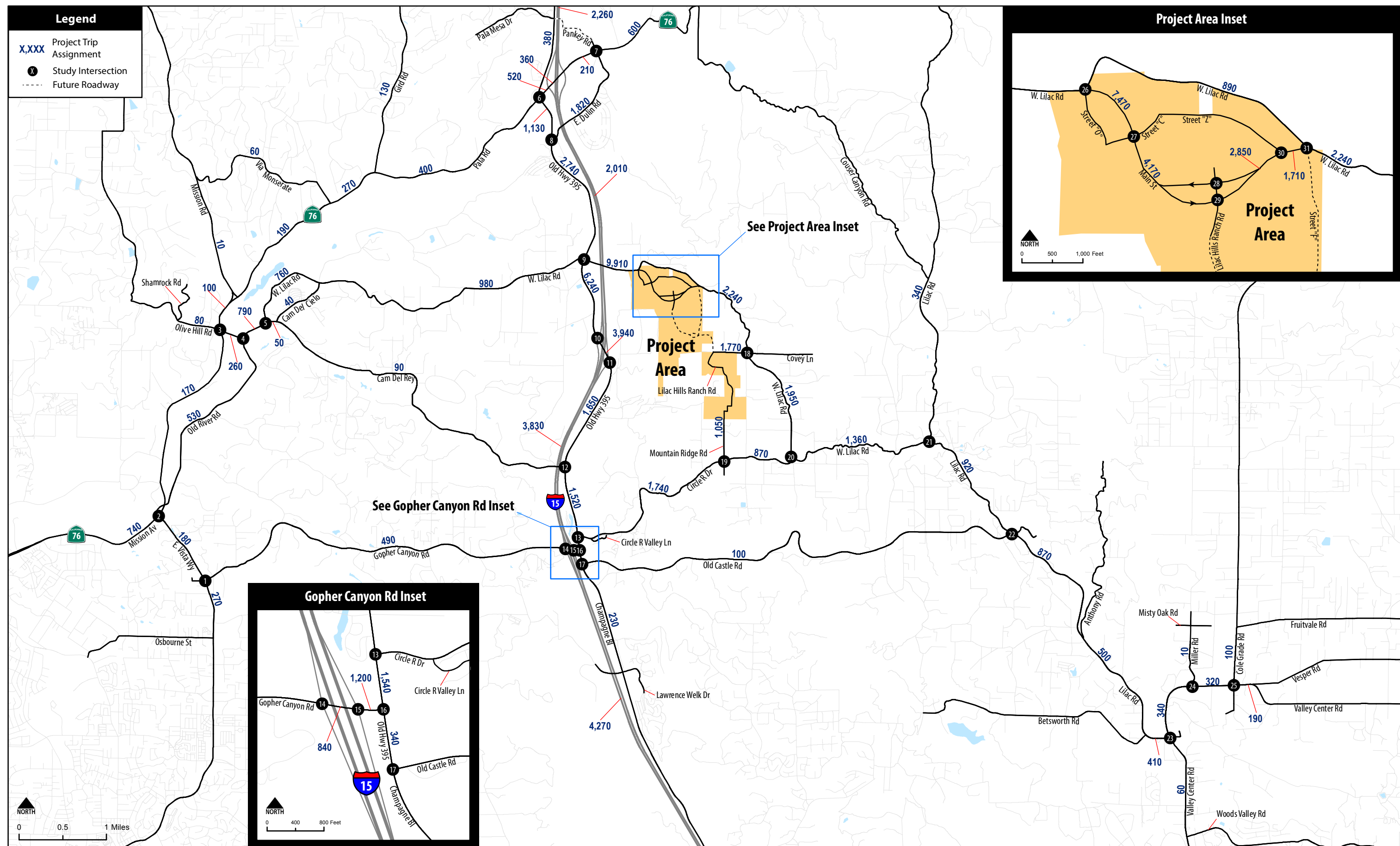
Figure 4-12B (Intersections 14-25)  
Project (Phase C) Trip Assignment (Intersection) -  
Existing Network



Lilac Hills Ranch Traffic Impact Study

Figure 4-12B (Intersections 26-31)  
Project (Phase C) Trip Assignment (Intersection) -  
Existing Network



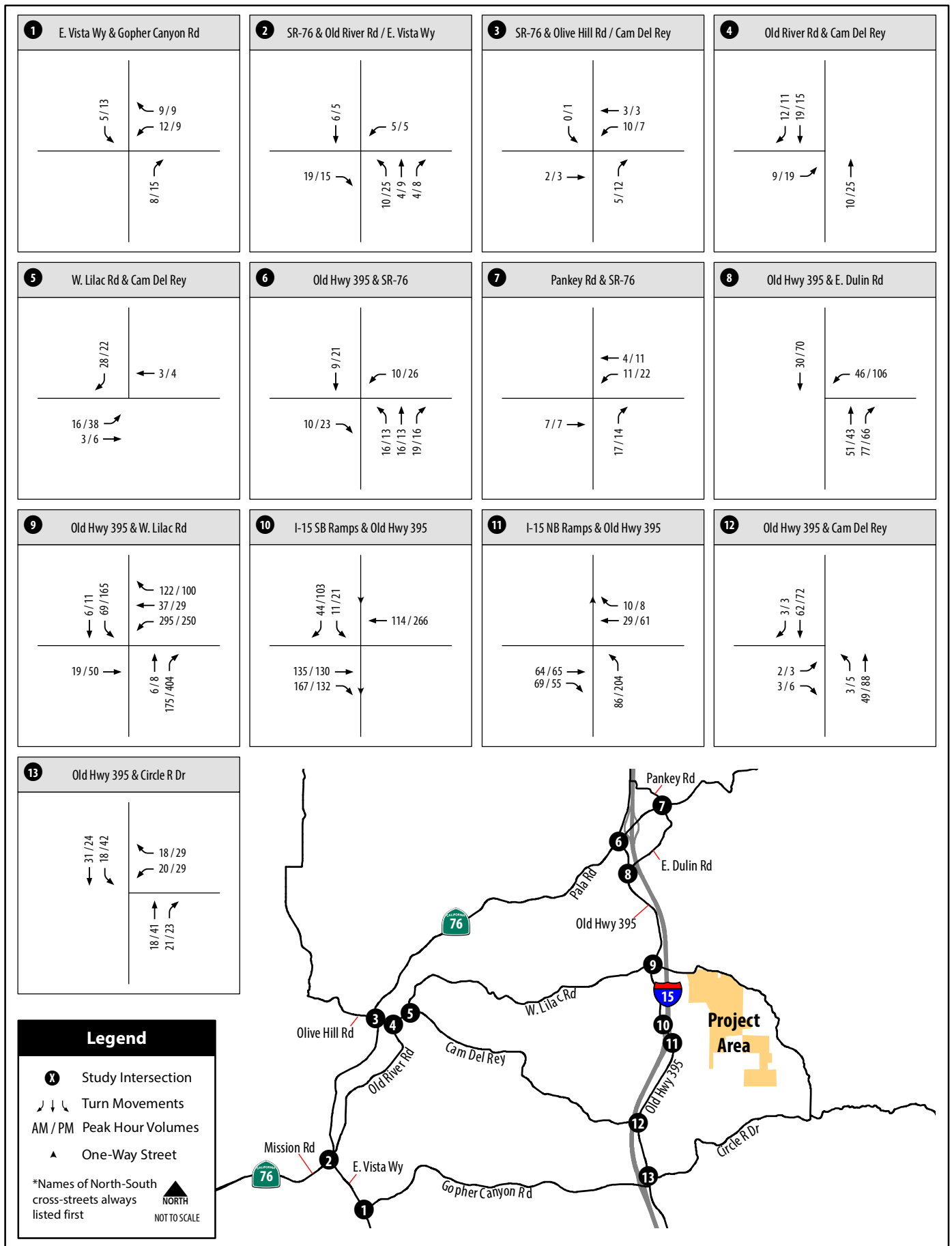


# Lilac Hills Ranch Traffic Impact Study

Figure 4-13A

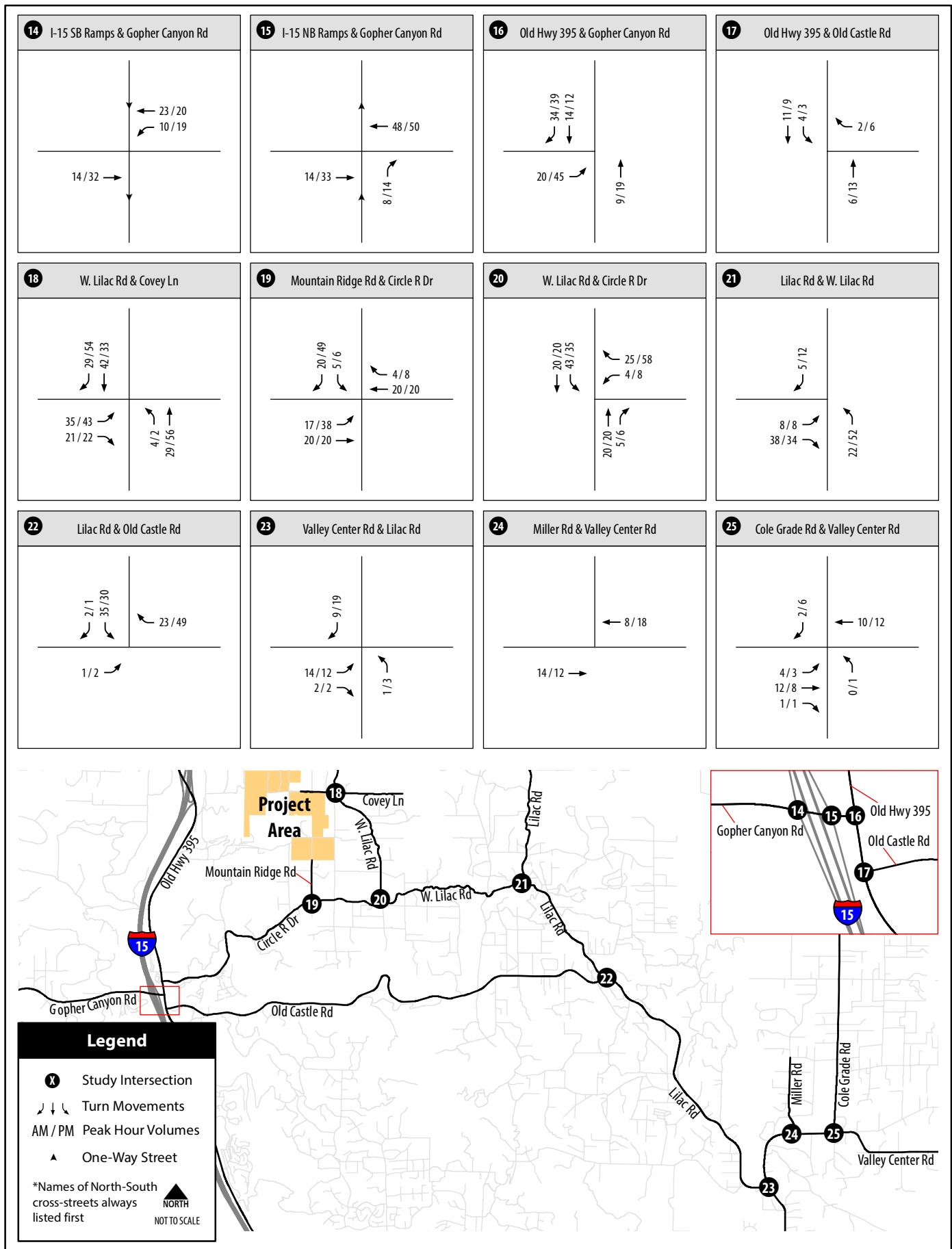
**Project (Phase D) Trip Assignment (Roadway) - Existing Network**





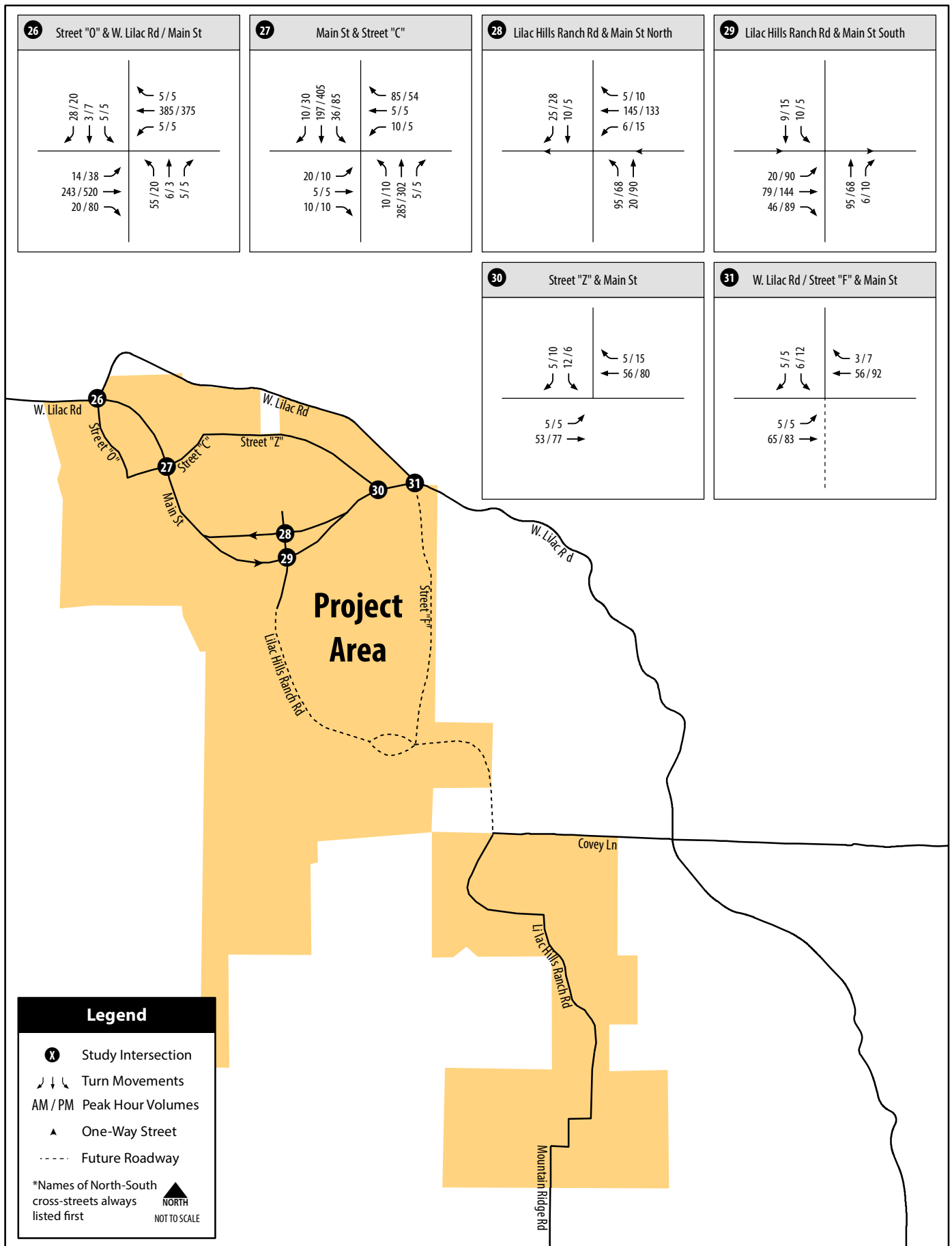
Lilac Hills Ranch Traffic Impact Study

Figure 4-13B (Intersections 1-13)  
Project (Phase D) Trip Assignment (Intersection) -  
Existing Network



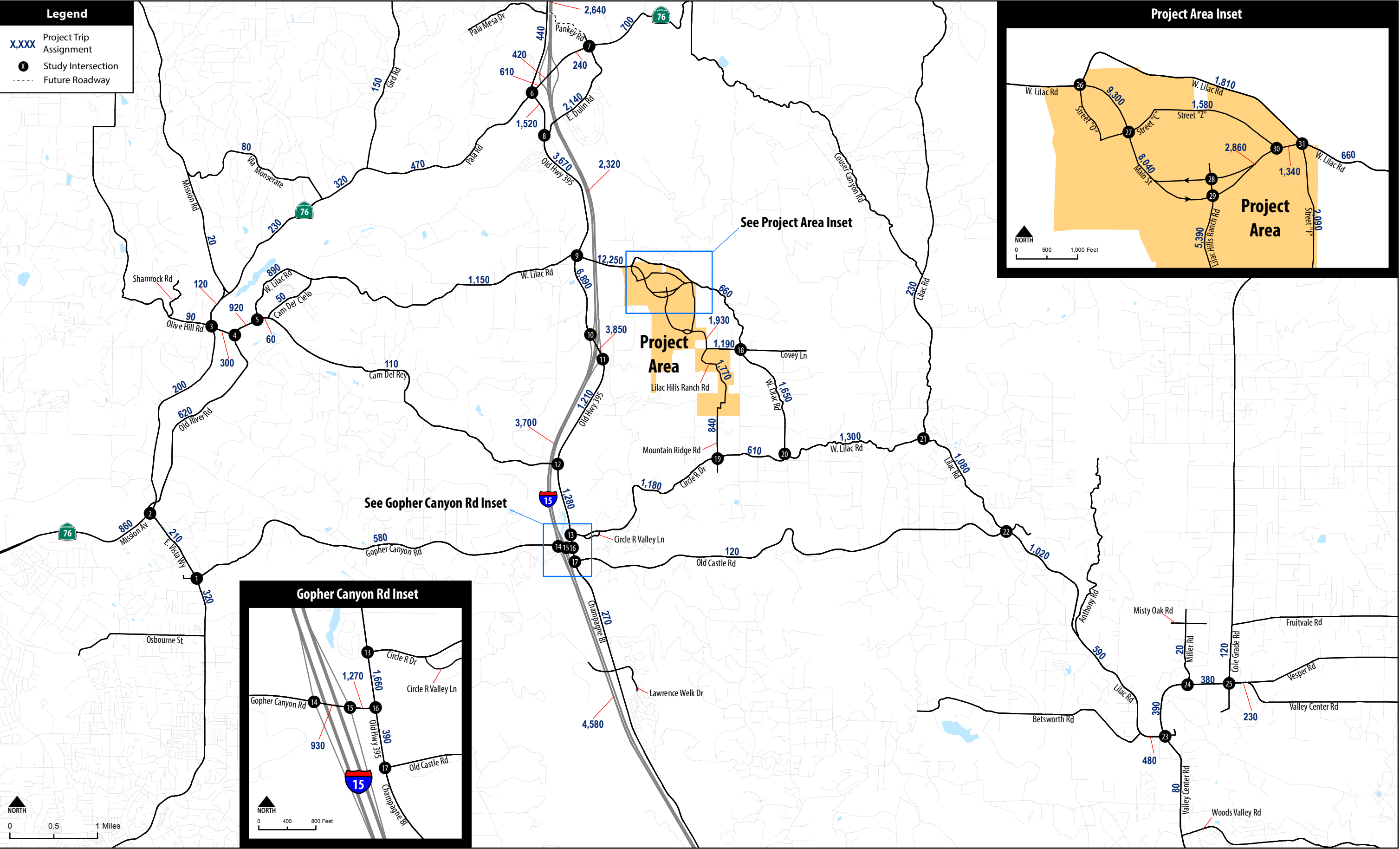
Lilac Hills Ranch Traffic Impact Study

Figure 4-13B (Intersections 14-25)  
Project (Phase D) Trip Assignment (Intersection) -  
Existing Network



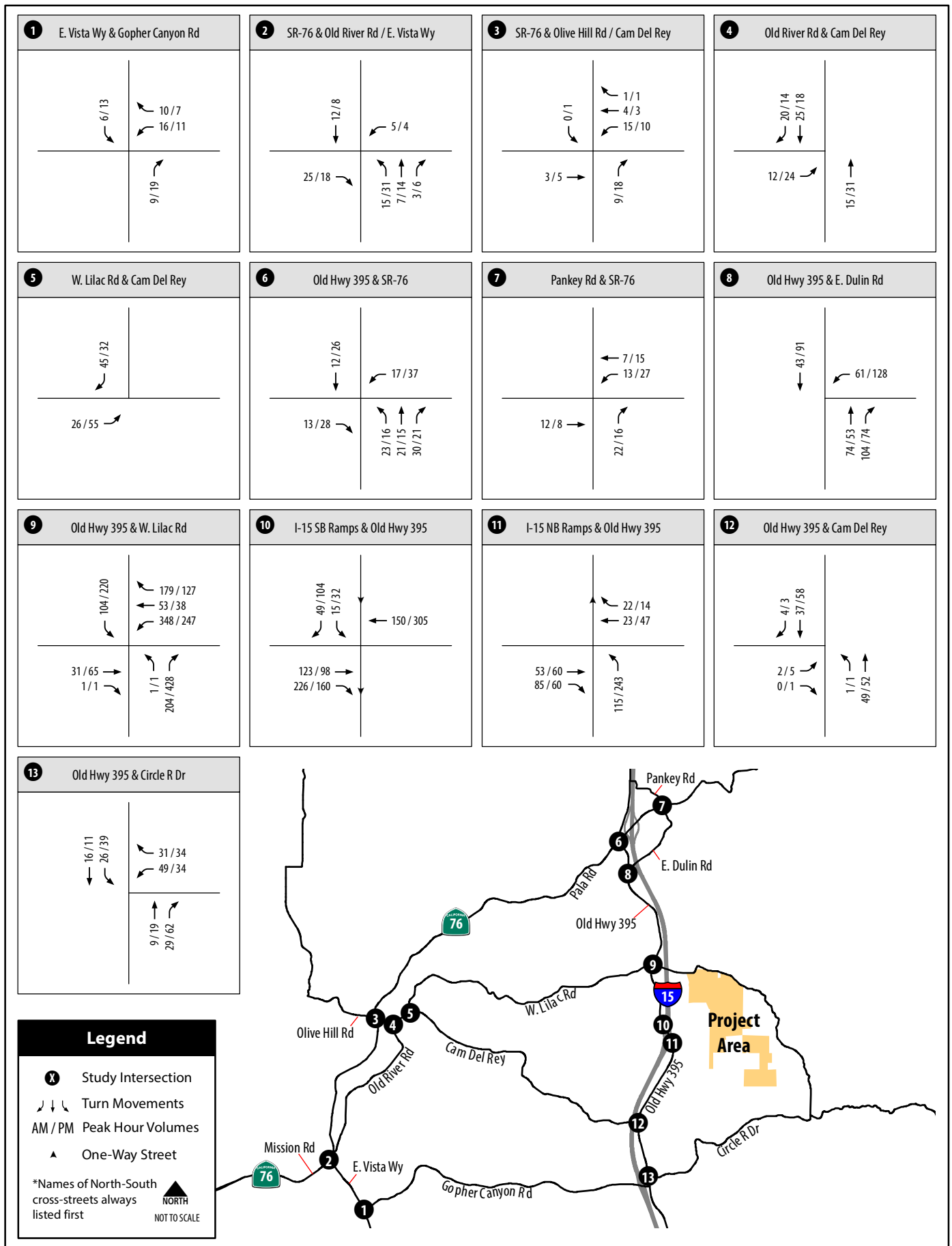
Lilac Hills Ranch Traffic Impact Study

Figure 4-13B (Intersections 26-31)  
Project (Phase D) Trip Assignment (Intersection) -  
Existing Network



Lilac Hills Ranch Traffic Impact Study

Figure 4-14A  
Project (Phase E, Buildout) Trip Assignment (Roadway) - Existing Network

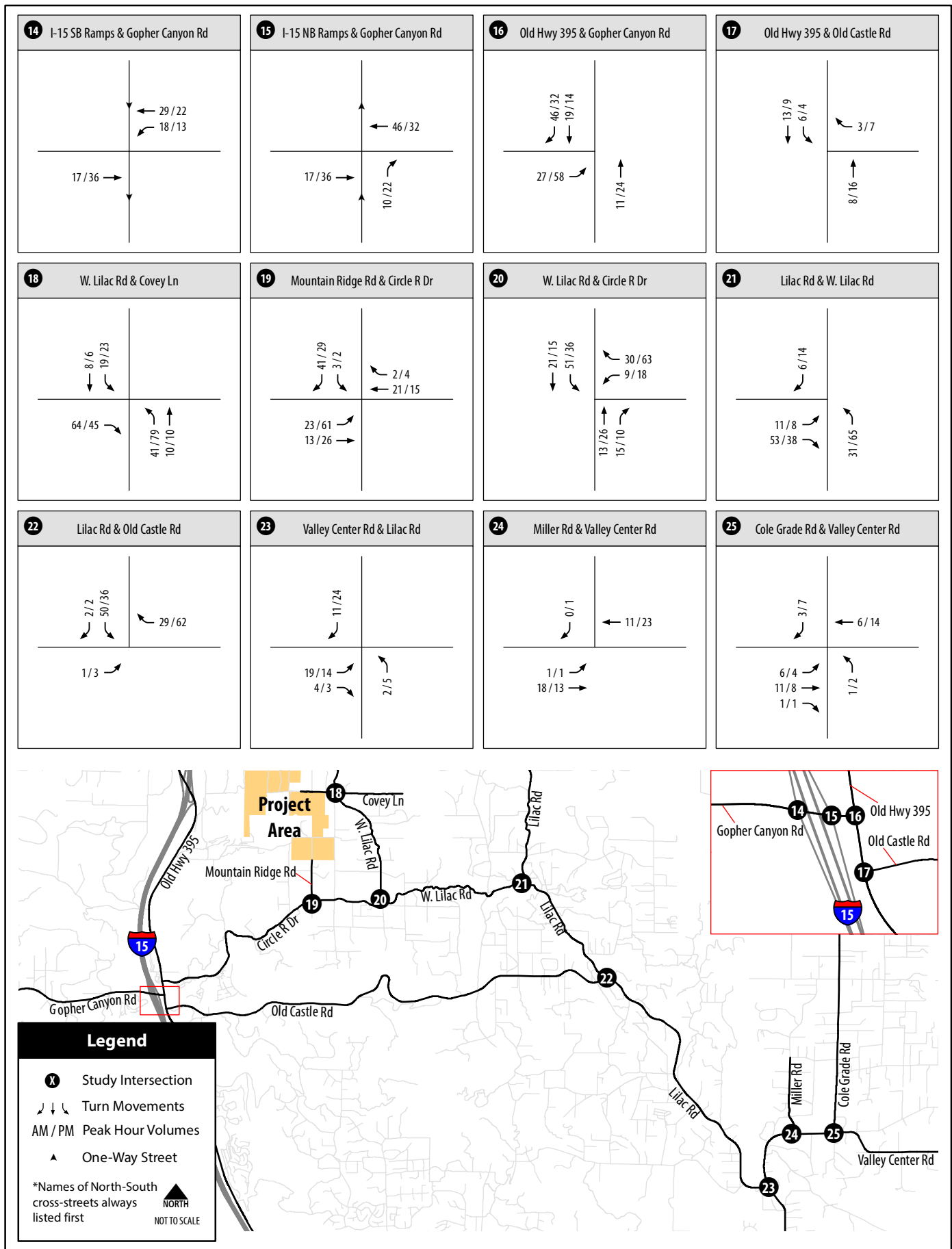


Lilac Hills Ranch Traffic Impact Study

Figure 4-14B (Intersections 1-13)

Project (Phase E, Buildout)

Trip Assignment (Intersection) - Existing Network

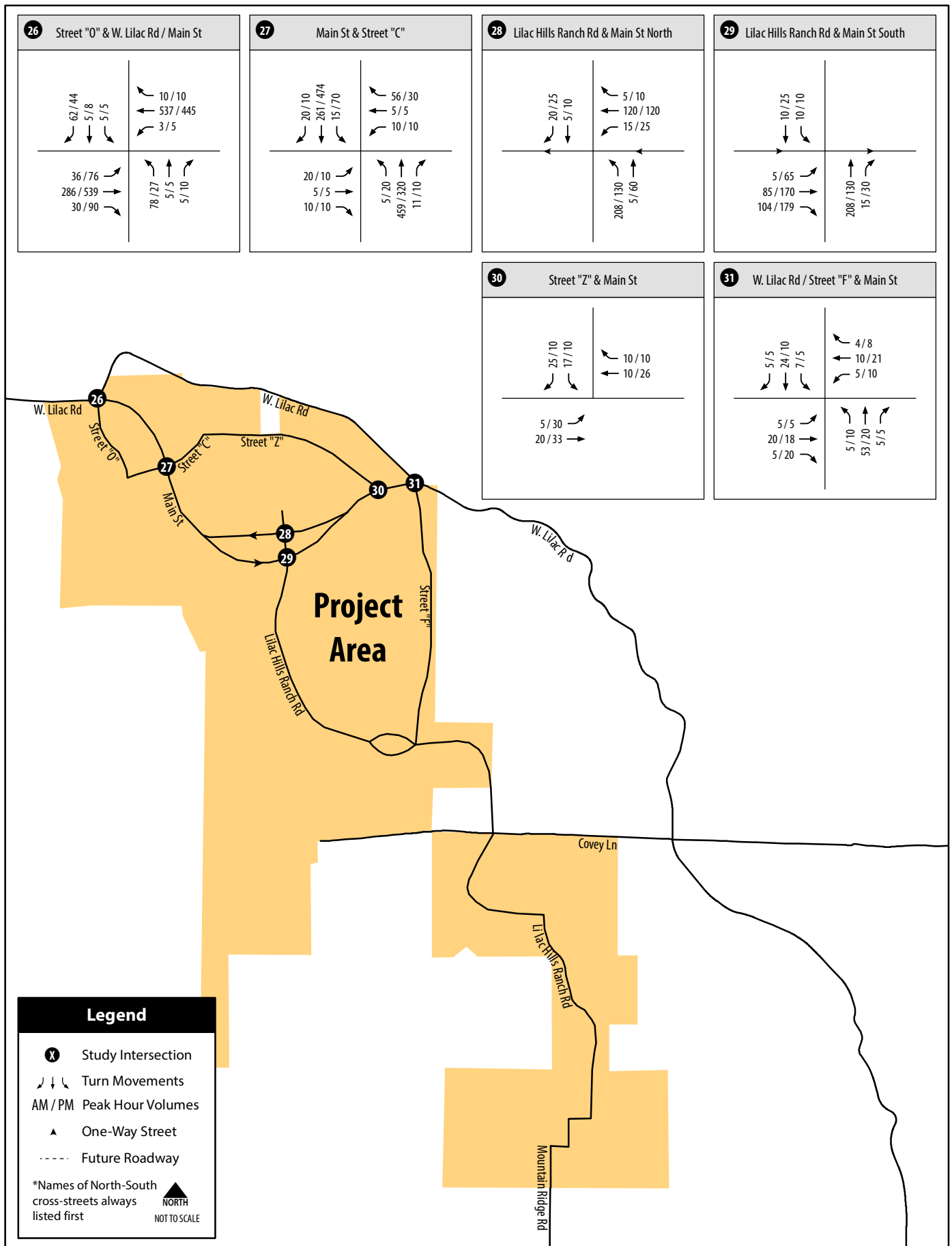


Lilac Hills Ranch Traffic Impact Study

Figure 4-14B (Intersections 14-25)

Project (Phase E, Buildout)

Trip Assignment (Intersection) - Existing Network



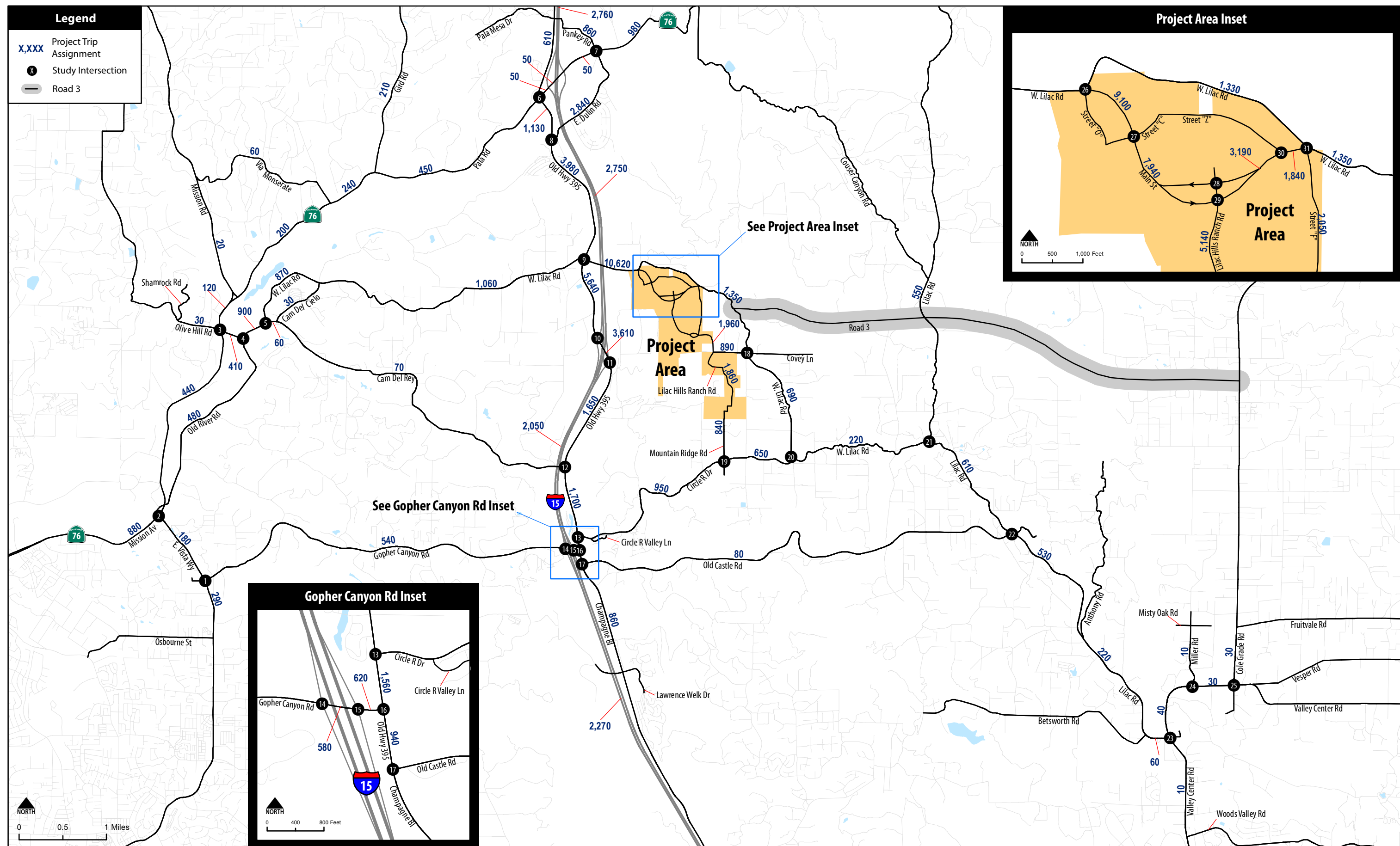
Lilac Hills Ranch Traffic Impact Study

Figure 4-14B (Intersections 26-31)

Project (Phase E, Buildout)

Trip Assignment (Intersection) - Existing Network



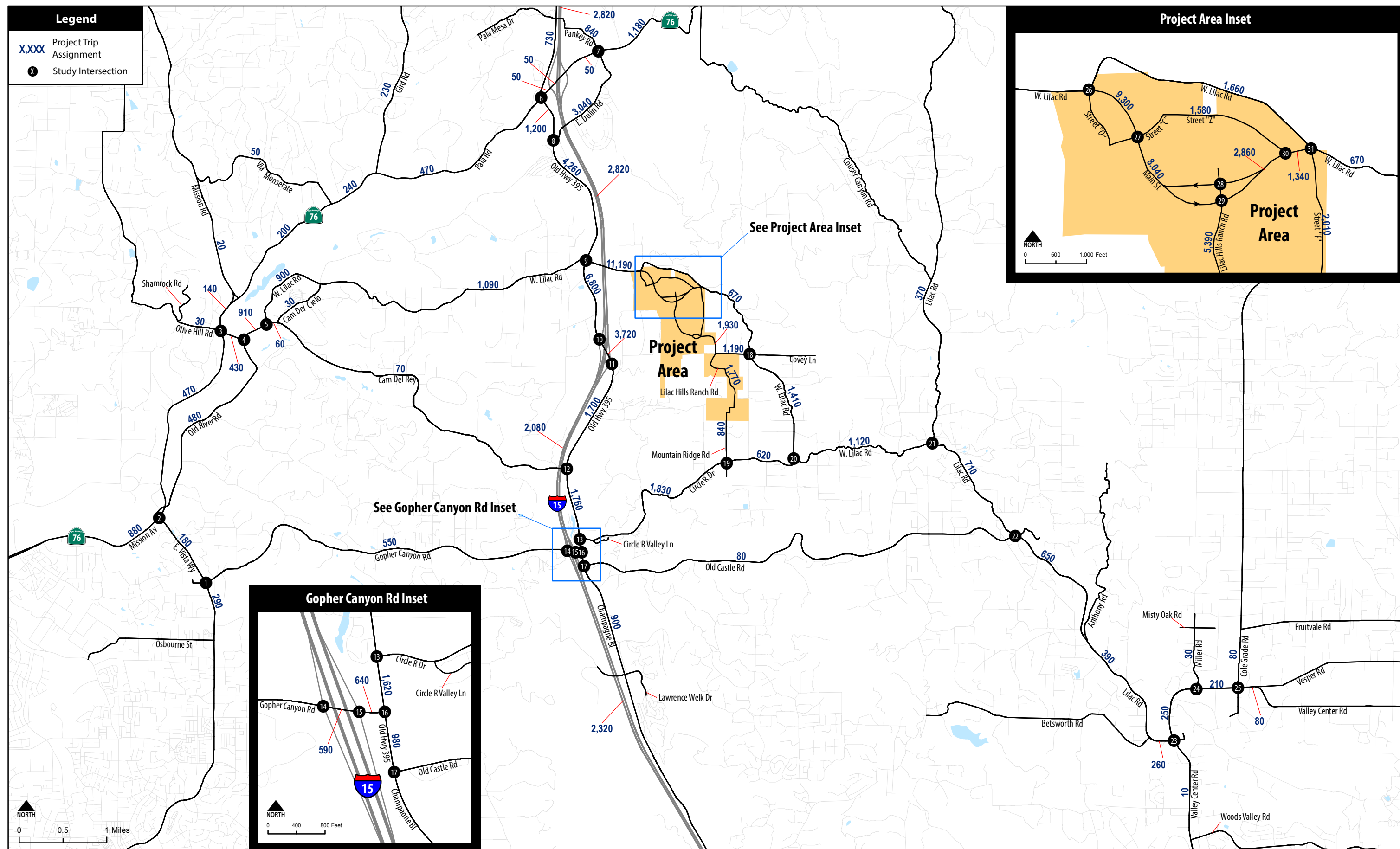


# Lilac Hills Ranch Traffic Impact Study

Figure 4-15

**Project (Buildout) Trip Assignment (Roadway) -  
Horizon Year Network with Road 3**





Lilac Hills Ranch Traffic Impact Study

Figure 4-16

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#### **4.4 Vehicle Miles of Travel (VMT) Analysis**

VMT is documented and compared in the form of average vehicular trip lengths in the Valley Center both with and without the proposed Lilac Hills Ranch project. Mode choice analyses and reports were derived from SANDAG model runs under the following six (6) scenarios:

##### With Road 3

1. **Without project and with Road 3:** Analyzes the average vehicular trip length within the Valley Center community without the proposed project and assuming the construction of Road 3. It is assumed that without the construction of the proposed project the project site would be developed based on the approved land uses contained in the *County of San Diego General Plan - Land Use Element*.
2. **With project and with Road 3:** Analyzes the average vehicular trip length within the Valley Center community assuming the development of the proposed project and assuming the construction of Road 3.
3. **Lilac Hills Ranch Project only with Road 3:** To provide a better understanding of how the vehicular trip lengths generated by the proposed project compares to the surrounding community, this scenario analyses the average vehicular trip length for the trips generated by the proposed Lilac Hills Ranch project, assuming the construction of Road 3.

##### Without Road 3

4. **Without project and without Road 3:** Analyzes the average vehicular trip length within the Valley Center community, without the construction of the proposed project and assuming that Road 3 would not be constructed. It is assumed that without the construction of the proposed project the project site would be developed based on the approved land uses contained in the *County of San Diego General Plan - Land Use Element*.
5. **With project and without Road 3:** Analyzes the average vehicular trip length within the Valley Center community assuming the development of the proposed project and assuming Road 3 would not be constructed.
6. **Lilac Hills Ranch Project only without Road 3:** To provide a better understanding of how the vehicular trip lengths generated by the proposed project compares to the surrounding community, this scenario analyses the average vehicular trip length for just the proposed Lilac Hills Ranch project, assuming Road 3 would not be constructed.

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The Year 2050 Regional Model (Series 12) assumes the build out of both the regional roadway network and the development of regional land uses under Year 2050 conditions. **Table 4.11** documents the assumed land use and roadway network under each of the analysis scenarios outlined above. Land use assumptions for each model run are provided in **Appendix M**.

**TABLE 4.11**  
**MODE CHOICE MODEL SCENARIOS**

| Scenario   | Model ID          | Geographic Area Analyzed | Assumed Land Uses within Project Site | Network Assumption                      |
|--|-------------------|--------------------------|---------------------------------------|---|
| <u>Without project and with Road 3</u>               | <u>2050rc11g</u>  | <u>Valley Center CPA</u> | <u>General Plan Update</u>            | <u>Regional Buildout with Road 3</u>    |
| <u>With project and with Road 3</u>                  | <u>2050rc11e1</u> | <u>Valley Center CPA</u> | <u>Lilac Hills Ranch project</u>      |   |
| <u>Lilac Hills Ranch Project only with Road 3</u>    | <u>2050rc11e2</u> | <u>Project Only</u>      | <u>Lilac Hills Ranch project</u>      |   |
| <u>Without project and without Road 3</u>            | <u>2050rc11h</u>  | <u>Valley Center CPA</u> | <u>General Plan Update</u>            | <u>Regional Buildout without Road 3</u> |
| <u>With project and without Road 3</u>               | <u>2050rc11f1</u> | <u>Valley Center CPA</u> | <u>Lilac Hills Ranch project</u>      |   |
| <u>Lilac Hills Ranch Project only without Road 3</u> | <u>2050rc11f2</u> | <u>Project Only</u>      | <u>Lilac Hills Ranch project</u>      |   |

Source: SANDAG, Chen Ryan Associates; May 2014

**Table 4.12** displays a comparison of vehicles mile travel (VMT), the total number of vehicular trips generated, and the average vehicular trip length within the community and/or generated by the proposed project for each of the six analysis scenarios. The individual mode choice reports for each scenario are provided in **Appendix N**.

**TABLE 4.12**  
**VEHICLE MILES TRAVEL & AVERAGE TRIP LENGTH**

| Scenarios  | VMT (mi)         | # of Vehicles  | Trip Length (mi) |
|--|------------------|----------------|------------------|
| <u>Without project and with Road 3</u>               | <u>991,157</u>   | <u>120,162</u> | <u>8.25</u>      |
| <u>With project and with Road 3</u>                  | <u>1,045,936</u> | <u>128,042</u> | <u>8.17</u>      |
| <u>Lilac Hills Ranch Project only with Road 3</u>    | <u>71,084</u>    | <u>9,353</u>   | <u>7.600</u>     |
| <u>Without project and without Road 3</u>            | <u>989,607</u>   | <u>120,162</u> | <u>8.24</u>      |
| <u>With project and without Road 3</u>               | <u>1,043,747</u> | <u>128,034</u> | <u>8.15</u>      |
| <u>Lilac Hills Ranch Project only without Road 3</u> | <u>71,055</u>    | <u>9,346</u>   | <u>7.603</u>     |

Source: SANDAG Mode Choice Reports; May 2014

As shown in Table 4.12, the overall VMT and number of vehicles increase with the development of the proposed project, however, trip lengths within the Valley Center community are projected to be reduced by 0.08 miles, assuming the construction of Road 3, and 0.09 miles without the

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construction of Road 3. The proposed project is projected to have an average vehicular trip length of 7.6 miles, which is over a half-mile lower than the rest of the Valley Center community, both with and without the construction of Road 3.

It should be noted that due the rural nature of the Valley Center community and the relevance of the trip length comparisons, this analysis was only conducted at the community and project level (not at the regional level). Based on the Year 2050 Regional Model, the average vehicular trip length within the San Diego region is 5.8 miles; however, this includes numerous urban and suburban communities and jurisdictions such as downtown, UTC, La Jolla, Mission Valley, Encinitas, etc. and is therefore not applicable to the rural Valley Center community.

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## 5.0 Existing Plus Project Conditions

This section provides an analysis of existing traffic conditions with the addition of project trips under the various traffic analysis phases of the Lilac Hills Ranch project.

### 5.1 Existing Plus Project (Phase A) Conditions

#### 5.1.1 Existing Plus Project (Phase A) Roadway Network and Traffic Volumes

The Existing Plus Project (Phase A) scenario includes existing traffic volumes with the addition of traffic generated by traffic analysis Phase A. Intersection and roadway geometrics under Existing Plus Project conditions were assumed to be identical to Existing conditions, with the exception of the following roads and driveway intersections associated with project frontage and access:

- Main Street, between West Lilac Road and Street “C”;
- Main Street, between Street “Z” and W. Lilac Road;
- Street “C” and Street “Z”;
- Birdsong Drive, between Street “Z” and W. Lilac Road;
- Intersection # 26, Street “O” / W. Lilac Road/Main Street – proposed roundabout;
- Intersection # 27, Main Street / Street “C” – proposed roundabout;
- Intersection # 30, Street “Z” / Main Street – proposed one-way stop (southbound Street “Z” approach) controlled L-intersection; and
- Intersection # 31, Street “Z” / Main Street – proposed roundabout.

Note that Birdsong Drive, between Street “Z” and W. Lilac Road will serve as an interim secondary access route for the initial phase of Phase A (SFD-1 and SFD-2 as shown in Figure 1-3). After the construction of Main Street, between Street “Z” and W. Lilac Road, Birdsong Drive will revert to a private driveway for use by the owner of APN 128-280-56. Appendix O provided a detailed assessment for Birdsong Drive traffic operations under Phase A, and it concluded that the initial phase of Phase A (SFD-1 and SFD-2) would not have a significant impact at Birdsong Drive and W. Lilac Road intersection.

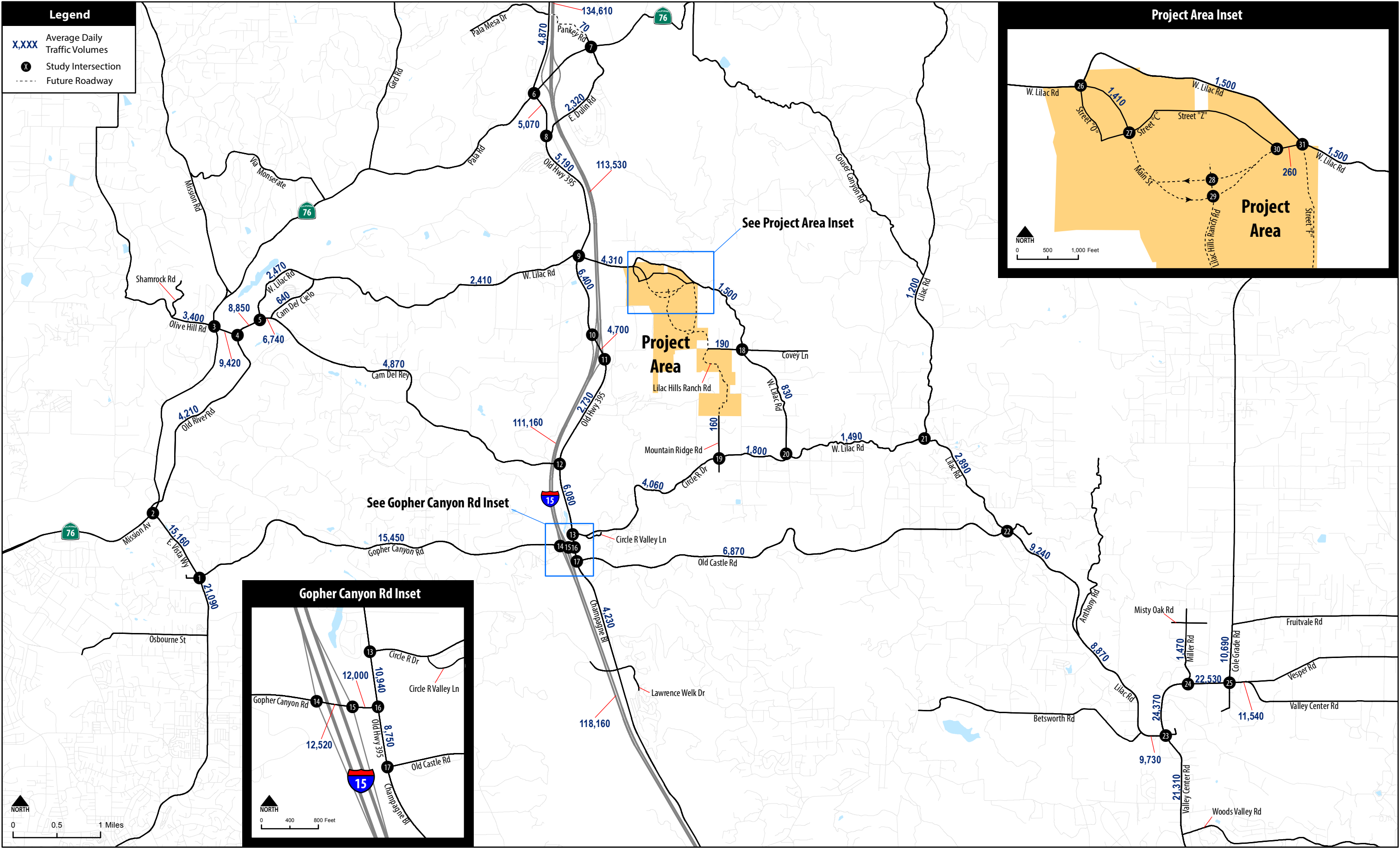
#### 5.1.2 Existing Plus Project (Phase A) Traffic Conditions

Level of service analyses under Existing Plus Project (Phase A) conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment, intersection, two-lane highway, freeway segment, and ramp intersection level of service results are discussed separately below. Average daily traffic volumes on study area roadway segments are displayed in **Figure 5-1A**, while peak hour traffic volumes at the key study area intersections are displayed in **Figure 5-1B**.

- ~~E. Vista Way, between SR 76 and Gopher Canyon Road – LOS E; and~~
- ~~E. Vista Way, between Gopher Canyon Road and Osborne Street – LOS F.~~

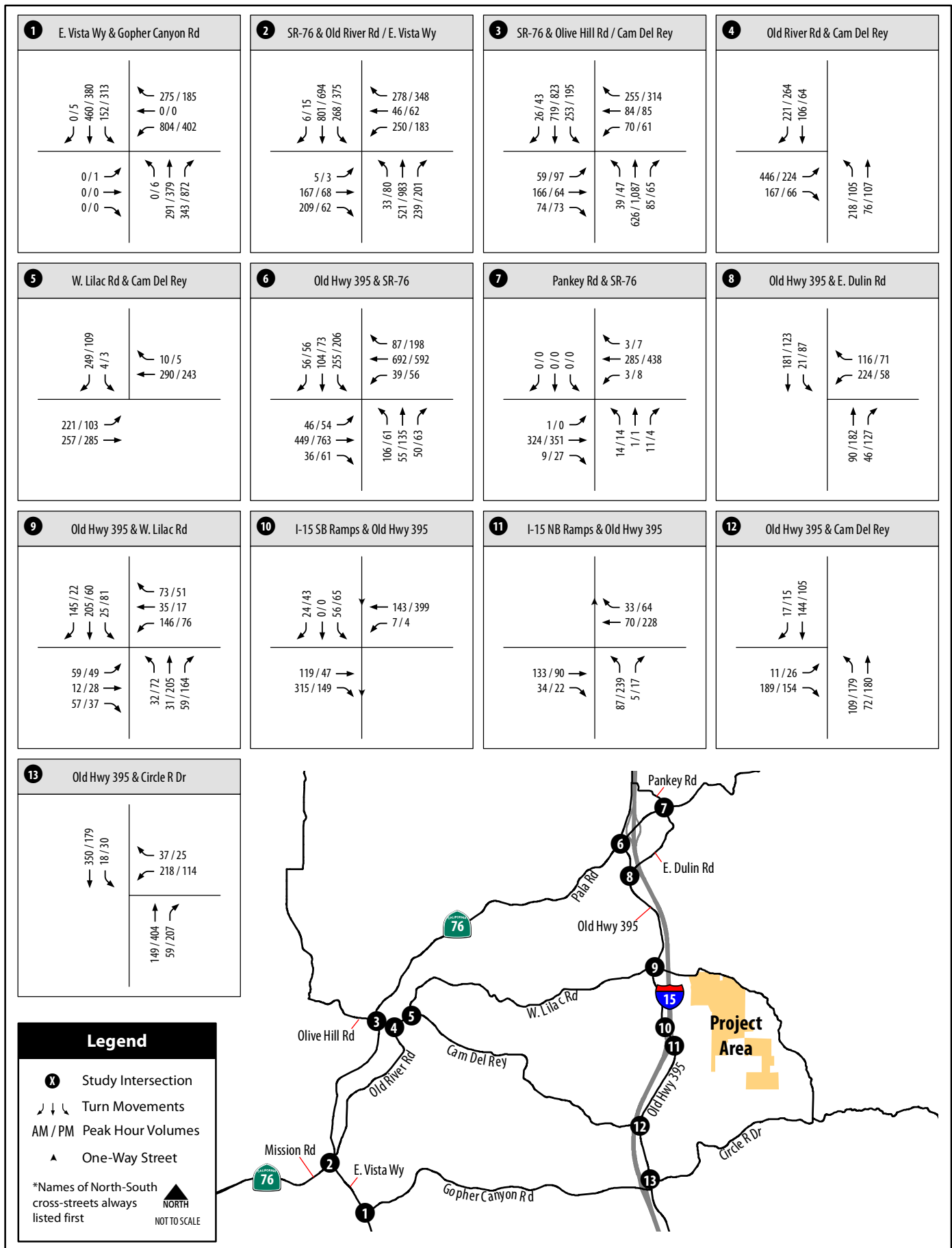
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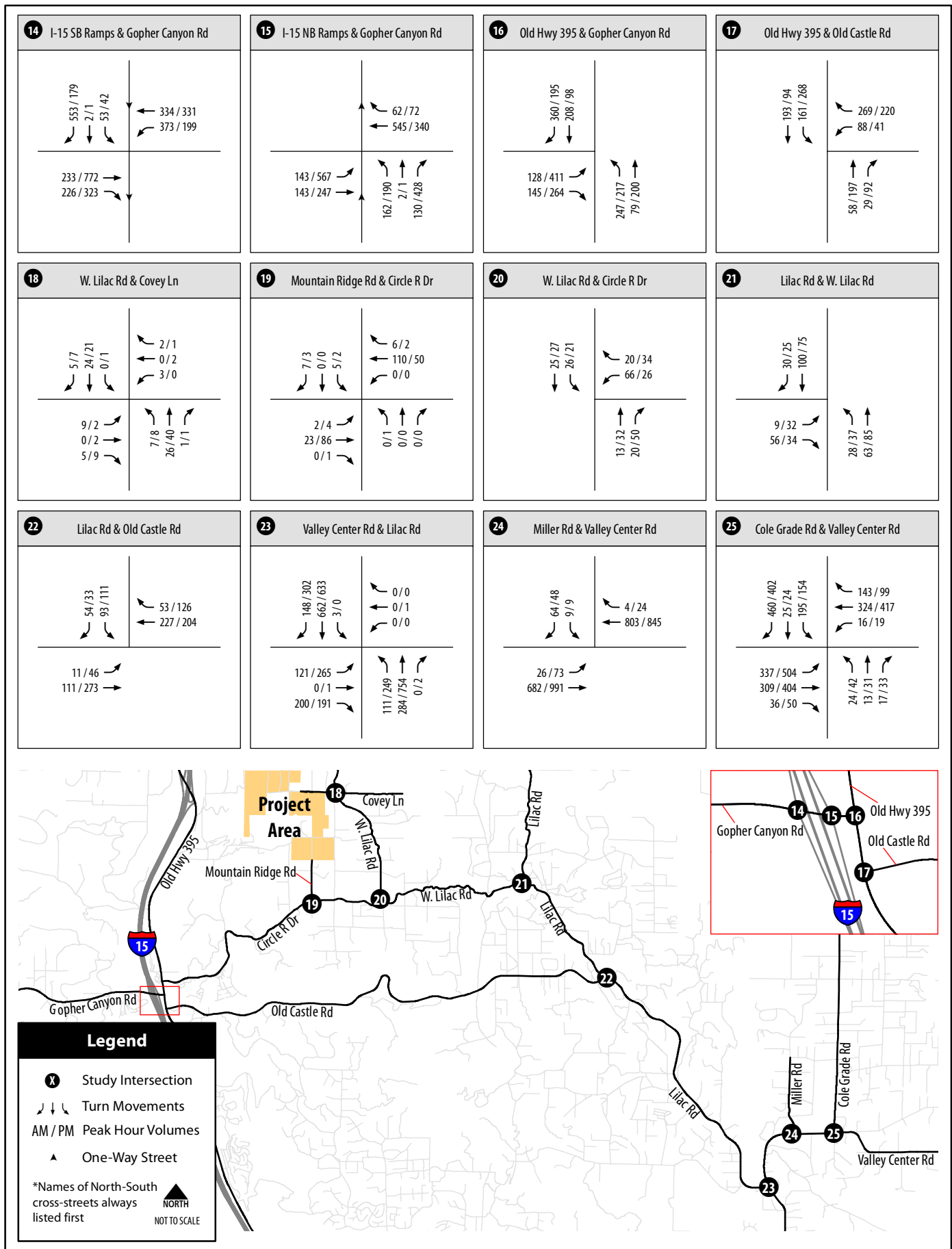
Lilac Hills Ranch Traffic Impact Study

Figure 5-1A  
Roadway Average Daily Traffic Volumes -  
Existing Plus Project (Phase A) Conditions



Lilac Hills Ranch Traffic Impact Study

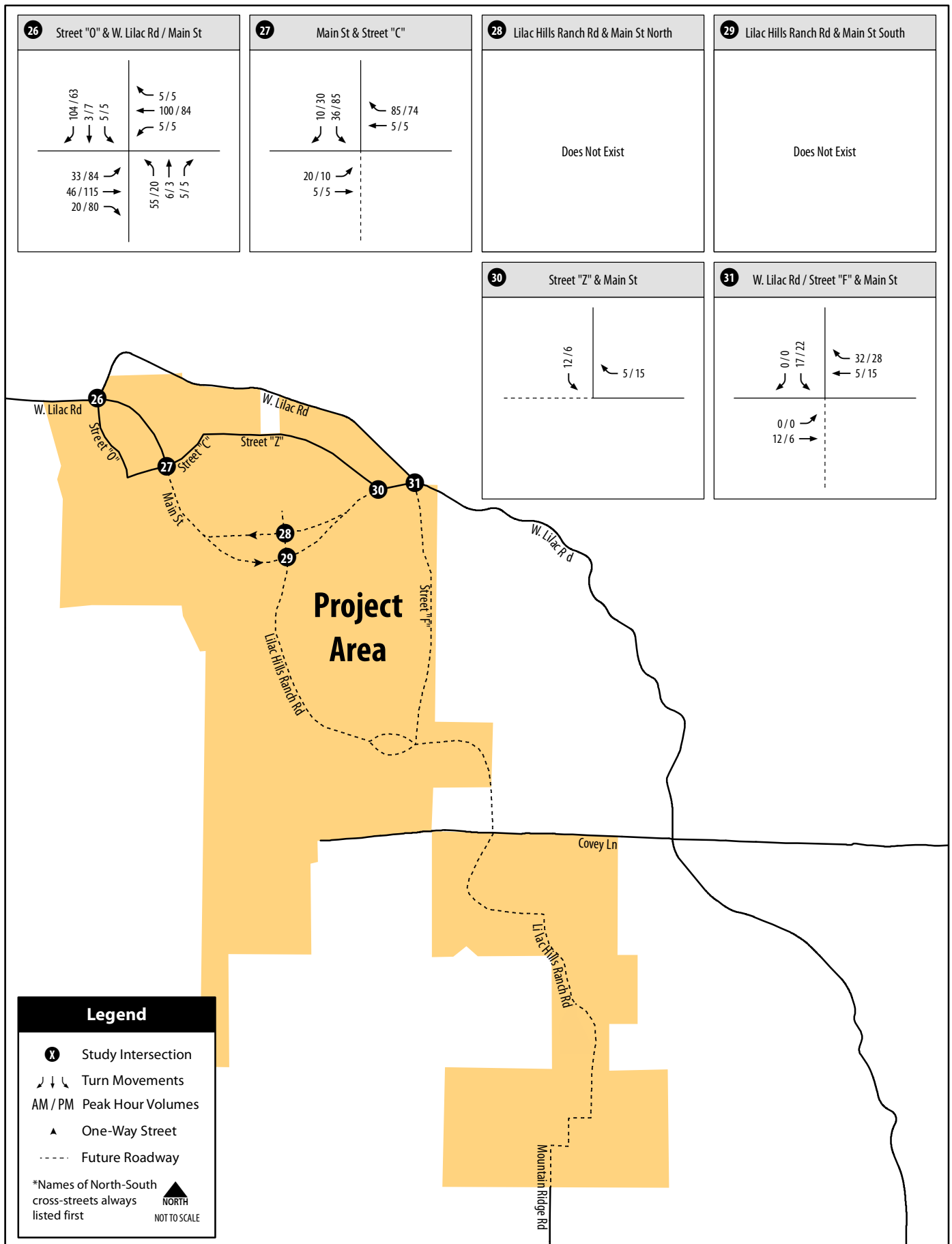
Figure 5-1B (Intersections 1-13)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase A) Conditions



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Figure 5-1B (Intersections 14-25)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase A) Conditions





Lilac Hills Ranch Traffic Impact Study

Figure 5-1B (Intersections 26-31)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase A) Conditions

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## Roadway Segment Analysis

**Table 5.1** displays the level of service analysis results for key roadway segments under Existing Plus Project (Phase A) conditions. As shown, similar to Existing conditions, the following three (3) roadway segments would continue to operate at substandard LOS E or F:

- Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – LOS F;  
Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase A of the Lilac Hills Ranch project would result in a direct impact to this roadway segment since it would add more than 100 ADT on this facility which would operate at LOS F.
- E. Vista Way, between SR-76 and Gopher Canyon Road – LOS E;  
Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase A of the Lilac Hills Ranch project would not result in direct impacts to this roadway segment since it would not add more than 200 daily trips.
- E. Vista Way, between Gopher Canyon Road and Osborne Street – LOS F.  
Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase A of the Lilac Hills Ranch project would not result in direct impacts to this roadway segment since it would not add more than 100 daily trips.

## Intersection Analysis

**Table 5.2** displays intersection level of service and average vehicle delay results under Existing Plus Project (Phase A) conditions. Level of service calculation worksheets for the Existing Plus Project (Phase A) conditions are provided in **Appendix P**. As shown in the table, the following three (3) study intersections would continue to operate at substandard LOS E or F under Existing Plus Project (Phase A) conditions:

- E. Vista Way / Gopher Canyon Road – LOS F during both the AM and PM peak hours, and the Phase A project traffic would add more than 5 peak hour trips to the critical movement, as well as more than 1 second of delay to this signalized intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase A of the Lilac Hills Ranch project would result in a direct impact to this intersection.

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TABLE 5.1  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE A) CONDITIONS

| Roadway            | From             | To                  | With Project Phase A |                           |        |           | Existing |           | Project Phase A ADT | Direct Impact?   |
|--------------------|------------------|---------------------|----------------------|---------------------------|--------|-----------|----------|-----------|---------------------|--|
|                    |                  |                     | Cross-Section        | LOS Threshold (LOS D)     | ADT    | LOS       | ADT      | LOS       |                     |  |
| E. Dulin Road      | Old Highway 395  | SR-76               | 2-Ln                 | <u>9,800</u>              | 2,320  | B         | 1,830    | <u>AB</u> | 500                 | No   |
| W. Lilac Road      | Camino Del Rey   | Camino Del Cielo    | 2-Ln                 | <u>8,700</u> <u>7,800</u> | 2,470  | A         | 2,270    | A         | 210                 | No   |
| W. Lilac Road      | Camino Del Cielo | Old Highway 395     | 2-Ln                 | <u>8,700</u> <u>7,800</u> | 2,410  | A         | 2,140    | A         | 270                 | No   |
| W. Lilac Road      | Old Highway 395  | Main Street         | 2-Ln                 | 8,700                     | 4,310  | A         | 1,150    | A         | 3,160               | No   |
| W. Lilac Road      | Main Street      | Street "F"          | 2-Ln                 | <u>8,700</u> <u>7,800</u> | 1,500  | A         | 1,150    | A         | 350                 | No   |
| W. Lilac Road      | Street "F"       | Covey Lane          | 2-Ln                 | <u>8,700</u> <u>7,800</u> | 1,500  | A         | 1,150    | A         | 350                 | No   |
| W. Lilac Road      | Covey Lane       | Circle R Drive      | 2-Ln                 | <u>8,700</u> <u>7,800</u> | 830    | A         | 480      | A         | 350                 | No   |
| W. Lilac Road      | Circle R Drive   | Lilac Road          | 2-Ln                 | <u>8,700</u> <u>7,800</u> | 1,490  | A         | 1,170    | A         | 320                 | No   |
| Camino Del Cielo   | Camino Del Rey   | W. Lilac Road       | 2-Ln                 | 10,900                    | 640    | A         | 630      | A         | 10                  | No   |
| Olive Hill Road    | Shamrock Road    | SR-76               | 2-Ln                 | 8,700                     | 3,400  | A         | 3,380    | A         | 20                  | No   |
| Camino Del Rey     | SR-76            | Old River Road      | 2-Ln                 | 10,900                    | 9,420  | D         | 9,350    | D         | 70                  | No   |
| Camino Del Rey     | Old River Road   | W. Lilac Road       | 2-Ln                 | <u>9,800</u>              | 8,850  | D         | 8,640    | D         | 210                 | No   |
| Camino Del Rey     | W. Lilac Road    | Camino Del Cielo    | 2-Ln w/ SM           | 13,500                    | 6,740  | C         | 6,730    | C         | 10                  | No   |
| Camino Del Rey     | Camino Del Cielo | Old Highway 395     | 2-Ln                 | <u>8,700</u> <u>7,800</u> | 4,870  | A         | 4,850    | A         | 20                  | No   |
| Gopher Canyon Road | E. Vista Way     | I-15 SB Ramps       | 2-Ln                 | <u>9,800</u>              | 15,450 | <u>EE</u> | 15,320   | <u>EE</u> | 130                 | <del>No</del><br><u>Yes</u><br><u>200ADT</u><br><u>&gt; 100ADT</u> |
| Gopher Canyon Road | I-15 SB Ramps    | I-15 NB Ramps       | 4-Ln                 | 30,800                    | 12,520 | A         | 12,390   | A         | 130                 | No   |
| Gopher Canyon Road | I-15 NB Ramps    | Old Highway 395     | 4-Ln                 | 30,800                    | 12,000 | A         | 11,870   | A         | 130                 | No   |
| Circle R Drive     | Old Highway 395  | Mountain Ridge Road | 2-Ln                 | <u>9,800</u>              | 4,060  | <u>BC</u> | 4,030    | <u>BC</u> | 40                  | No   |

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**TABLE 5.1  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE A) CONDITIONS**

| Roadway                | From                | To                  | With Project Phase A |                                 |        |           | Existing |           | Project<br>Phase A<br>ADT | Direct<br>Impact? |
|------------------------|---------------------|---------------------|----------------------|---------------------------------|--------|-----------|----------|-----------|---------------------------|-------------------|
|                        |                     |                     | Cross-<br>Section    | LOS<br>Threshold<br>(LOS D)     | ADT    | LOS       | ADT      | LOS       |                           |                   |
| Circle R Drive         | Mountain Ridge Road | W. Lilac Road       | 2-Ln                 | <u>9,800</u>                    | 1,800  | <u>AB</u> | 1,770    | <u>AB</u> | 40                        | No                |
| Old Castle Road        | Old Highway 395     | Lilac Road          | 2-Ln                 | <u>9,800</u>                    | 6,870  | <u>CD</u> | 6,840    | <u>CD</u> | 30                        | No                |
| E. Vista Way           | SR-76               | Gopher Canyon Road  | 2-Ln w/<br>TWLTL     | 13,500                          | 15,160 | E         | 15,120   | E         | 50                        | No<br>< 200ADT    |
| E. Vista Way           | Gopher Canyon Road  | Osborne Street      | 2-Ln w/<br>TWLTL     | 13,500                          | 21,090 | F         | 21,020   | F         | 70                        | No<br>< 100ADT    |
| Old River Road         | SR-76               | Camino Del Rey      | 2-Ln                 | <del>10,900</del> <u>9,800</u>  | 4,210  | C         | 4,070    | <u>BC</u> | 140                       | No                |
| Champagne<br>Boulevard | Old Castle Road     | Lawrence Welk Drive | 2-Ln                 | <del>10,900</del> <u>13,500</u> | 4,230  | <u>BC</u> | 4,170    | <u>BC</u> | 60                        | No                |
| Pankey Road            | Pala Mesa Drive     | SR-76               | 2-Ln                 | <del>10,900</del> <u>4,500</u>  | 70     | A         | 70       | A         | 0                         | No                |
| Lilac Road             | Couser Canyon Road  | W. Lilac Road       | 2-Ln                 | <del>8,700</del> <u>7,800</u>   | 1,200  | A         | 1,150    | A         | 50                        | No                |
| Lilac Road             | W. Lilac Road       | Old Castle Road     | 2-Ln                 | <del>8,700</del> <u>7,800</u>   | 2,890  | A         | 2,640    | A         | 250                       | No                |
| Lilac Road             | Old Castle Road     | Anthony Road        | 2-Ln                 | 10,900                          | 9,240  | D         | 9,010    | D         | 240                       | No                |
| Lilac Road             | Anthony Road        | Betsworth Road      | 2-Ln                 | 10,900                          | 8,870  | D         | 8,740    | D         | 140                       | No                |
| Lilac Road             | Betsworth Road      | Valley Center Road  | 2-Ln                 | 13,500                          | 9,730  | D         | 9,620    | D         | 110                       | No                |
| Valley Center Road     | Woods Valley Road   | Lilac Road          | 4/Ln w/<br>TWLTL/RM  | 27,000                          | 21,310 | C         | 21,290   | C         | 20                        | No                |
| Valley Center Road     | Lilac Road          | Miller Road         | 4-Ln w/ RM           | 33,400                          | 24,370 | B         | 24,280   | B         | 90                        | No                |
| Valley Center Road     | Miller Road         | Cole Grade Road     | 4-Ln w/ RM           | 27,000                          | 22,530 | C         | 22,440   | C         | 90                        | No                |
| Valley Center Road     | Cole Grade Road     | Vesper Road         | 2-Ln                 | 13,500                          | 11,540 | D         | 11,490   | D         | 50                        | No                |

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TABLE 5.1  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE A) CONDITIONS

| Roadway         | From           | To                 | With Project Phase A |                             |        |     | Existing |     | Project<br>Phase A<br>ADT | Direct<br>Impact? |
|-----------------|----------------|--------------------|----------------------|-----------------------------|--------|-----|----------|-----|---------------------------|-------------------|
|                 |                |                    | Cross-<br>Section    | LOS<br>Threshold<br>(LOS D) | ADT    | LOS | ADT      | LOS |                           |                   |
| Miller Road     | Misty Oak Road | Valley Center Road | 2-Ln                 | <del>8</del> 7,000          | 1,470  | A   | 1,460    | A   | 0                         | No                |
| Cole Grade Road | Fruitvale Road | Valley Center Road | 2-Ln w/<br>TWLTL     | 13,500                      | 10,690 | D   | 10,660   | D   | 30                        | No                |

Source: Chen Ryan Associates; ~~January 2013~~May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

RM = Raised Median.

SM = Striped Median.

TWLTL = Two-Way Left-Turn Lane.

Changes in this table are associated with "Change 3" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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**TABLE 5.2  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE A) CONDITIONS**

| Intersection                                     | Traffic Control | With Project Phase A |          |                   |          | Existing             |              | Change in Delay (sec.) AM / PM | Phase A Traffic to Critical Movements AM / PM | Direct Impact?                                 |
|--|-----------------|----------------------|----------|-------------------|----------|----------------------|--------------|--------------------------------|---|--|
|  |                 | AM Peak Hour         |          | PM Peak Hour      |          | Delay (sec.) AM / PM | LOS AM / PM  |                                |   |  |
|  |                 | Avg. Delay (sec.)    | LOS      | Avg. Delay (sec.) | LOS      |                      |              |                                |   |  |
| 1. <u>E. Vista Way / Gopher Canyon Road</u>      | <u>Signal</u>   | <u>175.7</u>         | <u>F</u> | <u>221.2</u>      | <u>F</u> | <u>172.8 / 212.0</u> | <u>F / F</u> | <u>2.9 / 9.2</u>               | <u>WB:+7 / NB:+5</u>                          | <u>Yes County Int. &gt; 5 trips &gt;1 sec.</u> |
| 2. <u>SR-76 / Old River Road/E. Vista Way</u>    | <u>Signal</u>   | <u>24.1</u>          | <u>C</u> | <u>32.0</u>       | <u>C</u> | <u>23.7 / 32</u>     | <u>C / C</u> | <u>0.4 / 0.0</u>               | <u>-</u>                                      | <u>No</u>                                      |
| 3. <u>SR-76 / Olive Hill Road/Camino Del Rey</u> | <u>Signal</u>   | <u>26.4</u>          | <u>C</u> | <u>34.5</u>       | <u>C</u> | <u>21.6 / 34.5</u>   | <u>C / C</u> | <u>4.8 / 0.0</u>               | <u>-</u>                                      | <u>No</u>                                      |
| 4. <u>Old River Road / Camino Del Rey</u>        | <u>OWSC</u>     | <u>23.4</u>          | <u>D</u> | <u>12.2</u>       | <u>B</u> | <u>23.2 / 12.2</u>   | <u>D / B</u> | <u>0.2 / 0.0</u>               | <u>-</u>                                      | <u>No</u>                                      |
| 5. <u>W. Lilac Road / Camino Del Rey</u>         | <u>OWSC</u>     | <u>16.2</u>          | <u>C</u> | <u>11.1</u>       | <u>B</u> | <u>15.7 / 11.0</u>   | <u>C / B</u> | <u>0.5 / 0.1</u>               | <u>-</u>                                      | <u>No</u>                                      |
| 6. <u>Old Highway 395 / SR-76</u>                | <u>Signal</u>   | <u>29.3</u>          | <u>C</u> | <u>41.8</u>       | <u>D</u> | <u>29.0 / 39.8</u>   | <u>C / D</u> | <u>0.3 / 2.0</u>               | <u>-</u>                                      | <u>No</u>                                      |
| 7. <u>Pankey Road / SR-76</u>                    | <u>TWSC</u>     | <u>12.9</u>          | <u>B</u> | <u>15.5</u>       | <u>C</u> | <u>12.8 / 15.2</u>   | <u>B / C</u> | <u>0.1 / 0.3</u>               | <u>-</u>                                      | <u>No</u>                                      |
| 8. <u>Old Highway 395 / E. Dulin Road</u>        | <u>OWSC</u>     | <u>14.7</u>          | <u>B</u> | <u>13.1</u>       | <u>B</u> | <u>14.7 / 11.2</u>   | <u>B / B</u> | <u>0.0 / 1.9</u>               | <u>-</u>                                      | <u>No</u>                                      |
| 9. <u>Old Highway 395 / W. Lilac Road</u>        | <u>TWSC</u>     | <u>19.3</u>          | <u>C</u> | <u>21.9</u>       | <u>C</u> | <u>18.5 / 13.3</u>   | <u>C / B</u> | <u>0.8 / 8.6</u>               | <u>-</u>                                      | <u>No</u>                                      |
| 10. <u>I-15 SB Ramps / Old Highway 395</u>       | <u>OWSC</u>     | <u>12.0</u>          | <u>B</u> | <u>12.1</u>       | <u>B</u> | <u>10.6 / 12.1</u>   | <u>B / B</u> | <u>1.4 / 0.0</u>               | <u>-</u>                                      | <u>No</u>                                      |
| 11. <u>I-15 NB Ramps / Old Highway 395</u>       | <u>OWSC</u>     | <u>10.2</u>          | <u>B</u> | <u>12.9</u>       | <u>B</u> | <u>9.8 / 11.2</u>    | <u>A / B</u> | <u>0.4 / 1.7</u>               | <u>-</u>                                      | <u>No</u>                                      |

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**TABLE 5.2**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE A) CONDITIONS**

| Intersection   | Traffic Control | With Project Phase A |          |                   |          | Existing             |              | Change in Delay (sec.) AM / PM | Phase A Traffic to Critical Movements AM / PM | Direct Impact?  |
|--|-----------------|----------------------|----------|-------------------|----------|----------------------|--------------|--------------------------------|---|---|
|  |                 | AM Peak Hour         |          | PM Peak Hour      |          | Delay (sec.) AM / PM | LOS AM / PM  |                                |   |   |
|  |                 | Avg. Delay (sec.)    | LOS      | Avg. Delay (sec.) | LOS      |                      |              |                                |   |   |
| <u>12. Old Highway 395 / Camino Del Rey</u>          | <u>OWSC</u>     | <u>10.2</u>          | <u>B</u> | <u>11.3</u>       | <u>B</u> | <u>10.1 / 11.0</u>   | <u>B / B</u> | <u>0.1 / 0.3</u>               | <u>-</u>                                      | <u>No</u>   |
| <u>13. Old Highway 395 / Circle R Drive</u>          | <u>OWSC</u>     | <u>21.5</u>          | <u>C</u> | <u>23.6</u>       | <u>C</u> | <u>20.4 / 22.5</u>   | <u>C / C</u> | <u>1.1 / 1.1</u>               | <u>-</u>                                      | <u>No</u>   |
| <u>14. I-15 SB Ramps / Gopher Canyon Road</u>        | <u>OWSC</u>     | <u>469.6</u>         | <u>F</u> | <u>173.0</u>      | <u>F</u> | <u>468.2 / 173.0</u> | <u>F / F</u> | <u>1.4 / 0.0</u>               | <u>-</u>                                      | <u>No</u><br><u>Caltrans Int.</u><br><u>&lt; 2 sec.</u> |
| <u>15. I-15 NB Ramps / Gopher Canyon Road</u>        | <u>OWSC</u>     | <u>31.3</u>          | <u>D</u> | <u>1945.5</u>     | <u>F</u> | <u>30.5 / 1945.4</u> | <u>D / F</u> | <u>0.8 / 0.1</u>               | <u>-</u>                                      | <u>No</u><br><u>Caltrans Int.</u><br><u>&lt; 2 sec.</u> |
| <u>16. Old Highway 395 / Gopher Canyon Road</u>      | <u>Signal</u>   | <u>13.4</u>          | <u>B</u> | <u>14.9</u>       | <u>B</u> | <u>11.0 / 14.7</u>   | <u>B / B</u> | <u>2.4 / 0.2</u>               | <u>-</u>                                      | <u>No</u>   |
| <u>17. Old Highway 395 / Old Castle Road</u>         | <u>Signal</u>   | <u>13.9</u>          | <u>B</u> | <u>16.2</u>       | <u>B</u> | <u>13.9 / 15.7</u>   | <u>B / B</u> | <u>0.0 / 0.5</u>               | <u>-</u>                                      | <u>No</u>   |
| <u>18. W. Lilac Road / Covey Lane</u>                | <u>TWSC</u>     | <u>9.0</u>           | <u>A</u> | <u>9.3</u>        | <u>A</u> | <u>8.8 / 9.3</u>     | <u>B / A</u> | <u>0.2 / 0.0</u>               | <u>-</u>                                      | <u>No</u>   |
| <u>19. Mountain Ridge Road / Circle R Drive</u>      | <u>TWSC</u>     | <u>9.3</u>           | <u>A</u> | <u>9.6</u>        | <u>A</u> | <u>9.3 / 9.6</u>     | <u>A / A</u> | <u>0.0 / 0.0</u>               | <u>-</u>                                      | <u>No</u>   |
| <del>20.</del> <u>W. Lilac Road / Circle R Drive</u> | OWSC            | 9.6                  | A        | 9.3               | A        | 9.3 / 9.3            | A / A        | 0.3 / 0.0                      | -   | No  |
| <del>21.</del> <u>Lilac Road / W. Lilac Road</u>     | OWSC            | 9.7                  | A        | 10.2              | B        | 9.6 / 9.9            | A / A        | 0.1 / 0.3                      | -   | No  |
| <del>22.</del> <u>Lilac Road / Old Castle Road</u>   | OWSC            | 12.2                 | B        | 18.6              | C        | 11.8 / 17.8          | B / C        | 0.4 / 0.8                      | -   | No  |

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**TABLE 5.2  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE A) CONDITIONS**

| Intersection  | Traffic Control | With Project Phase A |          |                   |          | Existing                |                | Change in Delay (sec.)<br>AM / PM | Phase A Traffic to Critical Movements<br>AM / PM | Direct Impact? |
|---|-----------------|----------------------|----------|-------------------|----------|-------------------------|----------------|-----------------------------------|--|----------------|
|   |                 | AM Peak Hour         |          | PM Peak Hour      |          | Delay (sec.)<br>AM / PM | LOS<br>AM / PM |                                   |  |                |
|   |                 | Avg. Delay (sec.)    | LOS      | Avg. Delay (sec.) | LOS      |                         |                |                                   |  |                |
| <del>5-23.</del> Valley Center Rd / Lilac Road              | Signal          | 10.6                 | B        | 22.8              | C        | 10.5 / 22.6             | B / C          | 0.1 / 0.2                         | -  | No             |
| <u>24. Miller Road / Valley Center Road</u>                 | <u>OWSC</u>     | <u>17.0</u>          | <u>C</u> | <u>25.3</u>       | <u>D</u> | <u>16.9 / 25.0</u>      | <u>C / D</u>   | <u>0.1 / 0.3</u>                  | <u>-</u>   | <u>No</u>      |
| <del>6-25.</del> Cole Grade Road / Valley Center Road       | Signal          | 31.1                 | C        | 34.9              | C        | 31.1 / 34.9             | C / C          | 0.0 / 0.0                         | -  | No             |
| <u>26. Street "O" / W. Lilac Road/Main Street</u>           | <u>RA</u>       | <u>4.6</u>           | <u>A</u> | <u>5.4</u>        | <u>A</u> | <u>DNE</u>              | <u>DNE</u>     | <u>4.6 / 5.4</u>                  | <u>-</u>   | <u>No</u>      |
| <del>7-27.</del> Main Street / Street "C"                   | RA              | 3.9                  | A        | 4.1               | A        | DNE                     | DNE            | 3.9 / 4.1                         | -  | No             |
| <del>8-28.</del> Lilac Hills Ranch Road / Main Street North | DNE             | DNE                  | DNE      | DNE               | DNE      | DNE                     | DNE            | DNE                               | DNE  | DNE            |
| <del>9-29.</del> Lilac Hills Ranch Road / Main Street South | DNE             | DNE                  | DNE      | DNE               | DNE      | DNE                     | DNE            | DNE                               | DNE  | DNE            |
| <del>40-30.</del> Street "Z" / Main Street                  | OWSC            | 8.6                  | A        | 8.6               | A        | DNE                     | DNE            | 8.6 / 8.6                         | -  | No             |
| <del>41-31.</del> W. Lilac Road/Street "F" / Main Street    | RA              | 3.5                  | A        | 3.5               | A        | DNE                     | DNE            | 3.5 / 3.5                         | -  | No             |

Source: Chen Ryan Associates; May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

AWSC = All-Way Stop Controlled.

TWSC = Two-Way Stop Controlled.

OWSC = One-Way Stop Controlled.

RA = Roundabout.

DNE = Does Not Exist.

For OWSC and TWSC intersections, the delay shown is the worst delay experienced by any of the approaches.

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Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase A of the Lilac Hills Ranch project would not result in any direct impacts to study roadway segments since it would not add 200 or more daily trips to the LOS E roadways or 100 or more daily trips to the LOS F roadway.

→

As shown in the table, the following four (4) study intersections would continue to operate at substandard LOS E or F under Existing Plus Project (Phase A) conditions:

SR 76 / Old River Road/E. Vista Way (Caltrans) — LOS E

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- ~~I-15 SB Ramps / Gopher Canyon Road (Caltrans) – LOS F during both the AM and PM peak hours, and the Phase A project traffic would not add two seconds or more of additional delay to this intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase A of the Lilac Hills Ranch project would not result in any direct impact to this intersection.~~
- ~~SR-76 / Olive Hill I-15 NB Ramps / Gopher Canyon Road / Camino Del Rey (Caltrans) – LOS EF during the PM peak hour, and the Phase A project traffic would not add two seconds or more of additional delay to this intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase A of the Lilac Hills Ranch project would not result in any direct impact to this intersection.~~
- ~~I-15 SB Ramps / Gopher Canyon Road (Caltrans) – LOS F during both the AM and PM peak hours, and the Phase A project traffic would not add two seconds or more of additional delay to this intersection.~~
- ~~I-15 NB Ramps / Gopher Canyon Road (Caltrans) – LOS F during the PM peak hour, and the Phase A project traffic would not add two seconds or more of additional delay to this intersection.~~

~~Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase A of the Lilac Hills Ranch project would not result in any direct impacts to the study intersections.~~

## Two-lane Highway Analysis

Table 5.3 displays two-lane highway level of service analysis results for Old Highway 395 under Existing Plus Project (Phase A) conditions. The two-lane highway level of service analysis was performed utilizing the methodology presented in Chapter 2.0.

As shown in the table, all segments along Old Highway 395 would continue to operate at acceptable LOS D or better under Existing Plus Project (Phase A) conditions and the additional traffic generated by Phase A of the project would not cause any direct impacts to Old Highway 395.

## Freeway Segment Analysis

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. Table 5.4 displays the resulting level of service for I-15 under Existing Plus Project (Phase A) conditions.

As shown in the table, all of the study area freeway segments along I-15 would continue to operate at LOS D or better under Existing Plus Project (Phase A) conditions. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase A of the project would not cause any direct impacts to study area freeway segments.

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|   |        |       |   |        |   |             |     |                |   |                                |
|---|--------|-------|---|--------|---|-------------|-----|----------------|---|--------------------------------|
| <del>12. E. Vista Way / Gopher Canyon Road</del>      | Signal | 27.9  | C | 49.4   | D | 24.3/48.7   | C/D | 3.6/0.7        | - | No                             |
| <del>13. SR 76 / Old River Road/E. Vista Way</del>    | Signal | 74.0  | E | 52.8   | D | 73.9/52.3   | E/D | <u>0.1/0.5</u> | - | No<br>Caltrans Int.<br><2 sec. |
| <del>14. SR 76 / Olive Hill Road/Camino Del Rey</del> | Signal | 44.5  | D | 61.7   | E | 43.6/60.8   | D/E | <u>0.9/0.9</u> | - | No<br>Caltrans Int.<br><2 sec. |
| <del>15. W. Lilac Road / Camino Del Rey</del>         | QWSC   | 16.2  | C | 11.1   | B | 15.4/11.0   | C/B | 0.8/0.1        | - | No                             |
| <del>16. Old Highway 395 / SR 76</del>                | Signal | 43.1  | D | 43.5   | D | 43.0/42.2   | D/D | 0.1/1.3        | - | No                             |
| <del>17. Pankey Road / SR 76</del>                    | TWSC   | 12.9  | B | 15.4   | C | 12.5/15.2   | B/C | 0.4/0.2        | - | No                             |
| <del>18. Old Highway 395 / E. Dulin Road</del>        | QWSC   | 14.7  | B | 13.0   | B | 14.6/11.2   | B/B | 0.1/1.8        | - | No                             |
| <del>19. Old Highway 395 / W. Lilac Road</del>        | TWSC   | 19.3  | C | 21.9   | C | 18.5/13.3   | C/B | 0.8/8.6        | - | No                             |
| <del>20. I-15 SB Ramps / Old Highway 395</del>        | QWSC   | 13.3  | B | 12.1   | B | 10.6/12.1   | B/B | 2.7/0.0        | - | No                             |
| <del>21. I-15 NB Ramps / Old Highway 395</del>        | QWSC   | 10.2  | B | 12.9   | B | 9.9/11.2    | A/B | 0.3/1.7        | - | No                             |
| <del>22. Old Highway 395 / Camino Del Rey</del>       | QWSC   | 10.2  | B | 11.3   | B | 10.1/11.0   | B/B | 0.1/0.3        | - | No                             |
| <del>23. Old Highway 395 / Circle R Drive</del>       | QWSC   | 21.5  | C | 23.6   | C | 20.4/22.5   | C/C | 1.1/1.1        | - | No                             |
| <del>24. I-15 SB Ramps / Gopher Canyon Road</del>     | QWSC   | 470.0 | F | 173.0  | F | 468.2/173.0 | F/F | <u>1.8/0.0</u> | - | No<br>Caltrans Int.<br><2 sec. |
| <del>25. I-15 NB Ramps / Gopher Canyon Road</del>     | QWSC   | 31.3  | D | 1945.5 | F | 30.5/1945.4 | D/F | <u>0.8/0.1</u> | - | No<br>Caltrans Int.<br><2 sec. |
| <del>26. Old Highway 395 / Gopher Canyon Road</del>   | Signal | 17.3  | B | 9.5    | A | 16.1/8.8    | B/A | 1.2/0.7        | - | No                             |

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|   |        |                 |   |                 |   |                      |                |                    |   |    |
|---|--------|-----------------|---|-----------------|---|----------------------|----------------|--------------------|---|----|
| <del>27. Old Highway 395 / Old Castle Road</del>      | Signal | <del>13.9</del> | B | <del>16.2</del> | B | <del>13.9/15.7</del> | <del>B/B</del> | <del>0.0/0.5</del> | - | No |
| <del>28. W. Lilac Road / Covey Lane</del>             | TWSC   | <del>8.9</del>  | A | <del>9.3</del>  | A | <del>8.8/9.1</del>   | <del>B/A</del> | <del>0.1/0.2</del> | - | No |
| <del>29. Mountain Ridge Road / Circle R Drive</del>   | TWSC   | <del>9.2</del>  | A | <del>9.6</del>  | A | <del>9.3/9.6</del>   | <del>A/A</del> | <del>0.0/0.0</del> | - | No |
| <del>30. Miller Road / Valley Center Road</del>       | QWSC   | <del>17.0</del> | C | <del>25.5</del> | D | <del>16.9/25.2</del> | <del>C/D</del> | <del>0.1/0.3</del> | - | No |
| <del>31. Street "O" / W. Lilac Road/Main Street</del> | RA     | <del>4.6</del>  | A | <del>5.3</del>  | A | <del>DNE</del>       | <del>DNE</del> | <del>4.6/5.3</del> | - | No |

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TABLE 5.3  
TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE A) CONDITIONS

| 2-Ln Highway    | From               | To                 | With Project Phase A  |        |             | Existing |             | Project Phase A ADT | Direct Impact? |
|-----------------|--------------------|--------------------|-----------------------|--------|-------------|----------|-------------|---------------------|----------------|
|                 |                    |                    | LOS Threshold (LOS D) | ADT    | LOS         | ADT      | LOS         |                     |                |
| Old Highway 395 | Pala Mesa Drive    | SR-76              | 16,200                | 4,870  | D or better | 4,770    | D or better | 100                 | No             |
| Old Highway 395 | SR-76              | E. Dulin Road      | 16,200                | 5,070  | D or better | 4,720    | D or better | 350                 | No             |
| Old Highway 395 | E. Dulin Road      | W. Lilac Road      | 16,200                | 5,190  | D or better | 4,340    | D or better | 850                 | No             |
| Old Highway 395 | W. Lilac Road      | I-15 SB Ramps      | 16,200                | 6,400  | D or better | 4,450    | D or better | 1,950               | No             |
| Old Highway 395 | I-15 SB Ramps      | I-15 NB Ramps      | 16,200                | 4,700  | D or better | 3,600    | D or better | 1,110               | No             |
| Old Highway 395 | I-15 NB Ramps      | Camino Del Rey     | 16,200                | 2,730  | D or better | 2,430    | D or better | 300                 | No             |
| Old Highway 395 | Camino Del Rey     | Circle R Drive     | 16,200                | 6,080  | D or better | 5,820    | D or better | 270                 | No             |
| Old Highway 395 | Circle R Drive     | Gopher Canyon Road | 16,200                | 10,940 | D or better | 10,710   | D or better | 230                 | No             |
| Old Highway 395 | Gopher Canyon Road | Old Castle Road    | 16,200                | 8,750  | D or better | 8,660    | D or better | 90                  | No             |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

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**TABLE 5.4  
FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE A) CONDITIONS**

| Freeway | Segment                                      | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|--|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|-------------------------------------|---------------------|
| I-15    | Riverside County Boundary to Old Highway 395 | 134,590 | 8.4%        | 11,371           | 0.64              | 4                        | 0.95 | 6.75%              | 1,965            | 0.836 | D              | 0.004                               | No                  |
| I-15    | Old Highway 395 to SR-76                     | 134,610 | 7.4%        | 10,014           | 0.73              | 4                        | 0.95 | 6.75%              | 1,993            | 0.848 | D              | 0.004                               | No                  |
| I-15    | SR-76 to Old Highway 395                     | 113,530 | 7.8%        | 8,880            | 0.69              | 4                        | 0.95 | 8.40%              | 1,669            | 0.710 | C              | 0.003                               | No                  |
| I-15    | Old Highway 395 to Gopher Canyon Road        | 111,160 | 8.1%        | 8,977            | 0.67              | 4                        | 0.95 | 8.40%              | 1,644            | 0.700 | C              | 0.007                               | No                  |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 118,160 | 8.1%        | 9,543            | 0.67              | 4                        | 0.95 | 13.20%             | 1,788            | 0.761 | C              | 0.007                               | No                  |
| I-15    | Deer Springs Road to Centre City Parkway     | 117,940 | 8.0%        | 9,475            | 0.66              | 4                        | 0.95 | 13.20%             | 1,766            | 0.751 | C              | 0.006                               | No                  |
| I-15    | Centre City Parkway to El Norte Parkway      | 111,750 | 8.0%        | 8,978            | 0.66              | 4                        | 0.95 | 13.20%             | 1,673            | 0.712 | C              | 0.005                               | No                  |
| I-15    | El Norte Parkway to SR-78                    | 127,690 | 7.9%        | 10,050           | 0.66              | 4                        | 0.95 | 10.00%             | 1,846            | 0.786 | C              | 0.004                               | No                  |
| I-15    | SR-78 to W Valley Parkway                    | 192,510 | 8.1%        | 15,667           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,484            | 0.631 | C              | 0.002                               | No                  |
| I-15    | W Valley Parkway to Auto Parkway             | 179,430 | 8.1%        | 14,603           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,383            | 0.589 | B              | 0.001                               | No                  |
| I-15    | Auto Parkway to W Citracado Parkway          | 172,420 | 7.8%        | 13,372           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,259            | 0.536 | B              | 0.001                               | No                  |

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TABLE 5.4  
FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE A) CONDITIONS

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|-------------------------------------|---------------------|
| I-15    | W Citracado Parkway to Via Rancho Parkway     | 196,370 | 7.8%        | 15,230           | 0.60              | 5+2ML                    | 0.95 | 7.00%              | 1,413            | 0.601 | B              | 0.001                               | No                  |
| I-15    | Via Rancho Parkway to Bernardo Drive          | 198,340 | 7.4%        | 14,597           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,314            | 0.559 | B              | 0.001                               | No                  |
| I-15    | Bernardo Drive to Rancho Bernardo Road        | 201,320 | 7.4%        | 14,817           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,334            | 0.568 | B              | 0.001                               | No                  |
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 209,200 | 7.3%        | 15,359           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,281            | 0.545 | B              | 0.001                               | No                  |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 214,290 | 7.3%        | 15,733           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,312            | 0.558 | B              | 0.001                               | No                  |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:  
Bold letter indicates unacceptable LOS E or F.  
ML = Managed Lane.

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## Ramp Intersection Capacity Analysis

Consistent with Caltrans' requirements, the signalized intersections along SR-76 within the study area were analyzed under Existing Plus Project (Phase A) conditions using the ILV procedures as described in Chapter 2.0. ILV analysis results are displayed in **Table 5.5** and analysis worksheets for the Existing Plus Project (Phase A) conditions are provided in **Appendix Q**.

TABLE 5.5  
RAMP INTERSECTION CAPACITY ANALYSIS  
EXISTING PLUS PROJECT (PHASE A) CONDITIONS

| Ramp Intersection                      | Peak Hour | ILV / Hour | Description              |
|--|-----------|------------|--------------------------|
| SR-76 / Old River Road/E. Vista Way    | AM        | 1,517      | >1500: (Over Capacity)   |
|  | PM        | 1,270      | 1200-1500: (At Capacity) |
| SR-76 / Olive Hill Road/Camino Del Rey | AM        | 1,204      | 1200-1500: (At Capacity) |
|  | PM        | 1,372      | 1200-1500: (At Capacity) |
| SR-76 / Old Highway 395                | AM        | 1,018      | <1200: (Under Capacity)  |
|  | PM        | 1,062      | <1200: (Under Capacity)  |

Source: Chen Ryan Associates; January 2013-May 2014

As shown in the table, all three (3) intersections along SR-76 would operate at "At Capacity" and/or "Under Capacity", with the exception of the SR-76 / Old River Road/E. Vista Way intersection, which would operate at "Over Capacity" during the AM peak hour under the Existing Plus Project (Phase A) conditions.

### 5.1.3 Existing Plus Project (Phase A) Impact Significance and Mitigation

This section identifies required mitigation measures for roadway, intersection, two-lane highway, and freeway facilities that would be significantly impacted by project-related traffic under Existing Plus Project (Phase A) conditions.

#### Roadway Segments

~~None~~Phase A of the project traffic would result in direct impact at one (1) of the study area roadway segments would be significantly impacted, and therefore no mitigation measuressegment. The following improvements would be required to mitigate the identified impact:

- Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – The project would add 130 daily trips (approximately 0.8% of the total ADT) to this roadway which is approximately 7 miles away from the project site.

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The mitigation for this direct impact is the provision of a dedicated right-turn lane at the westbound Gopher Canyon Road approach of the East Vista Way / Gopher Canyon Road intersection, the constraining intersection along the impacted segment. The arterial analysis shown in **Appendix R** and summarized in **Table 5.6** below shows that the mitigation would increase the AM peak hour average travel speed along this segment to better than the Existing conditions, and would maintain the same PM peak hour average travel speed as the Existing conditions. Therefore, the direct impact at the segment of Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps would be mitigated.

**TABLE 5.6**  
**ARTERIAL LEVEL OF SERVICE RESULTS AFTER MITIGATION**  
**EXISTING PLUS PROJECT (PHASE A) CONDITIONS**

| Arterial   | After Mitigation |     |              |     | Existing     |     |              |     |
|--|------------------|-----|--------------|-----|--------------|-----|--------------|-----|
|  | AM Peak Hour     |     | PM Peak Hour |     | AM Peak Hour |     | PM Peak Hour |     |
|  | Speed (mph)      | LOS | Speed (mph)  | LOS | Speed (mph)  | LOS | Speed (mph)  | LOS |
| Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps | 40.8             | B   | 44.3         | A   | 30.6         | C   | 44.3         | A   |

Source: Chen Ryan Associates: May 2014

### Intersections

Phase A of the project traffic would have a direct impact on the study area intersection of E. Vista Way / Gopher Canyon Road intersection. The following intersection improvement would be required to mitigate the identified traffic impact:

- E. Vista Way / Gopher Canyon Road (signal) (County) – Construction of a dedicated right-turn lane at the westbound Gopher Canyon Road approach of the East Vista Way / Gopher Canyon Road intersection. This mitigation measure would be required by 238<sup>th</sup> EDU to mitigate direct project impact.

**Table 5.7** displays level of service analysis results for the mitigated intersection under the Existing Plus Project (Phase A) conditions. Calculation worksheets for the intersection analysis are provided in **Appendix S**.

**TABLE 5.7**  
**MITIGATED INTERSECTION LEVEL OF SERVICE**  
**EXISTING PLUS PROJECT (PHASE A) CONDITIONS**

| Intersection                         | After Mitigation |     |              |     | Existing                |                |
|--------------------------------------|------------------|-----|--------------|-----|-------------------------|----------------|
|                                      | AM Peak Hour     |     | PM Peak Hour |     | Delay (sec.)<br>AM / PM | LOS<br>AM / PM |
|                                      | Delay (Sec.)     | LOS | Delay (sec.) | LOS |                         |                |
| 1. E. Vista Way / Gopher Canyon Road | 113.6            | F   | 177.9        | F   | 172.8 / 212.0           | F / F          |

Source: Chen Ryan Associates: May 2014

Note: Bold letter indicates unacceptable LOS E or F.

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### **Intersections**

~~None of the study area intersections would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase A) conditions.~~

As shown in the table, after the proposed mitigation measures, the intersection of E. Vista Way / Gopher Canyon Road would continue to operate at LOS F during the peak hours. However, the intersection delays are significantly reduced to less than existing conditions, and hence the direct impact would be mitigated.

### **Two-Lane Highways**

None of the study area two-lane highway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase A) conditions.

### **Freeways**

None of the study area freeway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase A) conditions.

**Table 5.68** summarizes potential impacts and recommended mitigation measures associated with Phase A of the Lilac Hills Ranch project.

**TABLE 5.68**  
**IMPACT AND MITIGATION SUMMARY**  
**EXISTING PLUS PROJECT (PHASE A) CONDITIONS**

| <del>Potentially</del> Impacted Facility                   | Mitigation Measures  |
|--|--|
| <i>Roadway Segment</i>                                     |  |
| Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps | <del>-Construction of a dedicated WB right-turn lane at the intersection of E. Vista Way / Gopher Canyon Road by 238<sup>th</sup> EDU.</del> |
| <i>Intersection</i>  |  |
| <del>None</del> E. Vista Way / Gopher Canyon Road          | <del>-Construction of a dedicated WB right-turn lane at the intersection of E. Vista Way / Gopher Canyon Road by 238<sup>th</sup> EDU.</del> |
| <i>Two-Lane Highway</i>                                    |  |
| None   | -  |
| <i>Freeway</i>   |  |
| None   | -  |

Source: Chen Ryan Associates: ~~January 2013~~ May 2014

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## 5.2 Existing Plus Project (Phase B) Conditions

### 5.2.1 Existing Plus Project (Phase B) Roadway Network and Traffic Volumes

The Existing Plus Project (Phase B) scenario includes existing traffic volumes with the addition of traffic generated by traffic analysis Phase B. Intersection and roadway geometrics under Existing Plus Project conditions were assumed to be identical to Existing conditions, with the exception of the following roads and driveway intersections associated with project frontage and access:

- Main Street, between West Lilac Road and Street “C”;
- Main Street, between Street “Z” and W. Lilac Road;
- Street “C” and Street “Z”;
- ~~Birdsong Drive, between Street “Z” and W. Lilac Road;~~
- Covey Lane, west of W. Lilac Road;
- Intersection # 26, Street “O” / W. Lilac Road/Main Street – proposed roundabout;
- Intersection # 27, Main Street / Street “C” – proposed roundabout;
- Intersection # 30, Street “Z” / Main Street – proposed one-way stop (southbound Street “Z” approach) controlled L-intersection; and
- Intersection # 31, Street “Z” / Main Street – proposed roundabout.

In addition to the project access and frontage roads assumed above, mitigation measure from Phase A was also carried forward into this Phase, including:

- Construction of a dedication right-turn lane at the westbound Gopher Canyon Road approach of the intersection of E. Vista Way and Gopher Canyon Road.

### 5.2.2 Existing Plus Project (Phase B) Traffic Conditions

Level of service analyses under Existing Plus Project (Phase B) conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment, intersection, two-lane highway, freeway segment, and ramp intersection level of service results are discussed separately below. Average daily traffic volumes on study area roadway segments are displayed in **Figure 5-2A**, while peak hour traffic volumes at the key study area intersections are displayed in **Figure 5-2B**.

#### Roadway Segment Analysis

**Table 5.79** displays the level of service analysis results for key roadway segments under Existing Plus Project (Phase B) conditions. As shown, similar to Existing conditions, the following three (3) roadway segments would continue to operate at substandard LOS E or F:

- Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – LOS ~~EE~~;

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Based upon The construction of a dedicated right-turn lane at the significance criteria discussed in Section 2.8, the additional traffic generated by Phase B of the Lilac Hills Ranch project would not result in any direct impacts to study roadway segments since it would not add 200 or more daily trips to the LOS E roadways or 100 or more daily trips to the LOS F roadway.

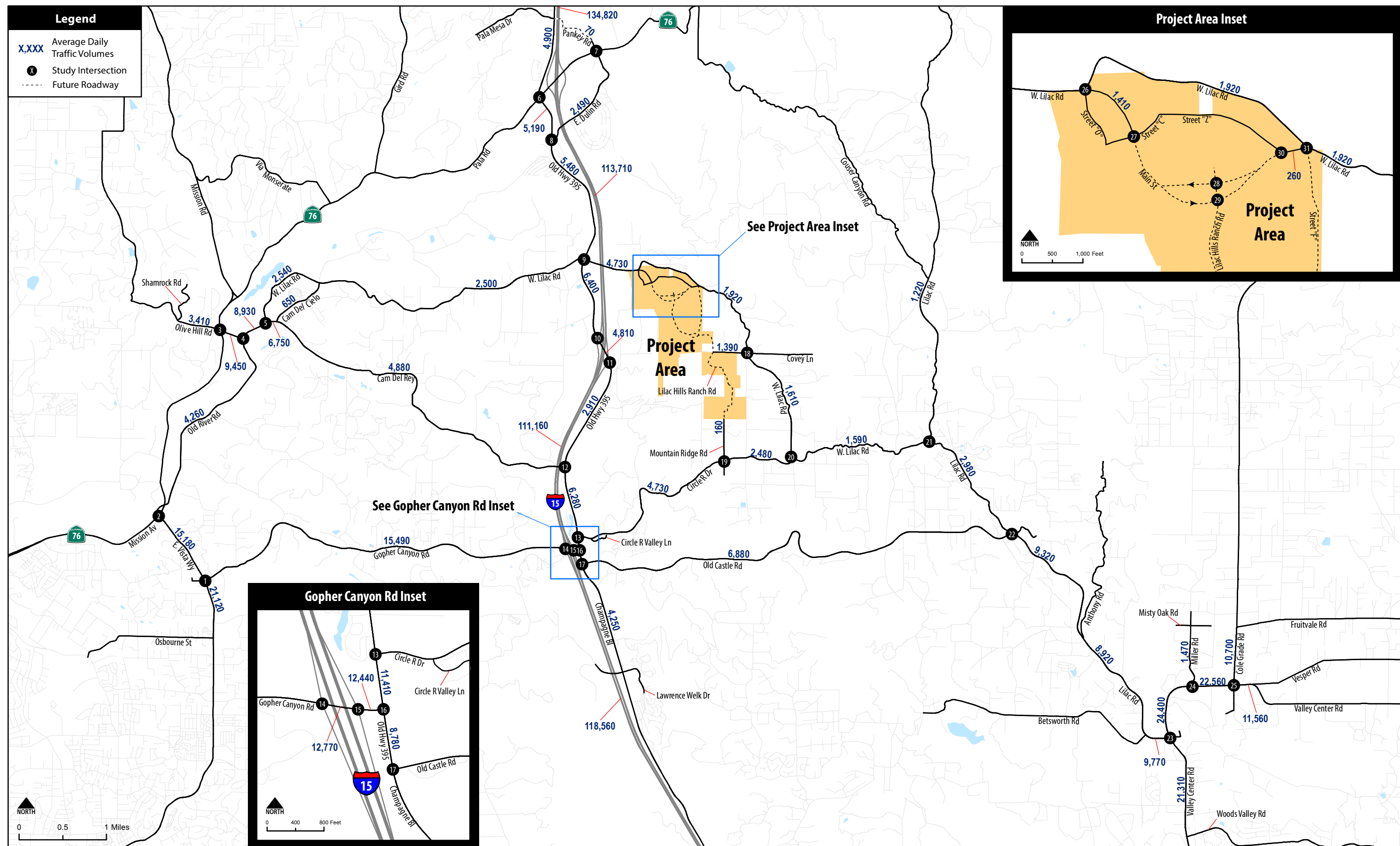
### Intersection Analysis

~~Table 5.8 displays westbound Gopher Canyon Road approach of the intersection level of service E. Vista Way and average vehicle delay results. Gopher Canyon Road was identified under the Existing Plus Project (Phase BA) conditions. Level of service calculation worksheets for the as a mitigation measure. With this mitigation measure, the arterial analysis for Existing Plus Project (Phase B) conditions are provided shown in Appendix K.~~

~~T and summarized in Table 5.10 shows that the mitigation would increase the table, the following four (4) study intersections would continue to operate at substandard LOS E or F under Existing Plus Project (Phase B) conditions:~~

- ~~• SR-76 / Old River Road / E. Vista Way (Caltrans) — LOS E during the AM peak hour average travel speed along this segment to better than the Existing conditions, and the Phase B project traffic would not add two seconds or more of additional delay to this intersection.~~
- ~~• SR-76 / Olive Hill Road / Camino Del Rey (Caltrans) — LOS E during maintain the same PM peak hour, and average travel speed as the Existing conditions. Therefore, with the mitigation measure from Phase B project traffic would not add two seconds or more of additional delay to this intersection.~~
- ~~• I-15 SB Ramps / Gopher Canyon Road (Caltrans) — LOS F during both the AM and PM peak hours, and the Phase B project traffic would add two seconds or more of additional delay to this intersection.~~
- ~~• I-15 NB Ramps / Gopher Canyon Road (Caltrans) — LOS F during the PM peak hour, and the Phase B project traffic would add two seconds or more of additional delay to this intersection.~~

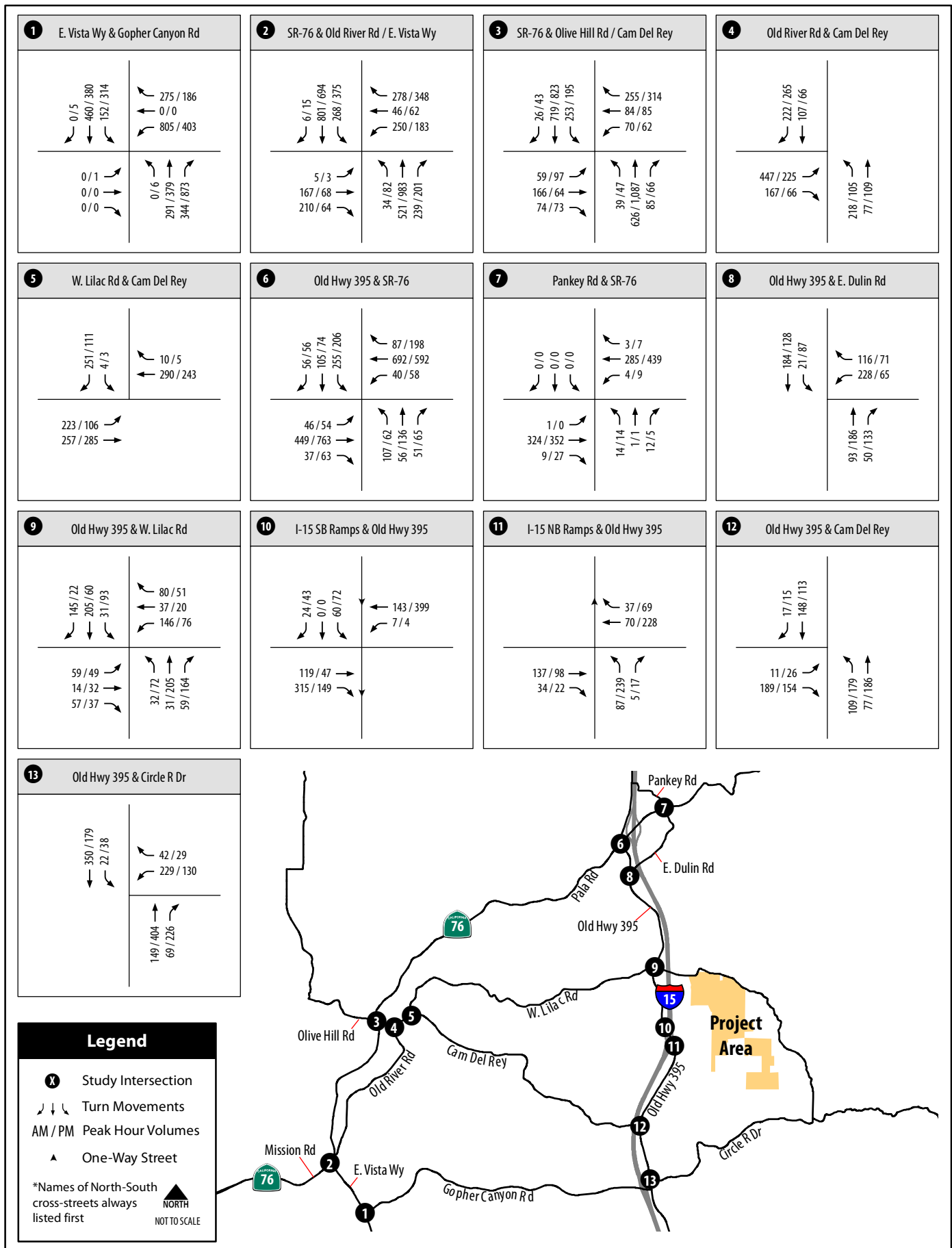
~~Based upon the significance criteria discussed in Section 2.8A, the additional traffic generated by Phase B of the Lilac Hills Ranch project would have not result in a direct impact at the intersections of I-15 SB Ramps / Gopher Canyon Road and I-15 NB Ramps / Gopher Canyon Road. this segment.~~



# Lilac Hills Ranch Traffic Impact Study

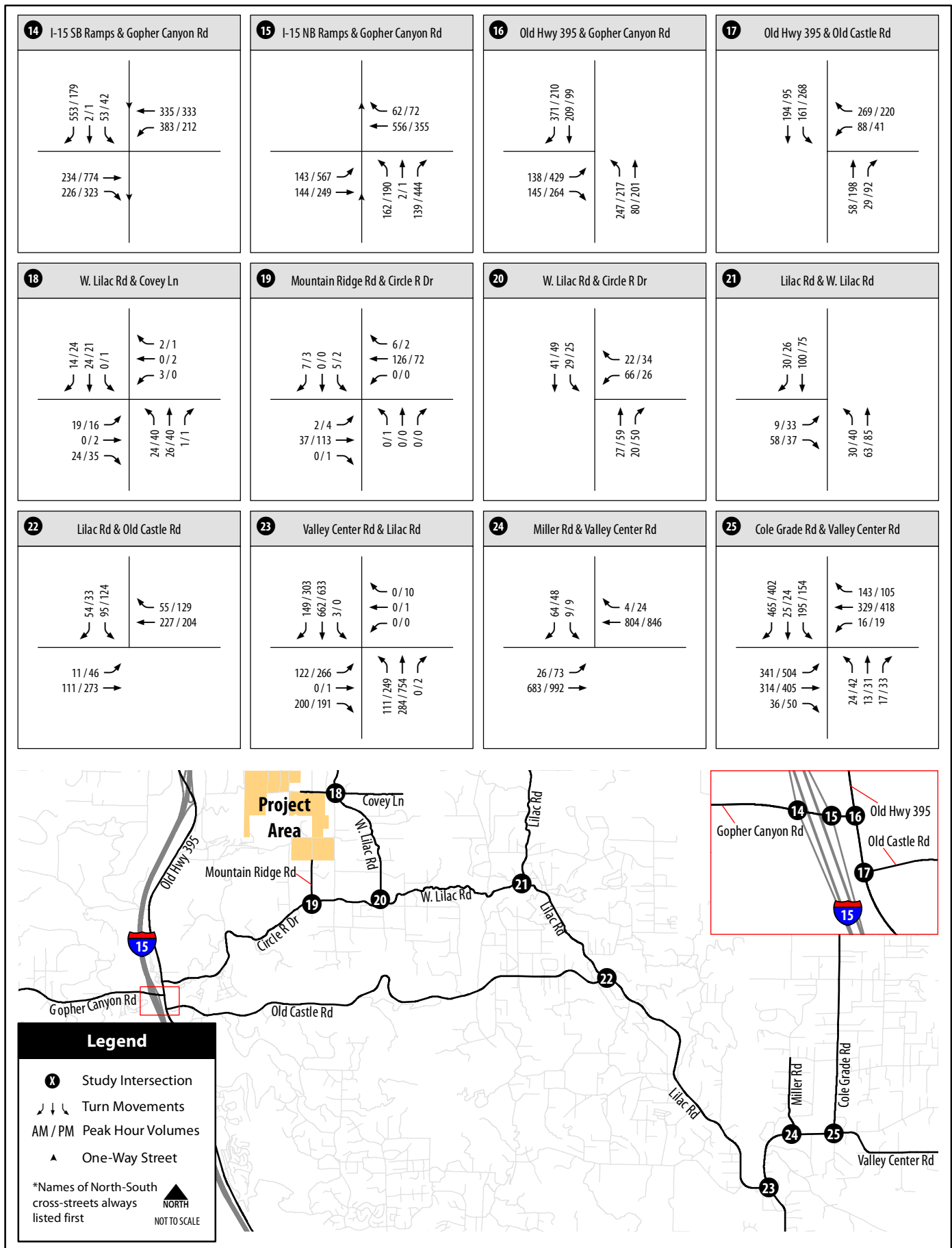
Figure 5-2A

**Roadway Average Daily Traffic Volumes -  
Existing Plus Project (Phase B) Conditions**



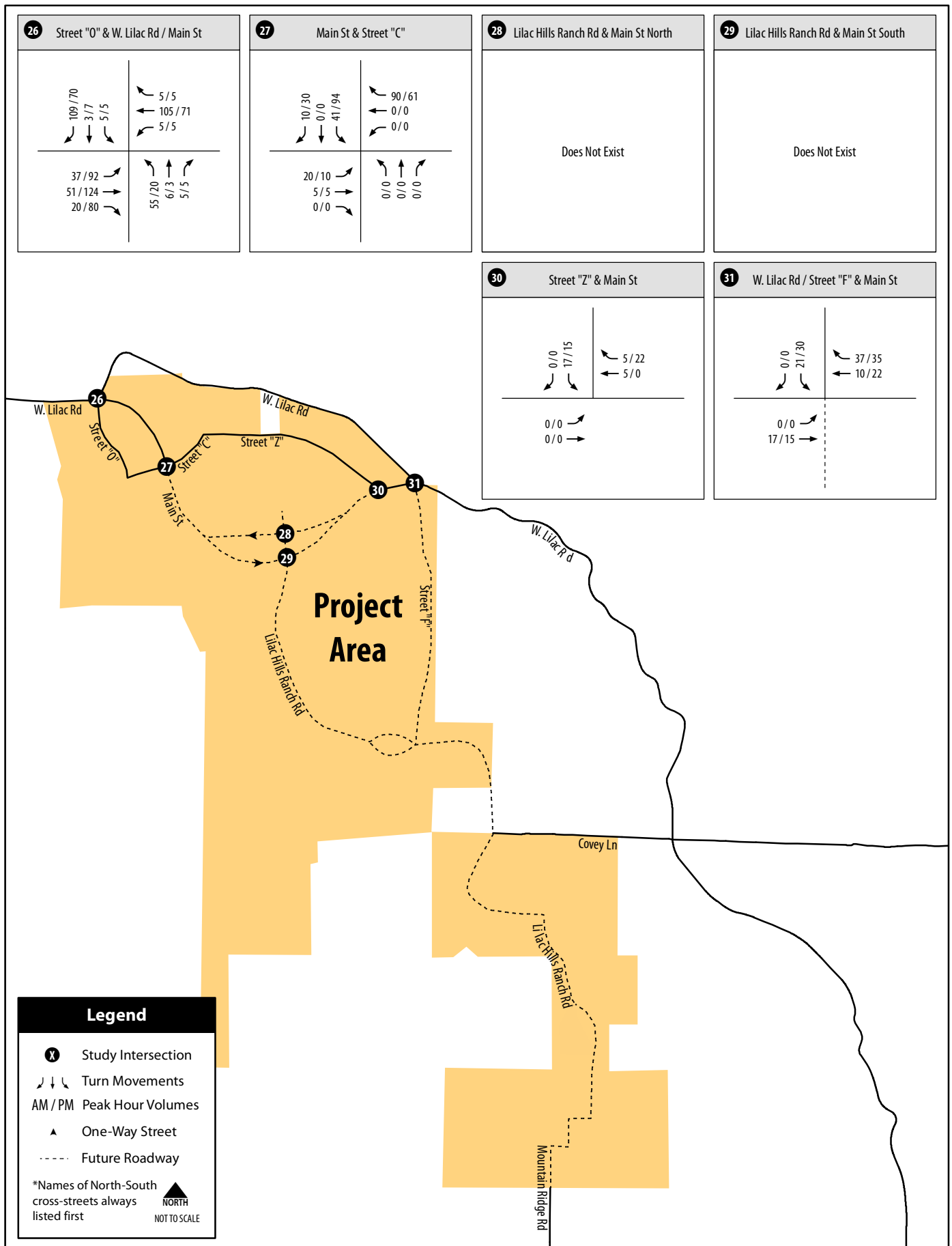
Lilac Hills Ranch Traffic Impact Study

Figure 5-2B (Intersections 1-13)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase B) Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 5-2B (Intersections 14-25)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase B) Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 5-2B (Intersections 26-31)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase B) Conditions



**TABLE 5.79**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Roadway            | From             | To               | With Project Phase B |                         |        |               | Existing |               | Project Phase B ADT | Direct Impact?                          |
|--------------------|------------------|------------------|----------------------|-------------------------|--------|---------------|----------|---------------|---------------------|---|
|                    |                  |                  | Cross-Section        | LOS Threshold (LOS D)   | ADT    | LOS           | ADT      | LOS           |                     |   |
| E. Dulin Road      | Old Highway 395  | SR-76            | 2-Ln                 | <del>10,900</del> 9,800 | 2,490  | B             | 1,830    | <del>AB</del> | 670                 | No                                      |
| W. Lilac Road      | Camino Del Rey   | Camino Del Cielo | 2-Ln                 | <del>8,700</del> 7,800  | 2,540  | A             | 2,270    | A             | 280                 | No                                      |
| W. Lilac Road      | Camino Del Cielo | Old Highway 395  | 2-Ln                 | <del>8,700</del> 7,800  | 2,500  | A             | 2,140    | A             | 360                 | No                                      |
| W. Lilac Road      | Old Highway 395  | Main Street      | 2-Ln                 | 8,700                   | 4,730  | A             | 1,150    | A             | 3,590               | No                                      |
| W. Lilac Road      | Main Street      | Street "F"       | 2-Ln                 | <del>8,700</del> 7,800  | 1,920  | A             | 1,150    | A             | 770                 | No                                      |
| W. Lilac Road      | Street "F"       | Covey Lane       | 2-Ln                 | <del>8,700</del> 7,800  | 1,920  | A             | 1,150    | A             | 770                 | No                                      |
| W. Lilac Road      | Covey Lane       | Circle R Drive   | 2-Ln                 | <del>8,700</del> 7,800  | 1,610  | A             | 480      | A             | 1,130               | No                                      |
| W. Lilac Road      | Circle R Drive   | Lilac Road       | 2-Ln                 | <del>8,700</del> 7,800  | 1,590  | A             | 1,170    | A             | 420                 | No                                      |
| Camino Del Cielo   | Camino Del Rey   | W. Lilac Road    | 2-Ln                 | 10,900                  | 650    | A             | 630      | A             | 10                  | No                                      |
| Olive Hill Road    | Shamrock Road    | SR-76            | 2-Ln                 | 8,700                   | 3,410  | A             | 3,380    | A             | 30                  | No                                      |
| Camino Del Rey     | SR-76            | Old River Road   | 2-Ln                 | 10,900                  | 9,450  | D             | 9,350    | D             | 90                  | No                                      |
| Camino Del Rey     | Old River Road   | W. Lilac Road    | 2-Ln                 | <del>10,900</del> 9,800 | 8,930  | D             | 8,640    | D             | 290                 | No                                      |
| Camino Del Rey     | W. Lilac Road    | Camino Del Cielo | 2-Ln w/ SM           | 13,500                  | 6,750  | C             | 6,730    | C             | 20                  | No                                      |
| Camino Del Rey     | Camino Del Cielo | Old Highway 395  | 2-Ln                 | <del>8,700</del> 7,800  | 4,880  | A             | 4,850    | A             | 30                  | No                                      |
| Gopher Canyon Road | E. Vista Way     | I-15 SB Ramps    | 2-Ln                 | <del>10,900</del> 9,800 | 15,490 | <del>EE</del> | 15,320   | <del>EE</del> | 180                 | <del>No</del><br>No*<br>200ADT > 100ADT |
| Gopher Canyon Road | I-15 SB Ramps    | I-15 NB Ramps    | 4-Ln                 | 30,800                  | 12,770 | A             | 12,390   | A             | 380                 | No                                      |

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**TABLE 5.79**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Roadway             | From                | To                  | With Project Phase B |                          |        |                | Existing |                | Project Phase B ADT | Direct Impact? |
|---------------------|---------------------|---------------------|----------------------|--------------------------|--------|----------------|----------|----------------|---------------------|----------------|
|                     |                     |                     | Cross-Section        | LOS Threshold (LOS D)    | ADT    | LOS            | ADT      | LOS            |                     |                |
| Gopher Canyon Road  | I-15 NB Ramps       | Old Highway 395     | 4-Ln                 | 30,800                   | 12,440 | A              | 11,870   | A              | 580                 | No             |
| Circle R Drive      | Old Highway 395     | Mountain Ridge Road | 2-Ln                 | <del>10,900</del> 9,800  | 4,730  | C              | 4,030    | <del>B</del> C | 700                 | No             |
| Circle R Drive      | Mountain Ridge Road | W. Lilac Road       | 2-Ln                 | <del>10,900</del> 9,800  | 2,480  | B              | 1,770    | <del>A</del> B | 710                 | No             |
| Old Castle Road     | Old Highway 395     | Lilac Road          | 2-Ln                 | <del>10,900</del> 9,800  | 6,880  | <del>C</del> D | 6,840    | <del>C</del> D | 40                  | No             |
| E. Vista Way        | SR-76               | Gopher Canyon Road  | 2-Ln w/ TWLTL        | 13,500                   | 15,180 | E              | 15,120   | E              | 70                  | No < 200ADT    |
| E. Vista Way        | Gopher Canyon Road  | Osborne Street      | 2-Ln w/ TWLTL        | 13,500                   | 21,120 | F              | 21,020   | F              | <100                | No < 100ADT    |
| Old River Road      | SR-76               | Camino Del Rey      | 2-Ln                 | <del>10,900</del> 9,800  | 4,260  | C              | 4,070    | <del>B</del> C | 190                 | No             |
| Champagne Boulevard | Old Castle Road     | Lawrence Welk Drive | 2-Ln                 | <del>10,900</del> 13,500 | 4,250  | <del>B</del> C | 4,170    | <del>B</del> C | 80                  | No             |
| Pankey Road         | Pala Mesa Drive     | SR-76               | 2-Ln                 | <del>10,900</del> 4,500  | 70     | A              | 70       | A              | 0                   | No             |
| Lilac Road          | Couser Canyon Road  | W. Lilac Road       | 2-Ln                 | <del>8,700</del> 7,800   | 1,220  | A              | 1,150    | A              | 70                  | No             |
| Lilac Road          | W. Lilac Road       | Old Castle Road     | 2-Ln                 | <del>8,700</del> 7,800   | 2,980  | A              | 2,640    | A              | 340                 | No             |
| Lilac Road          | Old Castle Road     | Anthony Road        | 2-Ln                 | 10,900                   | 9,320  | D              | 9,010    | D              | 320                 | No             |
| Lilac Road          | Anthony Road        | Betsworth Road      | 2-Ln                 | 10,900                   | 8,920  | D              | 8,740    | D              | 180                 | No             |
| Lilac Road          | Betsworth Road      | Valley Center Road  | 2-Ln                 | 13,500                   | 9,770  | D              | 9,620    | D              | 150                 | No             |

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**TABLE 5.79**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Roadway            | From              | To                 | With Project Phase B |                             |        |     | Existing |     | Project<br>Phase B<br>ADT | Direct<br>Impact? |
|--------------------|-------------------|--------------------|----------------------|-----------------------------|--------|-----|----------|-----|---------------------------|-------------------|
|                    |                   |                    | Cross-<br>Section    | LOS<br>Threshold<br>(LOS D) | ADT    | LOS | ADT      | LOS |                           |                   |
| Valley Center Road | Woods Valley Road | Lilac Road         | 4/Ln w/<br>TWLTL/RM  | 27,000                      | 21,310 | C   | 21,290   | C   | 20                        | No                |
| Valley Center Road | Lilac Road        | Miller Road        | 4-Ln w/ RM           | 33,400                      | 24,400 | B   | 24,280   | B   | 120                       | No                |
| Valley Center Road | Miller Road       | Cole Grade Road    | 4-Ln w/ RM           | 27,000                      | 22,560 | C   | 22,440   | C   | 120                       | No                |
| Valley Center Road | Cole Grade Road   | Vesper Road        | 2-Ln                 | 13,500                      | 11,560 | D   | 11,490   | D   | 70                        | No                |
| Miller Road        | Misty Oak Road    | Valley Center Road | 2-Ln                 | <del>87</del> ,000          | 1,470  | A   | 1,460    | A   | 0                         | No                |
| Cole Grade Road    | Fruitvale Road    | Valley Center Road | 2-Ln w/<br>TWLTL     | 13,500                      | 10,700 | D   | 10,660   | D   | 40                        | No                |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

RM = Raised Median.

SM = Striped Median.

TWLTl = Two-Way Left-Turn Lane.

Changes in this table are associated with "Change 3" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

\* Phase A mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases B, C, D, & E.

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**TABLE 5.10**  
**ARTERIAL LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Arterial   | With Project Phase B |     |                |     | Existing       |     |                |     |
|--|----------------------|-----|----------------|-----|----------------|-----|----------------|-----|
|  | AM Peak Hour         |     | PM Peak Hour   |     | AM Peak Hour   |     | PM Peak Hour   |     |
|  | Speed<br>(mph)       | LOS | Speed<br>(mph) | LOS | Speed<br>(mph) | LOS | Speed<br>(mph) | LOS |
| Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps | 40.7                 | B   | 44.3           | A   | 30.6           | C   | 44.3           | A   |

Source: Chen Ryan Associates: May 2014

- E. Vista Way, between Gopher Canyon Road and Osborne Street – LOS F.  
Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase B of the Lilac Hills Ranch project would not result in direct impacts to this roadway segment since it would not add more than 100 daily trips.
- E. Vista Way, between SR-76 and Gopher Canyon Road – LOS E;  
Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase B of the Lilac Hills Ranch project would not result in direct impacts to this roadway segment since it would not add more than 200 daily trips.

### **Intersection Analysis**

Table 5.11 displays intersection level of service and average vehicle delay results under Existing Plus Project (Phase B) conditions. Level of service calculation worksheets for the Existing Plus Project (Phase B) conditions are provided in **Appendix U**.

As shown in the table, the following three (3) study intersections would continue to operate at substandard LOS E or F under Existing Plus Project (Phase B) conditions:

- E. Vista Way / Gopher Canyon Road (County) – LOS F during both the AM and PM peak hours. However, this intersection is currently operating at LOS F and Phase A recommended mitigation measure would improve the intersection operations to better than existing conditions. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase B of the Lilac Hills Ranch project would not have a direct impact at this intersection.

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**TABLE 5.11**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Intersection                              | Traffic Control | With Project Phase B         |                       |                              |                       | Existing  |   | Change in Delay (sec.)<br>AM / PM                        | Phase B Traffic to Critical Movements<br>AM / PM | Direct Impact?                    |
|---|-----------------|------------------------------|-----------------------|------------------------------|-----------------------|---|---|--|--|-----------------------------------|
|   |                 | AM Peak Hour                 |                       | PM Peak Hour                 |                       | Delay (sec.)<br>AM / PM                                       | LOS<br>AM / PM                                  |  |  |                                   |
|   |                 | Avg. Delay (sec.)            | LOS                   | Avg. Delay (sec.)            | LOS                   |   |   |  |  |                                   |
| 1. E. Vista Way / Gopher Canyon Road      | Signal*         | <del>27.9</del> <u>114.7</u> | <del>E</del> <u>F</u> | <del>50.5</del> <u>178.6</u> | <del>D</del> <u>F</u> | <del>24.3</del> / <del>48.7</del> <u>172.8</u> / <u>212.0</u> | <del>C</del> / <del>D</del> <u>F</u> / <u>F</u> | <del>3.6</del> / <del>58.1</del> <u>8</u> / <u>-33.4</u> | -  | No                                |
| 2. SR-76 / Old River Road/E. Vista Way    | Signal          | <del>74</del> <u>24.2</u>    | <del>E</del> <u>C</u> | <del>53</del> <u>32.1</u>    | <del>D</del> <u>C</u> | <del>73.9</del> / <del>52.3</del> <u>23.7</u> / <u>32</u>     | <del>E</del> / <del>D</del> <u>C</u> / <u>C</u> | 0. <u>35</u> / 0. <u>81</u>                              | -  | No<br>← 2 sec.                    |
| 3. SR-76 / Olive Hill Road/Camino Del Rey | Signal          | <del>44.7</del> <u>26.4</u>  | <del>D</del> <u>C</u> | <del>61</del> <u>34.7</u>    | <del>E</del> <u>C</u> | <del>43</del> <u>21.6</u> / <del>60.8</del> <u>34.5</u>       | <del>D</del> / <del>E</del> <u>C</u> / <u>C</u> | <del>1.1</del> <u>4.8</u> / <del>0.9</del> <u>2</u>      | -  | No<br>Caltrans Int.<br>← 2 sec.No |
| 4. Old River Road / Camino Del Rey        | OWSC            | 23.4                         | D                     | 12.2                         | B                     | 23.2 / 12.2   | D / B   | 0.2 / 0.0  | -  | No                                |
| 5. W. Lilac Road / Camino Del Rey         | OWSC            | 16.3                         | C                     | 11.1                         | B                     | 15. <u>47</u> / 11.0  | C / B   | 0. <u>96</u> / 0.1                                       | -  | No                                |
| 6. Old Highway 395 / SR-76                | Signal          | <del>43.2</del> <u>29.6</u>  | <del>D</del> <u>C</u> | <del>44.9</del> <u>42.7</u>  | D                     | <del>43</del> <u>29.0</u> / <del>42.2</del> <u>39.8</u>       | <del>D</del> <u>C</u> / D                       | <del>0.6</del> / <del>2.4</del> <u>2.7</u> / <u>9</u>    | -  | No                                |
| 7. Pankey Road / SR-76                    | TWSC            | 14.1                         | B                     | 18.8                         | C                     | 12.5 / 15.2   | B / C   | 1.6 / 3.6  | -  | No                                |
| 8. Old Highway 395 / E. Dulin Road        | OWSC            | 14.7                         | B                     | 13.6                         | B                     | <del>14.6</del> <u>12.8</u> / 11.2                            | B / B   | <del>0.1</del> <u>9</u> / 2.4                            | -  | No                                |
| 9. Old Highway 395 / W. Lilac Road        | TWSC            | 22.3                         | C                     | 24.2                         | D                     | <u>14.7</u> / 13.3  | C / B   | <del>3.8</del> <u>7.6</u> / 10.9                         | -  | No                                |
| 10. I-15 SB Ramps / Old Highway 395       | OWSC            | 11.0                         | B                     | 12.1                         | B                     | 10.6 / 12.1   | B / B   | 0.4 / 0.0  | -  | No                                |

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**TABLE 5.11**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Intersection                             | Traffic Control | With Project Phase B |     |                   |     | Existing                |                | Change in Delay (sec.)<br>AM / PM | Phase B Traffic to Critical Movements<br>AM / PM | Direct Impact?                  |
|--|-----------------|----------------------|-----|-------------------|-----|-------------------------|----------------|-----------------------------------|--|---------------------------------|
|  |                 | AM Peak Hour         |     | PM Peak Hour      |     | Delay (sec.)<br>AM / PM | LOS<br>AM / PM |                                   |  |                                 |
|  |                 | Avg. Delay (sec.)    | LOS | Avg. Delay (sec.) | LOS |                         |                |                                   |  |                                 |
| 11. I-15 NB Ramps / Old Highway 395      | OWSC            | 10.2                 | B   | 13.1              | B   | 9.98 / 11.2             | A / B          | 0.34 / 1.9                        | -  | No                              |
| 12. Old Highway 395 / Camino Del Rey     | OWSC            | 10.2                 | B   | 11.3              | B   | 10.1 / 11.0             | B / B          | 0.1 / 0.3                         | -  | No                              |
| 13. Old Highway 395 / Circle R Drive     | OWSC            | 23.6                 | C   | 28.0              | D   | 20.4 / 22.5             | C / C          | 3.2 / 5.5                         | -  | No                              |
| 14. I-15 SB Ramps / Gopher Canyon Road   | OWSC            | 470.3                | F   | 173.0             | F   | 468.2 / 173.0           | F / F          | 2.1 / 0.0                         | -  | Yes<br>Caltrans<br>Int. > 2 sec |
| 15. I-15 NB Ramps / Gopher Canyon Road   | OWSC            | 31.8                 | D   | 1970.90           | F   | 30.5 / 1945.4           | D / F          | 1.3<br>/ 25.524.6                 | -  | Yes<br>Caltrans<br>Int. > 2 sec |
| 16. Old Highway 395 / Gopher Canyon Road | Signal          | 17.6                 | B   | 115.2             | B   | 16.1 / 8.811.0 / 14.7   | B / AB         | 16.6 / 0.5 / 2.4                  | -  | No                              |
| 17. Old Highway 395 / Old Castle Road    | Signal          | 13.9                 | B   | 16.2              | B   | 13.9 / 15.7             | B / B          | 0.0 / 0.5                         | -  | No                              |
| 18. W. Lilac Road / Covey Lane           | TWSC            | 9.3                  | A   | 9.9               | A   | 8.8 / 9.13              | B / A          | 0.5 / 0.86                        | -  | No                              |
| 19. Mountain Ridge Road / Circle R Drive | TWSC            | 9.5                  | A   | 9.510.1           | AB  | 9.3 / 9.6               | A / A          | 0.2 / 0.95                        | -  | No                              |
| 20. W. Lilac Road / Circle R Drive       | OWSC            | 9.9                  | A   | 9.7               | A   | 9.3 / 9.3               | A / A          | 0.6 / 0.4                         | -  | No                              |
| 21. Lilac Road / W. Lilac Road           | OWSC            | 9.8                  | A   | 10.2              | B   | 9.6 / 9.9               | A / A          | 0.2 / 0.3                         | -  | No                              |
| 22. Lilac Road / Old Castle Road         | OWSC            | 12.3                 | B   | 19.9              | C   | 11.8 / 17.8             | B / C          | 0.5 / 2.1                         | -  | No                              |

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**TABLE 5.11**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Intersection                                   | Traffic Control | With Project Phase B |     |                   |     | Existing             |             | Change in Delay (sec.) AM / PM | Phase B Traffic to Critical Movements AM / PM | Direct Impact? |
|--|-----------------|----------------------|-----|-------------------|-----|----------------------|-------------|--------------------------------|---|----------------|
|  |                 | AM Peak Hour         |     | PM Peak Hour      |     | Delay (sec.) AM / PM | LOS AM / PM |                                |   |                |
|  |                 | Avg. Delay (sec.)    | LOS | Avg. Delay (sec.) | LOS |                      |             |                                |   |                |
| 23. Valley Center Rd / Lilac Road              | Signal          | 10.6                 | B   | 26.4              | C   | 10.5 / 22.6          | B / C       | 0.1 / 3.8                      | -   | No             |
| 24. Miller Road / Valley Center Road           | OWSC            | 17                   | C   | 25.6              | D   | 16.9 / 25.20         | C / D       | 0.1 / 0.46                     | -   | No             |
| 25. Cole Grade Road / Valley Center Road       | Signal          | 31.4                 | C   | 35.1              | D   | 31.1 / 34.9          | C / C       | 0.3 / 0.2                      | -   | No             |
| 26. Street "O" / W. Lilac Road/Main Street     | RA              | 4.67                 | A   | 5.5               | A   | DNE                  | DNE         | 4.67 / 5.5                     | -   | No             |
| 27. Main Street / Street "C"                   | RA              | 3.9                  | A   | 4.1               | A   | DNE                  | DNE         | 3.9 / 4.1                      | -   | No             |
| 28. Lilac Hills Ranch Road / Main Street North | DNE             | DNE                  | DNE | DNE               | DNE | DNE                  | DNE         | DNE                            | DNE   | DNE            |
| 29. Lilac Hills Ranch Road / Main Street South | DNE             | DNE                  | DNE | DNE               | DNE | DNE                  | DNE         | DNE                            | DNE   | DNE            |
| 30. Street "Z" / Main Street                   | OWSC            | 8.6                  | A   | 8.6               | A   | DNE                  | DNE         | 8.6 / 8.6                      | -   | No             |
| 31. W. Lilac Road/Street "F" / Main Street     | RA              | 3.56                 | A   | 3.7               | A   | DNE                  | DNE         | 3.56 / 3.7                     | -   | No             |

Source: Chen Ryan Associates; May 20132014

Notes:

Bold letter indicates unacceptable LOS E or F.

AWSC = All-Way Stop Controlled.

TWSC = Two-Way Stop Controlled.

OWSC = One-Way Stop Controlled.

RA = Roundabout.

DNE = Does Not Exist.

For OWSC and TWSC intersections, the delay shown is the worst delay experienced by any of the approaches.

\* Phase A mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forward into Phases B, C, D, & E.

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- I-15 SB Ramps / Gopher Canyon Road (Caltrans) – LOS F during both the AM and PM peak hours, and the Phase B project traffic would add two seconds or more of additional delay to this intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase B of the Lilac Hills Ranch project would have a direct impact at this intersection.
- I-15 NB Ramps / Gopher Canyon Road (Caltrans) – LOS F during the PM peak hour, and the Phase B project traffic would add two seconds or more of additional delay to this intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase B of the Lilac Hills Ranch project would have a direct impact at this intersection.

## Two-Lane Highway Analysis

**Table 5.912** displays two-lane highway level of service analysis results for Old Highway 395 under Existing Plus Project (Phase B) conditions. The two-lane highway level of service analysis was performed utilizing the methodology presented in Chapter 2.0.

As shown in the table, all segments along Old Highway 395 would continue to operate at acceptable LOS D or better under Existing Plus Project (Phase B) conditions and the additional traffic generated by Phase B of the project would not cause any direct impacts to Old Highway 395.

## Freeway Segment Analysis

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. **Table 5.1013** displays the resulting level of service for I-15 under Existing Plus Project (Phase B) conditions.

As shown in the table, all of the study area freeway segments along I-15 would continue to operate at LOS D or better under Existing Plus Project (Phase B) conditions. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase B of the project would not cause any direct impacts to study area freeway segments.

## Ramp Intersection Capacity Analysis

~~Consistent with Caltrans' requirements, the signalized intersections along SR-76 within the study area were analyzed under Existing Plus Project (Phase B) conditions using the ILV procedures as described in Chapter 2.0. ILV analysis results are displayed in **Table 5.11** and analysis worksheets for the Existing Plus Project (Phase B) conditions are provided in **Appendix L**.~~

~~As shown in the table, all three (3) intersections along SR-76 would operate at "At Capacity" and/or "Under Capacity", with the exception of the SR-76 / Old River Road/E. Vista Way intersection, which would operate at "Over Capacity" during the AM peak hour under the Existing Plus Project (Phase B) conditions.~~

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**TABLE 5.12**  
**TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

**TABLE 5.9**  
**TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| 2-Ln Highway    | From               | To                 | With Project Phase B  |        |             | Existing |             | Project Phase B ADT | Direct Impact? |
|-----------------|--------------------|--------------------|-----------------------|--------|-------------|----------|-------------|---------------------|----------------|
|                 |                    |                    | LOS Threshold (LOS D) | ADT    | LOS         | ADT      | LOS         |                     |                |
| Old Highway 395 | Pala Mesa Drive    | SR-76              | 16,200                | 4,900  | D or better | 4,770    | D or better | 140                 | No             |
| Old Highway 395 | SR-76              | E. Dulin Road      | 16,200                | 5,190  | D or better | 4,720    | D or better | 470                 | No             |
| Old Highway 395 | E. Dulin Road      | W. Lilac Road      | 16,200                | 5,480  | D or better | 4,340    | D or better | 1,140               | No             |
| Old Highway 395 | W. Lilac Road      | I-15 SB Ramps      | 16,200                | 6,400  | D or better | 4,450    | D or better | 1,950               | No             |
| Old Highway 395 | I-15 SB Ramps      | I-15 NB Ramps      | 16,200                | 4,810  | D or better | 3,600    | D or better | 1,210               | No             |
| Old Highway 395 | I-15 NB Ramps      | Camino Del Rey     | 16,200                | 2,910  | D or better | 2,430    | D or better | 480                 | No             |
| Old Highway 395 | Camino Del Rey     | Circle R Drive     | 16,200                | 6,280  | D or better | 5,820    | D or better | 460                 | No             |
| Old Highway 395 | Circle R Drive     | Gopher Canyon Road | 16,200                | 11,410 | D or better | 10,710   | D or better | 710                 | No             |
| Old Highway 395 | Gopher Canyon Road | Old Castle Road    | 16,200                | 8,780  | D or better | 8,660    | D or better | 120                 | No             |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

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**TABLE 5.4013**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Freeway | Segment                                      | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|--|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|-------------------------------------|---------------------|
| I-15    | Riverside County Boundary to Old Highway 395 | 134,790 | 8.4%        | 11,387           | 0.64              | 4                        | 0.95 | 6.75%              | 1,968            | 0.838 | D              | 0.005                               | No                  |
| I-15    | Old Highway 395 to SR-76                     | 134,820 | 7.4%        | 10,030           | 0.73              | 4                        | 0.95 | 6.75%              | 1,996            | 0.849 | D              | 0.005                               | No                  |
| I-15    | SR-76 to Old Highway 395                     | 113,710 | 7.8%        | 8,894            | 0.69              | 4                        | 0.95 | 8.40%              | 1,672            | 0.711 | C              | 0.004                               | No                  |
| I-15    | Old Highway 395 to Gopher Canyon Road        | 111,160 | 8.1%        | 8,977            | 0.67              | 4                        | 0.95 | 8.40%              | 1,644            | 0.700 | C              | 0.007                               | No                  |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 118,560 | 8.1%        | 9,575            | 0.67              | 4                        | 0.95 | 13.20%             | 1,794            | 0.763 | C              | 0.010                               | No                  |
| I-15    | Deer Springs Road to Centre City Parkway     | 118,260 | 8.0%        | 9,501            | 0.66              | 4                        | 0.95 | 13.20%             | 1,771            | 0.754 | C              | 0.008                               | No                  |
| I-15    | Centre City Parkway to El Norte Parkway      | 112,000 | 8.0%        | 8,998            | 0.66              | 4                        | 0.95 | 13.20%             | 1,677            | 0.714 | C              | 0.006                               | No                  |
| I-15    | El Norte Parkway to SR-78                    | 127,930 | 7.9%        | 10,069           | 0.66              | 4                        | 0.95 | 10.00%             | 1,850            | 0.787 | C              | 0.006                               | No                  |
| I-15    | SR-78 to W Valley Parkway                    | 192,680 | 8.1%        | 15,681           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,485            | 0.632 | C              | 0.002                               | No                  |
| I-15    | W Valley Parkway to Auto Parkway             | 179,580 | 8.1%        | 14,615           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,384            | 0.589 | B              | 0.002                               | No                  |
| I-15    | Auto Parkway to W Citracado Parkway          | 172,560 | 7.8%        | 13,383           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,260            | 0.536 | B              | 0.002                               | No                  |

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TABLE 5.4013  
 FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
 EXISTING PLUS PROJECT (PHASE B) CONDITIONS

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|-------------------------------------|---------------------|
| I-15    | W Citracado Parkway to Via Rancho Parkway     | 196,490 | 7.8%        | 15,239           | 0.60              | 5+2ML                    | 0.95 | 7.00%              | 1,414            | 0.602 | B              | 0.002                               | No                  |
| I-15    | Via Rancho Parkway to Bernardo Drive          | 198,460 | 7.4%        | 14,606           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,315            | 0.560 | B              | 0.001                               | No                  |
| I-15    | Bernardo Drive to Rancho Bernardo Road        | 201,430 | 7.4%        | 14,825           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,335            | 0.568 | B              | 0.001                               | No                  |
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 209,400 | 7.3%        | 15,374           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,282            | 0.546 | B              | 0.001                               | No                  |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 214,380 | 7.3%        | 15,740           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,313            | 0.559 | B              | 0.001                               | No                  |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:  
 Bold letter indicates unacceptable LOS E or F.  
 ML = Managed Lane.

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### **Ramp Intersection Capacity Analysis**

Consistent with Caltrans' requirements, the signalized intersections along SR-76 within the study area were analyzed under Existing Plus Project (Phase B) conditions using the ILV procedures as described in Chapter 2.0. ILV analysis results are displayed in Table 5.14 and analysis worksheets for the Existing Plus Project (Phase B) conditions are provided in Appendix V.

**TABLE 5.14**  
**RAMP INTERSECTION CAPACITY ANALYSIS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

**TABLE 5.11**  
**RAMP INTERSECTION CAPACITY ANALYSIS**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Ramp Intersection                      | Peak Hour | ILV / Hour | Description              |
|--|-----------|------------|--------------------------|
| SR-76 / Old River Road/E. Vista Way    | AM        | 1,519      | >1500: (Over Capacity)   |
|  | PM        | 1,274      | 1200-1500: (At Capacity) |
| SR-76 / Olive Hill Road/Camino Del Rey | AM        | 1,204      | 1200-1500: (At Capacity) |
|  | PM        | 1,372      | 1200-1500: (At Capacity) |
| SR-76 / Old Highway 395                | AM        | 1,022      | <1200: (Under Capacity)  |
|  | PM        | 1,070      | <1200: (Under Capacity)  |

Source: Chen Ryan Associates; May 2014

As shown in the table, all three (3) intersections along SR-76 would operate at "At Capacity" and/or "Under Capacity", with the exception of the SR-76 / Old River Road/E. Vista Way intersection, which would operate at "Over Capacity" during the AM peak hour under the Existing Plus Project (Phase B) conditions. January 2013

### **5.2.3 Existing Plus Project (Phase B) Impact Significance and Mitigation**

This section identifies required mitigation measures for roadway, intersection, two-lane highway, and freeway facilities that would be significantly impacted by project-related traffic under Existing Plus Project (Phase B) conditions.

#### ***Roadway Segments***

None.

~~of the study area roadway segments would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase B) conditions.~~

#### ***Intersections***

Phase B of the project traffic would have direct impacts on two (2) of the study area intersections, including *I-15 SB Ramps / Gopher Canyon Road* and *I-15 NB Ramps / Gopher*

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*Canyon Road*. The following improvements would be required to mitigate the identified traffic impacts:

- *I-15 SB Ramps / Gopher Canyon Road* (stop controlled ramp intersection) (Caltrans) - Signalization would be required (by the 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU) at this intersection to mitigate direct project impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants. The project applicant would be responsible for ~~either~~ implementing the mitigation measure identified above ~~or making a fair share contribution in which the improvement. However, this particular facility is a part out of an approved Plan or Program, the County’s control and therefore the impact would remain significant and unavoidable.~~ The signal warrant worksheet for this intersection is provided in **Appendix ~~MX~~**. A number of potential improvements such as such as additional right-turn lane at the I-15 off ramp, all-way stop control, and single lane roundabout were assessed and it was determined that traffic signal is the most effective improvement to mitigate the identified project impact at this location. Calculation worksheets for the various improvement analyses are included in **Appendix ~~MX~~**.
- *I-15 NB Ramps / Gopher Canyon Road* (stop controlled ramp intersection) (Caltrans) - Signalization would be required (by the 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU) at this intersection to mitigate direct project impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants. The project applicant would be responsible for ~~either~~ implementing the mitigation measure identified above ~~or making a fair share contribution in which the improvement. However, this particular facility is a part out of an approved Plan or Program, the County’s control and therefore the impact would remain significant and unavoidable.~~ The signal warrant worksheet for this intersection is provided in **Appendix ~~MX~~**. A number of potential improvements such as such as additional right-turn lane at the I-15 off ramp, all-way stop control, and single lane roundabout were assessed and it was determined that traffic signal is the most effective improvement to mitigate the identified project impact at this location. Calculation worksheets for the various improvement analyses are included in **Appendix ~~MX~~**.

**Table 5.1215** displays level of service analysis results for the mitigated intersection under the Existing Plus Project (Phase B) conditions. Calculation worksheets for the intersection analysis are provided in **Appendix ~~MX~~**.

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**TABLE 5.1215**  
MITIGATED INTERSECTION LEVEL OF SERVICE  
EXISTING PLUS PROJECT (PHASE B) CONDITIONS

| Intersection                           | After Mitigation    |               |                     |               | Before Mitigation                                 | Existing       |
|--|---------------------|---------------|---------------------|---------------|---|----------------|
|  | AM Peak Hour        |               | PM Peak Hour        |               | Delay (sec.)<br>AM / PM                           | LOS<br>AM / PM |
|  | Delay (Sec.)        | LOS           | Delay (sec.)        | LOS           |   |                |
| 14. I-15 SB Ramps / Gopher Canyon Road | <del>5.4</del> 21.7 | <del>AC</del> | <del>6.1</del> 20.8 | <del>AC</del> | <del>470.3</del> 468.2 / 173.0                    | F / F          |
| 15. I-15 NB Ramps / Gopher Canyon Road | <del>4.6</del> 12.7 | <del>AB</del> | <del>6.4</del> 30.3 | <del>AC</del> | <del>31.9</del> / <del>1970.9</del> 30.5 / 1945.4 | D / F          |

Source: Chen Ryan Associates; May 20132014

Note: Bold letter indicates unacceptable LOS E or F.

As shown in the table, after installation of the proposed traffic signals, ~~all three~~**both** impacted intersections would operate at acceptable LOS ~~AC or better~~ during both the AM and PM peak hours. However, these intersections are Caltrans' facilities in which the County does not have jurisdiction. In addition, Caltrans does not have a plan or program in place. Therefore, the impacts would remain significant and unavoidable.

#### **Two-Lane Highways**

None of the study area two-lane highway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase B) conditions.

#### **Freeways**

None of the study area freeway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase B) conditions.

**Table 5.1216** summarizes potential impacts and recommended mitigation measures associated with Phase B of the Lilac Hills Ranch project.

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**TABLE 5.1316**  
**IMPACT AND MITIGATION SUMMARY**  
**EXISTING PLUS PROJECT (PHASE B) CONDITIONS**

| Potentially Impacted Facility      | Mitigation Measures   |           |
|------------------------------------|---|-----------|
|                                    | Recommendation  | Rationale |
| Roadway Segment                    |   |           |
| None                               | -   |           |
| Intersection                       |   |           |
| I-15 SB Ramps / Gopher Canyon Road | Signalization by the 1 <sup>st</sup> EDU of Phase 4 or 363 <sup>rd</sup> total EDU - <u>Caltrans' facility, significant and unavoidable impact.</u> |           |
| I-15 NB Ramps / Gopher Canyon Road | Signalization by the 1 <sup>st</sup> EDU of Phase 4 or 363 <sup>rd</sup> total EDU - <u>Caltrans' facility, significant and unavoidable impact.</u> |           |
| Two-Lane Highway                   |   |           |
| None                               | -   |           |
| Freeway                            |   |           |
| None                               | -   |           |

Source: Chen Ryan Associates; May 20132014

Split Cells

## 5.3 Existing Plus Project (Phase C) Conditions

### 5.3.1 Existing Plus Project (Phase C) Roadway Network and Traffic Volumes

The Existing Plus Project (Phase C) scenario includes existing traffic volumes with the addition of traffic generated by traffic analysis Phase C. Intersection and roadway geometrics under Existing Plus Project conditions were assumed to be identical to Existing conditions, with the exception of the following roads and driveway intersections associated with project frontage and access:

- Main Street, between West Lilac Road and Street "C";
- Main Street, between Street "C" and Street "Z";
- Main Street, between Street "Z" and W. Lilac Road;
- Street "C" and Street "Z";
- ~~Birdsong Drive, between Street "Z" and W. Lilac Road;~~
- Covey Lane, west of W. Lilac Road;
- Intersection # 26, Street "O" / W. Lilac Road/Main Street – proposed roundabout;
- Intersection # 27, Main Street / Street "C" – proposed roundabout;
- Intersection #28, Lilac Hills Ranch Road / Main Street North – proposed all-way stop controlled intersection;
- Intersection #29, Lilac Hills Ranch Road / Main Street South – proposed all-way stop controlled intersection;

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- Intersection # 30, Street “Z” / Main Street – proposed one-way stop (southbound Street “Z” approach) controlled T-intersection; and
- Intersection # 31, Street “Z” / Main Street – proposed roundabout.

In addition to the project access and frontage roads assumed above, mitigation ~~measures~~measure from Phase ~~B~~were~~A was~~ also carried forward into this Phase. ~~These improvements include, including:~~

- ~~I-15 SB Ramps / Construction of a dedication right-turn lane at the westbound~~ Gopher Canyon Road ~~approach of the~~ intersection ~~—signalized;~~ of E. Vista Way and
- ~~I-15 NB Ramps /~~ Gopher Canyon Road ~~intersection — signalized.~~

### 5.3.2 Existing Plus Project (Phase C) Traffic Conditions

Level of service analyses under Existing Plus Project (Phase C) conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment, intersection, two-lane highway, freeway segment, and ramp intersection level of service results are discussed separately below.

Average daily traffic volumes on study area roadway segments are displayed in **Figure 5-3A**, while peak hour traffic volumes at the key study area intersections are displayed in **Figure 5-3B**.

#### **Roadway Segment Analysis**

~~Table 5-14 displays the level of service analysis results for key roadway segments under Existing Plus Project (Phase C) conditions. As shown, the following four (4) roadway segments would operate at substandard LOS E or F:~~

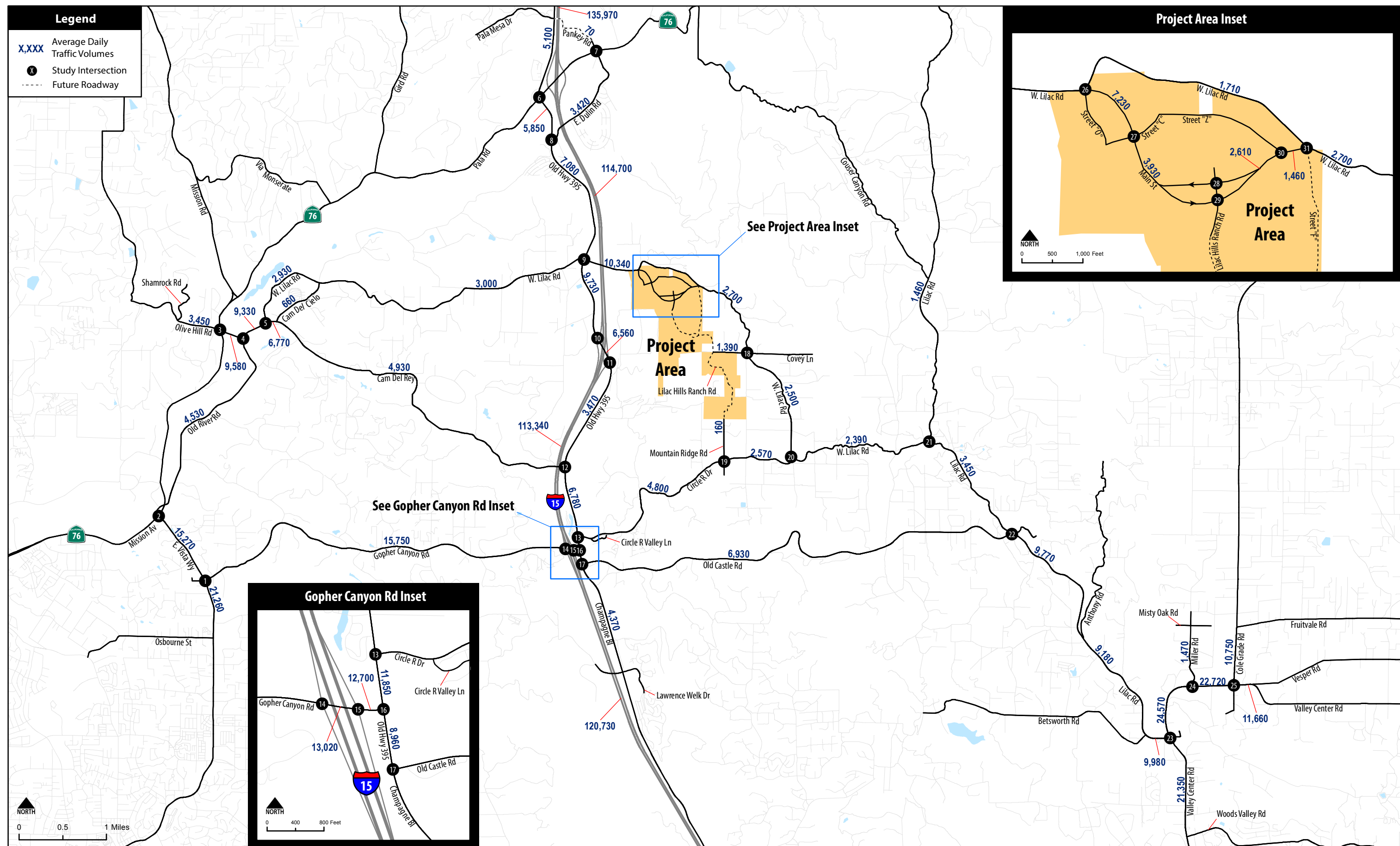
- ~~W. Lilac Road, between Old Highway 395 and Main Street — LOS F;~~
- ~~Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps — LOS E;~~
- ~~E. Vista Way, between Gopher Canyon Road and Osborne Street — LOS F.~~

~~Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase C of the Lilac Hills Ranch project would not result in a direct impact to study roadway segment of E. Vista Way, between SR 76 and Gopher Canyon Road since it would not add 200 or more daily trips this road. However, Phase C of the project traffic would result in direct impact (County planning level assessment) at the other three (3) segments, including: W. Vista Way and I-15 SB Ramps; and E. Vista Way, between Gopher Canyon Road and Osborne Street.~~

#### **Intersection Analysis**

~~Table 5-15 displays intersection level of service and average vehicle delay results under Existing Plus Project (Phase C) conditions. Level of service calculation worksheets for the Existing Plus Project (Phase C) conditions are provided in **Appendix O**.~~

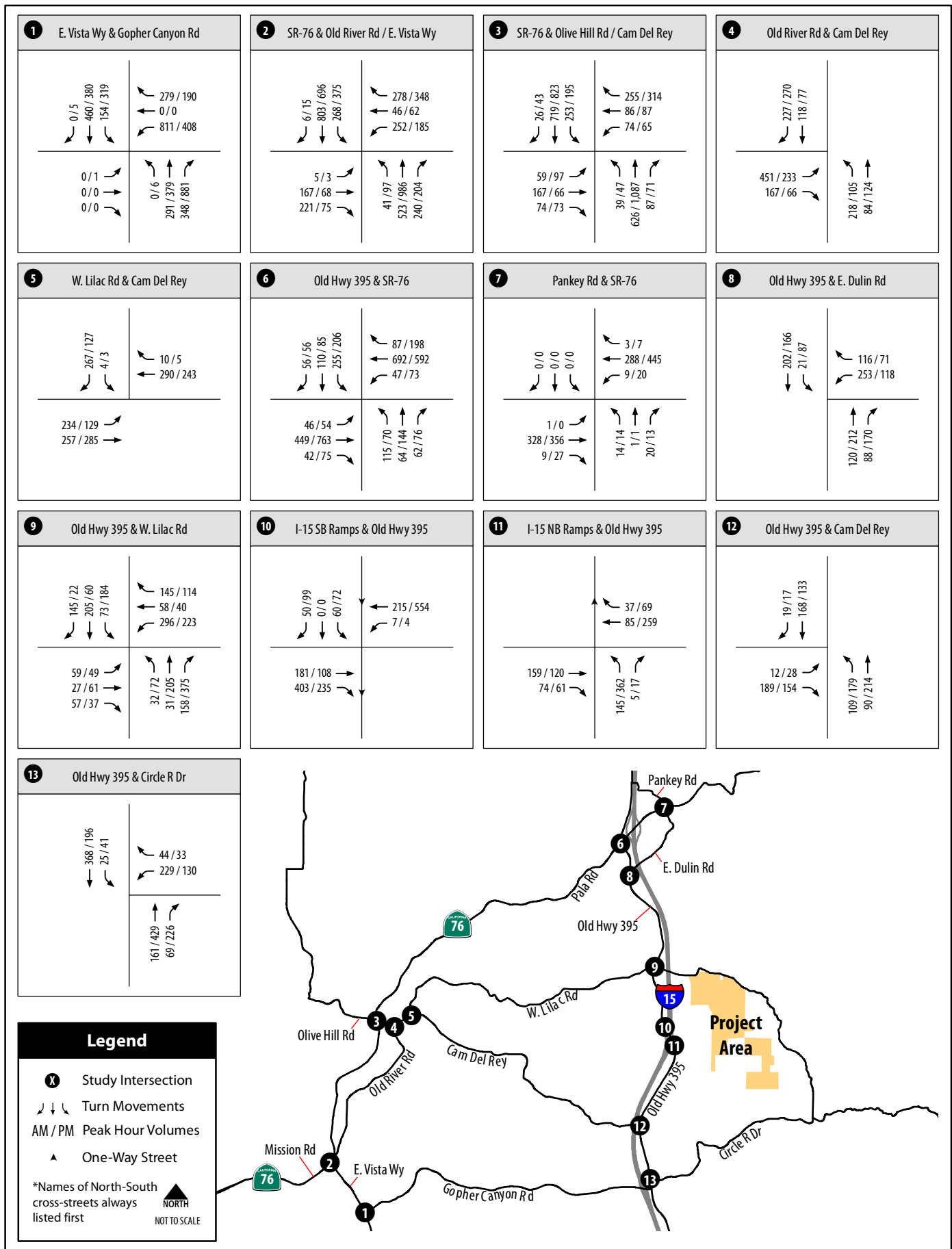
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# Lilac Hills Ranch Traffic Impact Study

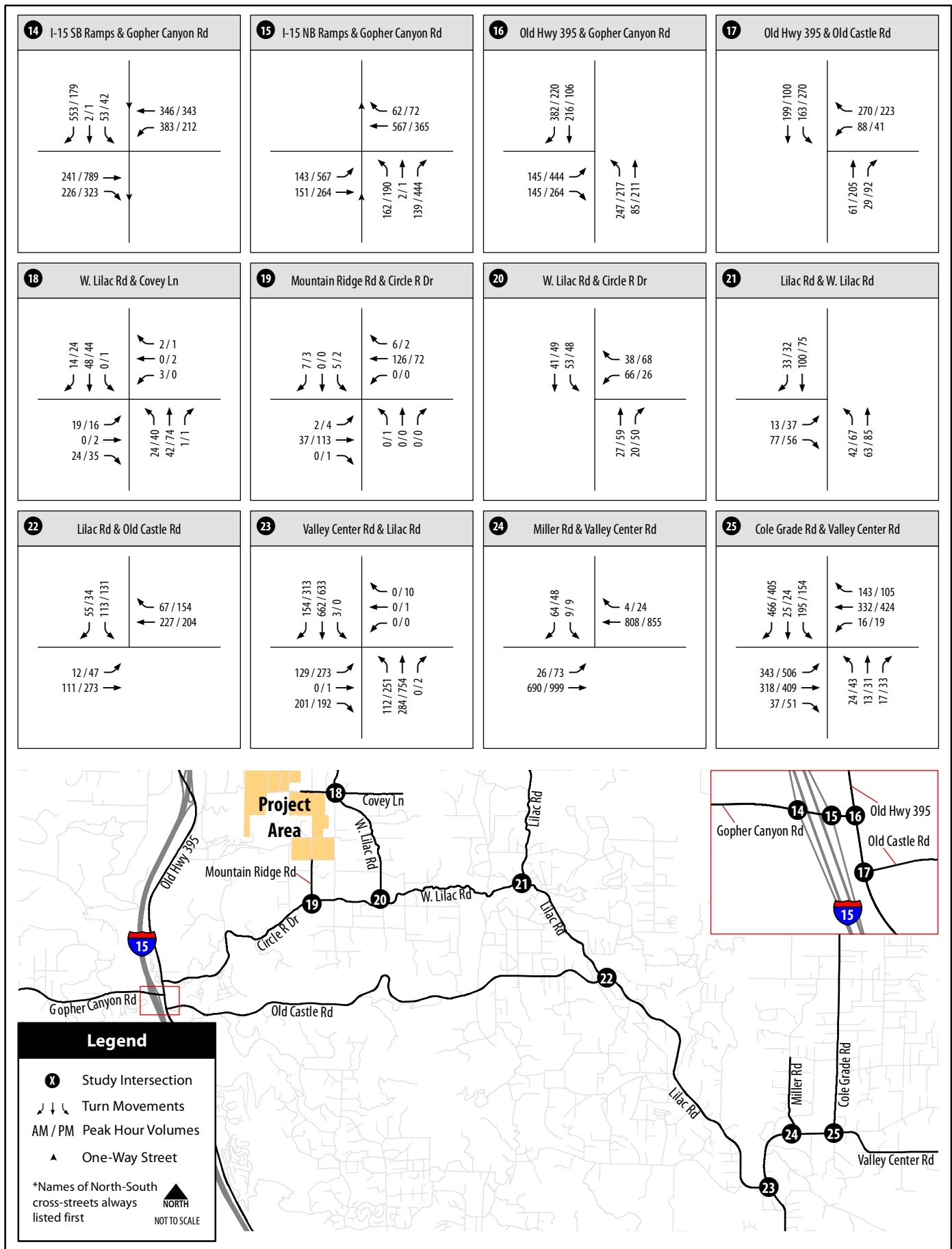
Figure 5-3A

**Roadway Average Daily Traffic Volumes -  
Existing Plus Project (Phase C) Conditions**



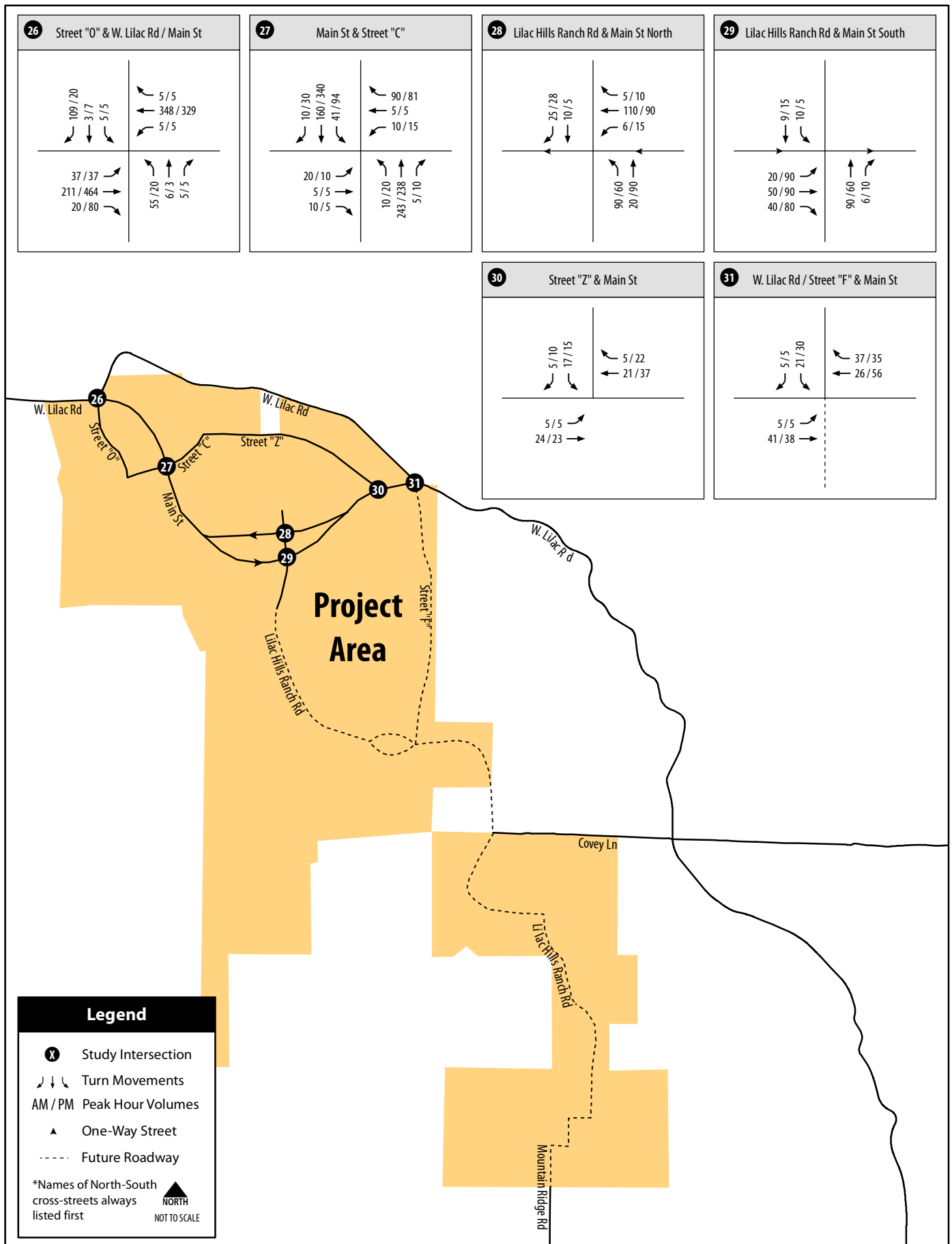
Lilac Hills Ranch Traffic Impact Study

Figure 5-3B (Intersections 1-13)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase C) Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 5-3B (Intersections 14-25)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase C) Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 5-3B (Intersections 26-31)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase C) Conditions

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## Roadway Segment Analysis

**Table 5.17** displays the level of service analysis results for key roadway segments under Existing Plus Project (Phase C) conditions. As shown, the following four (4) roadway segments would operate at substandard LOS E or F:

- W. Lilac Road, between Old Highway 395 and Main Street – LOS F;  
Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase C of the Lilac Hills Ranch project would result in a direct impact to this roadway segment since it would add more than 100 daily trips.
- Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – LOS F;  
The construction of a dedicated right-turn lane at the westbound Gopher Canyon Road approach of the intersection of E. Vista Way and Gopher Canyon Road was identified under the Existing Plus Project (Phase A) conditions as a mitigation measure. With this mitigation measure, the arterial analysis for Existing Plus Project (Phase C) shown in Appendix Y and summarized in Table 5.18 shows that the mitigation would increase the AM peak hour average travel speed along this segment to better than the Existing conditions, and would maintain the same PM peak hour average travel speed as the Existing conditions. Therefore, with the mitigation measure, the additional traffic generated by Phase C of the Lilac Hills Ranch project would not result in a direct impact at this segment.
- E. Vista Way, between SR-76 and Gopher Canyon Road – LOS E;  
Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase C of the Lilac Hills Ranch project would not result in direct impacts to this roadway segment since it would not add more than 200 daily trips.
- E. Vista Way, between Gopher Canyon Road and Osborne Street – LOS F.  
Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase C of the Lilac Hills Ranch project would result in a direct impact to this roadway segment since it would add more than 100 daily trips.

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**TABLE 5. 1417**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Roadway            | From             | To               | With Project Phase C |                                |        | Existing              |        |                       | Project Phase C ADT | Direct Impact?                     |
|--------------------|------------------|------------------|----------------------|--------------------------------|--------|-----------------------|--------|-----------------------|---------------------|------------------------------------|
|                    |                  |                  | Cross-Section        | LOS Threshold (LOS D)          | ADT    | LOS                   | ADT    | LOS                   |                     |                                    |
| E. Dulin Road      | Old Highway 395  | SR-76            | 2-Ln                 | <del>10,900</del> <u>9,800</u> | 3,420  | B                     | 1,830  | <del>A</del> <u>B</u> | 1,600               | No                                 |
| W. Lilac Road      | Camino Del Rey   | Camino Del Cielo | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 2,930  | A                     | 2,270  | A                     | 670                 | No                                 |
| W. Lilac Road      | Camino Del Cielo | Old Highway 395  | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 3,000  | A                     | 2,140  | A                     | 860                 | No                                 |
| W. Lilac Road      | Old Highway 395  | Main Street      | 2-Ln                 | 8,700                          | 10,340 | F                     | 1,150  | A                     | 9,190               | Yes<br>> 100ADT                    |
| W. Lilac Road      | Main Street      | Street "F"       | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 1,710  | A                     | 1,150  | A                     | 560                 | No                                 |
| W. Lilac Road      | Street "F"       | Covey Lane       | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 2,700  | A                     | 1,150  | A                     | 1,550               | No                                 |
| W. Lilac Road      | Covey Lane       | Circle R Drive   | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 2,500  | A                     | 480    | A                     | 2,020               | No                                 |
| W. Lilac Road      | Circle R Drive   | Lilac Road       | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 2,390  | A                     | 1,170  | A                     | 1,220               | No                                 |
| Camino Del Cielo   | Camino Del Rey   | W. Lilac Road    | 2-Ln                 | 10,900                         | 660    | A                     | 630    | A                     | 30                  | No                                 |
| Olive Hill Road    | Shamrock Road    | SR-76            | 2-Ln                 | 8,700                          | 3,450  | A                     | 3,380  | A                     | 70                  | No                                 |
| Camino Del Rey     | SR-76            | Old River Road   | 2-Ln                 | 10,900                         | 9,580  | D                     | 9,350  | D                     | 230                 | No                                 |
| Camino Del Rey     | Old River Road   | W. Lilac Road    | 2-Ln                 | <del>10,900</del> <u>9,800</u> | 9,330  | D                     | 8,640  | D                     | 690                 | No                                 |
| Camino Del Rey     | W. Lilac Road    | Camino Del Cielo | 2-In w/ SM           | 13,500                         | 6,770  | C                     | 6,730  | C                     | 50                  | No                                 |
| Camino Del Rey     | Camino Del Cielo | Old Highway 395  | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 4,930  | A                     | 4,850  | A                     | 80                  | No                                 |
| Gopher Canyon Road | E. Vista Way     | I-15 SB Ramps    | 2-Ln                 | <del>10,900</del> <u>9,800</u> | 15,750 | <del>E</del> <u>F</u> | 15,310 | <del>E</del> <u>F</u> | 430                 | Yes<br>> 200ADT<br>No*<br>> 100ADT |

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**TABLE 5. 1417**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Roadway             | From                | To                  | With Project Phase C |                          |        |                | Existing |                | Project Phase C ADT | Direct Impact? |
|---------------------|---------------------|---------------------|----------------------|--------------------------|--------|----------------|----------|----------------|---------------------|----------------|
|                     |                     |                     | Cross-Section        | LOS Threshold (LOS D)    | ADT    | LOS            | ADT      | LOS            |                     |                |
| Gopher Canyon Road  | I-15 SB Ramps       | I-15 NB Ramps       | 4-Ln                 | 30,800                   | 13,020 | A              | 12,390   | A              | 630                 | No             |
| Gopher Canyon Road  | I-15 NB Ramps       | Old Highway 395     | 4-Ln                 | 30,800                   | 12,700 | A              | 11,870   | A              | 830                 | No             |
| Circle R Drive      | Old Highway 395     | Mountain Ridge Road | 2-Ln                 | <del>10,900</del> 9,800  | 4,800  | C              | 4,030    | <del>B</del> C | 770                 | No             |
| Circle R Drive      | Mountain Ridge Road | W. Lilac Road       | 2-Ln                 | <del>10,900</del> 9,800  | 2,570  | B              | 1,770    | <del>A</del> B | 800                 | No             |
| Old Castle Road     | Old Highway 395     | Lilac Road          | 2-Ln                 | <del>10,900</del> 9,800  | 6,930  | <del>E</del> D | 6,840    | <del>E</del> D | 90                  | No             |
| E. Vista Way        | SR-76               | Gopher Canyon Road  | 2-Ln w/ TWLTL        | 13,500                   | 15,270 | E              | 15,120   | E              | 160                 | No < 200ADT    |
| E. Vista Way        | Gopher Canyon Road  | Osborne Street      | 2-Ln w/ TWLTL        | 13,500                   | 21,260 | F              | 21,020   | F              | 240                 | Yes > 100ADT   |
| Old River Road      | SR-76               | Camino Del Rey      | 2-Ln                 | <del>10,900</del> 9,800  | 4,530  | C              | 4,070    | <del>B</del> C | 460                 | No             |
| Champagne Boulevard | Old Castle Road     | Lawrence Welk Drive | 2-Ln                 | <del>10,900</del> 13,500 | 4,370  | <del>B</del> C | 4,170    | <del>B</del> C | 200                 | No             |
| Pankey Road         | Pala Mesa Drive     | SR-76               | 2-Ln                 | <del>10,900</del> 4,500  | 70     | A              | 70       | A              | 0                   | No             |
| Lilac Road          | Couser Canyon Road  | W. Lilac Road       | 2-Ln                 | <del>8,700</del> 7,800   | 1,460  | A              | 1,150    | A              | 310                 | No             |
| Lilac Road          | W. Lilac Road       | Old Castle Road     | 2-Ln                 | <del>8,700</del> 7,800   | 3,450  | A              | 2,640    | A              | 800                 | No             |
| Lilac Road          | Old Castle Road     | Anthony Road        | 2-Ln                 | 10,900                   | 9,770  | D              | 9,010    | D              | 760                 | No             |

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**TABLE 5. 1417**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Roadway            | From              | To                 | With Project Phase C |                       |        |     | Existing |     | Project Phase C ADT | Direct Impact? |
|--------------------|-------------------|--------------------|----------------------|-----------------------|--------|-----|----------|-----|---------------------|----------------|
|                    |                   |                    | Cross-Section        | LOS Threshold (LOS D) | ADT    | LOS | ADT      | LOS |                     |                |
| Lilac Road         | Anthony Road      | Betsworth Road     | 2-Ln                 | 10,900                | 9,180  | D   | 8,740    | D   | 440                 | No             |
| Lilac Road         | Betsworth Road    | Valley Center Road | 2-Ln                 | 13,500                | 9,980  | D   | 9,620    | D   | 360                 | No             |
| Valley Center Road | Woods Valley Road | Lilac Road         | 4/Ln w/ TWLTL/RM     | 27,000                | 21,350 | C   | 21,290   | C   | 60                  | No             |
| Valley Center Road | Lilac Road        | Miller Road        | 4-Ln w/ RM           | 33,400                | 24,570 | B   | 24,280   | B   | 290                 | No             |
| Valley Center Road | Miller Road       | Cole Grade Road    | 4-Ln w/ RM           | 27,000                | 22,720 | C   | 22,440   | C   | 280                 | No             |
| Valley Center Road | Cole Grade Road   | Vesper Road        | 2-Ln                 | 13,500                | 11,660 | D   | 11,490   | D   | 170                 | No             |
| Miller Road        | Misty Oak Road    | Valley Center Road | 2-Ln                 | 87,000                | 1,470  | A   | 1,460    | A   | 10                  | No             |
| Cole Grade Road    | Fruitvale Road    | Valley Center Road | 2-Ln w/ TWLTL        | 13,500                | 10,750 | D   | 10,660   | D   | 90                  | No             |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

RM = Raised Median.

SM = Striped Median.

TWLTL = Two-Way Left-Turn Lane.

Changes in this table are associated with "Change 3" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

\* Phase A mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases B, C, D, & E.

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**TABLE 5.18**  
**ARTERIAL LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Arterial   | With Project Phase C |     |              |     | Existing     |     |              |     |
|--|----------------------|-----|--------------|-----|--------------|-----|--------------|-----|
|  | AM Peak Hour         |     | PM Peak Hour |     | AM Peak Hour |     | PM Peak Hour |     |
|  | Speed (mph)          | LOS | Speed (mph)  | LOS | Speed (mph)  | LOS | Speed (mph)  | LOS |
| Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps | 40.0                 | B   | 44.3         | A   | 30.6         | C   | 44.3         | A   |

Source: Chen Ryan Associates: May 2014

### Intersection Analysis

**Table 5.19** displays intersection level of service and average vehicle delay results under Existing Plus Project (Phase C) conditions. Level of service calculation worksheets for the Existing Plus Project (Phase C) conditions are provided in **Appendix Z**.

As shown in the table, the following four (4) study intersections would continue to operate at substandard LOS E or F under Existing Plus Project (Phase C) conditions:

- E. Vista Way / Gopher Canyon Road (County) – LOS F during both the AM and PM peak hours. However, this intersection is currently operating at LOS F and Phase A recommended mitigation measure would improve the intersection operations to better than existing conditions. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase C of the Lilac Hills Ranch project would not have any direct impact at this intersection.
- Old Highway 395 / W. Lilac Road (County) – LOS F during both the AM and PM peak hours, and the Phase C project traffic would add more than 5 peak hour trips to the critical movement of this unsignalized intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase C of the Lilac Hills Ranch project would have a direct impact at this intersection.

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**TABLE 5. 4519**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Intersection                              | Traffic Control | With Project Phase C         |                       |                              |                       | Existing                                      |                               | Change in Delay (sec.)<br>AM / PM      | Phase C Traffic to Critical Movements<br>AM / PM | Direct Impact?                                     |
|---|-----------------|------------------------------|-----------------------|------------------------------|-----------------------|---|-------------------------------|--|--|--|
|   |                 | AM Peak Hour                 |                       | PM Peak Hour                 |                       | Delay (sec.)<br>AM / PM                       | LOS<br>AM / PM                |  |  |  |
|   |                 | Avg. Delay (sec.)            | LOS                   | Avg. Delay (sec.)            | LOS                   |   |                               |  |  |  |
| 1. E. Vista Way / Gopher Canyon Road      | Signal*         | <del>29.0</del> <u>115.1</u> | <del>C</del> <u>F</u> | <del>51.0</del> <u>189.5</u> | <del>D</del> <u>F</u> | <del>24.3 / 48.7</del> <u>172.8 / 212.0</u>   | <del>C / D</del> <u>F / F</u> | <del>4.5 / 7.7</del> <u>2.3 / 22.5</u> | -  | No   |
| 2. SR-76 / Old River Road/E. Vista Way    | Signal          | <del>74.7</del> <u>24.8</u>  | <del>E</del> <u>C</u> | <del>53.4</del> <u>32.3</u>  | <del>D</del> <u>C</u> | <del>73.9 / 52.3</del> <u>23.7 / 32</u>       | <del>E / D</del> <u>C / C</u> | <del>1.1 / 0.8</del> <u>0.83</u>       | -  | No<br><i>Caltrans Int. &lt; 2 sec.</i>             |
| 3. SR-76 / Olive Hill Road/Camino Del Rey | Signal          | <del>44.9</del> <u>26.4</u>  | <del>D</del> <u>C</u> | <del>62.0</del> <u>34.7</u>  | <del>E</del> <u>C</u> | <del>43.2</del> <u>1.6 / 60.8</u> <u>34.5</u> | <del>D / E</del> <u>C / C</u> | <del>1.3 / 14.8</del> <u>0.2</u>       | -  | No<br><i>Caltrans Int. &lt; 2 sec.</i> <u>No</u>   |
| 4. Old River Road / Camino Del Rey        | OWSC            | 24.1                         | D                     | 12.3                         | B                     | 23.2 / 12.2                                   | D / B                         | 0.9 / 0.1                              | -  | No   |
| 5. W. Lilac Road / Camino Del Rey         | OWSC            | 17.0                         | C                     | 11.3                         | B                     | 15. <del>4</del> <u>7</u> / 11.0              | C / B                         | <del>1.6</del> <u>3</u> / 0.3          | -  | No   |
| 6. Old Highway 395 / SR-76                | Signal          | <del>43.9</del> <u>31.2</u>  | <del>D</del> <u>C</u> | <del>47.4</del> <u>5.0</u>   | D                     | <del>43.2</del> <u>9.0 / 42.2</u> <u>39.8</u> | <del>D</del> <u>C</u> / D     | <del>0.9 / 4.8</del> <u>2.2 / 5.2</u>  | -  | No   |
| 7. Pankey Road / SR-76                    | TWSC            | 14.1                         | B                     | 19.3                         | C                     | 12.5 / 15.2                                   | B / C                         | 1.6 / 4.1                              | -  | No   |
| 8. Old Highway 395 / E. Dulin Road        | OWSC            | 17.9                         | C                     | 19.5                         | D                     | <del>14.6</del> <u>12.8</u> / 11.2            | B / B                         | <del>3.3</del> <u>5.1</u> / 8.3        | -  | No   |
| 9. Old Highway 395 / W. Lilac Road        | TWSC            | 174.8                        | F                     | 662.1                        | F                     | <del>18.5</del> <u>14.7</u> / 13.3            | C / B                         | <del>156.3</del> <u>160.1</u> / 648.8  | AM: WBL +260<br>PM: WBL +207                     | Yes<br><i>County Int. &gt; 5 trips &gt; 1 sec.</i> |

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**TABLE 5. 4519**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Intersection  | Traffic Control            | With Project Phase C |                |                   |                | Existing                |                    | Change in Delay (sec.)<br>AM / PM               | Phase C Traffic to Critical Movements<br>AM / PM | Direct Impact?                                 |
|---|----------------------------|----------------------|----------------|-------------------|----------------|-------------------------|--------------------|---|--|--|
|   |                            | AM Peak Hour         |                | PM Peak Hour      |                | Delay (sec.)<br>AM / PM | LOS<br>AM / PM     |   |  |  |
|   |                            | Avg. Delay (sec.)    | LOS            | Avg. Delay (sec.) | LOS            |                         |                    |   |  |  |
| 10. I-15 SB Ramps / Old Highway 395                 | OWSC                       | 11.5                 | B              | 13.4              | B              | 10.6 / 12.1             | B / B              | 0.9 / 1.3                                       | -  | No   |
| 11. I-15 NB Ramps / Old Highway 395                 | OWSC                       | 11.2                 | B              | 18.9              | C              | 9.98 / 11.2             | A / B              | 1.34 / 7.7                                      | -  | No   |
| 12. Old Highway 395 / Camino Del Rey                | OWSC                       | 10.4                 | B              | 11.8              | B              | 10.1 / 11.0             | B / B              | 0.3 / 0.8                                       | -  | No   |
| 13. Old Highway 395 / Circle R Drive                | OWSC                       | 26.8                 | D              | 3331.2            | D              | 20.4 / 22.5             | C / C              | 6.4 / 8.7                                       | -  | No   |
| 14. I-15 SB Ramps / Gopher Canyon Road <sup>±</sup> | Signal <del>OW</del><br>SC | 5.4561.9             | A <del>F</del> | 6.41272.9         | A <del>F</del> | 468.2 / 173.0           | F / F              | <del>462.8</del> / <del>166.9</del> 93.7 / 99.9 | -  | <del>No</del> Yes<br>Caltrans<br>Int. > 2 sec. |
| 15. I-15 NB Ramps / Gopher Canyon Road <sup>±</sup> | Signal <del>OW</del><br>SC | 4.734.1              | A <del>D</del> | 6.42171.0         | A <del>F</del> | 30.5 / 1945.4           | D / F              | <del>25.8</del> / <del>1939.0</del> 3.6 / 225.6 | -  | Yes<br>Caltrans<br>Int. <del>No</del> > 2 sec. |
| 16. Old Highway 395 / Gopher Canyon Road            | Signal                     | 17.6                 | B              | 12.915.3          | B              | 16.1 / 8.811.0 / 14.7   | B / A <del>B</del> | 1.5 / 4.16.6 / 0.6                              | -  | No   |
| 17. Old Highway 395 / Old Castle Road               | Signal                     | 13.8                 | B              | 16.2              | B              | 13.9 / 15.7             | B / B              | 0.0 / 0.5                                       | -  | No   |
| 18. W. Lilac Road / Covey Lane                      | TWSC                       | 9.7                  | A              | 10.3              | B              | 8.8 / 9.43              | B / A              | 0.9 / 1.20.9                                    | -  | No   |
| 19. Mountain Ridge Road / Circle R Drive            | TWSC                       | 9.5                  | A              | 10.1              | B              | 9.3 / 9.6               | A / A              | 0.2 / 0.5                                       | -  | No   |

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**TABLE 5. 4519**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Intersection                                   | Traffic Control | With Project Phase C |     |                   |     | Existing             |             | Change in Delay (sec.) AM / PM | Phase C Traffic to Critical Movements AM / PM | Direct Impact? |
|--|-----------------|----------------------|-----|-------------------|-----|----------------------|-------------|--------------------------------|---|----------------|
|  |                 | AM Peak Hour         |     | PM Peak Hour      |     | Delay (sec.) AM / PM | LOS AM / PM |                                |   |                |
|  |                 | Avg. Delay (sec.)    | LOS | Avg. Delay (sec.) | LOS |                      |             |                                |   |                |
| 20. W. Lilac Road / Circle R Drive             | OWSC            | 10.4                 | B   | 9.9               | B   | 9.3 / 9.3            | A / A       | 1.1 / 0.6                      | -   | No             |
| 21. Lilac Road / W. Lilac Road                 | OWSC            | 10.1                 | B   | 10.7              | B   | 9.6 / 9.9            | A / A       | 0.5 / 0.8                      | -   | No             |
| 22. Lilac Road / Old Castle Road               | OWSC            | 12.9                 | B   | 21.2              | C   | 11.8 / 17.8          | B / C       | 1.1 / 3.4                      | -   | No             |
| 23. Valley Center Rd / Lilac Road              | Signal          | 10.8                 | B   | 27.5              | C   | 10.5 / 22.6          | B / C       | 0.3 / 4.9                      | -   | No             |
| 24. Miller Road / Valley Center Road           | OWSC            | 17.1                 | C   | 25.9              | D   | 16.9 / 25.20         | C / D       | 0.2 / 0.79                     | -   | No             |
| 25. Cole Grade Road / Valley Center Road       | Signal          | 31.6                 | C   | 35.1              | C   | 31.1 / 34.9          | C / C       | 0.5 / 0.2                      | -   | No             |
| 26. Street "O" / W. Lilac Road/Main Street     | RA              | 6.9                  | A   | 910.0             | A   | DNE                  | DNE         | 6.9 / 910.0                    | -   | No             |
| 27. Main Street / Street "C"                   | RA              | 5.7                  | A   | 7.6               | A   | DNE                  | DNE         | 5.7 / 7.6                      | -   | No             |
| 28. Lilac Hills Ranch Road / Main Street North | AWSC            | 8.0                  | A   | 8.41              | A   | DNE                  | DNE         | 8.0 / 8.41                     | -   | No             |
| 29. Lilac Hills Ranch Road / Main Street South | AWSC            | 7.6                  | A   | 8.97              | A   | DNE                  | DNE         | 7.6 / 8.97                     | -   | No             |
| 30. Street "Z" / Main Street                   | OWSC            | 8.8                  | A   | 8.9               | A   | DNE                  | DNE         | 8.8 / 8.9                      | -   | No             |
| 31. W. Lilac Road/Street "F" / Main Street     | RA              | 3.7                  | A   | 3.9               | A   | DNE                  | DNE         | 3.7 / 3.9                      | -   | No             |

Source: Chen Ryan Associates; May 20132014

Notes:  
 Bold letter indicates unacceptable LOS E of F.  
 AWSC = All-Way Stop Controlled.

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TWSC = Two-Way Stop Controlled.  
OWSC = One-Way Stop Controlled.  
RA = Roundabout.  
DNE = Does Not Exist.

For OWSC and TWSC intersections, the delay shown is the worst delay experienced by any of the approaches.

\*Traffic signal was required as a Phase A mitigation measure in Phase B measures at the intersection of the project and was E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases B, C, D, & E.

As shown in the table, the following three (3) study intersections would continue to operate at substandard LOS E or F under Existing Plus Project (Phase C) conditions:

- ~~SR-76 / Old River / I-15 SB Ramps / Gopher Canyon Road / E. Vista Way (Caltrans) – LOS E during the AM peak hour, and the Phase C project traffic would not add two seconds or more of additional delay to this intersection.~~
- ~~SR-76 / Olive Hill Road / Camino Del Rey (Caltrans) – LOS E during the PM peak hour, and the Phase C project traffic would not add two seconds or more of additional delay to this intersection.~~
- ~~Old Highway 395 / W. Lilac Road (County) – LOS F during both the AM and PM peak hours, and the Phase C project traffic would add two seconds or more than 5 peak hour trips of additional delay to the critical movement of this unsignalized intersection.~~
- Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase C of the Lilac Hills Ranch project would have a direct impact at ~~the~~this intersection ~~of Old Highway 395 / W. Lilac Road.~~
- I-15 NB Ramps / Gopher Canyon Road (Caltrans) – LOS F during the PM peak hour, and the Phase C project traffic would add two seconds or more of additional delay to this intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase C of the Lilac Hills Ranch project would have a direct impact at this intersection.

## Two-Lane Highway Analysis

**Table 5.1620** displays two-lane highway level of service analysis results for Old Highway 395 under Existing Plus Project (Phase C) conditions. The two-lane highway level of service analysis was performed utilizing the methodology presented in Chapter 2.0.

As shown in the table, all segments along Old Highway 395 would continue to operate at acceptable LOS D or better under Existing Plus Project (Phase C) conditions and the additional traffic generated by Phase C of the project would not cause any direct impacts to Old Highway 395.

## Freeway Segment Analysis

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. **Table 5.1721** displays the resulting level of service for I-15 under Existing Plus Project (Phase C) conditions.

As shown in the table, all of the study area freeway segments along I-15 would continue to operate at LOS D or better under Existing Plus Project (Phase C) conditions. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase C of the project would not cause any direct impacts to study area freeway segments.

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TABLE 5.4620  
TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE C) CONDITIONS

| 2-Ln Highway    | From               | To                 | With Project Phase C        |        |             | Existing |             | Project<br>Phase C<br>ADT | Direct<br>Impact? |
|-----------------|--------------------|--------------------|-----------------------------|--------|-------------|----------|-------------|---------------------------|-------------------|
|                 |                    |                    | LOS<br>Threshold<br>(LOS D) | ADT    | LOS         | ADT      | LOS         |                           |                   |
| Old Highway 395 | Pala Mesa Drive    | SR-76              | 16,200                      | 5,100  | D or better | 4,770    | D or better | 330                       | No                |
| Old Highway 395 | SR-76              | E. Dulin Road      | 16,200                      | 5,850  | D or better | 4,720    | D or better | 1,130                     | No                |
| Old Highway 395 | E. Dulin Road      | W. Lilac Road      | 16,200                      | 7,080  | D or better | 4,340    | D or better | 2,740                     | No                |
| Old Highway 395 | W. Lilac Road      | I-15 SB Ramps      | 16,200                      | 9,730  | D or better | 4,450    | D or better | 5,280                     | No                |
| Old Highway 395 | I-15 SB Ramps      | I-15 NB Ramps      | 16,200                      | 6,560  | D or better | 3,600    | D or better | 2,960                     | No                |
| Old Highway 395 | I-15 NB Ramps      | Camino Del Rey     | 16,200                      | 3,470  | D or better | 2,430    | D or better | 1,040                     | No                |
| Old Highway 395 | Camino Del Rey     | Circle R Drive     | 16,200                      | 6,780  | D or better | 5,820    | D or better | 960                       | No                |
| Old Highway 395 | Circle R Drive     | Gopher Canyon Road | 16,200                      | 11,850 | D or better | 10,710   | D or better | 1,140                     | No                |
| Old Highway 395 | Gopher Canyon Road | Old Castle Road    | 16,200                      | 8,960  | D or better | 8,660    | D or better | 290                       | No                |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

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**TABLE 5.4721**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Freeway | Segment                                      | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|--|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|-------------------------------------|---------------------|
| I-15    | Riverside County Boundary to Old Highway 395 | 135,900 | 8.4%        | 11,481           | 0.64              | 4                        | 0.95 | 6.75%              | 1,985            | 0.844 | D              | 0.012                               | No                  |
| I-15    | Old Highway 395 to SR-76                     | 135,970 | 7.4%        | 10,115           | 0.73              | 4                        | 0.95 | 6.75%              | 2,013            | 0.856 | D              | 0.012                               | No                  |
| I-15    | SR-76 to Old Highway 395                     | 114,700 | 7.8%        | 8,972            | 0.69              | 4                        | 0.95 | 8.40%              | 1,686            | 0.718 | C              | 0.011                               | No                  |
| I-15    | Old Highway 395 to Gopher Canyon Road        | 113,340 | 8.1%        | 9,153            | 0.67              | 4                        | 0.95 | 8.40%              | 1,676            | 0.713 | C              | 0.021                               | No                  |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 120,730 | 8.1%        | 9,750            | 0.67              | 4                        | 0.95 | 13.20%             | 1,827            | 0.777 | C              | 0.024                               | No                  |
| I-15    | Deer Springs Road to Centre City Parkway     | 120,030 | 8.0%        | 9,643            | 0.66              | 4                        | 0.95 | 13.20%             | 1,797            | 0.765 | C              | 0.019                               | No                  |
| I-15    | Centre City Parkway to El Norte Parkway      | 113,400 | 8.0%        | 9,111            | 0.66              | 4                        | 0.95 | 13.20%             | 1,698            | 0.723 | C              | 0.015                               | No                  |
| I-15    | El Norte Parkway to SR-78                    | 129,220 | 7.9%        | 10,171           | 0.66              | 4                        | 0.95 | 10.00%             | 1,868            | 0.795 | C              | 0.014                               | No                  |
| I-15    | SR-78 to W Valley Parkway                    | 193,640 | 8.1%        | 15,759           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,493            | 0.635 | C              | 0.005                               | No                  |
| I-15    | W Valley Parkway to Auto Parkway             | 180,380 | 8.1%        | 14,680           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,390            | 0.592 | B              | 0.005                               | No                  |
| I-15    | Auto Parkway to W Citracado Parkway          | 173,340 | 7.8%        | 13,444           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,266            | 0.539 | B              | 0.004                               | No                  |

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TABLE 5.4721  
 FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
 EXISTING PLUS PROJECT (PHASE C) CONDITIONS

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|-------------------------------------|---------------------|
| I-15    | W Citracado Parkway to Via Rancho Parkway     | 197,180 | 7.8%        | 15,293           | 0.60              | 5+2ML                    | 0.95 | 7.00%              | 1,419            | 0.604 | B              | 0.004                               | No                  |
| I-15    | Via Rancho Parkway to Bernardo Drive          | 199,100 | 7.4%        | 14,653           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,319            | 0.561 | B              | 0.003                               | No                  |
| I-15    | Bernardo Drive to Rancho Bernardo Road        | 202,030 | 7.4%        | 14,869           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,339            | 0.570 | B              | 0.003                               | No                  |
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 209,970 | 7.3%        | 15,416           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,286            | 0.547 | B              | 0.003                               | No                  |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 214,920 | 7.3%        | 15,779           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,316            | 0.560 | B              | 0.002                               | No                  |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:  
 Bold letter indicates unacceptable LOS E or F.  
 ML = Managed Lane.

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## Ramp Intersection Capacity Analysis

Consistent with Caltrans' requirements, the signalized intersections along SR-76 within the study area were analyzed under Existing Plus Project (Phase C) conditions using the ILV procedures as described in Chapter 2.0. ILV analysis results are displayed in **Table 5.1822** and analysis worksheets for the Existing Plus Project (Phase C) conditions are provided in **Appendix PAA**.

TABLE 5.1822  
RAMP INTERSECTION CAPACITY ANALYSIS  
EXISTING PLUS PROJECT (PHASE C) CONDITIONS

| Ramp Intersection                      | Peak Hour | ILV / Hour | Description              |
|--|-----------|------------|--------------------------|
| SR-76 / Old River Road/E. Vista Way    | AM        | 1,541      | >1500: (Over Capacity)   |
|  | PM        | 1,302      | 1200-1500: (At Capacity) |
| SR-76 / Olive Hill Road/Camino Del Rey | AM        | 1,207      | 1200-1500: (At Capacity) |
|  | PM        | 1,376      | 1200-1500: (At Capacity) |
| SR-76 / Old Highway 395                | AM        | 1,055      | <1200: (Under Capacity)  |
|  | PM        | 1,129      | <1200: (Under Capacity)  |

Source: Chen Ryan Associates; January 2013-May 2014

As shown in the table, all three (3) intersections along SR-76 would operate at "At Capacity" and/or "Under Capacity", with the exception of the SR-76 / Old River Road/E. Vista Way intersection, which would operate at "Over Capacity" during the AM peak hour under the Existing Plus Project (Phase C) conditions.

### 5.3.3 Existing Plus Project (Phase C) Impact Significance and Mitigation

This section identifies required mitigation measures for roadway, intersection, two-lane highway, and freeway facilities that would be significantly impacted by project-related traffic under Existing Plus Project (Phase C) conditions.

#### Roadway Segments

Based on the County planning level impact criteria, Phase C of the project traffic would result in direct impacts at three (3) of the study area roadway segments. The following improvements would be required to mitigate the identified impact:

- W. Lilac Road, between Old Highway 395 and Main Street – This road provides primary access to the project site, and it is recommended to improve this facility to the General Plan Mobility Element classification of 2.2C by 929929<sup>th</sup> EDU (or project daily trips of 9,298). The project applicant would be responsible for ~~either~~ implementing the mitigation measure identified above ~~or making a fair share contribution in which the improvement is a part of an approved Plan or Program~~. This significantly impacted roadway segment would operate at LOS D with the roadway widening.

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~~Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – The project would add 430 daily trips (approximately 2.7% of the total ADT) to this roadway which is approximately 7 miles away from the project site.~~

- E. Vista Way, between Gopher Canyon Road and Osborne Street – The project would add 240 daily trips (approximately 1.1% of the total ADT) to this roadway which is approximately 9 miles away from the project site.

~~Given The mitigation for this direct impact is the rural community character where provision of a dedicated right-turn lane at the northbound E. Vista Way approach of the East Vista Way / Gopher Canyon Road and E. Vista Way are located and the minimal interruption to traffic flows, a more detailed intersection, the constraining intersection along the impacted segment. The arterial analysis was conducted. In this case, it was important to consider how performance of a roadway segment is heavily influenced by the ability of the arterial intersections to accommodate peak hour traffic.~~

~~Highway Capacity Software (HCS) 2000 developed by McTrans was employed for the arterial analysis. The HCS arterial analysis methodology is based upon Chapter 15 (Urban Street) and Chapter 20 (2 Lane Highway) of the Highway Capacity Manual (HCM) 2000, which determines shown in Appendix Y and summarized in Table 5.23 below shows that the mitigation would increase the average travel speed and facility level of service according to the roadway functional classification. E along this segment to better than the Existing conditions during both the AM and PM peak hours. Therefore, the direct impact at the segment of E. Vista Way, between Gopher Canyon Road and Osborne Street was evaluated as a Class I arterial with a free flow speed (FFS) of 50 mph since traffic signals along this facility are located less than one mile apart; while Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps was analyzed as a Class II 2-lane highway given the fact that traffic signals are located at more than two mile apart (> 4 miles) would be mitigated. This improvement would be required by the 476<sup>th</sup> EDU.~~

~~Table 5.19 displays the measure criteria (arterial travel speed or percent time spent following) and level of service, and the respective analysis worksheet is included in Appendix Q. Level of service criteria for both Class I arterial and Class II 2-lane highway are also included in Appendix Q.~~

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**TABLE 5.4923**  
**ARTERIAL LEVEL OF SERVICE RESULTS AFTER MITIGATION**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Arterial  | Free-Flow<br>Speed<br>(mph)                                 | AM Peak Hour |                | PM Peak Hour |                |      |                |      |
|---|---|--------------|----------------|--------------|----------------|------|----------------|------|
|   |   | Criteria     | LOS            | Criteria     | LOS            |      |                |      |
| Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps  | 50  | 78.8% PTSE   | D              | 76.5% PTSE   | D              |      |                |      |
| E. Vista Way, between Gopher Canyon Road and Osborne Street | 50  | 24.2 mph     | D              | 22.1 mph     | D              |      |                |      |
| Arterial  | After Mitigation  |              |                |              | Existing       |      |                |      |
|   | AM Peak Hour  |              | PM Peak Hour   |              | AM Peak Hour   |      | PM Peak Hour   |      |
|   | Speed<br>(mph)  | LOS          | Speed<br>(mph) | LOS          | Speed<br>(mph) | LOS  | Speed<br>(mph) | LOS  |
|   | E. Vista Way, between Gopher Canyon Road and Osborne Street | 35.4         | B              | 38.7         | B              | 35.1 | B              | 21.3 |

Source: Chen Ryan Associates; May 2013/2014

### Intersections

-PTSF = Percent time spent following shown in the table above, both segments would operate at acceptable LOS D or better under Existing Plus Project (Phase C) conditions based on the arterial analysis. Therefore, it is appropriate to consider that no mitigation measures would be necessary at these locations.

Phase C of the project traffic would have a direct impact on the three (3) study area intersection of Old Highway 395 / W. Lilac Road. The intersections and the following intersection improvements would be required to mitigate the identified traffic impacts:

- Old Highway 395 / W. Lilac Road (two-way stop controlled) (County) – Signalization and construction of a left-turn lane at the westbound W. Lilac Road approach would be required (by 585<sup>th</sup> EDU or 585 PM peak hour project trips since PM intersection operations would dictate the need for signalization) at this intersection to mitigate direct project impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants. The project applicant would be responsible for implementing the mitigation measure identified above. The signal warrant worksheet for this intersection is provided in Appendix AB.
- I-15 SB Ramps / Gopher Canyon Road (stop controlled ramp intersection) (Caltrans) - Signalization would be required (by the 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU) at this intersection to mitigate direct project impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular

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Volume” and the “Interruption of Continuous Traffic” warrants. The project applicant would be responsible for ~~either~~ implementing the mitigation measure identified above ~~or making a fair share contribution in which the improvement.~~ However, this particular facility is ~~a part out of an approved Plan or Program,~~ the County’s control and therefore the impact would remain significant and unavoidable. The signal warrant worksheet for this intersection is provided in Appendix ~~R-AB~~.

- I-15 NB Ramps / Gopher Canyon Road (stop controlled ramp intersection) (Caltrans) - Signalization would be required (by the 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU) at this intersection to mitigate direct project impacts. A traffic signal warrant was conducted. Based upon California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA), this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants. The project applicant would be responsible for implementing the mitigation measure identified above. However, this particular facility is out of the County’s control and therefore the impact would remain significant and unavoidable. The signal warrant worksheet for this intersection is provided in Appendix AB.

Additionally, the construction of the dedicated right-turn lane at the northbound E. Vista Way approach of the East Vista Way / Gopher Canyon Road intersection (a required mitigation measure for the segment of E. Vista Way, between Gopher Canyon Road and Osborne Street) would further improve the peak hour operations at the intersection of E. Vista Way / Gopher Canyon Road to LOS D. Figure 5-4 displays the conceptual improvements at this intersection with the recommended mitigation measures. Note that accommodation to bicyclists and pedestrians, such as bike lanes and ADA compliance curb ramps, should be considered during the actual design of the intersections.

Table 5.2024 displays level of service analysis results for the mitigated intersection under the Existing Plus Project (Phase C) conditions. Calculation worksheets for the intersection analysis are provided in Appendix AC.

As shown in the table, after installation of the proposed traffic signals, all three impacted intersections, as well as the intersection of E. Vista Way / Gopher Canyon Road, would operate at acceptable LOS D or better during both the AM and PM peak hours. However, both ramp intersections at I-15 / Gopher Canyon Road interchange are Caltrans’ facilities in which the County does not have jurisdiction. In addition, Caltrans does not have a plan or program in place. Therefore, the impacts would remain significant and unavoidable.

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**TABLE 5.24**  
MITIGATED INTERSECTION LEVEL OF SERVICE  
EXISTING PLUS PROJECT (PHASE C) CONDITIONS

| Intersection                          | After Mitigation |     |                 |     | Before Mitigation                                       | Existing                 |
|---------------------------------------|------------------|-----|-----------------|-----|---|--------------------------|
|                                       | AM Peak Hour     |     | PM Peak Hour    |     | Delay (sec.)<br>AM / PM                                 | LOS<br>AM / PM           |
|                                       | Delay<br>(Sec.)  | LOS | Delay<br>(sec.) | LOS |   |                          |
| 1. E. Vista Way / Gopher Canyon Road  | 44.8             | D   | 42.1            | D   | 172.8 / 212.0   | F / F                    |
| 9. Old Highway 395 / W. Lilac Road    | 32.7             | C   | 32.0            | C   | <del>174.8 /</del><br><del>662.1 / 14.7 /</del><br>13.3 | <del>F / F</del> / C / B |
| 14.I-15 SB Ramps / Gopher Canyon Road | 26.7             | C   | 23.1            | C   | 468.2 / 173.0   | F / F                    |
| 15.I-15 NB Ramps / Gopher Canyon Road | 12.7             | B   | 32.2            | C   | 30.5 / 1945.4   | D / F                    |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Note: Bold letter indicates unacceptable LOS E or F.

As shown in the table, after installation of the proposed traffic signal, the impacted intersection would operate at acceptable LOS C or better during both the AM and PM peak hours.

#### Two-Lane Highways

None of the study area two-lane highway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase C) conditions.

#### Freeways

None of the study area freeway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase C) conditions.

**Table 5.24** summarizes potential impacts and recommended mitigation measures associated with Phase C of the Lilac Hills Ranch project.

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**TABLE 5.2425**  
**IMPACT AND MITIGATION SUMMARY**  
**EXISTING PLUS PROJECT (PHASE C) CONDITIONS**

| Potentially Impacted Facility  | Mitigation Measures   |               |
|--|---|---------------|
| <i>Roadway Segment</i>   |   |               |
| <del>Roadway Segment</del> W. Lilac Road, between Old Highway 395 and Main Street              | Improve to 2.2C by 929 <sup>th</sup> EDU  |               |
| E. Vista Way W. Lilac Road, between Old Highway 395 Gopher Canyon Road and Main Osborne Street | Construction of a dedicated NB right-turn lane at the intersection of E. Vista Way / Gopher Canyon Road by 476 <sup>th</sup> EDU or 9,298 project ADT   |               |
| <i>Intersection</i>  |   |               |
| E. Vista Way, between Gopher Canyon Road and Osborne Street Old Highway 395 / W. Lilac Road    | None Signalization and +1 westbound left-turn lane by 585 <sup>th</sup> EDU   |               |
| <del>Intersection</del> -15 SB Ramps / Gopher Canyon Road                                      | Signalization by the 1 <sup>st</sup> EDU of Phase 4 or 363 <sup>rd</sup> total EDU - Caltrans' facility, significant and unavoidable impact.  |               |
| Old Highway 395 / W. Lilac -15 NB Ramps / Gopher Canyon Road                                   | Signalization by 585 <sup>th</sup> the 1 <sup>st</sup> EDU of Phase 4 or 585 PM-peak-hour project trips 363 <sup>rd</sup> total EDU - Caltrans' facility, significant and unavoidable impact. | Deleted Cells |
| <i>Two-Lane Highway</i>  |   |               |
| None   | -   | Deleted Cells |
| <i>Freeway</i>   |   |               |
| None   | -   | Deleted Cells |

Source: Chen Ryan Associates; May 2013-2014

## 5.4 Existing Plus Project (Phase D) Conditions

### 5.4.1 Existing Plus Project (Phase D) Roadway Network and Traffic Volumes

The Existing Plus Project (Phase D) scenario includes existing traffic volumes with the addition of traffic generated by traffic analysis Phase D. Intersection and roadway geometrics under Existing Plus Project conditions were assumed to be identical to Existing conditions, with the exception of the following roads and driveway intersections associated with project frontage and access:

- Main Street, between West Lilac Road and Street "C";
- Main Street, between Street "C" and Street "Z";
- Main Street, between Street "Z" and W. Lilac Road;
- Street "C" and Street "Z";
- ~~Birdsong Drive, between Street "Z" and W. Lilac Road;~~
- Covey Lane, west of W. Lilac Road;

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- Lilac Hills Ranch Road, between Covey Lane and Mountain Ridge Road;
- Intersection # 26, Street “O” / W. Lilac Road/Main Street – proposed roundabout;
- Intersection # 27, Main Street / Street “C” – proposed roundabout;
- Intersection #28, Lilac Hills Ranch Road / Main Street North – proposed all-way stop controlled intersection;
- Intersection #29, Lilac Hills Ranch Road / Main Street South – proposed all-way stop controlled intersection;
- Intersection # 30, Street “Z” / Main Street – proposed one-way stop (southbound Street “Z” approach) controlled T-intersection; and
- Intersection # 31, Street “Z” / Main Street – proposed roundabout.

In addition to the project access and frontage roads assumed above, mitigation measures from Phases ~~BA~~ and C were also carried forward into this Phase. These improvements include:

- Construction of dedicated right-turn lanes at the westbound Gopher Canyon Road and northbound E. Vista Way approaches of the intersection of E. Vista Way and Gopher Canyon Road;
- W. Lilac Road, between Old Highway 395 and Main Street – 2.2C; and
- ~~Old Highway 395 / W. Lilac Road intersection – signalized;~~
- ~~I-15 SB Ramps / Gopher Canyon Road intersection – signalized; and~~
- ~~I-15 NB Ramps / Gopher Canyon Road intersection – signalized and add a westbound left-turn lane.~~

#### 5.4.2 Existing Plus Project (Phase D) Traffic Conditions

Level of service analyses under Existing Plus Project (Phase D) conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment, intersection, two-lane highway, freeway segment, and ramp intersection level of service results are discussed separately below. Average daily traffic volumes on study area roadway segments are displayed in **Figure 5-~~4A5A~~**, while peak hour traffic volumes at the key study area intersections are displayed in **Figure 5-~~4B–5B~~**. Note that the traffic volume figures were modified to reflect the project access “Change 1” as described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”.

#### Roadway Segment Analysis

**Table 5-~~2226~~** displays the level of service analysis results for key roadway segments under Existing Plus Project (Phase D) conditions. As shown, the following three (3) roadway segments would operate at substandard LOS E or F:

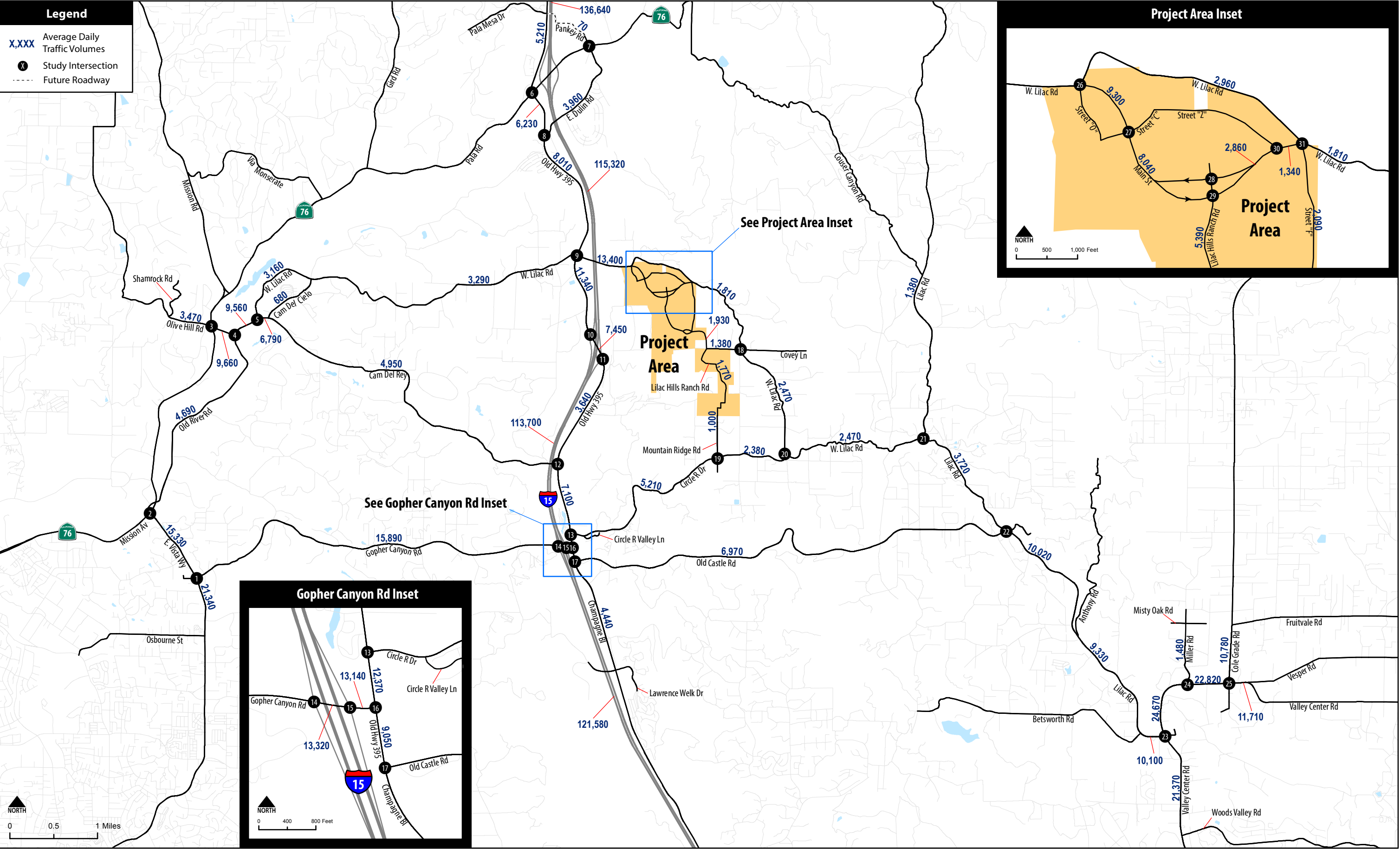
- Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – LOS ~~EE~~;  
The construction of a dedicated right-turn lane at the westbound Gopher Canyon Road approach, as well as a dedicated right-turn lane at the northbound E. Vista Way

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approach, of the intersection of E. Vista Way and Gopher Canyon Road was identified under the Existing Plus Project (Phase A) and Existing Plus Project (Phase C) conditions as mitigation measures. With these improvements, the arterial analysis for Existing Plus Project (Phase D) shown in **Appendix AD** and summarized in **Table 5.27** shows that the mitigation would increase the AM peak hour average travel speed along this segment to better than the Existing conditions, and would maintain the same PM peak hour average travel speed as the Existing conditions. Therefore, with the mitigation measure, the additional traffic generated by Phase D of the Lilac Hills Ranch project would not result in a direct impact at this segment.

- E. Vista Way, between SR-76 and Gopher Canyon Road – LOS E; ~~and~~  
Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase D of the Lilac Hills Ranch project would not result in direct impacts to this roadway segment since it would not add more than 200 daily trips.

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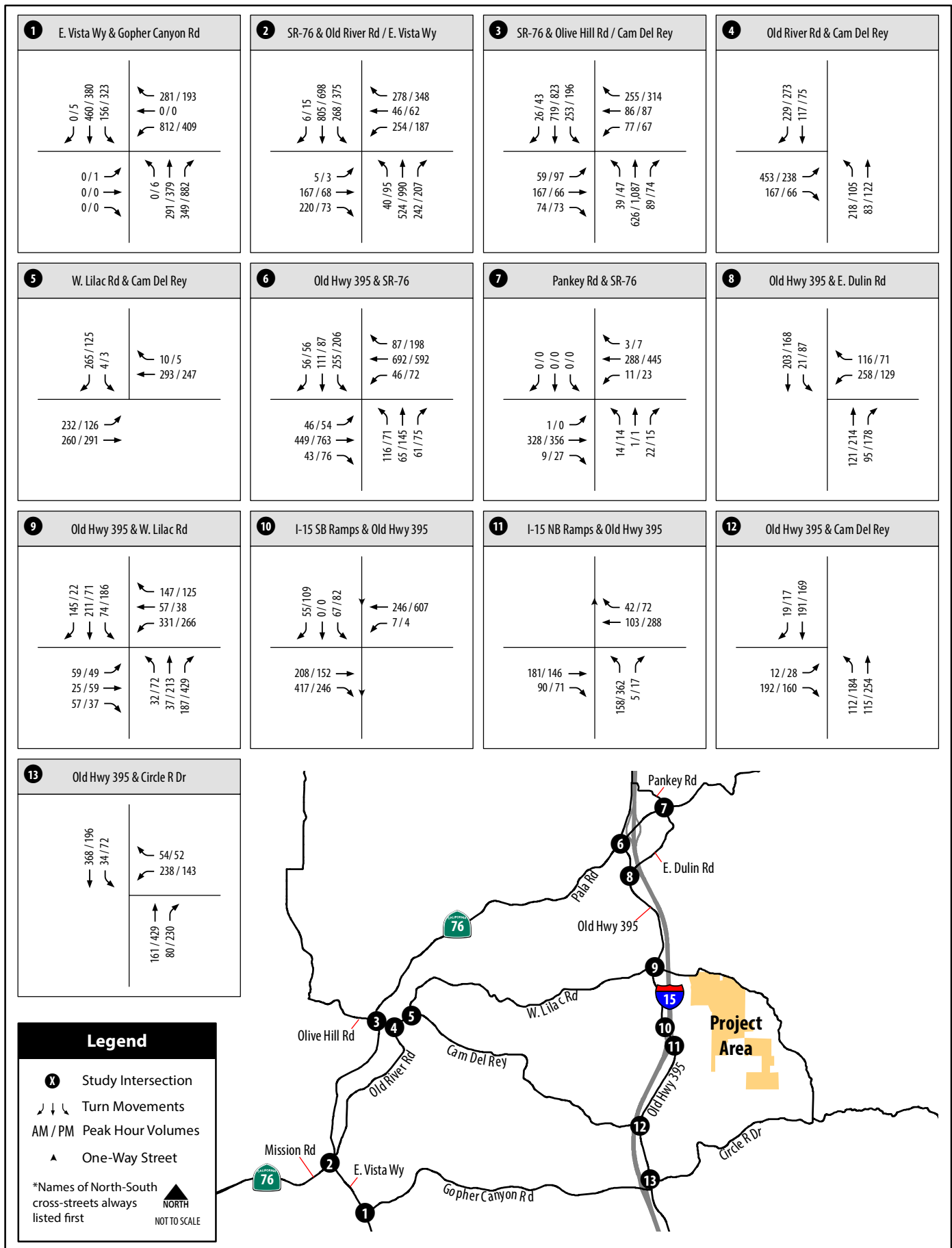


Lilac Hills Ranch Traffic Impact Study

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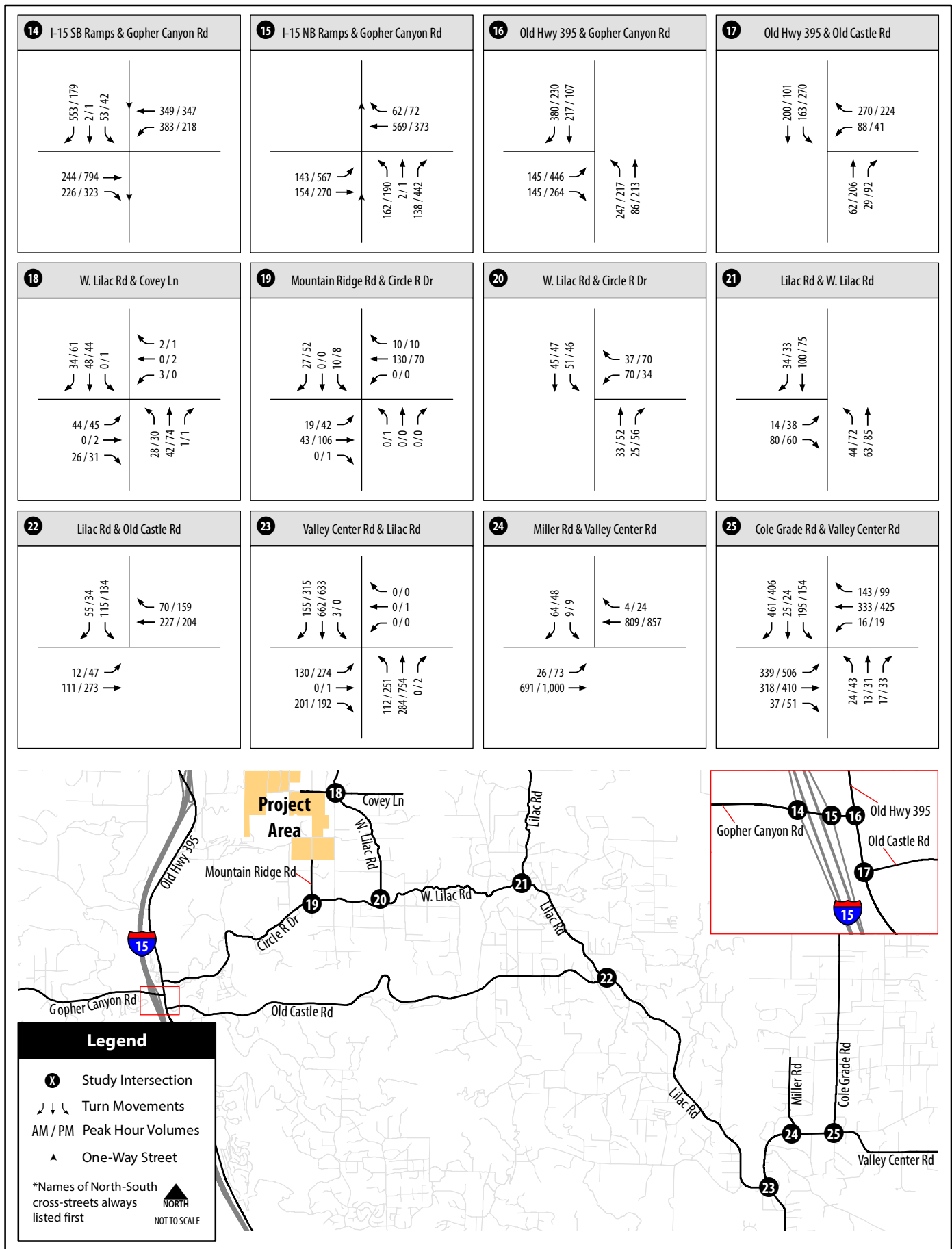
Figure 5-5A

Roadway Average Daily Traffic Volumes - Existing Plus Project (Phase E, Buildout) Conditions



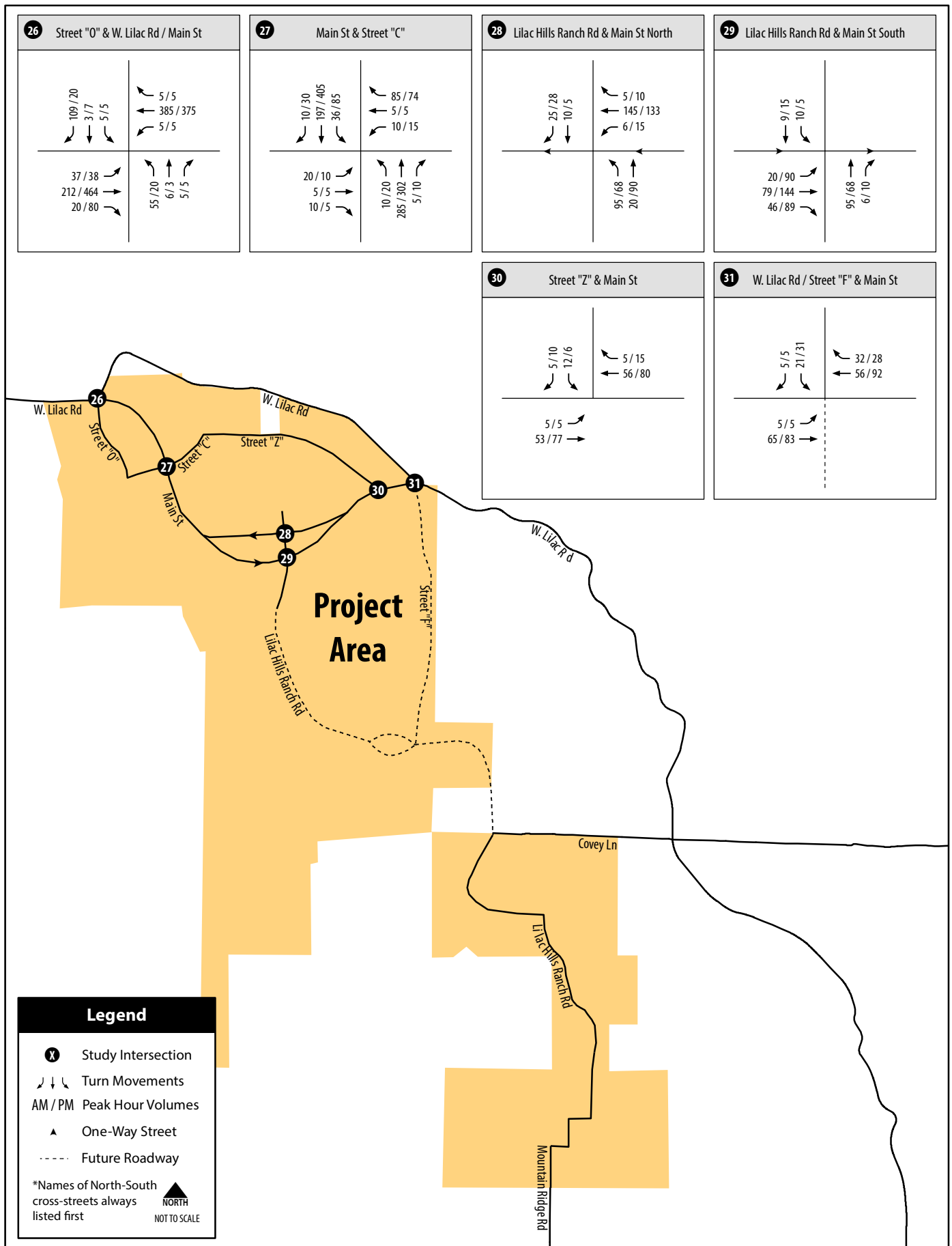
Lilac Hills Ranch Traffic Impact Study

Figure 5-5B (Intersections 1-13)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase D) Conditions



## Lilac Hills Ranch Traffic Impact Study

Figure 5-5B (Intersections 14-25)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase D) Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 5-5B (Intersections 26-31)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase D) Conditions

TABLE 5.2226  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE D) CONDITIONS

| Roadway          | From             | To               | With Project Phase D |                                |                                 |     | Existing |                       | Project<br>Phase D<br>ADT     | Direct<br>Impact? |
|------------------|------------------|------------------|----------------------|--------------------------------|---------------------------------|-----|----------|-----------------------|-------------------------------|-------------------|
|                  |                  |                  | Cross-<br>Section    | LOS<br>Threshold<br>(LOS D)    | ADT                             | LOS | ADT      | LOS                   |                               |                   |
| E. Dulin Road    | Old Highway 395  | SR-76            | 2-Ln                 | <del>10,900</del> <u>9,800</u> | 3,650                           | B   | 1,830    | <del>A</del> <u>B</u> | 1,820                         | No                |
| W. Lilac Road    | Camino Del Rey   | Camino Del Cielo | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 3,030                           | A   | 2,270    | A                     | 760                           | No                |
| W. Lilac Road    | Camino Del Cielo | Old Highway 395  | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 3,120                           | A   | 2,140    | A                     | 980                           | No                |
| W. Lilac Road*   | Old Highway 395  | Main Street      | 2.2C*                | 13,500                         | <del>10,340</del> <u>11,060</u> | D   | 1,150    | A                     | <del>9,200</del> <u>9,910</u> | No                |
| W. Lilac Road    | Main Street      | Street "F"       | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | <del>2,040</del> <u>1,770</u>   | A   | 1,150    | A                     | <del>560</del> <u>890</u>     | No                |
| W. Lilac Road    | Street "F"       | Covey Lane       | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | <del>2,910</del> <u>3,390</u>   | A   | 1,150    | A                     | <del>1,760</del> <u>2,240</u> | No                |
| W. Lilac Road    | Covey Lane       | Circle R Drive   | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | <del>1,780</del> <u>2,430</u>   | A   | 480      | A                     | <del>1,300</del> <u>950</u>   | No                |
| W. Lilac Road    | Circle R Drive   | Lilac Road       | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 2,530                           | A   | 1,170    | A                     | 1,360                         | No                |
| Camino Del Cielo | Camino Del Rey   | W. Lilac Road    | 2-Ln                 | 10,900                         | 670                             | A   | 630      | A                     | 40                            | No                |
| Olive Hill Road  | Shamrock Road    | SR-76            | 2-Ln                 | 8,700                          | 3,460                           | A   | 3,380    | A                     | 80                            | No                |
| Camino Del Rey   | SR-76            | Old River Road   | 2-Ln                 | 10,900                         | 9,610                           | D   | 9,350    | D                     | 260                           | No                |
| Camino Del Rey   | Old River Road   | W. Lilac Road    | 2-Ln                 | <del>10,900</del> <u>9,800</u> | 9,430                           | D   | 8,640    | D                     | 790                           | No                |
| Camino Del Rey   | W. Lilac Road    | Camino Del Cielo | 2-In w/ SM           | 13,500                         | 6,780                           | C   | 6,730    | C                     | 50                            | No                |
| Camino Del Rey   | Camino Del Cielo | Old Highway 395  | 2-Ln                 | <del>8,700</del> <u>7,800</u>  | 4,940                           | A   | 4,850    | A                     | 90                            | No                |

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TABLE 5.2226  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE D) CONDITIONS

| Roadway             | From                | To                  | With Project Phase D |                             |                  |                   | Existing |                   | Project<br>Phase D<br>ADT | Direct<br>Impact?                           |
|---------------------|---------------------|---------------------|----------------------|-----------------------------|------------------|-------------------|----------|-------------------|---------------------------|---|
|                     |                     |                     | Cross-<br>Section    | LOS<br>Threshold<br>(LOS D) | ADT              | LOS               | ADT      | LOS               |                           |   |
| Gopher Canyon Road  | E. Vista Way        | I-15 SB Ramps       | 2-Ln                 | <del>10,900</del><br>9,800  | 15,810           | <del>E</del><br>F | 15,310   | <del>E</del><br>F | 490                       | <del>Yes</del><br>No*<br>200ADT<br>> 100ADT |
| Gopher Canyon Road  | I-15 SB Ramps       | I-15 NB Ramps       | 4-Ln                 | <del>30,800</del>           | 13,350<br>23,000 | <del>A</del>      | 12,390   | <del>A</del>      | <del>960</del><br>840     | No  |
| Gopher Canyon Road  | I-15 NB Ramps       | Old Highway 395     | 4-Ln                 | <del>30,800</del>           | 13,290<br>7,000  | <del>A</del>      | 11,870   | <del>A</del>      | <del>1,430</del><br>200   | No  |
| Circle R Drive      | Old Highway 395     | Mountain Ridge Road | 2-Ln                 | <del>10,900</del><br>9,800  | 5,770<br>6,250   | <del>C</del>      | 4,030    | <del>B</del><br>C | <del>2,220</del><br>1,740 | No  |
| Circle R Drive      | Mountain Ridge Road | W. Lilac Road       | 2-Ln                 | <del>10,900</del><br>9,800  | 2,090<br>6,400   | <del>B</del>      | 1,770    | <del>A</del><br>B | <del>320</del><br>870     | No  |
| Old Castle Road     | Old Highway 395     | Lilac Road          | 2-Ln                 | <del>10,900</del><br>9,800  | 6,950            | <del>C</del><br>D | 6,840    | <del>C</del><br>D | <del>100</del><br>110     | No  |
| E. Vista Way        | SR-76               | Gopher Canyon Road  | 2-Ln w/<br>TWLTL     | 13,500                      | 15,300           | E                 | 15,120   | E                 | 180                       | No<br>< 200ADT                              |
| E. Vista Way        | Gopher Canyon Road  | Osborne Street      | 2-Ln w/<br>TWLTL     | 13,500                      | 21,290           | F                 | 21,020   | F                 | 270                       | <del>Yes</del><br>No*<br>> 100ADT           |
| Old River Road      | SR-76               | Camino Del Rey      | 2-Ln                 | <del>10,900</del><br>9,800  | 4,600            | C                 | 4,070    | <del>B</del><br>C | 530                       | No  |
| Champagne Boulevard | Old Castle Road     | Lawrence Welk Drive | 2-Ln                 | 10,900<br>13,500            | 4,400            | <del>B</del><br>C | 4,170    | <del>B</del><br>C | 230                       | No  |
| Pankey Road         | Pala Mesa Drive     | SR-76               | 2-Ln                 | <del>10,900</del><br>4,500  | 70               | A                 | 70       | A                 | 0                         | No  |

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**TABLE 5.2226**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Roadway            | From               | To                 | With Project Phase D |                        |        |     | Existing |     | Project Phase D ADT | Direct Impact? |
|--------------------|--------------------|--------------------|----------------------|------------------------|--------|-----|----------|-----|---------------------|----------------|
|                    |                    |                    | Cross-Section        | LOS Threshold (LOS D)  | ADT    | LOS | ADT      | LOS |                     |                |
| Lilac Road         | Couser Canyon Road | W. Lilac Road      | 2-Ln                 | <del>8,700</del> 7,800 | 1,490  | A   | 1,150    | A   | 340                 | No             |
| Lilac Road         | W. Lilac Road      | Old Castle Road    | 2-Ln                 | <del>8,700</del> 7,800 | 3,560  | A   | 2,640    | A   | 920                 | No             |
| Lilac Road         | Old Castle Road    | Anthony Road       | 2-Ln                 | 10,900                 | 9,870  | D   | 9,010    | D   | <del>870</del> 860  | No             |
| Lilac Road         | Anthony Road       | Betsworth Road     | 2-Ln                 | 10,900                 | 9,240  | D   | 8,740    | D   | 500                 | No             |
| Lilac Road         | Betsworth Road     | Valley Center Road | 2-Ln                 | 13,500                 | 10,030 | D   | 9,620    | D   | 410                 | No             |
| Valley Center Road | Woods Valley Road  | Lilac Road         | 4/Ln w/ TWLTL/RM     | 27,000                 | 21,350 | C   | 21,290   | C   | 60                  | No             |
| Valley Center Road | Lilac Road         | Miller Road        | 4-Ln w/ RM           | 33,400                 | 24,620 | B   | 24,280   | B   | 340                 | No             |
| Valley Center Road | Miller Road        | Cole Grade Road    | 4-Ln w/ RM           | 27,000                 | 22,760 | C   | 22,440   | C   | 320                 | No             |
| Valley Center Road | Cole Grade Road    | Vesper Road        | 2-Ln                 | 13,500                 | 11,680 | D   | 11,490   | D   | 190                 | No             |
| Miller Road        | Misty Oak Road     | Valley Center Road | 2-Ln                 | <del>87</del> 000      | 1,470  | A   | 1,460    | A   | 10                  | No             |
| Cole Grade Road    | Fruitvale Road     | Valley Center Road | 2-Ln w/ TWLTL        | 13,500                 | 10,760 | D   | 10,660   | D   | 100                 | No             |

Source: Chen Ryan Associates; ~~January 2013~~May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

RM = Raised Median.

SM = Striped Median.

TWLTL = Two-Way Left-Turn Lane.

\*W. Lilac Road, between Old Highway 395 and Main Street is to be improved to a 2.2C as a mitigation measure from previous phase (Phase C).

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

Changes in this table are also associated with "Change 3" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

\* Phase A mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases B, C, D, & E.\* Phase C mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases D & E.

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- E. Vista Way, between Gopher Canyon Road and Osborne Street – LOS F.

The construction of a dedicated right-turn lane at the westbound Gopher Canyon Road approach, as well as a dedicated right-turn lane at the northbound E. Vista Way approach, of the intersection of E. Vista Way and Gopher Canyon Road was identified under the Existing Plus Project (Phase A) and Existing Plus Project (Phase C) conditions as mitigation measures. With these improvements, the arterial analysis for Existing Plus Project (Phase D) shown in Appendix AD and summarized in Table 5.27 shows that the mitigation would increase the average travel speed along this segment to better than the Existing conditions during both the AM and PM peak hours. Therefore, with the mitigation measure, the additional traffic generated by Phase D of the Lilac Hills Ranch project would not result in a direct impact to study roadway segment of E. Vista Way, between SR-76 and Gopher Canyon Road since it would not add 200 or more daily trips this road. However, Phase D of the project traffic would result in direct impact (County planning level assessment) at the other two (2) segments, including: Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps; and E. Vista Way, between Gopher Canyon Road and Osborne Street. at this segment.

TABLE 5.27  
ARTERIAL LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE D) CONDITIONS

| Arterial   | With Project Phase D |          |              |          | Existing     |          |              |          |
|--|----------------------|----------|--------------|----------|--------------|----------|--------------|----------|
|  | AM Peak Hour         |          | PM Peak Hour |          | AM Peak Hour |          | PM Peak Hour |          |
|  | Speed (mph)          | LOS      | Speed (mph)  | LOS      | Speed (mph)  | LOS      | Speed (mph)  | LOS      |
| <u>Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps</u>  | <u>40.8</u>          | <u>B</u> | <u>44.3</u>  | <u>A</u> | <u>30.6</u>  | <u>C</u> | <u>44.3</u>  | <u>A</u> |
| <u>E. Vista Way, between Gopher Canyon Road and Osborne Street</u> | <u>35.4</u>          | <u>B</u> | <u>38.7</u>  | <u>B</u> | <u>35.1</u>  | <u>B</u> | <u>21.3</u>  | <u>D</u> |

Source: Chen Ryan Associates: May 2014

### Intersection Analysis

**Table 5.2328** displays intersection level of service and average vehicle delay results under Existing Plus Project (Phase D) conditions. Level of service calculation worksheets for the Existing Plus Project (Phase D) conditions are provided in **Appendix TAE**.

As shown in the table, the following three (3) study intersections would continue to operate at substandard LOS E or F under Existing Plus Project (Phase D) conditions:

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**TABLE 5.28**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

|   |                 | With Project Phase D |     |                   |     | Existing                |                | Change in Delay (sec.)<br>AM / PM | Phase D Traffic to Critical Movements<br>AM / PM | Direct Impact? |
|---|-----------------|----------------------|-----|-------------------|-----|-------------------------|----------------|-----------------------------------|--|----------------|
| Intersection                              | Traffic Control | AM Peak Hour         |     | PM Peak Hour      |     | Delay (sec.)<br>AM / PM | LOS<br>AM / PM |                                   |  |                |
|   |                 | Avg. Delay (sec.)    | LOS | Avg. Delay (sec.) | LOS |                         |                |                                   |  |                |
| 1. E. Vista Way / Gopher Canyon Road      | Signal*         | 45.4                 | D   | 48.7              | D   | 172.8 / 212.0           | F / F          | -127.4 / -163.3                   | -  | No             |
| 2. SR-76 / Old River Road/E. Vista Way    | Signal          | 24.8                 | C   | 32.4              | C   | 23.7 / 32               | C / C          | 1.1 / 0.4                         | -  | No             |
| 3. SR-76 / Olive Hill Road/Camino Del Rey | Signal          | 26.4                 | C   | 34.8              | C   | 21.6 / 34.5             | C / C          | 4.8 / 0.3                         | -  | No             |
| 4. Old River Road / Camino Del Rey        | OWSC            | 30.4                 | D   | 12.5              | B   | 23.2 / 12.2             | D / B          | 7.2 / 0.3                         | -  | No             |
| 5. W. Lilac Road / Camino Del Rey         | OWSC            | 17.1                 | C   | 11.3              | B   | 15.7 / 11.0             | C / B          | 1.4 / 0.3                         | -  | No             |
| 6. Old Highway 395 / SR-76                | Signal          | 31.4                 | C   | 46.5              | D   | 29.0 / 39.8             | C / D          | 2.4 / 6.7                         | -  | No             |
| 4-7. Pankey Road / SR-76                  | TWSC            | 14.1                 | B   | 19.0              | C   | 12.5 / 15.2             | B / C          | 1.6 / 3.8                         | -  | No             |
| 8. Old Highway 395 / E. Dulin Road        | OWSC            | 18.5                 | C   | 21.2              | C   | 12.8 / 11.2             | B / B          | 5.7 / 10.0                        | -  | No             |
| 9. Old Highway 395 / W. Lilac Road        | Signal*         | 22.5                 | C   | 36.1              | D   | 14.7 / 13.3             | C / B          | 7.8 / 22.8                        | -  | No             |
| 10. I-15 SB Ramps / Old Highway 395       | OWSC            | 12.4                 | B   | 16.2              | C   | 10.6 / 12.1             | B / B          | 1.8 / 4.1                         | -  | No             |
| 11. I-15 NB Ramps / Old Highway 395       | OWSC            | 12.0                 | B   | 22.2              | C   | 9.8 / 11.2              | A / B          | 2.2 / 11.0                        | -  | No             |

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**TABLE 5.28**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Intersection |                                      | Traffic Control | With Project Phase D |     |                   |     | Existing                |                | Change in Delay (sec.)<br>AM / PM | Phase D Traffic to Critical Movements<br>AM / PM | Direct Impact?                             |
|--------------|--------------------------------------|-----------------|----------------------|-----|-------------------|-----|-------------------------|----------------|-----------------------------------|--|--|
|              |                                      |                 | AM Peak Hour         |     | PM Peak Hour      |     | Delay (sec.)<br>AM / PM | LOS<br>AM / PM |                                   |  |  |
|              |                                      |                 | Avg. Delay (sec.)    | LOS | Avg. Delay (sec.) | LOS |                         |                |                                   |  |  |
| 12.          | Old Highway 395 / Camino Del Rey     | OWSC            | 10.5                 | B   | 12.5              | B   | 10.1 / 11.0             | B / B          | 0.4 / 1.5                         | -  | No   |
| 13.          | Old Highway 395 / Circle R Drive     | OWSC            | 31.2                 | D   | 51.2              | F   | 20.4 / 22.5             | C / C          | 10.8 / 28.7                       | AM: WBL +20<br>PM: WBL +29                       | Yes<br>County Int.<br>> 5 trips<br>>1 sec. |
| 14.          | I-15 SB Ramps / Gopher Canyon Road   | OWSC            | 592.9                | F   | 288.9             | F   | 468.2 / 173.0           | F / F          | 124.7 / 115.9                     | -  | Yes<br>Caltrans<br>Int. > 2 sec.           |
| 15.          | I-15 NB Ramps / Gopher Canyon Road   | OWSC            | 34.3                 | D   | 2254.2            | F   | 30.5 / 1945.4           | D / F          | 3.8 / 308.8                       | -  | Yes<br>Caltrans<br>Int. > 2 sec.           |
| 16.          | Old Highway 395 / Gopher Canyon Road | Signal          | 17.9                 | B   | 15.6              | B   | 11.0 / 14.7             | B / B          | 6.9 / 0.9                         | -  | No   |
| 17.          | Old Highway 395 / Old Castle Road    | Signal          | 13.8                 | B   | 16.6              | B   | 13.9 / 15.7             | B / B          | 0.0 / 0.9                         | -  | No   |
| 18.          | W. Lilac Road / Covey Lane           | TWSC            | 10.5                 | B   | 11.2              | B   | 8.8 / 9.3               | B / A          | 1.7 / 1.9                         | -  | No   |
| 19.          | Mountain Ridge Road / Circle R Drive | TWSC            | 9.7                  | A   | 13.8              | B   | 9.3 / 9.6               | A / A          | 0.4 / 4.2                         | -  | No   |
| 20.          | W. Lilac Road / Circle R Drive       | OWSC            | 10.5                 | B   | 10.7              | B   | 9.3 / 9.3               | A / A          | 1.2 / 1.4                         | -  | No   |
| 21.          | Lilac Road / W. Lilac Road           | OWSC            | 10.2                 | B   | 10.8              | B   | 9.6 / 9.9               | A / A          | 0.6 / 0.9                         | -  | No   |

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**TABLE 5.28**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Intersection |   | Traffic Control | With Project Phase D |          |                   |          | Existing             |              | Change in Delay (sec.) AM / PM | Phase D Traffic to Critical Movements AM / PM | Direct Impact? |
|--------------|---|-----------------|----------------------|----------|-------------------|----------|----------------------|--------------|--------------------------------|---|----------------|
|              |   |                 | AM Peak Hour         |          | PM Peak Hour      |          | Delay (sec.) AM / PM | LOS AM / PM  |                                |   |                |
|              |   |                 | Avg. Delay (sec.)    | LOS      | Avg. Delay (sec.) | LOS      |                      |              |                                |   |                |
| 3-22.        | Lilac Road / Old Castle Road  | OWSC            | 13.0                 | B        | 21.7              | C        | 11.8 / 17.8          | B / C        | 1.2 / 3.9                      | -   | No             |
| 4-23.        | Valley Center Rd / Lilac Road   | Signal          | 10.8                 | B        | 30.5              | C        | 10.5 / 22.6          | B / C        | 0.3 / 7.9                      | -   | No             |
|              | <del>24. Old Highway 395 / Circle R Drive (County) - LOS E during the AM peak hour / Miller Road / Valley Center Road</del> | <u>OWSC</u>     | <u>17.2</u>          | <u>C</u> | <u>26.3</u>       | <u>D</u> | <u>16.9 / 25.0</u>   | <u>C / D</u> | <u>0.3 / 1.3</u>               | <u>-</u>                                      | <u>No</u>      |
|              | <u>25. Cole Grade Road / Valley Center Road</u>   | <u>Signal</u>   | <u>32.8</u>          | <u>C</u> | <u>35.1</u>       | <u>D</u> | <u>31.1 / 34.9</u>   | <u>C / C</u> | <u>1.7 / 0.2</u>               | <u>-</u>                                      | <u>No</u>      |
|              | <u>26. Street "O" / W. Lilac Road/Main Street</u>   | <u>RA</u>       | <u>7.3</u>           | <u>A</u> | <u>15.0</u>       | <u>B</u> | <u>DNE</u>           | <u>DNE</u>   | <u>7.3 / 15.0</u>              | <u>-</u>                                      | <u>No</u>      |
|              | <u>27. Main Street / Street "C"</u>   | <u>RA</u>       | <u>6.1</u>           | <u>A</u> | <u>8.6</u>        | <u>A</u> | <u>DNE</u>           | <u>DNE</u>   | <u>6.1 / 8.6</u>               | <u>-</u>                                      | <u>No</u>      |
|              | <u>28. Lilac Hills Ranch Road / Main Street North</u>   | <u>AWSC</u>     | <u>8.3</u>           | <u>A</u> | <u>8.5</u>        | <u>A</u> | <u>DNE</u>           | <u>DNE</u>   | <u>8.3 / 8.5</u>               | <u>-</u>                                      | <u>No</u>      |
|              | <u>29. Lilac Hills Ranch Road / Main Street South</u>   | <u>AWSC</u>     | <u>7.9</u>           | <u>A</u> | <u>9.3</u>        | <u>A</u> | <u>DNE</u>           | <u>DNE</u>   | <u>7.9 / 9.3</u>               | <u>-</u>                                      | <u>No</u>      |
|              | <u>30. Street "Z" / Main Street</u>   | <u>OWSC</u>     | <u>9.2</u>           | <u>A</u> | <u>9.4</u>        | <u>A</u> | <u>DNE</u>           | <u>DNE</u>   | <u>9.2 / 9.4</u>               | <u>-</u>                                      | <u>No</u>      |
|              | <u>31. W. Lilac Road/Street "F" / Main Street</u>   | <u>RA</u>       | <u>3.9</u>           | <u>A</u> | <u>4.2</u>        | <u>A</u> | <u>DNE</u>           | <u>DNE</u>   | <u>3.9 / 4.2</u>               | <u>-</u>                                      | <u>No</u>      |

Source: Chen Ryan Associates; May 2014

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Bold letter indicates unacceptable LOS E of F.

AWSC = All-Way Stop Controlled.

TWSC = Two-Way Stop Controlled.

OWSC = One-Way Stop Controlled.

RA = Roundabout.

DNE = Does Not Exist.

For OWSC and TWSC intersections, the delay shown is the worst delay experienced by any of the approaches.

\* Phase A mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases B, C, D, & E.

\* Phase C mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases D & E.

\*Traffic signal was required at intersection #9 as a mitigation measure in Phase C of the project and was assumed to be carried forwarded into Phases D & E.

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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- ~~Old Highway 395 / Circle R Drive (County) – LOS F during the PM peak hour, and the SR-76 / Old River Road/E. Vista Way (Caltrans) – LOS E during the AM peak hour, and the Phase D project traffic would not add two seconds or more of additional delay to this intersection.~~
- ~~SR-76 / Olive Hill Road/Camino Del Rey (Caltrans) – LOS E during the PM peak hour, and the Phase D project traffic would not add two seconds or more of additional delay to this intersection.~~

Phase D project traffic would add more than 5 peak hour trips to the critical movement of this unsignalized intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase D of the Lilac Hills Ranch project would have a direct impact at this intersection.

- I-15 SB Ramps / Gopher Canyon Road (Caltrans) – LOS F during both the AM and PM peak hours, and the Phase D project traffic would add two seconds or more of additional delay to this intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase D of the Lilac Hills Ranch project would have a direct impact at ~~the~~this intersection ~~of Old Highway 395 / Circle R Drive.~~
- I-15 NB Ramps / Gopher Canyon Road (Caltrans) – LOS F during the PM peak hour, and the Phase D project traffic would add two seconds or more of additional delay to this intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase D of the Lilac Hills Ranch project would have a direct impact at this intersection.

## Two-Lane Highway Analysis

**Table 5.2429** displays two-lane highway level of service analysis results for Old Highway 395 under Existing Plus Project (Phase D) conditions. The two-lane highway level of service analysis was performed utilizing the methodology presented in Chapter 2.0.

As shown in the table, all segments along Old Highway 395 would continue to operate at acceptable LOS D or better under Existing Plus Project (Phase D) conditions and the additional traffic generated by Phase D of the project would not cause any direct impacts to Old Highway 395.

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**TABLE 5.23  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Intersection   | Traffic Control | With Project Phase-D |     |                   |     | Existing           |           | Change in Delay (sec.) AM/PM | Phase-D Traffic to Critical Movements AM/PM | Direct Impact?            |
|--|-----------------|----------------------|-----|-------------------|-----|--------------------|-----------|------------------------------|---|---------------------------|
|  |                 | AM Peak Hour         |     | PM Peak Hour      |     | Delay (sec.) AM/PM | LOS AM/PM |                              |   |                           |
|  |                 | Avg. Delay (sec.)    | LOS | Avg. Delay (sec.) | LOS |                    |           |                              |   |                           |
| <del>5. E. Vista Way / Gopher Canyon Road</del>      | Signal          | 30.1                 | C   | 52.5              | D   | 24.3/48.7          | C/D       | 5.8/3.8                      | -   | No                        |
| <del>6. SR 76 / Old River Road/E. Vista Way</del>    | Signal          | 74.8                 | E   | 53.7              | D   | 73.9/52.3          | E/D       | <u>0.9</u> /1.4              | -   | No Caltrans Int. < 2 sec. |
| <del>7. SR 76 / Olive Hill Road/Camino Del Rey</del> | Signal          | 44.8                 | D   | 62.2              | E   | 43.6/60.8          | D/E       | 1.2/ <u>1.4</u>              | -   | No Caltrans Int. < 2 sec. |
| <del>8. Old River Road / Camino Del Rey</del>        | OWSC            | 32.5                 | D   | 12.4              | B   | 23.2/12.2          | D/B       | 9.3/0.2                      | -   | No                        |
| <del>9. W. Lilac Road / Camino Del Rey</del>         | OWSC            | 17.1                 | C   | 11.3              | B   | 15.4/11.0          | C/B       | 1.7/0.3                      | -   | No                        |
| <del>10. Old Highway 395 / SR 76</del>               | Signal          | 44.1                 | D   | 47.8              | D   | 43.0/42.2          | D/D       | 1.1/5.6                      | -   | No                        |
| <del>11. Old Highway 395 / E. Dulin Road</del>       | OWSC            | 18.5                 | C   | 21.2              | C   | 14.6/11.2          | B/B       | 3.9/10.0                     | -   | No                        |
| <del>12. Old Highway 395 / W. Lilac Road</del>       | Signal*         | 19.1                 | B   | 28.7              | C   | 18.5/13.3          | C/B       | 0.6/15.4                     | -   | No                        |
| <del>13. I 15 SB Ramps / Old Highway 395</del>       | OWSC            | 12.3                 | B   | 15.8              | C   | 10.6/12.1          | B/B       | 1.7/3.7                      | -   | No                        |
| <del>14. I 15 NB Ramps / Old Highway 395</del>       | OWSC            | 11.4                 | B   | 20.9              | C   | 9.9/11.2           | A/B       | 1.5/9.7                      | -   | No                        |
| <del>15. Old Highway 395 / Camino Del Rey</del>      | OWSC            | 10.5                 | B   | 12.2              | B   | 10.1/11.0          | B/B       | 0.4/1.2                      | -   | No                        |

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**TABLE 5.23  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Intersection  | Traffic Control | With Project Phase D |     |                   |     | Existing           |           | Change in Delay (sec.) AM/PM | Phase-D Traffic to Critical Movements AM/PM | Direct Impact?  |
|---|-----------------|----------------------|-----|-------------------|-----|--------------------|-----------|------------------------------|---|---|
|   |                 | AM Peak Hour         |     | PM Peak Hour      |     | Delay (sec.) AM/PM | LOS AM/PM |                              |   |   |
|   |                 | Avg. Delay (sec.)    | LOS | Avg. Delay (sec.) | LOS |                    |           |                              |   |   |
| <del>16. Old Highway 395 / Circle R Drive</del>       | OWSC            | 39.0                 | E   | 62.7              | F   | 20.4 / 22.5        | C / C     | 18.6 / 40.2                  | AM: WBL +31<br>PM: WBL +38                  | <del>Yes</del><br><del>County Int. &gt; 5 trips</del> |
| 17. I-15 SB Ramps / Gopher Canyon Road                | Signal          | 5.9                  | A   | 6.5               | A   | 468.2 / 173.0      | F / F     | 462.3 / 166.5                | -   | No  |
| 18. I-15 NB Ramps / Gopher Canyon Road                | Signal          | 4.9                  | A   | 6.5               | A   | 30.5 / 1945.4      | D / F     | 25.6 / 1938.9                | -   | No  |
| <del>19. Old Highway 395 / Gopher Canyon Road</del>   | Signal          | 17.6                 | B   | 13.8              | B   | 16.1 / 8.8         | B / A     | 1.5 / 5.0                    | -   | No  |
| <del>20. Old Highway 395 / Old Castle Road</del>      | Signal          | 13.8                 | B   | 16.6              | B   | 13.9 / 15.7        | B / B     | 0.0 / 0.9                    | -   | No  |
| <del>21. W. Lilac Road / Covey Lane</del>             | TWSC            | 9.4                  | A   | 9.7               | A   | 8.8 / 9.1          | B / A     | 0.6 / 0.6                    | -   | No  |
| <del>22. Mountain Ridge Road / Circle R Drive</del>   | TWSC            | 9.7                  | A   | 13.1              | B   | 9.3 / 9.6          | A / A     | 0.4 / 3.5                    | -   | No  |
| <del>23. W. Lilac Road / Circle R Drive</del>         | OWSC            | 10.2                 | B   | 10.4              | A   | 9.3 / 9.3          | A / A     | 0.9 / 1.1                    | -   | No  |
| <del>24. Miller Road / Valley Center Road</del>       | OWSC            | 17.2                 | C   | 26.3              | D   | 16.9 / 25.2        | C / D     | 0.3 / 1.1                    | -   | No  |
| <del>25. Cole Grade Road / Valley Center Road</del>   | Signal          | 32.8                 | C   | 35.1              | D   | 31.1 / 34.9        | C / C     | 1.7 / 0.2                    | -   | No  |
| <del>26. Street "O" / W. Lilac Road/Main Street</del> | RA              | 6.9                  | A   | 10.9              | B   | DNE                | DNE       | 6.9 / 10.9                   | -   | No  |

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**TABLE 5.23  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Intersection  | Traffic Control | With Project Phase D |     |                   |     | Existing           |           | Change in Delay (sec.) AM/PM | Phase D Traffic to Critical Movements AM/PM | Direct Impact? |
|---|-----------------|----------------------|-----|-------------------|-----|--------------------|-----------|------------------------------|---|----------------|
|   |                 | AM Peak Hour         |     | PM Peak Hour      |     | Delay (sec.) AM/PM | LOS AM/PM |                              |   |                |
|   |                 | Avg. Delay (sec.)    | LOS | Avg. Delay (sec.) | LOS |                    |           |                              |   |                |
| 27. <del>Main Street / Street "C"</del>                   | RA              | 5.7                  | A   | 7.7               | A   | DNE                | DNE       | 5.7/7.7                      | -   | No             |
| 28. <del>Lilac Hills Ranch Road / Main Street North</del> | AWSC            | 8.2                  | A   | 8.5               | A   | DNE                | DNE       | 8.2/8.5                      | -   | No             |
| 29. <del>Lilac Hills Ranch Road / Main Street South</del> | AWSC            | 7.8                  | A   | 9.0               | A   | DNE                | DNE       | 7.8/9.0                      | -   | No             |
| 30. <del>Street "Z" / Main Street</del>                   | QWSC            | 8.8                  | A   | 8.9               | A   | DNE                | DNE       | 8.8/8.9                      | -   | No             |
| 31. <del>W. Lilac Road/Street "F" / Main Street</del>     | RA              | 3.7                  | A   | 3.8               | A   | DNE                | DNE       | 3.7/3.8                      | -   | No             |

Source: Chen Ryan Associates; May 2013

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**TABLE 5.29**  
**TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

**TABLE 5.24**  
**TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Ln Highway  | From               | To                 | With Project Phase D  |        |             | Existing |             | Project Phase D ADT | Direct Impact? |
|-------------|--------------------|--------------------|-----------------------|--------|-------------|----------|-------------|---------------------|----------------|
|             |                    |                    | LOS Threshold (LOS D) | ADT    | LOS         | ADT      | LOS         |                     |                |
| Highway 395 | Pala Mesa Drive    | SR-76              | 16,200                | 5,440  | D or better | 4,770    | D or better | 380                 | No             |
| Highway 395 | SR-76              | E. Dulin Road      | 16,200                | 5,940  | D or better | 4,720    | D or better | 1,230               | No             |
| Highway 395 | E. Dulin Road      | W. Lilac Road      | 16,200                | 7,440  | D or better | 4,340    | D or better | 3,060               | No             |
| Highway 395 | W. Lilac Road      | I-15 SB Ramps      | 16,200                | 10,210 | D or better | 4,450    | D or better | 6,240               | No             |
| Highway 395 | I-15 SB Ramps      | I-15 NB Ramps      | 16,200                | 7,180  | D or better | 3,600    | D or better | 3,580               | No             |
| Highway 395 | I-15 NB Ramps      | Camino Del Rey     | 16,200                | 4,260  | D or better | 2,430    | D or better | 1,830               | No             |
| Highway 395 | Camino Del Rey     | Circle R Drive     | 16,200                | 7,590  | D or better | 5,820    | D or better | 1,770               | No             |
| Highway 395 | Circle R Drive     | Gopher Canyon Road | 16,200                | 12,490 | D or better | 10,710   | D or better | 1,790               | No             |
| Highway 395 | Gopher Canyon Road | Old Castle Road    | 16,200                | 9,000  | D or better | 8,660    | D or better | 340                 | No             |

Source: Chen Ryan Associates; January 2013-May 2014

Note:

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

## Freeway Segment Analysis

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. **Table 5.30** displays the resulting level of service for I-15 under Existing Plus Project (Phase D) conditions.

**Table 5.25** displays the resulting level of service for I-15 under Existing Plus Project (Phase D) conditions.

HLV analysis results are displayed in **Table 5.26** and analysis worksheets for the Existing Plus Project (Phase D) conditions are provided in **Appendix U**.

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As shown in the table, all three (3) intersections along SR-76 would operate at “At Capacity” and/or “Under Capacity”, with the exception of the SR-76 / Old River Road/E. Vista Way intersection, which would operate at “Over Capacity” during the AM peak hour under the Existing Plus Project (Phase D) conditions.

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**TABLE 5.30**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

**TABLE 5.25**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Freeway | Segment                                      | ADT                           | Peak Hour % | Peak Hour Volume          | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/l)           | V/C                       | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|--|-------------------------------|-------------|---------------------------|-------------------|--------------------------|------|--------------------|---------------------------|---------------------------|----------------|-------------------------------------|---------------------|
| I-15    | Riverside County Boundary to Old Highway 395 | 136,180                       | 8.4%        | 11,505                    | 0.64              | 4                        | 0.95 | 6.75%              | 1,989                     | 0.846                     | D              | 0.014                               | No                  |
| I-15    | Old Highway 395 to SR-76                     | 136,260                       | 7.4%        | 10,137                    | 0.73              | 4                        | 0.95 | 6.75%              | 2,017                     | 0.858                     | D              | 0.014                               | No                  |
| I-15    | SR-76 to Old Highway 395                     | 115,010                       | 7.8%        | 8,996                     | 0.69              | 4                        | 0.95 | 8.40%              | 1,691                     | 0.720                     | C              | 0.013                               | No                  |
| I-15    | Old Highway 395 to Gopher Canyon Road        | <del>113,830</del><br>114,070 | 8.1%        | <del>9,193</del><br>9,212 | 0.67              | 4                        | 0.95 | 8.40%              | <del>1,683</del><br>1,718 | <del>0.716</del><br>0.718 | C              | <del>0.024</del><br>0.026           | No                  |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 121,270                       | 8.1%        | 9,794                     | 0.67              | 4                        | 0.95 | 13.20%             | 1,835                     | 0.781                     | C              | 0.027                               | No                  |
| I-15    | Deer Springs Road to Centre City Parkway     | 120,460                       | 8.0%        | 9,678                     | 0.66              | 4                        | 0.95 | 13.20%             | 1,804                     | 0.768                     | C              | 0.022                               | No                  |
| I-15    | Centre City Parkway to El Norte Parkway      | 113,740                       | 8.0%        | 9,138                     | 0.66              | 4                        | 0.95 | 13.20%             | 1,703                     | 0.725                     | C              | 0.017                               | No                  |
| I-15    | El Norte Parkway to SR-78                    | 129,540                       | 7.9%        | 10,196                    | 0.66              | 4                        | 0.95 | 10.00%             | 1,873                     | 0.797                     | C              | 0.016                               | No                  |
| I-15    | SR-78 to W Valley Parkway                    | 193,880                       | 8.1%        | 15,779                    | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,495                     | 0.636                     | C              | 0.006                               | No                  |
| I-15    | W Valley Parkway to Auto Parkway             | 180,580                       | 8.1%        | 14,696                    | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,392                     | 0.592                     | B              | 0.005                               | No                  |

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**TABLE 5.30**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

**TABLE 5.25**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/in) | V/C   | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|-------------------------------------|---------------------|
| I-15    | Auto Parkway to W Citracado Parkway           | 173,540 | 7.8%        | 13,459           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,267            | 0.539 | B              | 0.005                               | No                  |
| I-15    | W Citracado Parkway to Via Rancho Parkway     | 197,360 | 7.8%        | 15,307           | 0.60              | 5+2ML                    | 0.95 | 7.00%              | 1,421            | 0.604 | B              | 0.004                               | No                  |
| I-15    | Via Rancho Parkway to Bernardo Drive          | 199,260 | 7.4%        | 14,665           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,320            | 0.562 | B              | 0.004                               | No                  |
| I-15    | Bernardo Drive to Rancho Bernardo Road        | 202,180 | 7.4%        | 14,880           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,340            | 0.570 | B              | 0.003                               | No                  |
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 210,100 | 7.3%        | 15,425           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,287            | 0.548 | B              | 0.003                               | No                  |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 215,050 | 7.3%        | 15,789           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,317            | 0.560 | B              | 0.003                               | No                  |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

ML = Managed Lane.

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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As shown in the table, all of the study area freeway segments along I-15 would continue to operate at LOS D or better under Existing Plus Project (Phase D) conditions. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by Phase D of the project would not cause any direct impacts to study area freeway segments.

### Ramp Intersection Capacity Analysis

Consistent with Caltrans' requirements, the signalized intersections along SR-76 within the study area were analyzed under Existing Plus Project (Phase D) conditions using the ILV procedures as described in Chapter 2.0. ILV analysis results are displayed in Table 5.31 and analysis worksheets for the Existing Plus Project (Phase D) conditions are provided in Appendix AF.

**TABLE 5.31**  
**RAMP INTERSECTION CAPACITY ANALYSIS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

**TABLE 5.26**  
**RAMP INTERSECTION CAPACITY ANALYSIS**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Ramp Intersection                      | Peak Hour | ILV / Hour | Description              |
|--|-----------|------------|--------------------------|
| SR-76 / Old River Road/E. Vista Way    | AM        | 1,549      | >1500: (Over Capacity)   |
|  | PM        | 1,300      | 1200-1500: (At Capacity) |
| SR-76 / Olive Hill Road/Camino Del Rey | AM        | 1,207      | 1200-1500: (At Capacity) |
|  | PM        | 1,377      | 1200-1500: (At Capacity) |
| SR-76 / Old Highway 395                | AM        | 1,056      | <1200: (Under Capacity)  |
|  | PM        | 1,132      | <1200: (Under Capacity)  |

Source: Chen Ryan Associates; May 2014

As shown in the table, all three (3) intersections along SR-76 would operate at "At Capacity" and/or "Under Capacity", with the exception of the SR-76 / Old River Road/E. Vista Way intersection, which would operate at "Over Capacity" during the AM peak hour under the Existing Plus Project (Phase D) conditions. January 2013

### 5.4.3 Existing Plus Project (Phase D) Impact Significance and Mitigation

This section identifies required mitigation measures for roadway, intersection, two-lane highway, and freeway facilities that would be significantly impacted by project-related traffic under Existing Plus Project (Phase D) conditions.

#### Roadway Segments

None.

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## Intersections

- Based on the County planning level impact criteria, Phase D of the project traffic would result in direct impacts at two (2) of the study area roadway segments, including Vista Way and I-15 SB Ramps. The project would add 490 daily trips (approximately 3.1% of the total ADT) to this roadway which is approximately 7 miles away from the project site.
- E. Vista Way, between Gopher Canyon Road and Osborne Street. The project would add 270 daily trips (approximately 1.3% of the total ADT) to this roadway which is approximately 9 miles away from the project site.

Given the rural community character where Gopher Canyon Road and E. Vista Way are located and the minimal interruption to traffic flows, a more detailed arterial analysis was conducted. In this case, it was important to consider how performance of a roadway segment is heavily influenced by the ability of the arterial intersections to accommodate peak hour traffic.

Highway Capacity Software (HCS) 2000 developed by McTrans was employed for the arterial analysis. The HCS arterial analysis methodology is based upon Chapter 15 (Urban Street) and Chapter 20 (2 Lane Highway) of the Highway Capacity Manual (HCM) 2000, which determines average travel speed and facility level of service according to the roadway functional classification. E. Vista Way, between Gopher Canyon Road and Osborne Street was evaluated as a Class I arterial with a free flow speed (FFS) of 50 mph since traffic signals along this facility are located less than one mile apart; while Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps was analyzed as a Class II 2-lane highway given the fact that traffic signals are located at more than two mile apart (> 4 miles).

**Table 5.27** displays the measure criteria (arterial travel speed or percent time spent following) and level of service, and the respective analysis worksheet is included in **Appendix V**.

| Arterial  | Free-Flow Speed (mph) | AM Peak Hour |     | PM Peak Hour |     |
|---|-----------------------|--------------|-----|--------------|-----|
|   |                       | Criteria     | LOS | Criteria     | LOS |
| Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps  | 50                    | 78.9% PTSF   | D   | 83.4% PTSF   | D   |
| E. Vista Way, between Gopher Canyon Road and Osborne Street | 50                    | 24.2 mph     | D   | 22.0 mph     | D   |

Source: Chen-Ryan Associates; May 2013

PTSF = Percent time spent following. In the table above, both segments would operate at acceptable LOS D or better under Existing Plus Project (Phase D) conditions based on the arterial analysis. Therefore, it is appropriate to consider that no mitigation measures would be necessary at these locations.

Phase D of the project traffic would have a direct impact on three (3) of the study area intersections, including Old Highway 395 / Circle R Drive, I-15 SB Ramps / Gopher Canyon Road, and I-15 NB Ramps / Gopher Canyon Road. The following intersection improvements would be required to mitigate the identified traffic impacts:

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- Old Highway 395 / Circle R Drive (one-way stop controlled) (County) - Signalization would be required (by ~~121<sup>st</sup>~~210<sup>th</sup> EDU from combined Phases 4 and 5 to mitigate direct project impacts; or a 1,220 total EDU. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants. ~~or by 121 project (Phases 4 and 5) PM peak hour trips since PM peak hour intersection operation dictates the need for signalization~~The project applicant would be responsible for implementing the mitigation measure identified above. The signal warrant worksheet for this intersection is provided in Appendix AG.
- I-15 SB Ramps / Gopher Canyon Road (stop controlled ramp intersection) (Caltrans) - Signalization would be required (by the 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU) at this intersection to mitigate direct project impacts; ~~or a 1,132 total EDU.~~ A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants. The project applicant would be responsible for ~~either implementing the mitigation measure identified above or making a fair share contribution in which the improvement is a part of an approved Plan or Program.~~ However, this particular facility is out of the County’s control and therefore the impact would remain significant and unavoidable. The signal warrant worksheet for this intersection is provided in Appendix W-AG.
- I-15 NB Ramps / Gopher Canyon Road (stop controlled ramp intersection) (Caltrans) - Signalization would be required (by the 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU) at this intersection to mitigate direct project impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants. The project applicant would be responsible for implementing the mitigation measure identified above. However, this particular facility is out of the County’s control and therefore the impact would remain significant and unavoidable. The signal warrant worksheet for this intersection is provided in Appendix AG.

**Table 5.2832** displays level of service analysis results for the mitigated intersection under the Existing Plus Project (Phase D) conditions. Calculation worksheets for the intersection analysis are provided in Appendix ~~X-AH~~.

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**TABLE 5.2832**  
MITIGATED INTERSECTION LEVEL OF SERVICE  
EXISTING PLUS PROJECT (PHASE D) CONDITIONS

| Intersection                                    | After Mitigation |              |                |              | Before Mitigation       |                  |
|---|------------------|--------------|----------------|--------------|-------------------------|------------------|
|   | After Mitigation |              |                |              | Existing                |                  |
|   | AM Peak Hour     |              | PM Peak Hour   |              | Delay (sec.)<br>AM / PM | LOS<br>AM / PM   |
| Intersection                                    | Delay (Sec.)     | LOS          | Delay (sec.)   | LOS          |                         |                  |
| <del>12. Old Highway 395 / Circle R Drive</del> | <del>4.7</del>   | <del>A</del> | <del>4.8</del> | <del>A</del> | <del>39.0 / 62.7</del>  | <del>E / F</del> |
| 13. Old Highway 395 / Circle R Drive            | 9.2              | A            | 10.2           | B            | 20.4 / 22.5             | C / C            |
| 14. I-15 SB Ramps / Gopher Canyon Road          | 29.1             | C            | 23.6           | C            | 468.2 / 173.0           | F / F            |
| 15. I-15 NB Ramps / Gopher Canyon Road          | 12.8             | B            | 33.9           | C            | 30.5 / 1945.4           | D / F            |

Source: Chen Ryan Associates; May 2013/2014

Note: Bold letter indicates unacceptable LOS E or F.

As shown in the table, after installation of the proposed traffic signals, ~~the all three~~ impacted intersection of Old Highway 395 / Circle R Drive intersections would operate at acceptable LOS ~~A/C or better~~ during both the AM and PM peak hours. ~~However, both ramp intersections at I-15 / Gopher Canyon Road interchange are Caltrans' facilities in which the County does not have jurisdiction. In addition, Caltrans does not have a plan or program in place. Therefore, the impacts would remain significant and unavoidable.~~

#### Two-Lane Highways

None of the study area two-lane highway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase D) conditions.

#### Freeways

None of the study area freeway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Phase D) conditions.

**Table 5.2933** summarizes potential impacts and recommended mitigation measures associated with Phase D of the Lilac Hills Ranch project.

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**TABLE 5.2933**  
**IMPACT AND MITIGATION SUMMARY**  
**EXISTING PLUS PROJECT (PHASE D) CONDITIONS**

| Potentially Impacted Facility<br>Roadway Segment  | Mitigation Measures   |   |
|---|---|---|
|   | Recommendation  | Rationale   |
| None  | -   | -   |
| <del>Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps</del><br><del>Intersection</del>                      | <del>None</del>   | <del>-</del>  |
| <del>E. Vista Way, between Gopher Canyon Road and Osborne Street</del><br><del>Old Highway 395 / Circle R Drive</del> | <ul style="list-style-type: none"> <li>— Rural community character</li> <li>— Minimal project trips added</li> <li>— Distance from project site</li> </ul>  | Acceptable arterial speed   |
| <del>Intersection</del> I-15 SB Ramps / Gopher Canyon Road  | Signalization by the 1 <sup>st</sup> EDU of Phase 4 or 363 <sup>rd</sup> total EDU - Caltrans' facility, significant and unavoidable impact.  | Signalization by 210 <sup>th</sup> EDU from combined Phases 4 and 5 or 1,220 <sup>th</sup> total EDU. |
| <del>Old Highway 395 / Circle R Drive</del> I-15 NB Ramps / Gopher Canyon Road  | Signalization by 121 <sup>st</sup> the 1 <sup>st</sup> EDU from combined Phases of Phase 4 and 5 or by 121 project (Phases 4 and 5) PM peak hour trips; or 1,132363 <sup>rd</sup> total EDU - Caltrans' facility, significant and unavoidable impact. |   |
| <b>Two-Lane Highway</b>   |   |   |
| None  | -   | -   |
| <b>Freeway</b>  |   |   |
| None  | -   | -   |

Source: Chen Ryan Associates; May 20132014

## 5.5 Existing Plus Project (Phase E – Project Buildout) Conditions

### 5.5.1 Existing Plus Project (Buildout) Roadway Network and Traffic Volumes

The Existing Plus Project (Buildout) scenario includes existing traffic volumes with the addition of traffic generated by project buildout. Intersection and roadway geometrics under Existing Plus Project conditions were assumed to be identical to Existing conditions, with the exception of the following roads and driveway intersections associated with project frontage and access:

- Main Street, between West Lilac Road and Street “C”;
- Main Street, between Street “C” and Street “Z”;
- Main Street, between Street “Z” and W. Lilac Road;
- Street “C” and Street “Z”;
- ~~Birdsong Drive, between Street “Z” and W. Lilac Road;~~
- Covey Lane, west of W. Lilac Road;
- Lilac Hills Ranch Road, north of Covey Lane;
- Lilac Hills Ranch Road, between Covey Lane and Mountain Ridge Road;
- Street “F”, between W. Lilac Road and Lilac Hills Ranch Road;

- Intersection # 26, Street “O” / W. Lilac Road/Main Street – proposed roundabout;
- Intersection # 27, Main Street / Street “C” – proposed roundabout;
- Intersection #28, Lilac Hills Ranch Road / Main Street North – proposed all-way stop controlled intersection;
- Intersection #29, Lilac Hills Ranch Road / Main Street South – proposed all-way stop controlled intersection;
- Intersection # 30, Street “Z” / Main Street – proposed one-way stop (southbound Street “Z” approach) controlled T-intersection; and
- Intersection # 31, Street “Z” / Main Street – proposed roundabout.

In addition to the project access and frontage roads assumed above, mitigation measures from Phases ~~BA~~, C, and D were also carried forward into this Phase. These improvements include:

- Construction of dedicated right-turn lanes at the westbound Gopher Canyon Road and northbound E. Vista Way approach of the intersection of E. Vista Way and Gopher Canyon Road;
- W. Lilac Road, between Old Highway 395 and Main Street – 2.2C;
- Old Highway 395 / W. Lilac Road intersection – signalized; and add a westbound left-turn lane; and
- ~~Old Highway 395 / Circle R Drive intersection – signalized;~~
- ~~I-15 SB Ramps / Gopher Canyon Road intersection – signalized; and~~
- ~~I-15 NB Ramps / Gopher Canyon Road intersection – signalized.~~

### 5.5.2 Existing Plus Project (Buildout) Traffic Conditions

Level of service analyses under Existing Plus Project (Buildout) conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment, intersection, two-lane highway, freeway segment, and ramp intersection level of service results are discussed separately below. Average daily traffic volumes on study area roadway segments are displayed in **Figure 5-~~5A6A~~**, while peak hour traffic volumes at the key study area intersections are displayed in **Figure 5-~~5B–6B~~**. Note that the traffic volume figures were modified to reflect the project access “Change 1” as described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”.

#### Roadway Segment Analysis

**Table 5-~~3034~~** displays the level of service analysis results for key roadway segments under Existing Plus Project (Buildout) conditions. As shown, the following three (3) roadway segments would operate at substandard LOS E or F:

- Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – LOS ~~E~~F;
- E. The construction of a dedicated right-turn lane at the westbound Gopher Canyon Road approach, as well as a dedicated right-turn lane at the northbound E. Vista Way;

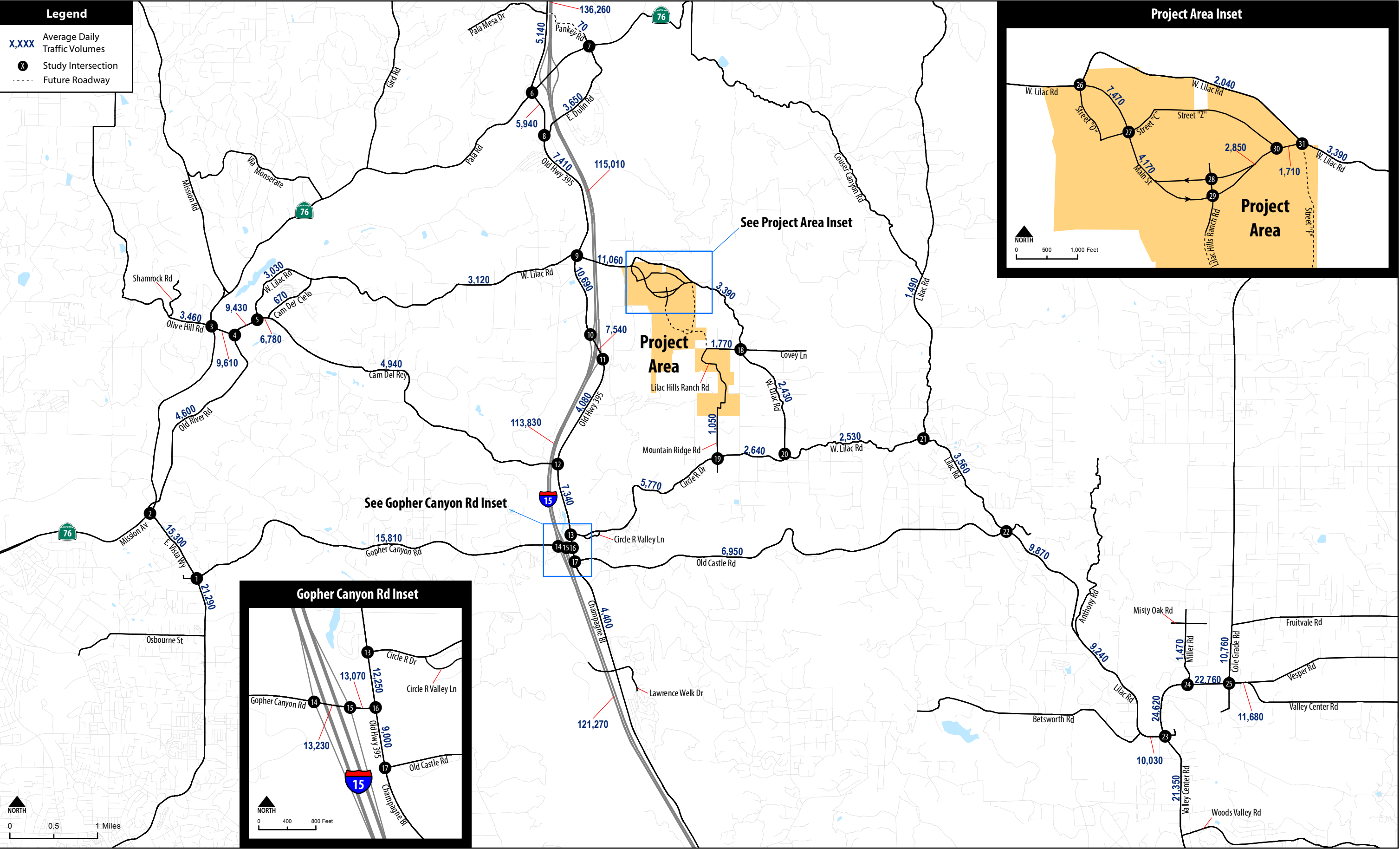
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between SR-76 approach, of the intersection of E. Vista Way and Gopher Canyon Road  
—LOS E; was identified under the Existing Plus Project (Phase A) and

Based upon the significance criteria discussed in Section 2.8 Existing Plus Project (Phase C) conditions as mitigation measures. With these improvements, the arterial analysis for Existing Plus Project (Buildout) shown in **Appendix AI** and summarized in **Table 5.35** shows that the mitigation would increase the AM peak hour average travel speed along this segment to better than the Existing conditions, and would maintain the same PM peak hour average travel speed as the Existing conditions. Therefore, with the mitigation measure, the additional traffic generated by the buildout of the Lilac Hills Ranch project would not result in a direct impacts all three (3) study roadway segments above. impact at this segment.

**Table 5.31** displays intersection level of service and average vehicle delay results under Existing Plus Project (Buildout) conditions. Level of service calculation worksheets for the Existing Plus Project (Buildout) conditions are provided in **Appendix Y**.

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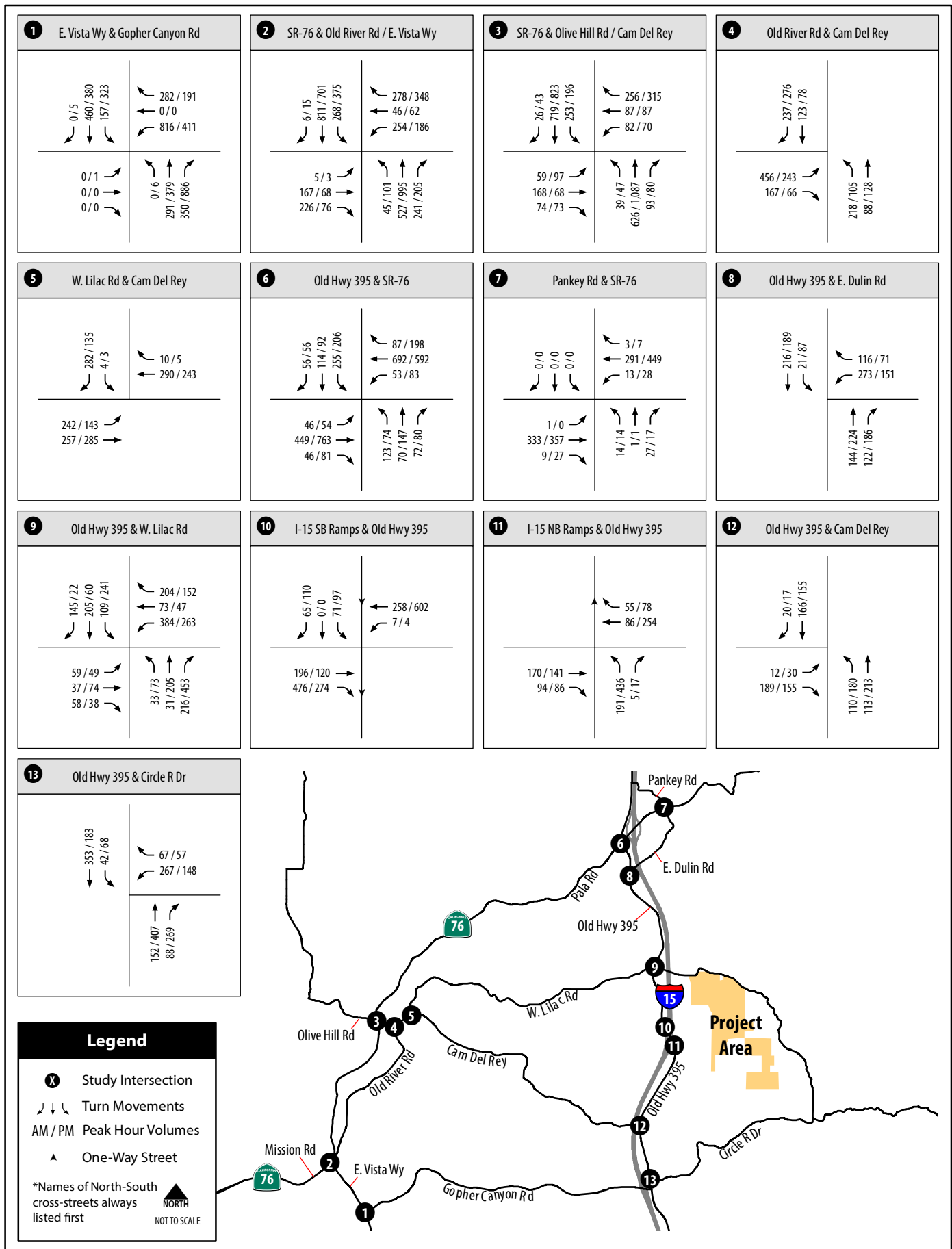
Lilac Hills Ranch Traffic Impact Study

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Figure 5-6A

Roadway Average Daily Traffic Volumes - Existing Plus Project (Phase D) Conditions

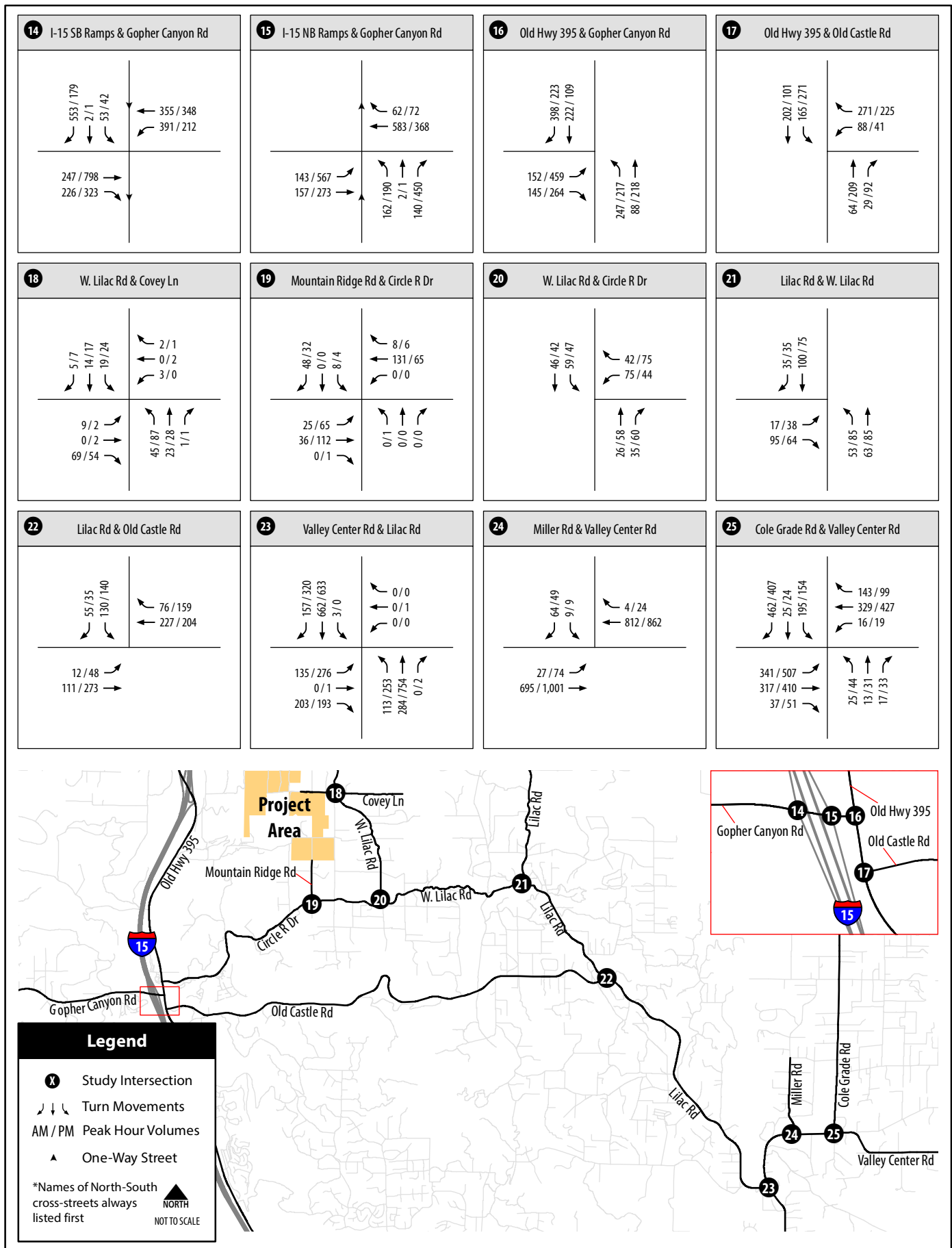




Lilac Hills Ranch Traffic Impact Study

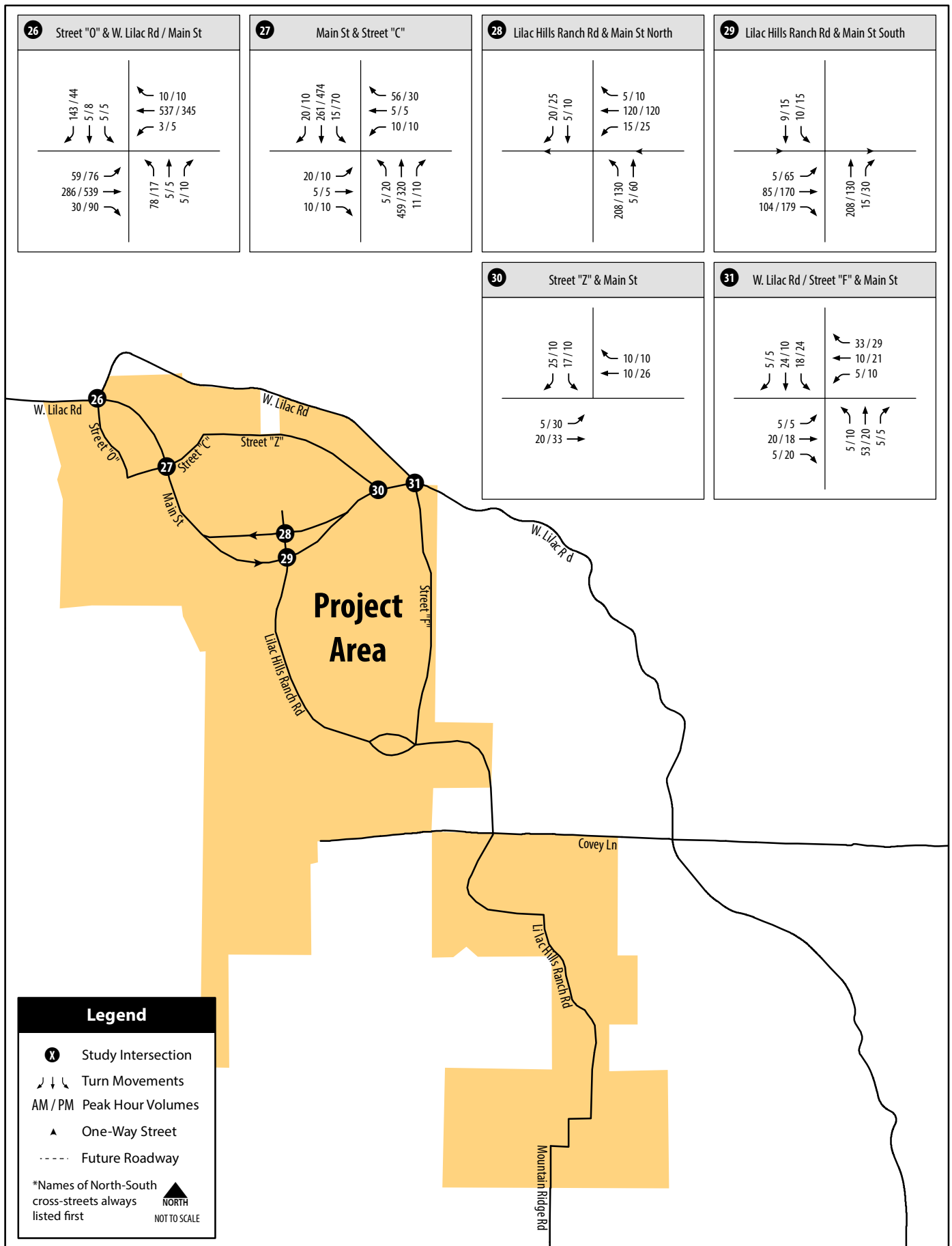
Figure 5-6B (Intersections 1-13)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase E, Buildout) Conditions





Lilac Hills Ranch Traffic Impact Study

Figure 5-6B (Intersections 14-25)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase E, Buildout) Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 5-6B (Intersections 26-31)  
Intersection Peak Hour Traffic Volumes -  
Existing Plus Project (Phase E, Buildout) Conditions

**TABLE 5.3034**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

| Roadway            | From             | To               | With Project Buildout |                                |                                 |                       | Existing |                       | Project Buildout ADT            | Direct Impact?   |
|--------------------|------------------|------------------|-----------------------|--------------------------------|---------------------------------|-----------------------|----------|-----------------------|---------------------------------|--|
|                    |                  |                  | Cross-Section         | LOS Threshold (LOS D)          | ADT                             | LOS                   | ADT      | LOS                   |                                 |  |
| E. Dulin Road      | Old Highway 395  | SR-76            | 2-Ln                  | <del>10,900</del> <u>9,800</u> | 3,960                           | <del>B</del> <u>C</u> | 1,830    | <del>A</del> <u>B</u> | <del>2,140</del> <u>130</u>     | No   |
| W. Lilac Road      | Camino Del Rey   | Camino Del Cielo | 2-Ln                  | <del>8,700</del> <u>7,800</u>  | 3,160                           | A                     | 2,270    | A                     | 890                             | No   |
| W. Lilac Road      | Camino Del Cielo | Old Highway 395  | 2-Ln                  | <del>8,700</del> <u>7,800</u>  | 3,290                           | A                     | 2,140    | A                     | 1,150                           | No   |
| W. Lilac Road      | Old Highway 395  | Main Street      | 2.2C*                 | 13,500                         | <del>12,650</del> <u>13,400</u> | D                     | 1,150    | A                     | <del>11,500</del> <u>12,250</u> | No   |
| W. Lilac Road      | Main Street      | Street "F"       | 2-Ln                  | <del>8,700</del> <u>7,800</u>  | 2,960                           | A                     | 1,150    | A                     | 1,810                           | No   |
| W. Lilac Road      | Street "F"       | Covey Lane       | 2-Ln                  | <del>7,800</del>               | 1,810                           | A                     | 1,150    | A                     | 660                             | No   |
| W. Lilac Road      | Covey Lane       | Circle R Drive   | 2-Ln                  | <del>8,700</del> <u>7,800</u>  | <del>1,660</del> <u>2,130</u>   | A                     | 480      | A                     | <del>1,180</del> <u>650</u>     | No   |
| W. Lilac Road      | Circle R Drive   | Lilac Road       | 2-Ln                  | <del>8,700</del> <u>7,800</u>  | 2,470                           | A                     | 1,170    | A                     | 1,300                           | No   |
| Camino Del Cielo   | Camino Del Rey   | W. Lilac Road    | 2-Ln                  | 10,900                         | 680                             | A                     | 630      | A                     | 50                              | No   |
| Olive Hill Road    | Shamrock Road    | SR-76            | 2-Ln                  | 8,700                          | 3,470                           | A                     | 3,380    | A                     | 90                              | No   |
| Camino Del Rey     | SR-76            | Old River Road   | 2-Ln                  | 10,900                         | 9,660                           | D                     | 9,350    | D                     | <del>300</del> <u>310</u>       | No   |
| Camino Del Rey     | Old River Road   | W. Lilac Road    | 2-Ln                  | <del>10,900</del> <u>9,800</u> | 9,560                           | D                     | 8,640    | D                     | 920                             | No   |
| Camino Del Rey     | W. Lilac Road    | Camino Del Cielo | 2-Ln w/ SM            | 13,500                         | 6,790                           | C                     | 6,730    | C                     | 60                              | No   |
| Camino Del Rey     | Camino Del Cielo | Old Highway 395  | 2-Ln                  | <del>8,700</del> <u>7,800</u>  | 4,950                           | A                     | 4,850    | A                     | <del>110</del> <u>100</u>       | No   |
| Gopher Canyon Road | E. Vista Way     | I-15 SB Ramps    | 2-Ln                  | <del>10,900</del> <u>9,800</u> | 15,890                          | <del>E</del> <u>F</u> | 15,310   | <del>E</del> <u>F</u> | 580                             | <del>Yes</del><br><del>&gt; 200ADT</del><br><del>No*</del><br><del>&gt; 100ADT</del> |

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**TABLE 5.3034**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

| Roadway             | From                | To                  | With Project Buildout |  |                                     |               | Existing |               | Project Buildout ADT | Direct Impact?                 |
|---------------------|---------------------|---------------------|-----------------------|--|-------------------------------------|---------------|----------|---------------|----------------------|--------------------------------|
|                     |                     |                     | Cross-Section         | LOS Threshold (LOS D)                  | ADT                                 | LOS           | ADT      | LOS           |                      |                                |
| Gopher Canyon Road  | I-15 SB Ramps       | I-15 NB Ramps       | 4-Ln                  | 30,800                                 | 13,480 <del>32</del> <sub>0</sub>   | A             | 12,390   | A             | 1,090 <del>930</del> | No                             |
| Gopher Canyon Road  | I-15 NB Ramps       | Old Highway 395     | 4-Ln                  | 30,800                                 | 13,440 <del>14</del> <sub>0</sub>   | A             | 11,870   | A             | 1,580 <del>270</del> | No                             |
| Circle R Drive      | Old Highway 395     | Mountain Ridge Road | 2-Ln                  | 10,900 <del>9,800</del> <sub>0</sub>   | 5,940 <del>210</del>                | C             | 4,030    | <del>BC</del> | 1,940 <del>180</del> | No                             |
| Circle R Drive      | Mountain Ridge Road | W. Lilac Road       | 2-Ln                  | 10,900 <del>9,800</del> <sub>0</sub>   | 1,910 <del>2,380</del> <sub>0</sub> | B             | 1,770    | <del>AB</del> | 140 <del>610</del>   | No                             |
| Old Castle Road     | Old Highway 395     | Lilac Road          | 2-Ln                  | 10,900 <del>9,800</del> <sub>0</sub>   | 6,970                               | <del>CD</del> | 6,840    | <del>CD</del> | 120 <del>130</del>   | No                             |
| E. Vista Way        | SR-76               | Gopher Canyon Road  | 2-Ln w/ TWLTL         | 13,500                                 | 15,330                              | E             | 15,120   | E             | 210                  | Yes<br>> 200ADT                |
| E. Vista Way        | Gopher Canyon Road  | Osborne Street      | 2-Ln w/ TWLTL         | 13,500                                 | 21,340                              | F             | 21,020   | F             | 320                  | <del>Yes</del> No*<br>> 100ADT |
| Old River Road      | SR-76               | Camino Del Rey      | 2-Ln                  | 10,900 <del>9,800</del> <sub>0</sub>   | 4,690                               | C             | 4,070    | <del>BC</del> | 620                  | No                             |
| Champagne Boulevard | Old Castle Road     | Lawrence Welk Drive | 2-Ln                  | 10,900 <del>13,500</del> <sub>00</sub> | 4,440                               | <del>BC</del> | 4,170    | <del>BC</del> | 270                  | No                             |
| Pankey Road         | Pala Mesa Drive     | SR-76               | 2-Ln                  | 10,900 <del>4,500</del> <sub>0</sub>   | 70                                  | A             | 70       | A             | 0                    | No                             |
| Lilac Road          | Couser Canyon Road  | W. Lilac Road       | 2-Ln                  | 8,700 <del>7,800</del>                 | 1,380                               | A             | 1,150    | A             | 230                  | No                             |
| Lilac Road          | W. Lilac Road       | Old Castle Road     | 2-Ln                  | 8,700 <del>7,800</del>                 | 3,720                               | A             | 2,640    | A             | 1,080                | No                             |
| Lilac Road          | Old Castle Road     | Anthony Road        | 2-Ln                  | 10,900                                 | 10,020                              | D             | 9,010    | D             | 1,020 <del>010</del> | No                             |

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**TABLE 5.3034**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

| Roadway            | From              | To                 | With Project Buildout |                       |        |     | Existing |     | Project Buildout ADT | Direct Impact? |
|--------------------|-------------------|--------------------|-----------------------|-----------------------|--------|-----|----------|-----|----------------------|----------------|
|                    |                   |                    | Cross-Section         | LOS Threshold (LOS D) | ADT    | LOS | ADT      | LOS |                      |                |
| Lilac Road         | Anthony Road      | Betsworth Road     | 2-Ln                  | 10,900                | 9,330  | D   | 8,740    | D   | 590                  | No             |
| Lilac Road         | Betsworth Road    | Valley Center Road | 2-Ln                  | 13,500                | 10,100 | D   | 9,620    | D   | 480                  | No             |
| Valley Center Road | Woods Valley Road | Lilac Road         | 4/Ln w/ TWLTL/RM      | 27,000                | 21,370 | C   | 21,290   | C   | 80                   | No             |
| Valley Center Road | Lilac Road        | Miller Road        | 4-Ln w/ RM            | 33,400                | 24,670 | B   | 24,280   | B   | 390                  | No             |
| Valley Center Road | Miller Road       | Cole Grade Road    | 4-Ln w/ RM            | 27,000                | 22,820 | C   | 22,440   | C   | 380                  | No             |
| Valley Center Road | Cole Grade Road   | Vesper Road        | 2-Ln                  | 13,500                | 11,710 | D   | 11,490   | D   | <del>230</del> 220   | No             |
| Miller Road        | Misty Oak Road    | Valley Center Road | 2-Ln                  | <del>87</del> 000     | 1,480  | A   | 1,460    | A   | 20                   | No             |
| Cole Grade Road    | Fruitvale Road    | Valley Center Road | 2-Ln w/ TWLTL         | 13,500                | 10,780 | D   | 10,660   | D   | 120                  | No             |

Source: Chen Ryan Associates; May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

RM = Raised Median.

SM = Striped Median.

TWLTL = Two-Way Left-Turn Lane.

\*W. Lilac Road, between Old Highway 395 and Main Street is to be improved to a 2.2C as a mitigation measure from previous phase (Phase C).

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

Changes in this table are also associated with "Change 3" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

\* Phase A mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases B, C, D, & E.\* Phase C mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases D & E.

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- E. Vista Way, between SR-76 and Gopher Canyon Road – LOS E;

Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by the buildout of the Lilac Hills Ranch project would result in a direct impact to this roadway segment since it would add more than 200 daily trips.

- E. Vista Way, between Gopher Canyon Road and Osborne Street – LOS F.

The construction of a dedicated right-turn lane at the westbound Gopher Canyon Road approach, as well as a dedicated right-turn lane at the northbound E. Vista Way approach, of the intersection of E. Vista Way and Gopher Canyon Road was identified under the Existing Plus Project (Phase A) and Existing Plus Project (Phase C) conditions as mitigation measures. With these improvements, the arterial analysis for Existing Plus Project (Buildout) shown in Appendix AI and summarized in Table 5.34 shows that the mitigation would increase the average travel speed along this segment to better than the Existing conditions during both the AM and PM peak hours. Therefore, with the mitigation measure, the additional traffic generated by the buildout of the Lilac Hills Ranch project would not result in a direct impact at this segment.

**TABLE 5.35**  
**ARTERIAL LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

| <u>Arterial</u>  | <u>With Project Phase D</u> |            |                     |            | <u>Existing</u>     |            |                     |            |
|--|-----------------------------|------------|---------------------|------------|---------------------|------------|---------------------|------------|
|  | <u>AM Peak Hour</u>         |            | <u>PM Peak Hour</u> |            | <u>AM Peak Hour</u> |            | <u>PM Peak Hour</u> |            |
|  | <u>Speed (mph)</u>          | <u>LOS</u> | <u>Speed (mph)</u>  | <u>LOS</u> | <u>Speed (mph)</u>  | <u>LOS</u> | <u>Speed (mph)</u>  | <u>LOS</u> |
| <u>Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps</u>  | <u>40.6</u>                 | <u>B</u>   | <u>44.3</u>         | <u>A</u>   | <u>30.6</u>         | <u>C</u>   | <u>44.3</u>         | <u>A</u>   |
| <u>E. Vista Way, between Gopher Canyon Road and Osborne Street</u> | <u>35.2</u>                 | <u>B</u>   | <u>34.9</u>         | <u>B</u>   | <u>35.1</u>         | <u>B</u>   | <u>21.3</u>         | <u>D</u>   |

Source: Chen Ryan Associates: May 2014

### **Intersection Analysis**

**Table 5.36** displays intersection level of service and average vehicle delay results under Existing Plus Project (Buildout) conditions. Level of service calculation worksheets for the Existing Plus Project (Buildout) conditions are provided in **Appendix AJ**.

As shown in the table, the following two (2) study intersections would continue to operate at substandard LOS E or F under Existing Plus Project (Buildout) conditions:

~~As shown in the table, the following two (2) study intersections would continue to operate at substandard LOS E or F under Existing Plus Project (Buildout) conditions:~~

~~SR-76 / Old River Road/E. Vista Way~~

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**TABLE 5.36**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

**TABLE 5.31**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

| Intersection                              | Traffic Control | With Project Buildout       |                       |                             |                       | Existing                                    |                               | Change in Delay (sec.) AM / PM                       | Buildout Traffic to Critical Movements AM / PM | Direct Impact?                                |
|---|-----------------|-----------------------------|-----------------------|-----------------------------|-----------------------|---|-------------------------------|--|--|---|
|   |                 | AM Peak Hour                |                       | PM Peak Hour                |                       | Delay (sec.) AM / PM                        | LOS AM / PM                   |  |  |   |
|   |                 | Avg. Delay (sec.)           | LOS                   | Avg. Delay (sec.)           | LOS                   |   |                               |  |  |   |
| 1. E. Vista Way / Gopher Canyon Road      | Signal*         | <del>30.7</del> <u>47.3</u> | <del>D</del> <u>D</u> | <del>52.5</del> <u>51.9</u> | D                     | <del>24.3 / 48.7</del> <u>172.8 / 212.0</u> | <del>C / D</del> <u>F / F</u> | <del>6.4 / 3.8</del> <u>125.5 / -160.1</u>           | -  | No  |
| 2. SR-76 / Old River Road/E. Vista Way    | Signal          | <del>75.3</del> <u>24.9</u> | <del>E</del> <u>C</u> | <del>54.0</del> <u>32.4</u> | <del>D</del> <u>C</u> | <del>73.9 / 52.3</del> <u>323.7 / 32</u>    | <del>E / D</del> <u>C / C</u> | <del>1.2 / 0.4</del> <u>1.7</u>                      | -  | No  |
| 3. SR-76 / Olive Hill Road/Camino Del Rey | Signal          | <del>45.2</del> <u>26.6</u> | <del>D</del> <u>C</u> | <del>62.3</del> <u>34.8</u> | <del>E</del> <u>C</u> | <del>4321.6 / 60.8</del> <u>34.5</u>        | <del>D / E</del> <u>C / C</u> | <del>1.6 / 1.5</del> <u>0 / 0.3</u>                  | -  | <del>No</del><br>Caltrans Int. < 2 sec.<br>No |
| 4. Old River Road / Camino Del Rey        | OWSC            | 33.2                        | D                     | 12.6                        | B                     | 31.2 / 10.7                                 | D / B                         | 2.0 / 1.9  | -  | No  |
| 5. W. Lilac Road / Camino Del Rey         | OWSC            | 17.8                        | C                     | 11.4                        | B                     | 15. <del>4</del> <u>7</u> / 11.0            | C / B                         | 2. <del>4</del> <u>1</u> / 0.4                       | -  | No  |
| 6. Old Highway 395 / SR-76                | Signal          | <del>44.5</del> <u>32.7</u> | <del>D</del> <u>C</u> | <del>48</del> <u>46.6</u>   | D                     | <del>4329.0 / 42.2</del> <u>39.8</u>        | <del>D</del> <u>C</u> / D     | <del>1.5</del> <u>3.7</u> / 6. <del>4</del> <u>8</u> | -  | No  |
| 7. Pankey Road / SR-76                    | TWSC            | 15.2                        | B                     | 19.3                        | C                     | 12.5 / 15.2                                 | B / C                         | 2.7 / 4.1  | -  | No  |
| 8. Old Highway 395 / E. Dulin Road        | OWSC            | 23.2                        | C                     | 27.2                        | D                     | <del>14.6</del> <u>12.8</u> / 11.2          | B / B                         | <del>8.6</del> <u>10.4</u> / 16.0                    | -  | No  |
| 9. Old Highway 395 / W. Lilac Road        | Signal*         | <del>29.3</del> <u>28.7</u> | C                     | <del>34.2</del> <u>38.1</u> | <del>D</del> <u>D</u> | <del>18.5</del> <u>14.7</u> / 13.3          | C / B                         | <del>10.1</del> <u>4.0 / 24.8</u><br><u>20.9</u>     | -  | No  |

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**TABLE 5.36**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

**TABLE 5.31**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

| Intersection                             | Traffic Control                              | With Project Buildout       |                       |                                  |                       | Existing                                    |                           | Change in Delay (sec.)<br>AM / PM                | Buildout Traffic to Critical Movements<br>AM / PM | Direct Impact?  |
|--|--|-----------------------------|-----------------------|----------------------------------|-----------------------|---|---------------------------|--|---|---|
|  |  | AM Peak Hour                |                       | PM Peak Hour                     |                       | Delay (sec.)<br>AM / PM                     | LOS<br>AM / PM            |  |   |   |
|  |  | Avg. Delay (sec.)           | LOS                   | Avg. Delay (sec.)                | LOS                   |   |                           |  |   |   |
| 10. I-15 SB Ramps / Old Highway 395      | OWSC   | <del>12.4</del> <u>13.1</u> | B                     | <del>19.6</del> <u>17.9</u>      | C                     | 10.6 / 12.1                                 | B / B                     | <del>12.5 / 5.8</del><br><u>7.5</u>              | -   | No  |
| 11. I-15 NB Ramps / Old Highway 395      | OWSC   | <del>11.4</del> <u>12.1</u> | B                     | <del>21.2</del> <u>24.8</u>      | C                     | 9.98 / 11.2                                 | A / B                     | <del>1.5 / 10.0</del> <u>2.3 / 13.6</u>          | -   | No  |
| 12. Old Highway 395 / Camino Del Rey     | OWSC   | 10. <u>45</u>               | B                     | 12. <u>02</u>                    | B                     | 10.1 / 11.0                                 | B / B                     | 0. <u>34</u> / 1. <u>02</u>                      | -   | No  |
| 13. Old Highway 395 / Circle R Drive     | Signal*                                      | <del>5.0</del> <u>10.8</u>  | <del>A</del> <u>B</u> | <del>4.9</del> <u>11.5</u>       | <del>A</del> <u>B</u> | 20.4 / 22.5                                 | C / C                     | <del>15.4 / 179.6</del><br><u>111.0</u>          | -   | No  |
| 14. I-15 SB Ramps / Gopher Canyon Road   | <del>Signal</del> <u>OW</u><br><del>SC</del> | <del>66</del> <u>49.3</u>   | <del>A-E</del>        | <del>6.6</del> <u>288.9</u>      | <del>A-E</del>        | 468.2 / 173.0                               | F / F                     | <del>461.9 / 166.4</del><br><u>181.1 / 115.9</u> | -   | <del>No</del> <u>Yes</u><br><u>Caltrans</u><br><u>Int. &gt; 2 sec.</u>    |
| 15. I-15 NB Ramps / Gopher Canyon Road   | <del>Signal</del> <u>OW</u><br><del>SC</del> | <del>5.2</del> <u>36.0</u>  | <del>A-E</del>        | <del>10.7</del><br><u>2240.4</u> | <del>B-E</del>        | 30.5 / 1945.4                               | D / F                     | <del>25.3 / 1934.7</del><br><u>5.5 / 295.0</u>   | -   | <u>Yes</u><br><u>Caltrans</u><br><u>Int. &gt; 2 sec.</u><br><del>No</del> |
| 16. Old Highway 395 / Gopher Canyon Road | Signal                                       | 18.5 <del>17.7</del>        | B                     | <del>18</del> <u>15.9</u>        | B                     | <del>16.1 / 8.8</del><br><u>11.0 / 14.7</u> | B / <del>A</del> <u>B</u> | <del>7.5 / 1.6</del><br><u>10.42</u>             | -   | No  |
| 17. Old Highway 395 / Old Castle Road    | Signal                                       | 14.2                        | B                     | 17.0                             | B                     | 13.9 / 15.7                                 | B / B                     | 0.3 / 1.3  | -   | No  |
| 18. W. Lilac Road / Covey Lane           | TWSC   | <del>9.9</del> <u>10.3</u>  | <del>A</del> <u>B</u> | 10. <u>39</u>                    | B                     | 8.8 / 9. <u>43</u>                          | B / A                     | 1. <u>5</u> / 1. <del>1.2</del> <u>6</u>         | -   | No  |

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**TABLE 5.36**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

**TABLE 5.31**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

| Intersection                                   | Traffic Control | With Project Buildout |               |                      |               | Existing             |             | Change in Delay (sec.) AM / PM          | Buildout Traffic to Critical Movements AM / PM | Direct Impact? |
|--|-----------------|-----------------------|---------------|----------------------|---------------|----------------------|-------------|---|--|----------------|
|  |                 | AM Peak Hour          |               | PM Peak Hour         |               | Delay (sec.) AM / PM | LOS AM / PM |   |  |                |
|  |                 | Avg. Delay (sec.)     | LOS           | Avg. Delay (sec.)    | LOS           |                      |             |   |  |                |
| 19. Mountain Ridge Road / Circle R Drive       | TWSC            | <del>10.0</del> 9.7   | <del>BA</del> | 15.0                 | C             | 9.3 / 9.6            | A / A       | 0.7 / <del>5.4</del> 6.3                | -  | No             |
| 20. W. Lilac Road / Circle R Drive             | OWSC            | <del>13.5</del> 10.8  | B             | <del>22.5</del> 11.0 | <del>CB</del> | 9.3 / 9.3            | A / A       | 1.5 / 1.7 / <del>4.7</del>              | -  | No             |
| 21. Lilac Road / W. Lilac Road                 | OWSC            | 10.4                  | B             | 11.0                 | B             | 9.6 / 9.9            | A / A       | 0.8 / 1.1                               | -  | No             |
| 22. Lilac Road / Old Castle Road               | OWSC            | 11.9                  | B             | 17.9                 | C             | 11.8 / 17.8          | B / C       | 0.1 / 0.1                               | -  | No             |
| 23. Valley Center Rd / Lilac Road              | Signal          | 10.9                  | B             | 31.5                 | C             | 10.5 / 22.6          | B / C       | 0.4 / 8.9                               | -  | No             |
| 24. Miller Road / Valley Center Road           | OWSC            | 17.3                  | C             | 26.4                 | D             | 16.9 / 25.2          | C / D       | 0.4 / 1.2                               | -  | No             |
| 25. Cole Grade Road / Valley Center Road       | Signal          | 32.7                  | C             | 35.3                 | D             | 31.1 / 34.9          | C / C       | 1.6 / 0.4                               | -  | No             |
| 26. Street "O" / W. Lilac Road/Main Street     | RA              | <del>9.3</del> 10.4   | <del>AB</del> | <del>10.8</del> 13.4 | B             | DNE                  | DNE         | <del>9.3</del> / <del>10.8</del> / 13.4 | -  | No             |
| 27. Main Street / Street "C"                   | RA              | <del>7.2</del>        | A             | <del>8.2</del> 9.1   | A             | DNE                  | DNE         | <del>7.2</del> / <del>8.2</del> / 9.1   | -  | No             |
| 28. Lilac Hills Ranch Road / Main Street North | AWSC            | <del>8.5</del> 9.0    | A             | <del>8.5</del>       | A             | DNE                  | DNE         | <del>9.0</del> / <del>8.5</del> / 8.5   | -  | No             |
| 29. Lilac Hills Ranch Road / Main Street South | AWSC            | <del>8.3</del>        | A             | <del>10.6</del> 11.1 | B             | DNE                  | DNE         | <del>8.3</del> / <del>10.6</del> / 11.1 | -  | No             |
| 30. Street "Z" / Main Street                   | OWSC            | 8.7                   | A             | 9.0                  | A             | DNE                  | DNE         | 8.7 / 9.0                               | -  | No             |

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**TABLE 5.36**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

**TABLE 5.31**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

| Intersection                               | Traffic Control | With Project Buildout |     |                   |     | Existing                |                | Change in Delay (sec.)<br>AM / PM | Buildout Traffic to Critical Movements<br>AM / PM | Direct Impact? |
|--|-----------------|-----------------------|-----|-------------------|-----|-------------------------|----------------|-----------------------------------|---|----------------|
|  |                 | AM Peak Hour          |     | PM Peak Hour      |     | Delay (sec.)<br>AM / PM | LOS<br>AM / PM |                                   |   |                |
|  |                 | Avg. Delay (sec.)     | LOS | Avg. Delay (sec.) | LOS |                         |                |                                   |   |                |
| 31. W. Lilac Road/Street "F" / Main Street | RA              | 3.8                   | A   | 3.8               | A   | DNE                     | DNE            | 3.8 / 3.8                         | -   | No             |

Source: Chen Ryan Associates; May 20132014

Notes:

Bold letter indicates unacceptable LOS E of F.

AWSC = All-Way Stop Controlled.

TWSC = Two-Way Stop Controlled.

OWSC = One-Way Stop Controlled.

RA = Roundabout.

DNE = Does Not Exist.

For OWSC and TWSC intersections, the delay shown is the worst delay experienced by any of the approaches.

\* Phase A mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases B, C, D, & E.

\* Phase C mitigation measures at the intersection of E. Vista Way / Gopher Canyon Road were assumed to be carried forwarded into Phases D & E.

\*Traffic signal was required at intersection #9 as a mitigation measure in Phase C of the project and was assumed to be carried forwarded into Phases D & E.

\*Traffic signal was required at intersection #13 as a mitigation measure in Phase D of the project and was assumed to be carried forwarded into Phase E.

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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- ~~I-15 SB Ramps / Gopher Canyon Road (Caltrans) – LOS EF during both the AM and PM peak hours, and the buildout of the project traffic would not add two seconds or more of additional delay to this intersection.~~
- ~~SR-76 / Olive Hill Road/Camino Del Rey (Caltrans) – LOS E during the PM peak hour, and the buildout of the project traffic would not add two seconds or more of additional delay to this intersection.~~

Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by the buildout of the Lilac Hills Ranch project would ~~not~~ have ~~any~~ direct impact at ~~the study area intersection~~this intersection.

- ~~I-15 NB Ramps / Gopher Canyon Road (Caltrans) – LOS F during the PM peak hour, and the buildout project traffic would add two seconds or more of additional delay to this intersection. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by the buildout of the Lilac Hills Ranch project would have a direct impact at this intersection.~~

## Two-Lane Highway Analysis

**Table 5.3237** displays two-lane highway level of service analysis results for Old Highway 395 under Existing Plus Project (Buildout) conditions. The two-lane highway level of service analysis was performed utilizing the methodology presented in Chapter 2.0.

As shown in the table, all segments along Old Highway 395 would continue to operate at acceptable LOS D or better under Existing Plus Project (Buildout) conditions and the additional traffic generated by buildout of the project would not cause any direct impacts to Old Highway 395.

## Freeway Segment Analysis

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. **Table 5.3238** displays the resulting level of service for I-15 under Existing Plus Project (Buildout) conditions.

As shown in the table, all of the study area freeway segments along I-15 would continue to operate at LOS D or better under Existing Plus Project (Buildout) conditions. Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by the buildout of the project would not cause any direct impacts to study area freeway segments.

## ~~Ramp Intersection Capacity Analysis~~

~~Consistent with Caltrans' requirements, the signalized intersections along SR-76 within the study area were analyzed under Existing Plus Project (Buildout) conditions using the ILV procedures as described in Chapter 2.0. ILV analysis results are displayed in Table 5.34 and analysis worksheets for the Existing Plus Project (Buildout) conditions are provided in Appendix Z.~~

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**TABLE 5.37**  
**TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

**TABLE 5.32**  
**TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS**

| 2-Ln Highway    | From               | To                 | With Project Buildout |                                    |             | Existing |             | Project Buildout ADT           | Direct Impact? |
|-----------------|--------------------|--------------------|-----------------------|------------------------------------|-------------|----------|-------------|--------------------------------|----------------|
|                 |                    |                    | LOS Threshold (LOS D) | ADT                                | LOS         | ADT      | LOS         |                                |                |
| Old Highway 395 | Pala Mesa Drive    | SR-76              | 16,200                | 5,210                              | D or better | 4,770    | D or better | 440                            | No             |
| Old Highway 395 | SR-76              | E. Dulin Road      | 16,200                | 6,230                              | D or better | 4,720    | D or better | 1,520                          | No             |
| Old Highway 395 | E. Dulin Road      | W. Lilac Road      | 16,200                | 8,010                              | D or better | 4,340    | D or better | 3,670                          | No             |
| Old Highway 395 | W. Lilac Road      | I-15 SB Ramps      | 16,200                | <del>10,580</del><br><u>11,340</u> | D or better | 4,450    | D or better | <del>6,140</del><br><u>890</u> | No             |
| Old Highway 395 | I-15 SB Ramps      | I-15 NB Ramps      | 16,200                | <del>6,840</del><br><u>7,450</u>   | D or better | 3,600    | D or better | <del>3,240</del><br><u>850</u> | No             |
| Old Highway 395 | I-15 NB Ramps      | Camino Del Rey     | 16,200                | <del>3,190</del><br><u>640</u>     | D or better | 2,430    | D or better | <del>760</del><br><u>1,210</u> | No             |
| Old Highway 395 | Camino Del Rey     | Circle R Drive     | 16,200                | <del>6,650</del><br><u>7,100</u>   | D or better | 5,820    | D or better | <del>830</del><br><u>1,280</u> | No             |
| Old Highway 395 | Circle R Drive     | Gopher Canyon Road | 16,200                | <del>12,670</del><br><u>370</u>    | D or better | 10,710   | D or better | <del>1,970</del><br><u>660</u> | No             |
| Old Highway 395 | Gopher Canyon Road | Old Castle Road    | 16,200                | 9,050                              | D or better | 8,660    | D or better | 390                            | No             |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Note:  
Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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TABLE 5.3338  
 FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
 EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS

| Freeway | Segment                                      | ADT                                  | Peak Hour % | Peak Hour Volume                 | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln)                 | V/C                              | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|--|--------------------------------------|-------------|----------------------------------|-------------------|--------------------------|------|--------------------|----------------------------------|----------------------------------|----------------|-------------------------------------|---------------------|
| I-15    | Riverside County Boundary to Old Highway 395 | 136,550                              | 8.4%        | 11,536                           | 0.64              | 4                        | 0.95 | 6.75%              | 1,994                            | 0.849                            | D              | 0.016                               | No                  |
| I-15    | Old Highway 395 to SR-76                     | 136,640                              | 7.4%        | 10,165                           | 0.73              | 4                        | 0.95 | 6.75%              | 2,023                            | 0.861                            | D              | 0.017                               | No                  |
| I-15    | SR-76 to Old Highway 395                     | 115,320                              | 7.8%        | 9,020                            | 0.69              | 4                        | 0.95 | 8.40%              | 1,695                            | 0.721                            | C              | 0.015                               | No                  |
| I-15    | Old Highway 395 to Gopher Canyon Road        | <del>113,700</del><br><u>114,000</u> | 8.1%        | <del>9,482</del><br><u>9,720</u> | 0.67              | 4                        | 0.95 | 8.40%              | <del>1,687</del><br><u>1,686</u> | <del>0.746</del><br><u>0.747</u> | C              | <del>0.023</del><br><u>0.025</u>    | No                  |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 121,580                              | 8.1%        | 9,819                            | 0.67              | 4                        | 0.95 | 13.20%             | 1,839                            | 0.783                            | C              | 0.029                               | No                  |
| I-15    | Deer Springs Road to Centre City Parkway     | 121,050                              | 8.0%        | 9,725                            | 0.66              | 4                        | 0.95 | 13.20%             | 1,813                            | 0.771                            | C              | 0.026                               | No                  |
| I-15    | Centre City Parkway to El Norte Parkway      | 114,210                              | 8.0%        | 9,176                            | 0.66              | 4                        | 0.95 | 13.20%             | 1,710                            | 0.728                            | C              | 0.020                               | No                  |
| I-15    | El Norte Parkway to SR-78                    | 129,970                              | 7.9%        | 10,230                           | 0.66              | 4                        | 0.95 | 10.00%             | 1,879                            | 0.800                            | C              | 0.018                               | No                  |
| I-15    | SR-78 to W Valley Parkway                    | 194,200                              | 8.1%        | 15,805                           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,497                            | 0.637                            | C              | 0.007                               | No                  |
| I-15    | W Valley Parkway to Auto Parkway             | 180,850                              | 8.1%        | 14,718                           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,394                            | 0.593                            | B              | 0.006                               | No                  |
| I-15    | Auto Parkway to W Citracado Parkway          | 173,800                              | 7.8%        | 13,479                           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,269                            | 0.540                            | B              | 0.006                               | No                  |

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TABLE 5.3338  
 FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
 EXISTING PLUS PROJECT (PHASE E – BUILDOUT) CONDITIONS

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS w/ Project | Change in V/C (compare to Existing) | Significant Impact? |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|-------------------------------------|---------------------|
| I-15    | W Citracado Parkway to Via Rancho Parkway     | 197,590 | 7.8%        | 15,324           | 0.60              | 5+2ML                    | 0.95 | 7.00%              | 1,422            | 0.605 | B              | 0.005                               | No                  |
| I-15    | Via Rancho Parkway to Bernardo Drive          | 199,470 | 7.4%        | 14,680           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,322            | 0.562 | B              | 0.004                               | No                  |
| I-15    | Bernardo Drive to Rancho Bernardo Road        | 202,380 | 7.4%        | 14,895           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,341            | 0.571 | B              | 0.004                               | No                  |
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 210,290 | 7.3%        | 15,439           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,288            | 0.548 | B              | 0.003                               | No                  |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 215,230 | 7.3%        | 15,802           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,318            | 0.561 | B              | 0.003                               | No                  |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

ML = Managed Lane.

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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### **Ramp Intersection Capacity Analysis**

Consistent with Caltrans' requirements, the signalized intersections along SR-76 within the study area were analyzed under Existing Plus Project (Buildout) conditions using the ILV procedures as described in Chapter 2.0.

ILV analysis results are displayed in **Table 5.39** and analysis worksheets for the Existing Plus Project (Buildout) conditions are provided in **Appendix AK**.

**TABLE 5.34**  
**RAMP INTERSECTION CAPACITY ANALYSIS**  
**EXISTING PLUS PROJECT (PHASE E - BUILDOUT) CONDITIONS**

**TABLE 5.39**  
**RAMP INTERSECTION CAPACITY ANALYSIS**  
**EXISTING PLUS PROJECT (PHASE E - BUILDOUT) CONDITIONS**

| Ramp Intersection                      | Peak Hour | ILV / Hour | Description              |
|--|-----------|------------|--------------------------|
| SR-76 / Old River Road/E. Vista Way    | AM        | 1,560      | >1500: (Over Capacity)   |
|  | PM        | 1,312      | 1200-1500: (At Capacity) |
| SR-76 / Olive Hill Road/Camino Del Rey | AM        | 1,210      | 1200-1500: (At Capacity) |
|  | PM        | 1,379      | 1200-1500: (At Capacity) |
| SR-76 / Old Highway 395                | AM        | 1,089      | <1200: (Under Capacity)  |
|  | PM        | 1,160      | <1200: (Under Capacity)  |

Source: Chen Ryan Associates; ~~January 2013-May 2014~~

As shown in the table, all three (3) intersections along SR-76 would operate at "At Capacity" and/or "Under Capacity", with the exception of the SR-76 / Old River Road/E. Vista Way intersection, which would operate at "Over Capacity" during the AM peak hour under the Existing Plus Project (Buildout) conditions.

### **5.5.3 Existing Plus Project (Buildout) Impact Significance and Mitigation**

This section identifies required mitigation measures for roadway, intersection, two-lane highway, and freeway facilities that would be significantly impacted by project-related traffic under Existing Plus Project (Buildout) conditions.

#### **Roadway Segments**

Based on the County planning level impact criteria, buildout of the project traffic would result in direct impacts at ~~three (3)~~ **one (1)** of the study area roadway ~~segments, including segment:~~

- ~~• Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps — The project would add 580 daily trips (approximately 3.6% of the total ADT) to this roadway which is approximately 7 miles away from the project site.~~

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- E. Vista Way, between SR-76 and Gopher Canyon Road - The project would add 210 daily trips (approximately 1.4% of the total ADT) to this roadway which is approximately 9 miles away from the project site.

- ~~E. The mitigation for this direct impact is the provision of a dedicated right-turn lane at the westbound Gopher Canyon Road approach, as well as a dedicated right-turn lane at the northbound E. Vista Way approach, of the East Vista Way, between / Gopher Canyon Road and Osborne Street. The project would add 320 daily trips (approximately 1.5% of the total ADT) to this roadway which is approximately 9 miles away from the project site.~~

~~Given intersection, the rural community character where Gopher Canyon Road and E. Vista Way are located and the minimal interruption to traffic flows, a more detailed constraining intersection along the impacted segment. The arterial analysis was conducted. In this case, it was important to consider how performance of a roadway segment is heavily influenced by shown in Appendix A1 and summarized in Table 5.40 below shows that the ability of mitigation would increase the arterial intersections to accommodate peak hour traffic. Highway Capacity Software (HCS) 2000 developed by McTrans was employed for the arterial analysis. The HCS arterial analysis methodology is based upon Chapter 15 (Urban Street) and Chapter 20 (2-Lane Highway) of the Highway Capacity Manual (HCM) 2000, which determines average travel speed and facility level of service according to the roadway functional classification. The two segments along E. Vista Way, between SR-76 and Gopher Canyon Road, and between Gopher Canyon Road and Osborne Street were evaluated as a Class I arterial with a free flow speed (FFS) of 50 mph since traffic signals along this facility are located less segment to better than one mile apart; while the existing conditions. Therefore, the direct impact at the segment of E. Vista Way, between SR-76 and Gopher Canyon Road would be mitigated. Vista Way and I-15 SB Ramps was analyzed as a Class II 2-lane highway given the fact that traffic signals are located at more than two mile apart (> 4 miles).~~

**TABLE 5.40**  
**ARTERIAL LEVEL OF SERVICE RESULTS AFTER MITIGATION**  
**EXISTING PLUS PROJECT (PHASE E - BUILDOUT) CONDITIONS**

| Arterial  | After Mitigation      |               |              |     | Existing     |     |              |     |
|---|-----------------------|---------------|--------------|-----|--------------|-----|--------------|-----|
|   | Free Flow Speed (mph) |               | AM Peak Hour |     | PM Peak Hour |     | PM Peak Hour |     |
|   | Speed (mph)           | LOS           | Speed (mph)  | LOS | Speed (mph)  | LOS | Speed (mph)  | LOS |
| Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps  | 50                    |               | 79.1% PTSE   |     | D            |     | 83.5% PTSE   | D   |
| E. Vista Way, between SR-76 and Gopher Canyon Road          | 50                    | 25.6 mph<br>C | 34.4         | B   | 24.5         | D   | 34.8 mph     | C   |
| E. Vista Way, between Gopher Canyon Road and Osborne Street | 50                    |               | 24.2 mph     |     | D            |     | 22.0 mph     | D   |

Source: Chen Ryan Associates; May 2013/2014

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Note that the impacted segment of E. Vista Way, between SR-76 and Gopher Canyon Road along with the other two substandard (LOS E/F) segments of Gopher Canyon Road between E. Vista Way and SR-15 SB Ramps, and E. Vista Way between Gopher Canyon Road and Osborne Street share a common intersection, the Gopher Canyon Road / E. Vista Way intersection, which is a busy constraining intersection along each of these segments. It is recommended that a dedicated westbound right-turn lane be provided at the intersection which will improve intersection operations since only one westbound lane is currently provided and this lane serves over 1,000 peak hour vehicles. Additionally, it is recommended that a dedicated northbound right-turn lane be provided at the intersection to improve the intersection by providing additional capacity for the northbound right-turn approach which currently serves over 800 peak hour vehicles. Arterial analyses were conducted along each of the three segments with the intersection improvement and the results show that the post-improvement average speeds are generally greater than the pre-project condition. Therefore, it can be concluded that the recommended improvement would mitigate the impact to below a level of significance.

### **Intersections**

The buildout of the project traffic would have a direct impact on two (2) study area intersections and the following intersection improvements would be required to mitigate the identified traffic impacts:

- I-15 SB Ramps / Gopher Canyon Road (stop controlled ramp intersection) (Caltrans) - Signalization would be required (by the 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU) at this intersection to mitigate direct project impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the "Minimum Vehicular Volume" and the "Interruption of Continuous Traffic" warrants. The project applicant would be responsible for implementing the mitigation measure identified above. However, this particular facility is out of the County's control and therefore the impact would remain significant and unavoidable. The signal warrant worksheet for this intersection is provided in Appendix AL.
- I-15 NB Ramps / Gopher Canyon Road (stop controlled ramp intersection) (Caltrans) - Signalization would be required (by the 1<sup>st</sup> EDU of Phase 4 or 363<sup>rd</sup> total EDU) at this intersection to mitigate direct project impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the "Minimum Vehicular Volume" and the "Interruption of Continuous Traffic" warrants. The project applicant would be responsible for implementing the mitigation measure identified above. However, this particular facility is out of the County's control and therefore the impact would remain significant and unavoidable. The signal warrant worksheet for this intersection is provided in Appendix AL.

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**Table 5.41** displays level of service analysis results for the mitigated intersection under the Existing Plus Project (Buildout) conditions. Calculation worksheets for the intersection analysis are provided in **Appendix AM**.

**TABLE 5.41**  
**MITIGATED INTERSECTION LEVEL OF SERVICE**  
**EXISTING PLUS PROJECT (PHASE E - BUILDOUT) CONDITIONS**

| Intersection                           | After Mitigation |     |              |     | Existing                |                |
|--|------------------|-----|--------------|-----|-------------------------|----------------|
|  | AM Peak Hour     |     | PM Peak Hour |     | Delay (sec.)<br>AM / PM | LOS<br>AM / PM |
|  | Delay (Sec.)     | LOS | Delay (sec.) | LOS |                         |                |
| 14. I-15 SB Ramps / Gopher Canyon Road | 30.3             | C   | 26.9         | C   | 468.2 / 173.0           | F / F          |
| 15. I-15 NB Ramps / Gopher Canyon Road | 17.8             | B   | 34.7         | C   | 30.5 / 1945.4           | D / F          |

Source: Chen Ryan Associates, May 2014

Note: Bold letter indicates unacceptable LOS E or F.

Note: PTSF = Percent time spent following.

As shown in the table above, all three (3) segments, after installation of the proposed traffic signals, both impacted intersections would operate at acceptable LOS ~~DC~~ or better under Existing Plus Project (Buildout) conditions based on the arterial analysis during both the AM and PM peak hours. However, both ramp intersections at I-15 / Gopher Canyon Road interchange are Caltrans' facilities in which the County does not have jurisdiction. In addition, Caltrans does not have a plan or program in place. Therefore, it is appropriate to consider that no mitigation measures would be necessary at these locations.

None of the study area intersections would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Buildout) conditions. The impacts would remain significant and unavoidable.

#### **Two-Lane Highways**

None of the study area two-lane highway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Buildout) conditions.

#### **Freeways**

None of the study area freeway facilities would be significantly impacted, and therefore no mitigation measures would be required under Existing Plus Project (Buildout) conditions.

**Table 5.3642** summarizes potential impacts and recommended mitigation measures associated with buildout of the Lilac Hills Ranch project.

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**TABLE 5.3642**  
**IMPACT AND MITIGATION SUMMARY**  
**EXISTING PLUS PROJECT (PHASE E - BUILDOUT) CONDITIONS**

| Potentially Impacted Facility   | Mitigation Measures   |
|---|---|
| <i>Roadway Segment</i>  |   |
| <u>E. Vista Way, between SR-76 and Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps</u> | <del>None</del> Construction of a dedicated WB right-turn lane by 238 <sup>th</sup> EDU, as well as a dedicated NB right-turn lane by 476 <sup>th</sup> EDU at the intersection of E. Vista Way / Gopher Canyon Road. |
| <i>Intersection</i>   |   |
| <u>E. Vista Way, between SR-76 and I-15 SB Ramps / Gopher Canyon Road</u>                         | <del>None</del> Signalization by the 1 <sup>st</sup> EDU of Phase 4 or 363 <sup>rd</sup> total EDU - Caltrans' facility, significant and unavoidable impact.  |
| <u>E. Vista Way, between I-15 NB Ramps / Gopher Canyon Road and Osborne Street</u>                | <del>None</del> Signalization by the 1 <sup>st</sup> EDU of Phase 4 or 363 <sup>rd</sup> total EDU - Caltrans' facility, significant and unavoidable impact.  |
| <i>Intersection</i>   |   |
| None  | -   |
| <i>Two-Lane Highway</i>   |   |
| None  | -   |
| <i>Freeway</i>  |   |
| None  | -   |

Source: Chen Ryan Associates; May 2013-2014

Note that the Existing Plus Project (Buildout) scenario includes the project's build-out traffic volumes added to the existing traffic volumes and existing roadway configurations and is shown in Traffic Analysis Phases A-E above as required by the County's Guidelines for Determining Significance and Report Format & Content Requirements for Transportation and Traffic.

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## 6.0 Cumulative Traffic Conditions

This section describes cumulative land development projects anticipated to generate additional traffic within the study area. Potential traffic impacts to the existing transportation network, due to the addition of cumulative projects and proposed project traffic, were also assessed.

### 6.1 Cumulative Projects

SANDAG's Series 12 Year 2020 Transportation Model was utilized to forecast cumulative traffic volumes. SANDAG Year 2020 land use assumptions were examined to ensure that anticipated land development projects within a seven-mile radius of the proposed project, were accurately reflected in the model. A list of ~~169~~171 cumulative projects was compiled, including:

- #1 - #96 - The cumulative project list utilized for the recent Meadowood development project;
- #97 - ~~#109~~110 - Geographically applicable projects from the County GPA Property Specific Workplan list of 56 projects, dated June 28, 2012;
- ~~#110 - #169~~111 - #171 - A list of discretionary projects obtained from SanGIS ~~(August 2011)~~ and refined to include projects with potentially relevant trip generation, such as Major Use Permits, General Plan Amendments, Specific Plans and Amendments, Tentative Maps, and Tentative Parcel Maps. Both County staff input and the KivaNet system were utilized to gather detailed project land use descriptions.

**Table 6.1** displays the approved and pending cumulative project list which was incorporated in the SANDAG Transportation Model. A SANDAG model trip generation report is included in **Appendix ABAN**. **Figure 6-1** illustrates the location of the cumulative projects. This figure is modified from the public review version of the TIS (dated 6/28/2013) to reflect the following cumulative project changes:

1. The Sierra (former Merriam Mountains) Development project (#106 in Table 6.1) located west of I-15, between Gopher Canyon Road and Deer Springs Road is expected to request the construction of approximately 2,100 residential units and a small amount of commercial development. The public review version of the TIS (dated 6/28/2013) only included 1,162 DU based on the County identified in the County GPA Property Specific Workplan list of 56 projects. The latest project data was included in the cumulative analysis.
2. In addition, a number (VC7, 11, 20A, 20B, 54, 61, 66) of Valley Center County GPA Property Specific Workplan list of 56 projects were also added as #110 in Table 6.1. These small PSRs represent a total of 261 units of single family rural residential located east of I-15, between W. Lilac Road and Mountain Ridge Road.
3. The Sukup project (#171 in Table 6.1) located on the east side of Rodriguez Road within the Valley Center Community Planning Area. The project is an Expired Map for a major

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subdivision, TM 5184, that was approved on June 10, 2004 and expired on June 10, 2007. The project now proposes to subdivide 24.62 gross acres into 9 single-family residential lots ranging in size from 2.02 to 2.90 net acres.

**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key # | Project                 | Description   | Project Reference Numbers   | Area (acres) | Location  |
|-----------|-------------------------|---|---|--------------|---|
| 1         | Campus Park             | Mixed-use development, including: 529 single-family dwelling (SFR) units, 555 multi-family dwelling (MFR) units, a town center (retail) of 62,000 square feet (sf), an office building with 150,000 sf, a sports complex of 5.2 acres, and a small neighborhood park. | TM 5338<br>GPA 03-004   | 417          | Just north of SR-76, 0.25 mile east of I-15   |
| 2         | Campus Park West        | Mixed-use development including approximately 355 MFR units, 400,000 sf Commercial, 50,000 sf Office Professional, 347,000 sf of Light Industrial, and possible Civic Uses..  | TM 5424,<br>S 05-014,<br>SPA 05-001<br>GPA 05-003<br>REZ 05-005                       | 118.5        | Northeast quadrant of I-15 and SR-76  |
| 3         | Pala Mesa Highlands     | Maximum of 130 SFR.<br>Density 1.6 DU/acre.<br>Lot sizes vary from 5,500 sf to 23,500 sf, two parks totaling 4.3 acres, trails, 36.5 acres of open space. SPA to allow clustering.  | TM 5187 RPL <sup>11</sup><br>SPA 99-005<br>MUP 99-020<br>REZ 99-020<br>MUP/REZ 04-024 | 84.6         | West of Old Highway 395 between Pala Mesa Drive and Via Belamonte                   |
| 4         | Tedder TM               | Split lot into 13 SFR lots, ranging in size from 1.0 to 6.43 acres net.   | TM 4729 RPL <sup>3</sup><br>TE  | 29.5         | South side of Pala Mesa Drive, west of I-15 and east of Daisy Lane                  |
| 5         | Hukari subdivision      | Minor residential subdivision with road improvements.<br>4 SFR lots plus one remainder lot (3.4 to 7.7 net acres each).   | TPM 20830   | 30           | Northern terminus of Mountain View Road and West Lilac Road on west side of Bonsall |
| 6         | Fallbrook Ranch         | 11 SFR lots   | TM 5532<br>S 07-012   | --           | East of Old Highway 395 and Sterling View Drive (at Mission Road), Fallbrook        |
| 7         | Los Willows Inn and Spa | Add additional units to a Bed and Breakfast   | MUP 03-127  | --           | 532 Stewart Canyon Road   |
| 8         | Reeve TPM               | Minor residential subdivision.<br>3 SFR lots (2 acres minimum).   | TPM 20411   | 8.8          | 2987 Sumac Road, Fallbrook  |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key # | Project                | Description   | Project Reference Numbers  | Area (acres) | Location  |
|-----------|------------------------|---|--|--------------|---|
| 9         | Evans TPM              | Minor subdivision into 2 residential/agricultural parcels (2.00 and 2.10 acres). Private septic system.   | TPM 20491  | 4.10         | West side of Sage Road between Sumac Road and Pala Road, Fallbrook                            |
| 10        | Bridge Pac West I TPM  | Minor residential subdivision. 4 SFR lots plus one remainder lot (2.04, 2.08, 2.12, 2.14 and remainder 7.08 net acres each).  | TPM 20841  | 15.90        | 3321 Sage Road, Fallbrook   |
| 11        | Pala Mesa Resort       | Specific Plan Amendment for modification and construction of new recreation and resort-related facilities. Addition of 186 resort rooms and wedding facility. Expansion of resort by 6 acres. | SPA 03-005<br>R 00-000<br>MUP 00-000<br>P 74-120W <sup>1</sup><br>P 74-121M <sup>10</sup> ;<br>MUP 03-006;<br>MUP 04-005 | 181.2        | 2001 Old Highway 395 at Tecalote Lane, north of SR 76 and immediately west of I-15, Fallbrook |
| 12        | Lung TPM               | Minor residential subdivision. 2 SFR lots (6.7 and 4.0 acres)   | TPM 20431<br>S 98-006  | 10.7         | Citrus Drive and Calle Canonero, Fallbrook  |
| 13        | Chipman TPM            | Minor residential subdivision. 4 SFR lots plus one remainder lot, ranging from 2.13 to 2.85 net acres each and remainder 4.00 net acres. Septic system.                                       | TPM 20440  | 13.54        | East side of Citrus Lane between Peony Drive and Dos Ninos, Fallbrook                         |
| 14        | Bierman TPM            | Minor residential subdivision. 4 SFR lots, ranging from 2.01 to 2.19 net acres each. Septic system.   | TPM 20484  | 9.91         | 4065 Calle Canonero, Fallbrook, south of Vern Drive and west of Lorita Lane                   |
| 15        | Cooke Residence        | 4,723 s.f. SFR  | S 04-026   | N/A          | 3974 Citrus Drive between Wilt Road and Vern Drive  |
| 16        | Treister TPM           | Minor residential subdivision. 4 SFR lots plus one remainder lot.   | TPM 20581  | 21.81        | Donut-shaped parcel surrounding 401 Ranger Road, Fallbrook                                    |
| 17        | Mission Ridge Road TPM | Minor residential subdivision. 4 SFR lots.  | TPM 20793<br>03-02-068   | 19.55        | 235 Mission Ridge Road east of I-15 off Mission Road, Fallbrook                               |
| 18        | Rancho Alegre TPM      | Part of 116-acre subdivision (33 lots). This project consists of 20 lots in the eastern portion of property and proposes a different street alignment, grading, and lot arrangement.          | TM 5413  | 70           | West side of Ranger Road approx. 0.4 mile north of Reche Road                                 |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key # | Project   | Description  | Project Reference Numbers                                   | Area (acres) | Location   |
|-----------|---|--|---|--------------|--|
| 19        | Rarick TPM  | Minor residential subdivision. 4 SFR lots (ranging from 2.02 to 2.25 acres each). Septic system.   | TPM 20853   | 8.77         | 3261 Reche Road, Fallbrook   |
| 20        | Fernandez TPM   | Minor residential subdivision. 4 SFR lots. Minimum lot size 2 acres. 2 existing SFR on-site.   | TPM 20936   | 10.4         | 3838 Foxglove Lane, Fallbrook  |
| 21        | Rabuchin TPM  | Subdivision of 2 lots into 4 SFR lots. Existing SFR on site  | TPM 20944   | 9.91         | 4065 Calle Canonero, Fallbrook   |
| 22        | Pala Casino   | 187,300 s.f. casino, hotel, theater.   | NA  | TBD          | Pala Road and Pala Mission Road  |
| 23        | Rosemary's Mountain/Palomar Aggregates Quarry               | Aggregate rock quarry and processing plants for concrete and asphalt. Approximately 22 million tons of rock would be mined over 20 years. Realignment of SR 76 from Project site west to I-15. Reclamation Plan to designate lower portion of site as water storage reservoir after completion of mining activities. | MUP 87-021 RPL <sup>2</sup><br>REZ P87-001 RPL <sup>2</sup> | 96.4         | North side of SR 76, 1.25 miles east of I-15   |
| 24        | Patapoff Minor Residential Subdivision                      | Subdivide property into four parcels of 4.3 acres, 4.2 acres, 9.6 acres, 8 acres, and a 33-acre parcel   | TPM 20542   | 59.1         | Southern end of Rainbow Hills Road   |
| 25        | Prominence at Pala  | Subdivide the property into 30 SFR and two open space lots ranging in size from 4 to 96 acres  | TM 5321   | 346.6        | Pala Del Norte Road. 1/3 mile north of SR-76 and approximately two miles west of the Pala Indian Reservation |
| 26        | Palomar College North Education Center District Master Plan | New Community College campus to serve approximately 12,000 students, to include classroom and administration buildings, parking, open space, athletic fields, and off-site road, water and sewer improvements.   | NA  | 85           | East side of I-15 between Pankey Road and Pala Mesa Heights Drive  |
| 27        | Caltrans Realignment of SR-76                               | Realignment and widening of roadway, improvements to northbound I-15 on- and off-ramps.  | NA  | NA           | From I-15 to west of Rice Canyon Road  |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key # | Project   | Description  | Project Reference Numbers | Area (acres) | Location   |
|-----------|---|--|---------------------------|--------------|--|
| 28        | San Luis Rey Municipal Water District (SLRMWD) Water, Wastewater and Recycled Water Master Plan | Exploration of pipeline and water storage options.   | NA                        | Over 3,000   | SLRMWD service area and vicinity, north and south of SR-76 between I-15 and Pala Temecula Road |
| 29        | --  | 39 condo units   | TM 5231                   | 30.48        | Canonita Drive and Old Hwy 395, Fallbrook  |
| 30        | --  | 8 SFR lots   | TM 5276                   | 12.8         | Aqueduct Road and Via Urner, Bonsall   |
| 31        | --  | 9 SFR lots   | TM 5346                   | 38.4         | Old Hwy 395 and Via Urner, Bonsall   |
| 32        | Marquart Ranch  | 9 SFR lots. Includes improvements to Mesa Lilac Road, and drainage improvements.   | TM 5410                   | 44.2         | West Lilac Road and Mesa Lilac Road, Bonsall   |
| 33        | Fallbrook Oaks  | 19 SFR lots  | TM 5449                   | 26           | Reche Road and Ranger Road, Fallbrook  |
| 34        | Ridge Creek Drive   | 14 SFR lots  | TM 5469                   | 30.4         | Ridge Creek east of Live Oak Park Road and Ridge Drive, Fallbrook                              |
| 35        | Club Estates  | 31 SFR lots  | TM 5499                   | 48.3         | SR 76 east of Cole Grade Road at Pauma Valley Drive  |
| 36        | Oak Tree Ranch TM   | 24 SFR   | TM 5540; MUP 07-007       | 9.95         | 15560 Spring Valley Road   |
| 37        | Turnbull TM   | 17 lots  | TM 5545                   | 22.9         | 32979 Temet Drive  |
| 38        | Wexler TPM  | 4 lots   | TPM 20913                 | 2.54         | --   |
| 39        | Shadow Run Ranch  | 54 SFR lots and 2 open space lots. MUP filed concurrently for Planned Residential Development that would cluster residential development on minimum 2-acre lots. | TM 5223<br>MUP 00-030     | 263          | Shadow Run Ranch, SR-76 and Adams Drive, Pala  |
| 40        | Diana Acres   | 3 lots   | TPM 20896                 | --           | Adams Drive off SR-76, Pauma Valley  |
| 41        | Hunter Subdivision  | 3 lots   | TPM 20804                 | 7.5          | 15550 Adams Drive  |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key # | Project                                 | Description  | Project Reference Numbers            | Area (acres) | Location   |
|-----------|---|--|--------------------------------------|--------------|--|
| 42        | Burge TPM                               | 4 lots plus remainder  | TPM 20538                            | 12.58        | 34487 Citracado Drive, Pala                            |
| 43        | Pauma Valley Packing Company            | Packing and processing   | MUP 99-001                           | 4.14         | 34188 Hampton Road                                     |
| 44        | Shadow Run Ranch/<br>Schoepe-Pauma TM   | 13 lots  | TM 5223; MUP 00-030                  | 263.17       | 15040 Adams Drive                                      |
| 45        | Warner Ranch                            | 732 SFR lots, 168 condo units, community park, fire station lot  | TM 5508                              | 513          | Pala-Pauma   |
| 46        | Pauma Casino and Hotel                  | 400 room hotel and 171,000 s.f. casino   | CASINO                               | --           | Approximately 11 miles east of I-15 along SR-76        |
| 47        | De Jong/Pala Minor Subdivision          | Minor residential subdivision. 3 SFR lots (1.03, 2.06 and 2.31 net acres each).  | TPM 20451                            | 5.62         | Canonita Drive between I-15 and Tecalote Drive         |
| 48        | Crossroads Investors Minor Subdivision  | Minor residential subdivision. 4 SFR lots plus one remainder lot. Existing SFR and grove on site   | TPM 20800                            | 15.5         | Ranger Road, Fallbrook                                 |
| 49        | Chaffin/Red Mountain Ranch Subdivisions | Withdrawn<br>TM 5217: Residential development with 29 SFR lots (2.28 to 18.33 acres) and 2 biological open space zones.<br>TM 5225: 55 acres divided into 6 SFR lots (8.1 to 13.9 acres).<br>TM 5227: 44.5 acres divided into 4 SFR lots (8.08 to 13.71 acres each). TM 5228: 19.1 acres divided into 2 lots (8.4 and 10.7 acres). | TM 5217/5225/5227/5228<br>MUP 00-027 | 455.9        | Rainbow Glen Road and Red Mountain Dam Road, Fallbrook |
| 50        | John Collins TPM                        | 2 lots   | TPM 20505                            | 8.29         | Margarita in Fallbrook                                 |
| 51        | Brannon Trust TPM Remai                 | 4+ lots  | TPM 21085                            | --           | 411 Yucca Road, Fallbrook                              |
| 52        | Dien N Do TPM                           | 4+ lots  | TPM 20976                            | --           | 405 Ranger Road  |
| 53        | Tim Rosa TPM                            | 4 lots plus remainder  | TPM 20373                            | 13           | 2973 Los Alisos Drive                                  |
| 54        | Leising TPM                             | 4 lots   | TPM 20427                            | 10.83        | 1246 Via Vista   |
| 55        | Atteberry TPM                           | 3 lots   | TPM 20434                            | 9            | 1166 Sierra Bonita                                     |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key # | Project                                 | Description   | Project Reference Numbers | Area (acres) | Location   |
|-----------|---|---|---------------------------|--------------|--|
| 56        | Johnson TPM                             | 2 lots  | TPM 20980                 | --           | 3035 Trelawney Lane  |
| 57        | Chipman TPM                             | 4 lots plus remainder   | TPM 20381                 | 24.5         | Camino Zasa, Fallbrook   |
| 58        | American Lotus Bhuddist Association TPM | 4 lots plus remainder lot   | TPM 21047                 | --           | Reche Road at Rabbit Hill, Fallbrook   |
| 59        | Reche Road TM                           | 12 SFR lots   | TM 5547                   | 33.5         | 3129 Reche Road, Bonsall   |
| 60        | Palisades Estates                       | 51 lots   | TM 5158; RPL3             | 408.4        | 3880 Dos Niños Road/Elevado Road   |
| 61        | Dion TPM and time extension             | 2 lots  | TPM 19742                 | 7.5          | 3562 Canonita Drive  |
| 62        | Patricia Daniels TPM                    | 4 lots plus remainder   | TPM 20476                 | 13.2         | 3609 Canonita Road, Fallbrook  |
| 63        | Cameron Subdivision                     | Minor residential subdivision. 3 SFR lots (2.22, 2.44 and 6.37 acres each). Septic system.    | TPM 20443                 | 11.31        | 2644 Vista de Palomar, Fallbrook. North side of Vista de Palomar between Post Hill and Via Rancheros |
| 64        | Tesla Gray TPM                          | Minor residential subdivision. 4 SFR lots plus one remainder lot. Future development of 5 SFR | TPM 20473                 | 28.91        | East end of Vista de Palomar, and north end of Old Post Road, Fallbrook                              |
| 65        | Aspel TPM                               | Minor residential subdivision. 2 SFR lots (2.09 and 5.20 acres each).                         | TPM 20592                 | 7.32         | 3107 Old Post Road, Fallbrook  |
| 66        | James Patapoff TPM                      | Subdivision of 16.8 acres into 4 lots plus a remainder lot                                    | TPM 20317                 | 16.8         | 2639 Via Alicia, Fallbrook   |
| 67        | Yew Tree Spring Water Corporation       | 3 residential lots  | TPM 20503                 | 7.48         | 3573 Diego Estates Drive, Fallbrook  |
| 68        | Haugh, Granger TPM                      | 4 lots  | TPM 20610                 | 12.94        | Fallbrook  |
| 69        | Brown, Lee & Karen, TPM                 | 3 lots  | TPM 20614; RPL1           | 6.46         | 3850 Gird Road   |
| 70        | Pepper Drive TPM                        | 4 residential lots  | TPM 20648                 | 1.39         | 3926 Flowerwood Lane   |
| 71        | Surf Properties TM                      | 15 lots   | TM 4971                   | 46.89        | 3545 Vista Corona  |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key # | Project  | Description  | Project Reference Numbers | Area (acres) | Location   |
|-----------|--|--|---------------------------|--------------|--|
| 72        | Brook Hills TM                                     | 35 lots  | TM 4908                   | 96.71        | 4061 La Cañada Road, Fallbrook                                       |
| 73        | Latter-Day Saints/Via Monserate                    | 17,000 sq. ft. church and meeting rooms                                | MUP 02-011                | 7.96         | Fallbrook  |
| 74        | Leeds and Strausss TM                              | 17 SFR lots – TM time extension until 09/13/2009                       | TM 4976; RPL4             | 45.76        | North side of Olive Hill Road, near intersection with SR-76, Bonsall |
| 75        | Murray Davidson                                    | 7 lots   | TM 5398                   | 4.28         | 3956 Pala Mesa Road, Bonsall   |
| 76        | Shamrock Partners TPM                              | 3 lots   | TPM 20173                 | 10           | Shamrock Road, Bonsall   |
| 77        | Crook TPM  | 5 lots   | TPM 20851                 | --           | 32179 Shamrock Road  |
| 78        | Tabata Bonsall TPM RPL1                            | 4 lots   | TPM 20729                 | 33.75        | 5546 Mission Road  |
| 79        | Berezousky TPM (311 Same as one in original latch) | Subdivision of 3.11 acre into 4 residential lots. Existing SFR on site | TPM 20874                 | 3.11         | 4040 Pala Mesa Drive, Fallbrook                                      |
| 80        | Murray Davidson TPM                                | Subdivision of 1 lot into 4 SFR lots plus a remainder lot              | TPM 20932                 | --           | 3956 Pala Mesa Road, Fallbrook                                       |
| 81        | Sumac TPM  | 4 lots   | TPM 21076                 | --           | 3111 Sumac Road  |
| 82        | Janikowski SFR                                     | 3,200 s.f. SFR   | S 03-024                  | 5.12         | 9686 Pala Road (SR 76), Fallbrook, on north side of SR 76            |
| 83        | Kratochvid TPM; expired map                        | 4 lots   | TPM 19827                 | 12.3         | Old Highway 395  |
| 84        | Kohl TPM   | 4 lots plus remainder  | TPM 20319                 | 9.71         | 7641 Mount Ararat Way, Bonsall                                       |
| 85        | Woodhead TPM                                       | 4 lots plus remainder  | TPM 20541                 | 12.54        | Mt. Ararat Way, Bonsall  |
| 86        | Rockefeller TPM                                    | 2 lots   | TPM 20596                 | 5            | 9590 Lilac Way, VC   |
| 87        | McNulty TPM  | 2 lots   | TPM 20763                 | 5.19         | 32171 Dos Niñas  |
| 88        | Stehly Caminito Quieto TPM                         | 4 lots   | TPM 20799                 | 11.69        | 32009 Caminito Quieto at West Lilac Road                             |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key # | Project                           | Description   | Project Reference Numbers      | Area (acres) | Location  |
|-----------|-----------------------------------|---|--------------------------------|--------------|---|
| 89        | Sanders TPM                       | 4 lots plus remainder lot   | TPM 20845                      | --           | West Lilac Road, 1.25 miles west of Old Highway 395                     |
| 90        | Pala Shopping Center              | Addition of 5 commercial buildings to an existing commercial site with grocery store.                                     | S 02-061                       | 3.88         | On Old Highway 395 just northwest of the intersection of I-15 and SR 76 |
| 91        | Monserate TM                      | 7 SFR   | TM 5489                        | 24.6         | 3624 Monserate Hill Road  |
| 92        | Dimitri, Diffendale, and Kirk TPM | 4 lots  | TPM 21075                      | --           | Monserate Hill Road and Monserate Place                                 |
| 93        | Madrigal TPM                      | 3 lots  | TPM 20994                      | --           | 1055 Rainbow Valley Boulevard near Old Hwy 395                          |
| 94        | Singh Power Plant                 | Power Generation facility   | MUP 07-009                     | 8.5          | 4 miles NE of I-15 on Pala Del Norte Road, north of SR 76               |
| 95        | Gregory Landfill                  | Landfill site for solid waste   | 37-AA-0032                     | 1,770        | Approximately 3.5 miles east of I-15 on SR-76                           |
| 96        | Meadowood                         | 355 single-family dwelling units, 503 multi-family dwelling units, a 10 acre neighborhood park, and an elementary school. | TM 5354 & GPA 04-02            | --           | Just north of SR-76, 0.25 mile east of I-15                             |
| 97        | Bonsall - BO 18,20,22,29,32,33    | 61 Rural Single Family Residential - 1 unit per every 4 acres.  | Bonsall - BO 18,20,22,29,32,33 | --           | Bonsall - North of Camino Del Rey, west of I-15                         |
| 98        | Fallbrook - FB 17, 18             | 28 Single Family Rural Residential - splitting between SR1 and SR2 classification.  | Fallbrook - FB 17, 18          | --           | Reche Road, West of Ranger Road   |
| 99        | Fallbrook - FB 21,22,23           | 7 Single Family Rural Residential - SR10 Class.   | Fallbrook - FB 21,22,23        | --           | Northern border of county, next to river side county                    |
| 100       | Fallbrook - SR2                   | 3 Single Family Rural Residential - SR10 class.   | Fallbrook - SR2                | --           | East of I-15 / Mission Road interchange                                 |
| 101       | Fallbrook - FB19,25,26            | 13 Single Family Rural Residential - SR10 class.  | Fallbrook - FB19,25,26         | --           | North of Pala, East of I-15, west of Rice Canyon                        |
| 102       | Fallbrook - FB 21,22,23           | 7 Single Family Rural Residential.  | Fallbrook - FB 21,22,23        | --           | Northern border of county, next to river side county                    |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key #           | Project  | Description  | Project Reference Numbers  | Area (acres)  | Location  |
|---------------------|--|--|--|---------------|---|
| 103                 | North County Metro - NC22  | 44 Single Family Rural Residential - SR1 class.  | North County Metro - NC22  | --            | North of San Marcos Boundary, along Las Posas Road                            |
| 104                 | North County Metro - NC37  | 30 Single Family Rural Residential - to SR4  | North County Metro - NC37  | --            | West of Twin Oak Valley Road, northwest of Deer Spring road, at Calafia Road  |
| 105                 | North County Metro - NC3A  | 10 Single Family Residential - SR10  | North County Metro - NC3A  | --            | North-East of Broadway/Jesmon Dende, Access Vista Verde                       |
| 106                 | North County Metro - NC42/<br><u>Sierra (former Merriam Mountains)</u> | <del>1162 units compose mostly of Multi Family Residential and a combination of SR-5, SR2 or RL20 on the remaining land.</del> <u>The Sierra (former Merriam Mountains) Development project is expected to request the construction of 2,100 residential units and a small amount of commercial development.</u> | North County Metro - NC42/<br><u>Sierra (former Merriam Mountains)</u> | --            | North of Deer Spring, West of I-15, South of Gopher Canyon                    |
| 107                 | Valley Center - VC51   | 15 Single Family Rural Residential - SR-4  | Valley Center - VC51   | --            | Corner of Courser Canyon and Lilac Road                                       |
| 108                 | Valley Center - VC57, 63, 64   | 238 Single Family Rural Residential - SR-2   | Valley Center - VC57, 63, 64   | --            | Corner of Valley Center Road / Mactan Road                                    |
| 109                 | Valley Center - VC67   | North and south of Valley center road between Miller Road and Cole Grade Road  | Valley Center - VC67   | --            | North and south of Valley center road between Miller Road and Cole Grade Road |
| <del>110</del>      | <del>Valley Center - VC7, 11, 20A, 20B, 54, 61, 66</del>               | <del>261 Single Family Rural Residential - SR-2</del>  | <del>Valley Center - VC7, 11, 20A, 20B, 54, 61, 66</del>               | <del>--</del> | <del>East of I-15, south of W. Lilac Road</del>                               |
| <del>111</del><br>1 | Casa de amparo, mup  | This project is a Major Use Permit for a group residential care facility to serve up to 60 children and the child development center would have the capacity to serve 46 children.   | 04-14603   | --            | 325 Buena Creek Rd  |
| <del>111</del><br>2 | Dai dang meditation center   | The permit will provide for the development of the following buildings totaling 22,796 square feet: a Meditation Hall, Residence Quarters, and the Main Worship Hall   | 04-11468   | --            | 6326 Camino Del Rey   |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key #             | Project                                  | Description  | Project Reference Numbers | Area (acres) | Location                |
|-----------------------|--|--|---------------------------|--------------|-------------------------|
| <del>11211</del><br>3 | Dougherty pet resort/mup 10-027          | The project also includes a proposed 1,056 square foot kennel with a rooftop grass deck and pedestrian bridge. Enough kennel for 40 dogs/cats  | 07-0081283                | --           | 1412 Windsong Lane      |
| <del>11311</del><br>4 | Gainer, major use permit, p08-052        | The project consists of construction of an approximately 10,368 square foot horse stable to accommodate up to 18 horses, construction of a 10,800 square foot covered riding arena, and improvement of the existing driveway.  | 08-0096048                | --           | 6893 West Lilac Road    |
| <del>11411</del><br>5 | Patnode ; mup 08-036                     | The project proposes to construct a 4,000 square foot reception hall (not permitted in the zone), pave driveways for a shuttle to move the event attendees, and to use the existing residence as a staging area for scheduled events. Also, an unpaved parking area is proposed (not permitted).   | 08-0100394                | --           | 14044 Horse Creek Trail |
| <del>11511</del><br>6 | Valley center comm church                | The project is a Major Use Permit for a new church campus on a 20.56-acre parcel. Construction will occur in four phases; at the completion of the final phase of construction, the church campus would consist of six main structures totaling approximately 65,000 square feet with associated parking, landscaping and outdoor areas. | 04-13720                  | 20.56        | 29010 Cole Grade Road   |
| <del>11611</del><br>7 | Casa de amparo mup minor deviation p 03- | Foster Care Facility for Casa de Amparo - 4-Bldgs for a total sq footage of 28353.   | 10-0121634                | --           | 325 Buena Creek Road    |
| <del>11711</del><br>8 | Champagne lakes, mup, mod                | Modification for the relocation of 51 RV spaces and one mobile home space to include full hookups to 20 RV spaces, a new restroom, and an area screened by landscaping for vehicle storage.  | 06-0055819                | --           | 8310 Nelson Way         |

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CUMULATIVE PROJECTS**

| Map Key #             | Project                                   | Description  | Project Reference Numbers | Area (acres) | Location   |
|-----------------------|---|--|---------------------------|--------------|--|
| <del>11811</del><br>9 | Crossroads church, mup mod for pre-school | The modification proposes to install and operate relocatable pre-school classrooms. The pre-school classrooms will have a maximum of 100 students and will operate from 6am to 6:30pm Monday through Friday.   | 08-0094758                | --           | 2406 N. Twin Oaks Valley Road  |
| <del>11912</del><br>0 | Moody creek farms llc, mup mod; p79-134w  | The project will consist of expansion of the footprint of the previously approved Major Use Permit to include all of the stables; barns; riding rings and arenas; ¾ mile horse training track; ranch manager's residence; farm employee housing; and accessory structures associated with the Equestrian Facility. | 09-0107476                | --           | 30185 and 30321 Camino De Los Caballos; 31257 Via Maria Elena                            |
| <del>12012</del><br>1 | Vista valley country club, spa and mup m  | Total increase of 12,520 sq. feet enclosed and 4,442 sq. feet un-enclosed.   | 08-0100054                | --           | 2262 Gopher Canyon Road  |
| <del>12112</del><br>2 | Hidden meadows - oak woodlands rezone     | The Project will contain 17.3 acres of General Commercial, 5.6 acres of Office/Professional, 7.7 acres of 10.9 DU/AC Multifamily Residential and 5.2 acres of 15.0 DU/AC Multifamily Residential.  | 04-16685                  | 17.3         | This property is within the Northern Village Town Center of the Valley Center Community. |
| <del>12212</del><br>3 | Mountain gate rezone for tm timex         | Tentative Map Time Extension and Rezone to make sure that only those uses consistent with the Specific Plan are permitted. Tentative Map authorized a total of 147 single family lots.   | 04-15133                  | --           | 27319, 27321, 27329 Mountain Meadow Road   |
| <del>12312</del><br>4 | Orchard run major subdivision (296 lot)   | <del>Withdrawn</del> The project will contain <u>300 Single Family Residential, 5.8 acres Waste Water Treatment Plant, 1.4 Acres of Community Recreation</u>   | 08-0092691                | --           | Valley Center Road; 13675 Old Road; 28290 Lilac Road                                     |
| <del>12412</del><br>5 | Tentative map                             | Approved Tentative Map for 16 dwelling units on 41.7 acres.  | 04-20072                  | 41.7         | 14357 Tyler Road   |
| <del>12512</del><br>6 | Alti, gpa, rez,                           | GPA withdrawn; however, the Tentative Map (TM 5551) proposes to subdivide 59.52 acre site into 71 lots.  | 06-0064250                | 59.52        | 14096 Sunday Drive; 27845 Valley Center Road   |
| <del>12612</del><br>7 | Beauvais tm                               | Tentative Map to subdivide 23.2 acres into 7 residential lots.   | 04-13906                  | 23.2         | South of intersection of Bella Linda and Old Castle Road                                 |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key #                                 | Project                            | Description   | Project Reference Numbers | Area (acres) | Location   |
|---|------------------------------------|---|---------------------------|--------------|--|
| <del>127</del> <sup>12</sup> <sub>8</sub> | Brisa del mar                      | The project is a Tentative Map for a residential subdivision of 206 acres into 27 x 2-acre minimum lots.  | 06-0060719                | 206          | 31002 Aquaduct Road; 7520, 7530, 7570, 7574, 7650 Camino Del Rey |
| <del>128</del> <sup>12</sup> <sub>9</sub> | Canyon villas welk tm, rez and stp | The project is a Rezone and Tentative Map (TM 5313) to subdivide 20.89 acres into 177 time share units.   | 04-13850                  | 20.89        | 28833, 28915 Champagne Blvd; 8860 Welk View Drive                |
| <del>129</del> <sup>13</sup> <sub>0</sub> | Charles froehlich tm               | The project is a residential subdivision of two parent parcels, resulting in a total of six lots. The site is located on Double K Road within the Valley Center Community Planning Group in unincorporated San Diego County.  | 06-0061043                | --           | Sierra Roja and Double K   |
| <del>130</del> <sup>13</sup> <sub>1</sub> | Circle p lane tm5468rpl3           | The project is a Major Subdivision of 11 proposed lots ranging in area from 1.03 to 2 gross acres on a 15.48-acre property with access via a private easement road from Mountain Meadows Road. The subject property is designated (2) Residential by the North County Metropolitan Subregional Plan | 05-0055339                | 15.48        | 10264 Circle P Lane; 27446 Mountain Meadow Road                  |
| <del>131</del> <sup>13</sup> <sub>2</sub> | Dabbs tentative map                | This is a request for a tentative map on 38.4 acres (gross acres). The subdivision proposes 9 lots. Each proposed lot will be 4 acres in size (net acres).  | 04-11658                  | 38.4         | 32006 Aquaduct Road  |
| <del>132</del> <sup>13</sup> <sub>3</sub> | Foxenwood prd tm4836 & stp89-041   | Tentative Map to subdivide 45.2 acres into 17 dwelling units.   | 04-20362                  | 45.2         | Mirar De Valle   |
| <del>133</del> <sup>13</sup> <sub>4</sub> | Golf green estates/s/site plan     | 116 Lot subdivisions of 6,000 square foot parcels.  | 06-0061925                | --           | Old River Road and Camino Del Rey                                |
| <del>134</del> <sup>13</sup> <sub>5</sub> | Kawano subdivision                 | Tentative Map to subdivide 10.51 into 8 residential lots.   | 04-0029730                | 10.51        | 1050 Ora Avo Drive   |
| <del>135</del> <sup>13</sup> <sub>6</sub> | Mcintyre subdivision tm5014        | Lilac Mtn Rch: 22-lot/108-ac  | 05-0060917                | --           | 11278 Lilac Vista Drive;   |

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CUMULATIVE PROJECTS**

| Map Key #             | Project                        | Description  | Project Reference Numbers | Area (acres) | Location                                    |
|-----------------------|--------------------------------|--|---------------------------|--------------|---|
| <del>13613</del><br>7 | Oak glen                       | The project proposes major subdivision of 20.01 acres. The subdivision proposes nine single family residences on 2 acre minimum lots. 9 Single Family Residential.   | 05-0046937                | 20.01        | 14099 West Oak Glen Road                    |
| <del>13713</del><br>8 | Orchard vista, tm, rez         | Withdrawn  | 06-0064848                | --           | 13278 Orchard Vista Road                    |
| <del>13813</del><br>9 | Pauma ranches                  | The project is a Tentative Map to subdivide 100 acres into 22 residential lots, with each lot no less than 4 acres in size.  | 06-0064845                | 100          | 30434 Montrachet Street;                    |
| <del>13914</del><br>0 | Rabbit run, tm, 10 lots        | The project is a major subdivision of 17.70 gross acres into 7 lots ranging in size from 2.03 to 4.02 gross acres.   | 06-0057789                | 17.7         | 29222, 29270 Duffwood Lane                  |
| <del>14014</del><br>1 | West lilac farms i & ii        | Approved Tentative Map for 28 single family lots on 92.8 acres.  | 04-14957                  | 92.8         | 31817 Via Ararat Drive; 32542 Aquaduct Road |
| <del>14114</del><br>2 | Boyer tpm 20794                | Approved Tentative Parcel Map for 3 lots on 3 acres.   | 04-11552                  | 3            |   |
| <del>14214</del><br>3 | Cunningham- tpm, 2 lots        | The project proposes to create two legal lots from Assessor Parcel Numbers 172-140-62 and 64. Parcel 1 is 7.40 net acres and Parcel 2 is 17.6 net acres.   | 05-0060144                | 25           | 1221 Tarek Trail                            |
| <del>14314</del><br>4 | Fitzpatrick tpm                | The project is a minor subdivision of a 10.8-acre parcel currently being used for agriculture (avocado grove). The project proposes to develop four residential lots ranging in size from 2.3 to 3.1 acre. | 04-0023583                | 10.8         | Tomsyl Road                                 |
| <del>14414</del><br>5 | Gangavalli, tpm, 2 lots        | The project proposes to divide 5.05 net acres into 2 parcels measuring 2.51 acres gross (2.29 acres net), and 2.51 acres gross (2.45 acres net).   | 07-0086629                | 5.05         | 10418 King Sanday Lane                      |
| <del>14514</del><br>6 | Goodnight ranchos, tpm, 2 lots | The project proposes to divide 5.0 acres into 2 parcels measuring 2.45 acres net each. The proposed parcels will have frontage upon Circle R Lane.   | 06-0058961                | 5.0          | 30359 Circle R Lane                         |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key #                                 | Project   | Description  | Project Reference Numbers | Area (acres) | Location                               |
|---|---|--|---------------------------|--------------|--|
| <del>146</del> <sup>14</sup> <sub>7</sub> | Harlow minor subdivision ( 3 lots); tpm             | 3 Lot Subdivision  | 08-0096323                | --           | 12542 Betsworth Road                   |
| <del>147</del> <sup>14</sup> <sub>8</sub> | Hefner/brown 4 lot and remainder tpm: tp            | Subdivide a +/-57.9 acre parcel into four lots plus a remainder (lots range from 7.4 to 13.1 net acres).   | 09-0108702                | 57.9         | 31460 Aquaduct Road                    |
| <del>148</del> <sup>14</sup> <sub>9</sub> | Kim tentative parcel map                            | 4 lots TPM w/ Remainder Parcel<br>The project is a tentative parcel map application to subdivide a 46.72 acre parcel into 4 lots plus a remainder lot, ranging in area from 7.4 acres to 12.2 acres, for residential land use. | 10-0135167                | 46.72        | 29640 Pamoosa Lane                     |
| <del>149</del> <sup>15</sup> <sub>0</sub> | Kirkorowicz, tpm,                                   | The project proposes a two lot subdivision for the creation of two single-family residences and associated driveways and septic.   | 05-0054874                | 8.58         | Fairview Road                          |
| <del>150</del> <sup>15</sup> <sub>1</sub> | Matheson, 2 lot tpm; tpm 21173                      | 12.83 acres into 2 residential lots of 4.013 and 8.259 net acres.  | 10-0122579                | 12.83        | 1202 Rancho Luiseno Road               |
| <del>151</del> <sup>15</sup> <sub>2</sub> | <del>McBride</del> <sup>McBride</sup> tpm, 2 lots   | 2-lot residential subdivision  | 07-0086911                | --           | 29945 Spearhead Trail                  |
| <del>152</del> <sup>15</sup> <sub>3</sub> | <del>McNally</del> <sup>McNally</sup> rd parcel map | The project proposes to divide 78.3 acres into 4 parcels and a remainder measuring 8.3 acres net, 4.2 acres net, 4.0 acres net, 4.0 acres net and 57.8 acres net, respectively.  | 06-0059622                | 78.3         | McNally Road; Lilac Road               |
| <del>153</del> <sup>15</sup> <sub>4</sub> | Modelmoa tpm  | Tentative Parcel Map to subdivide 21.1 acres into 4 parcels and a remainder.   | 04-13025                  | 21.1         | 30455 and 30463 Roadrunner Ridge South |
| <del>154</del> <sup>15</sup> <sub>5</sub> | Mustafa tpm   | Tentative Parcel Map to subdivide 16.4 acres into 4 parcels and a remainder.   | 04-11418                  | 16.4         | 9770 Circle R Road                     |
| <del>155</del> <sup>15</sup> <sub>6</sub> | Nichols whitman, tpm, 4 lots                        | TPM 4 Lots   | 05-0045920                | --           | 10015 W Lilac Road                     |
| <del>156</del> <sup>15</sup> <sub>7</sub> | Rimsa tpm 2 lots                                    | 2 Single Family Residential lots   | 06-0058024                | --           | 235 West Camino Calafia                |
| <del>157</del> <sup>15</sup> <sub>8</sub> | Rios, tentative parcel map; tpm 21143               | The project is a minor subdivision to create 2 parcels   | 08-0103568                | --           | 12902 Mirar de Valle Road              |

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**TABLE 6.1  
CUMULATIVE PROJECTS**

| Map Key #                    | Project                                  | Description   | Project Reference Numbers | Area (acres) | Location                           |
|------------------------------|--|---|---------------------------|--------------|------------------------------------|
| <del>15815</del><br><u>2</u> | Robinson, tpm, 4 lots                    | 4 Single Family Residential lots  | 07-0087850                | --           | 10127 Circle R Drive               |
| <del>15916</del><br><u>0</u> | Sage meadow tpm                          | 2 Single Family Residential lots  | 06-0070181                | --           | 13510 Sage Meadow Lane             |
| <del>16016</del><br><u>1</u> | Sanders, tpm, bc, 4 lots +               | Tentative Parcel Map: Standard 4 lots plus a reminder lot   | 04-0022522                | --           | 6993 W Lilac Road                  |
| <del>16116</del><br><u>2</u> | Souris, tpm, 4 lots                      | Divide 38.8 net acres into 4 parcels ranging in size from 4.01 to 21.47 net acres. One existing single-family residence and guesthouse resides on Parcel 3 and will remain  | 05-0060924                | 38.8         | 14174 Sun Rocks Drive              |
| <del>16216</del><br><u>3</u> | Tran tentative parcel map                | 4 Single Family Residential lots  | 04-0021712                | --           | 29623 Valley of the King Road      |
| <del>16316</del><br><u>4</u> | Turner, tpm                              | 4 Single Family Residential lots  | 08-0090536                | --           | 29133 Sandy Hill Drive             |
| <del>16416</del><br><u>5</u> | Weber, 4 lot tpm, tpm 21128              | 4 Single Family Residential lots  | 08-0097087                | 4.67         | 3458 Royal Road                    |
| <del>16516</del><br><u>6</u> | Wild, tentative parcel map; tpm 21170    | 4 Single Family Residential lots  | 09-0117871                | --           | 1560 Wild Acres Road               |
| <del>16616</del><br><u>7</u> | Yuan, minor subdivision + remainder, tpm | The project is a Tentative Map to subdivide 89.88 acres into four parcels plus a remainder parcel.  | 07-0082675                | 89.88        | Old River Road and Dentro de Lomas |
| <del>16716</del><br><u>8</u> | Pfaff, tpm, 3 lots                       | Tentative parcel map to divide a 7.79 acre parcel into three residential lots of 2.5, 2.1 and 2.7 net acres (Parcels 1, 2 and 3 respectively). The site contains an existing single-family residence on proposed Parcel 1 that would be retained.                                     | 06-0061790                | 7.79         | 32010 Caminito Quieto              |
| <del>16816</del><br><u>9</u> | Kohne residence, rez                     | Withdrawn   | 05-0045714                | --           | Calle Oro Verde                    |
| <del>169170</del>            | Castle creek condominiums, gpa, spa, rez | The project is a General Plan Amendment, Specific Plan Amendment, and Tentative Map to change the existing Land Use Designations to (21) Specific Plan Area in order to increase the density from 1.29 to 1.37 to allow a Tentative Map to subdivide the site into 63 dwelling units. | 05-0061049                | --           | 8790 Old Castle Road               |

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TABLE 6.1  
CUMULATIVE PROJECTS

| Map Key #  | Project      | Description  | Project Reference Numbers | Area (acres) | Location                           |
|------------|--------------|--|---------------------------|--------------|------------------------------------|
| <u>171</u> | <u>Sukup</u> | <u>The project is an Expired Map for a major subdivision, TM 5184, that was approved on June 10, 2004 and expired on June 10, 2007. The project now proposes to subdivide 24.62 gross acres into 9 single-family residential lots ranging in size from 2.02 to 2.90 net acres.</u> | <u>TM 5184</u>            | <u>24.62</u> | <u>east side of Rodriguez Road</u> |

Source: Chen Ryan Associates; ~~August 2012~~ May 2014

Note:

Changes in this table are associated with "Change 4" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

## 6.2 Existing Plus Cumulative Projects Plus Project Roadway Network and Traffic Volumes

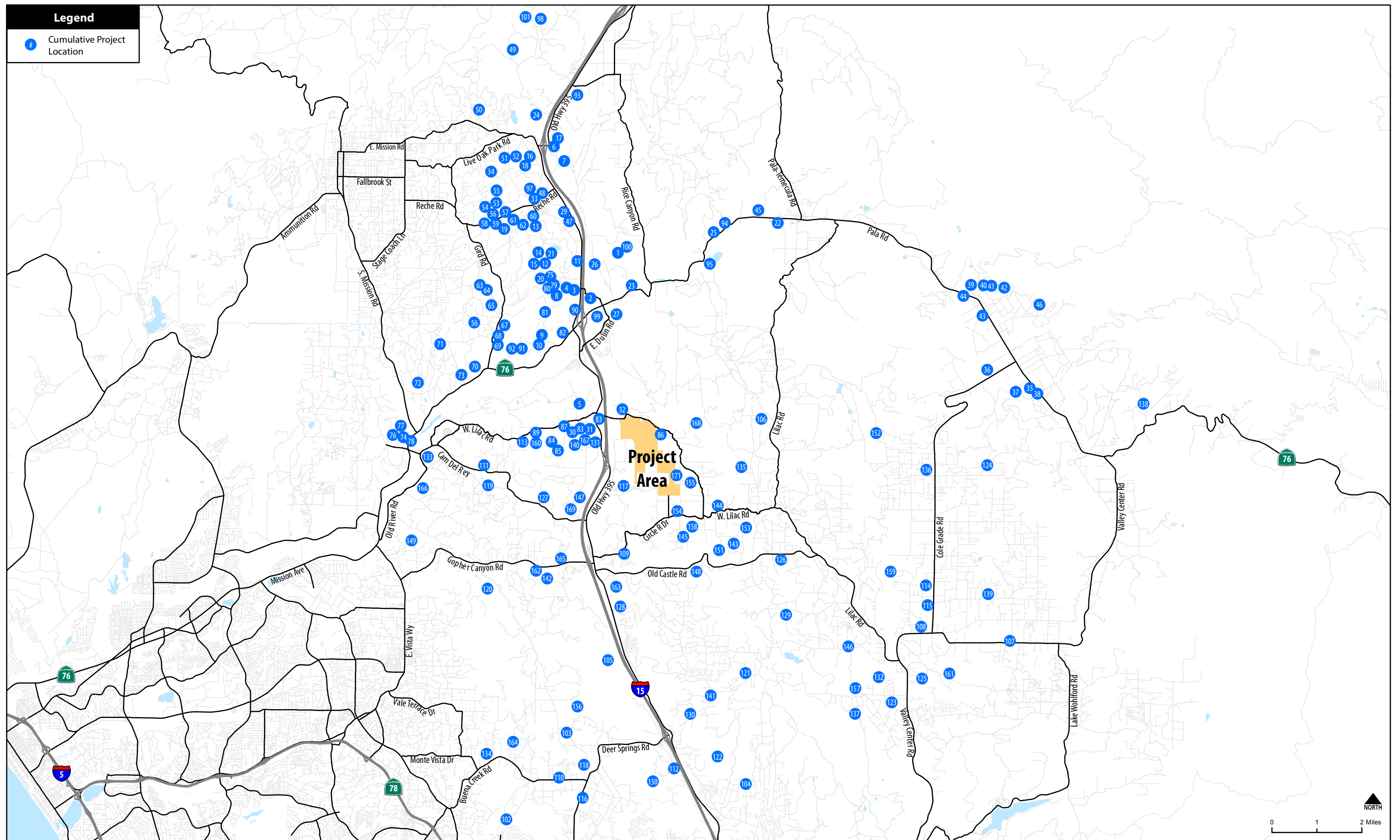
Intersection and roadway geometrics under Existing Plus Cumulative Projects Plus Project conditions were assumed to be largely identical to Existing conditions, with the following two (2) exceptions:

- SR-76 is widened to 4 lanes – currently under construction; and
- Pankey Road, north of SR-76 is constructed as a 2-lane roadway through construction associated with cumulative projects, and the need to provide direct access to those projects. This segment of Pankey Road is currently required to be improved as conditions of the previously approved Campus Park and Meadowood projects. Specifically, these projects have been conditioned to construct the roadway to its current Mobility Element Road Classification of 2.1A. The environmental impacts associated with the improvement of Pankey Road are described in the Campus Park EIR.

Study area roadway and intersection geometrics are displayed in **Figures 6-2A** and **6-2B**, respectively. *It should be noted that, other than Pankey Road, this analysis did not assume any traffic mitigation and/or transportation system improvements by any of the anticipated cumulative land development projects. Based upon the project descriptions of a number of the cumulative projects, significant roadway improvements would in fact be forthcoming to satisfy CEQA requirements.*

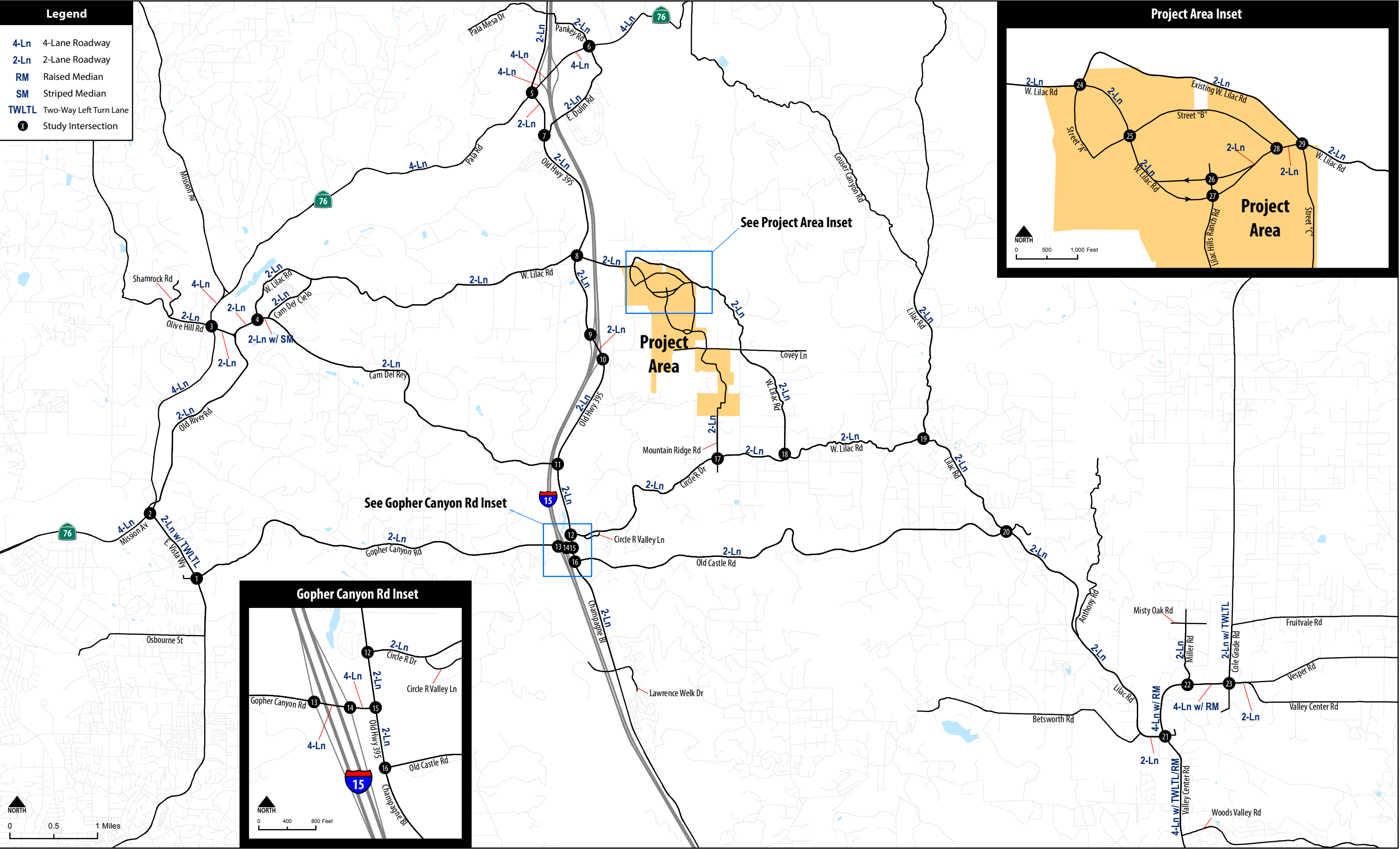
Traffic volumes were developed by adding cumulative project traffic and the proposed project trip to Existing traffic volumes.

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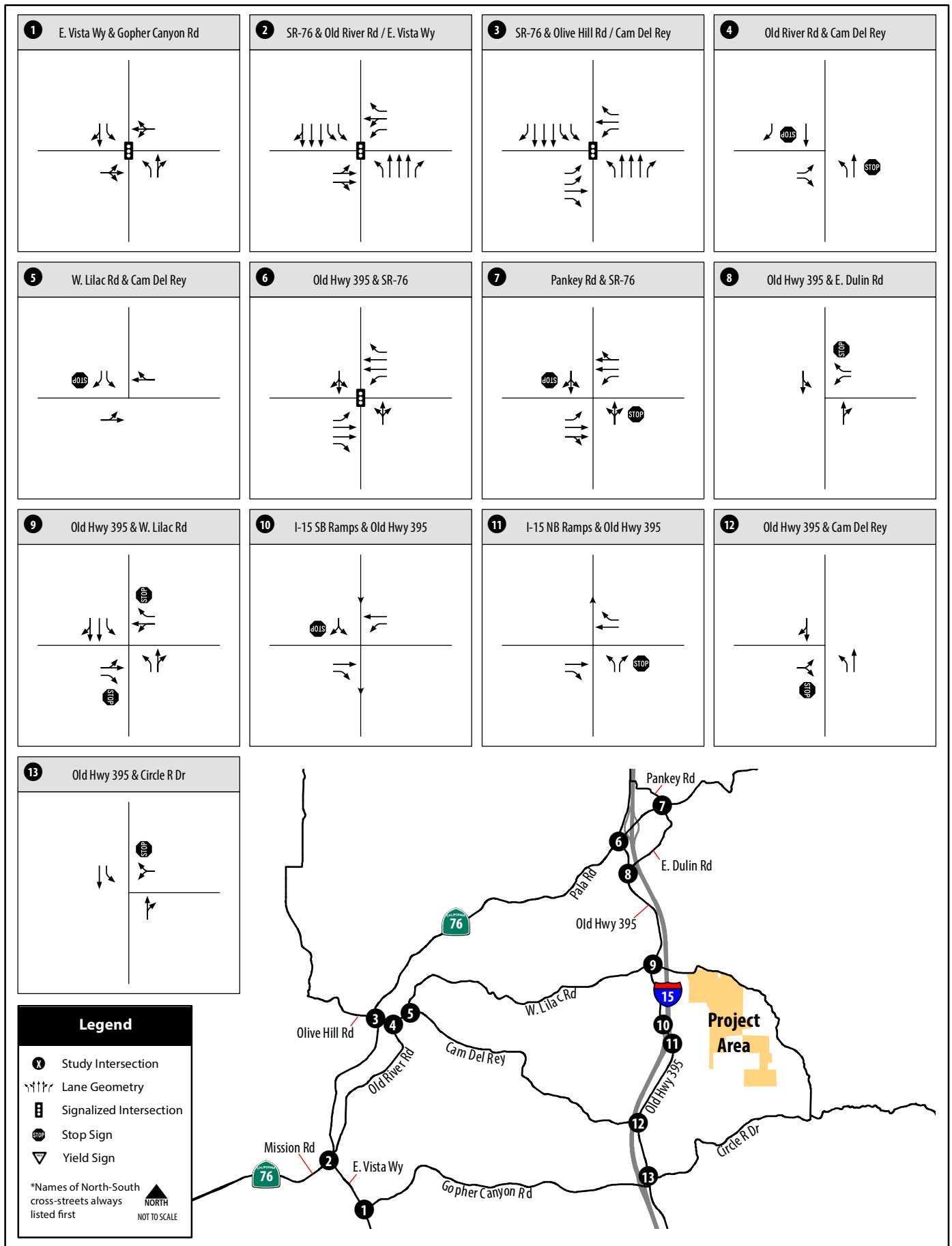
**Figure 6-1**  
**Cumulative Project Locations**





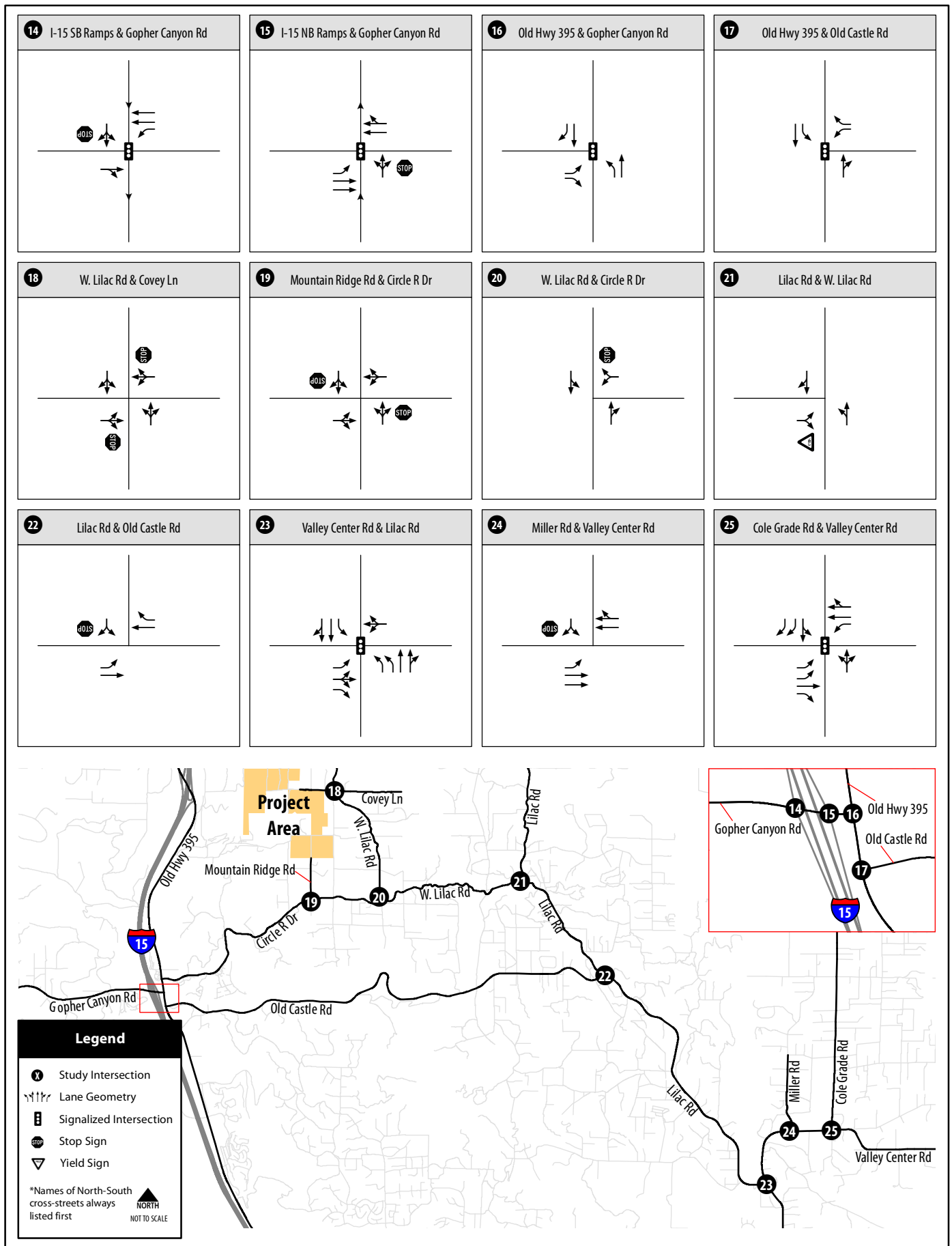
Lilac Hills Ranch Traffic Impact Study

Figure 6-2A  
Roadway Geometrics - Existing Plus Cumulative Projects Plus Project Conditions



Lilac Hills Ranch Traffic Impact Study

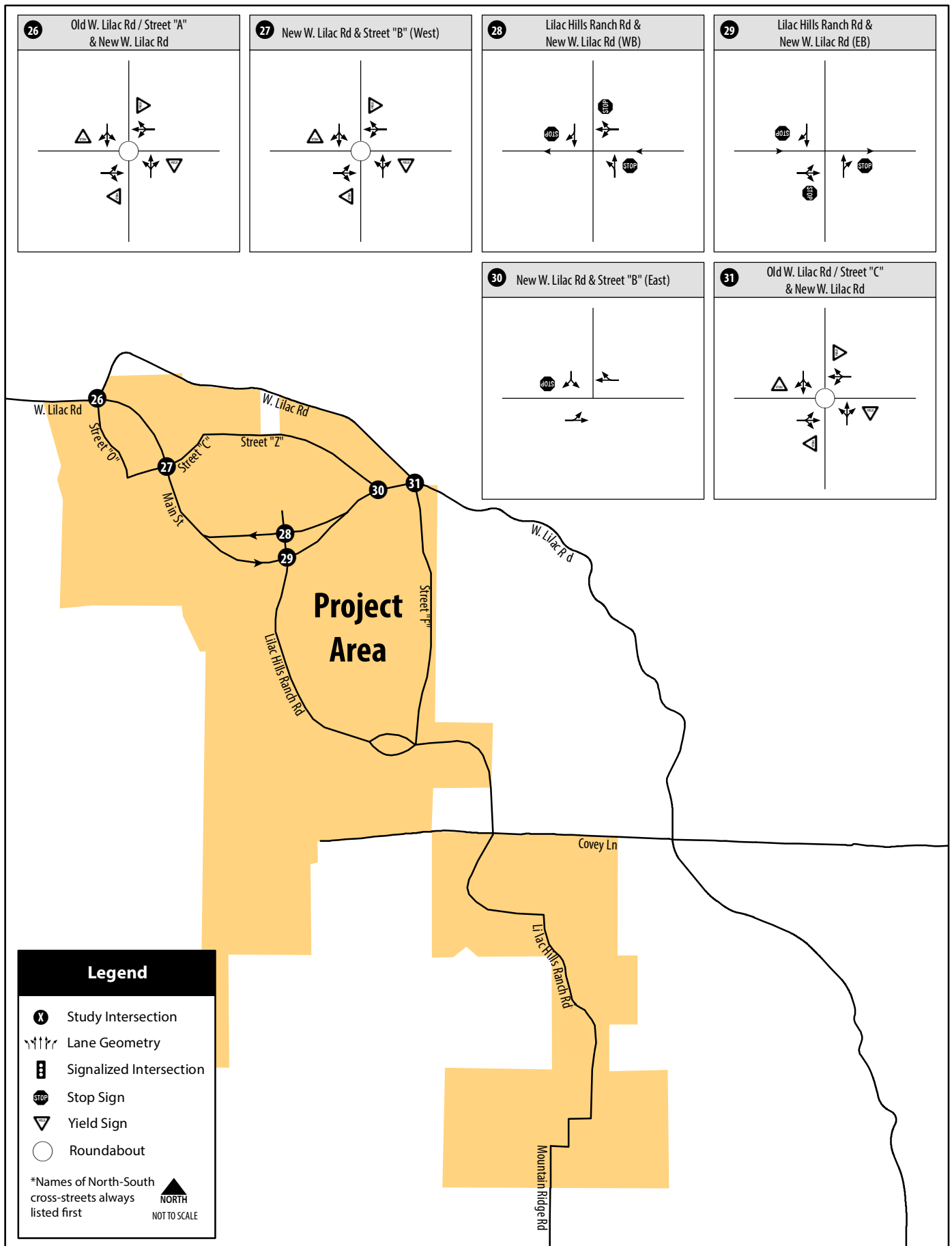
Figure 6-2B (Intersections 1-13)



Lilac Hills Ranch Traffic Impact Study

Figure 6-2B (Intersections 14-25)





Lilac Hills Ranch Traffic Impact Study

Figure 6-2B (Intersections 26-31)

### 6.3 Existing Plus Cumulative Projects Plus Project Traffic Conditions

Level of service analyses under Existing Plus Cumulative Projects Plus Project conditions were conducted using the methodologies described in Chapter 2.0. Roadway segment, intersection, freeway segment, and ramp intersection level of service results are discussed separately below. Average daily traffic volumes on study area roadway segments are displayed in **Figure 6-3A**, while peak hour traffic volumes at the key study area intersections are displayed in **Figure 6-3B**. Note that the traffic volume figures were modified to reflect the project access “Change 1” and additional cumulative project “Change 4” as described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”.

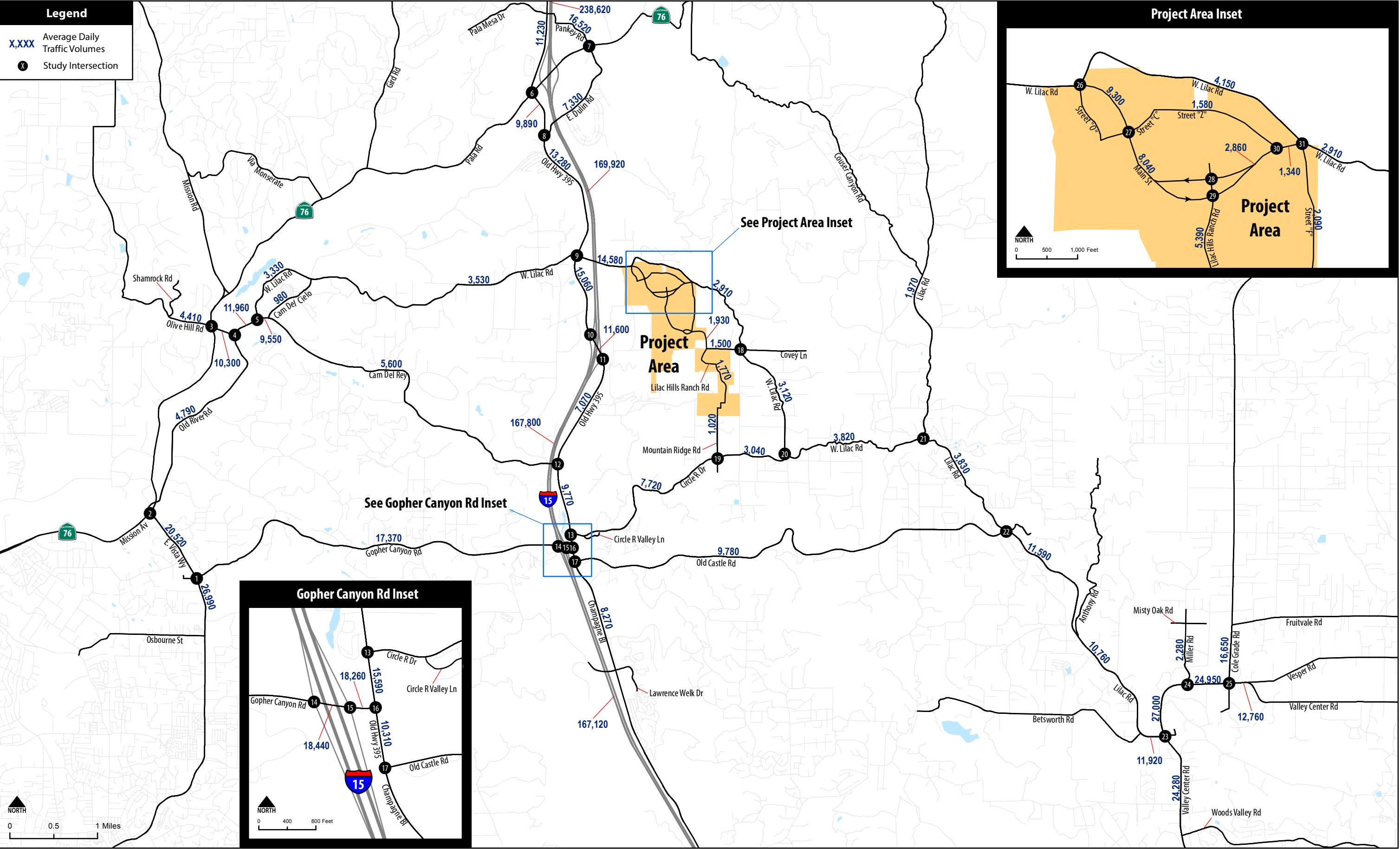
#### Roadway Segment Analysis

**Table 6.2** displays the level of service analysis results for key roadway segments under Existing Plus Cumulative Projects Plus Project conditions. As shown in the table, the following ~~eight~~ nine (9) roadway segments would ~~continue to~~ operate substandard LOS E or F:

- W. Lilac Road, between Old Highway 395 and Main Street – LOS F, and the cumulative projects plus the proposed project would add more than 100 daily trips.
- Camino Del Rey, between Old River Road and W. Lilac Road - LOS E, and the cumulative projects plus the proposed project would add more than 200 daily trips.
- ~~Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps – LOS F, and the cumulative projects plus the proposed project would add more than 100 daily trips.~~
- E. Vista Way, between SR-76 and Vista Way and Little Gopher Canyon Road – LOS F, and the cumulative projects plus the proposed project would add more than 100 daily trips.
- E. Vista Way Gopher Canyon Road, between Little Gopher Canyon Road and Osborne Street I-15 SB Ramps – LOS F, and the cumulative projects plus the proposed project would add more than 100 daily trips.
- E. Vista Way, between SR-76 and Gopher Canyon Road – LOS F, and the cumulative projects plus the proposed project would add more than 100 daily trips.
- E. Vista Way, between Gopher Canyon Road and Osborne Street – LOS F, and the cumulative projects plus the proposed project would add more than 100 daily trips.
- Pankey Road, between Pala Mesa Drive and SR-76 - LOS F, and the cumulative projects would add more than 100 daily trips.
- Lilac Road, between Old Castle Road and Anthony Road - LOS E, and the cumulative projects plus the proposed project would add more than 200 daily trips.
- Cole Grade Road, between Fruitvale Road and Valley Center Road - LOS E, and the cumulative projects plus the proposed project would add more than 200 daily trips.

Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by the proposed Lilac Hills Ranch project and the anticipated cumulative projects would result in cumulative impacts to all ~~eight~~ nine (9) roadway segments.

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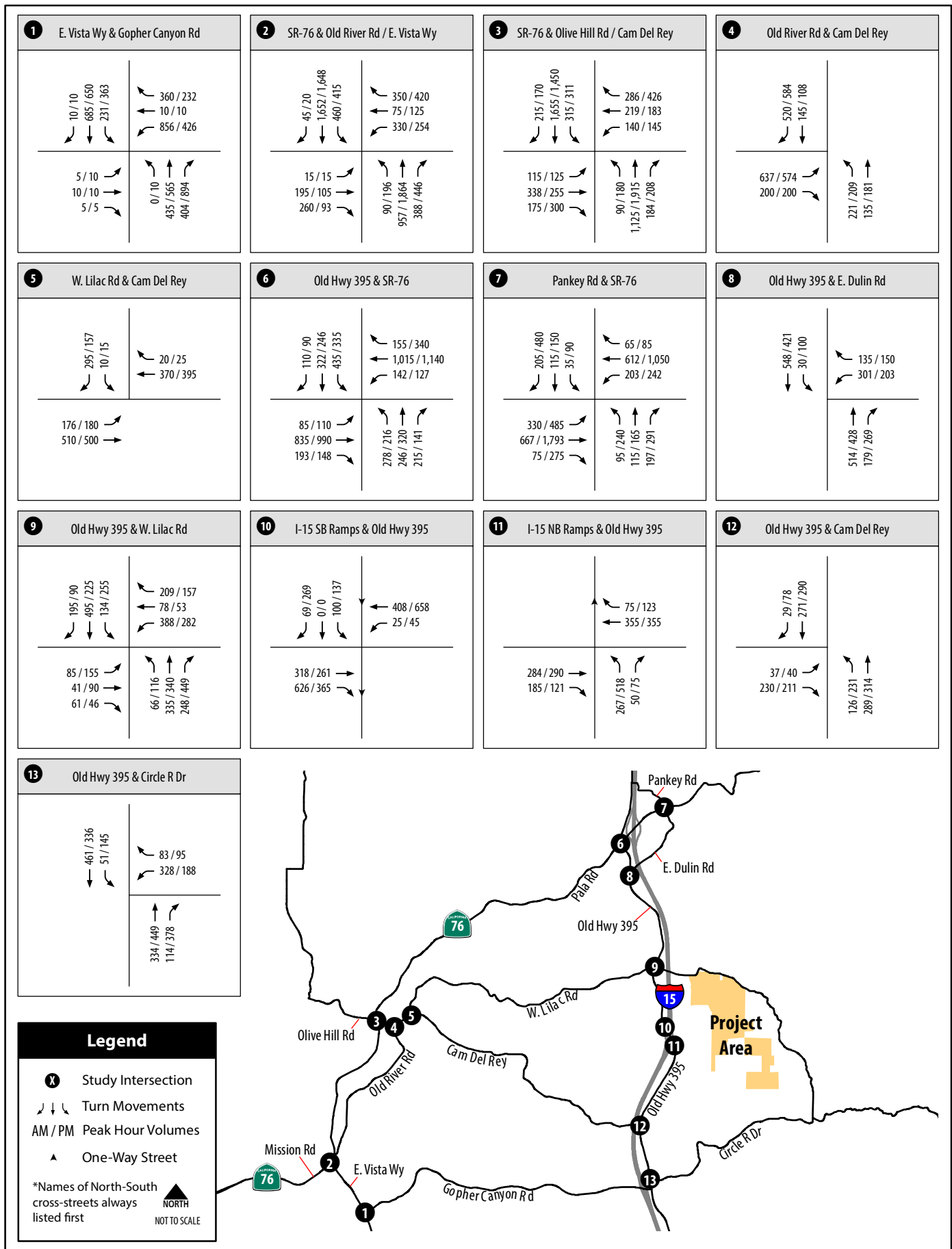


Lilac Hills Ranch Traffic Impact Study

CHEN RYAN

Figure 6-3A

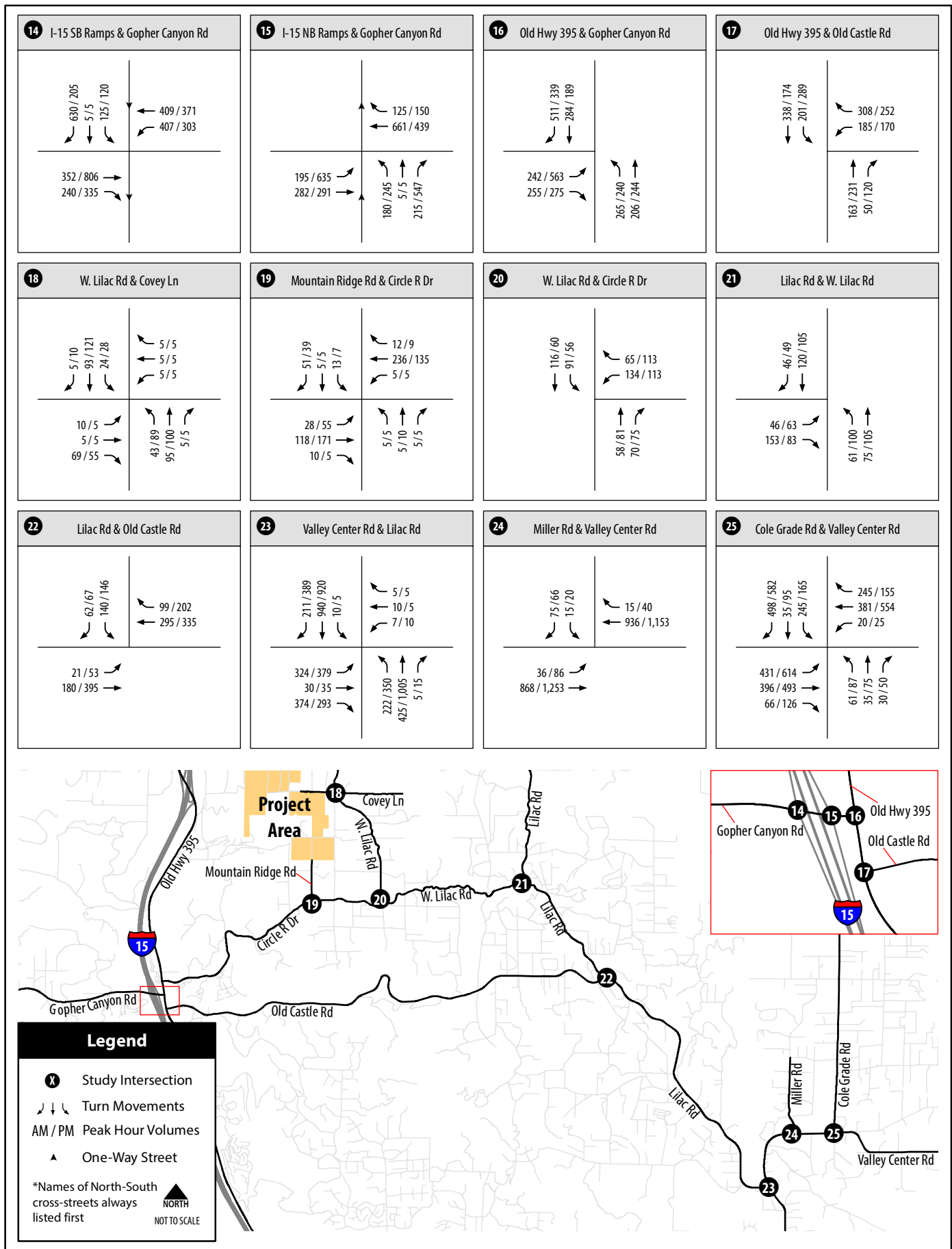
Roadway Average Daily Traffic Volumes - Existing Plus Cumulative Projects Plus Project Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 6-3B (Intersections 1-13)

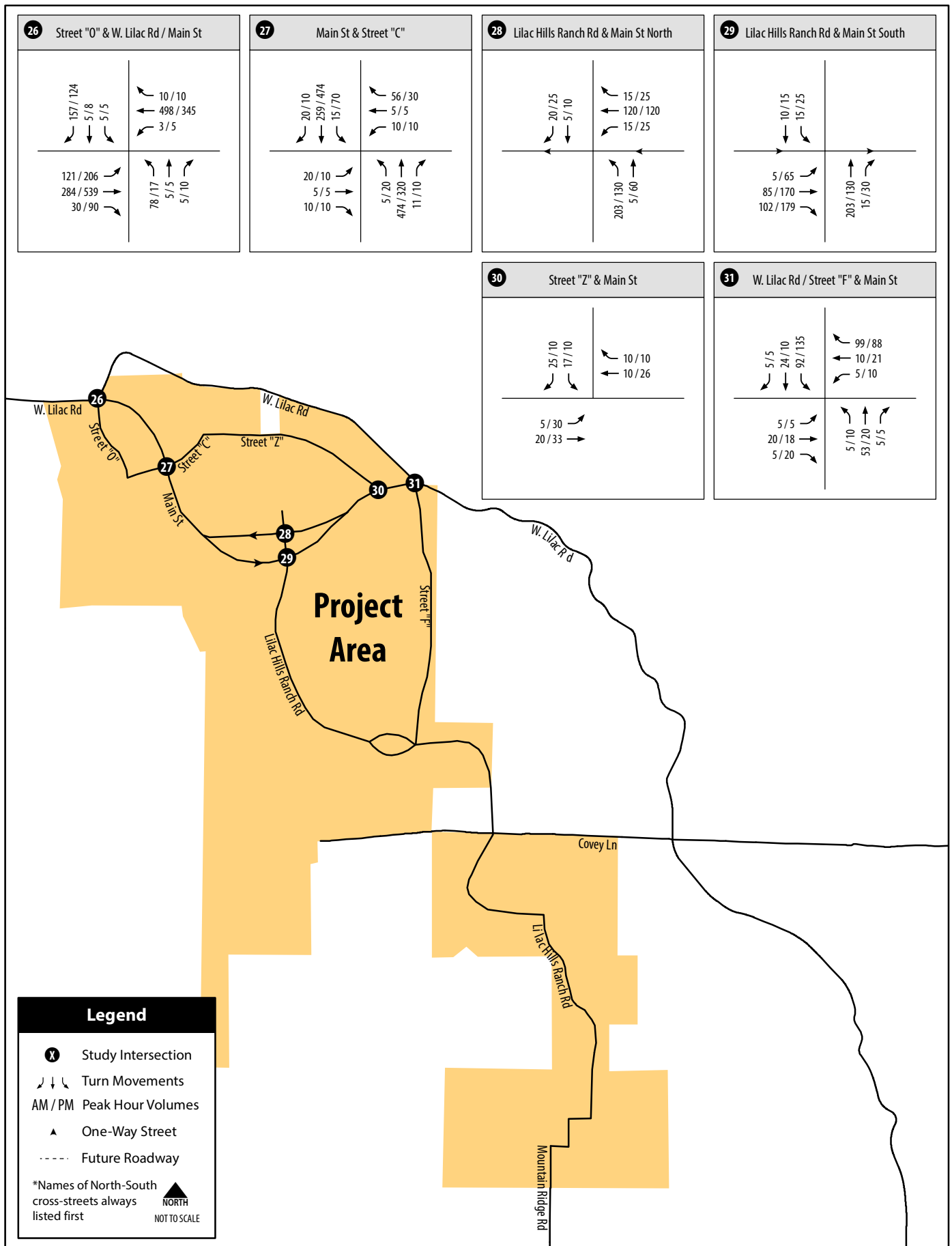
Intersection Peak Hour Traffic Volumes -  
Existing Plus Cumulative Projects Plus Project Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 6-3B (Intersections 14-25)

Intersection Peak Hour Traffic Volumes -  
Existing Plus Cumulative Projects Plus Project Conditions



Lilac Hills Ranch Traffic Impact Study

Figure 6-3B (Intersections 26-31)

Intersection Peak Hour Traffic Volumes -  
Existing Plus Cumulative Projects Plus Project Conditions

**TABLE 6.2  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| Roadway            | From             | To               | With Cumulative Projects + Project |                             |                            |               | Existing |               | Cumulative<br>Projects +<br>Project ADT | Cumulative<br>Impact? |
|--------------------|------------------|------------------|------------------------------------|-----------------------------|----------------------------|---------------|----------|---------------|---|-----------------------|
|                    |                  |                  | Cross-<br>Section                  | LOS<br>Threshold<br>(LOS D) | ADT                        | LOS           | ADT      | LOS           |   |                       |
| E. Dulin Road      | Old Highway 395  | SR-76            | 2-Ln                               | <del>10,900</del><br>9,800  | 7,330                      | D             | 1,830    | <del>AB</del> | 5,500                                   | No                    |
| W. Lilac Road      | Camino Del Rey   | Camino Del Cielo | 2-Ln                               | <del>8,700</del><br>7,800   | 3,330                      | A             | 2,270    | A             | 1,060                                   | No                    |
| W. Lilac Road      | Camino Del Cielo | Old Highway 395  | 2-Ln                               | <del>8,700</del><br>7,800   | 3,530                      | A             | 2,140    | A             | 1,390                                   | No                    |
| W. Lilac Road      | Old Highway 395  | Main Street      | 2-Ln                               | 8,700                       | <del>12,800</del><br>4,580 | F             | 1,150    | A             | <del>11,650</del><br>12,350             | Yes<br>> 100ADT       |
| W. Lilac Road      | Main Street      | Street "F"       | 2-Ln                               | <del>8,700</del><br>7,800   | <del>3,110</del><br>4,150  | A             | 1,150    | A             | <del>2,000</del>                        | No                    |
| W. Lilac Road      | Street "F"       | Covey Lane       | 2-Ln                               | <del>8,700</del><br>7,800   | <del>1,870</del><br>2,910  | A             | 1,150    | A             | <del>720</del><br>760                   | No                    |
| W. Lilac Road      | Covey Lane       | Circle R Drive   | 2-Ln                               | <del>8,700</del><br>7,800   | <del>3,120</del>           | A             | 480      | A             | <del>2,140</del>                        | No                    |
| W. Lilac Road      | Circle R Drive   | Lilac Road       | 2-Ln                               | <del>8,700</del><br>7,800   | <del>3,510</del><br>820    | A             | 1,170    | A             | <del>2,400</del>                        | No                    |
| Camino Del Cielo   | Camino Del Rey   | W. Lilac Road    | 2-Ln                               | 10,900                      | 980                        | A             | 630      | A             | 350                                     | No                    |
| Olive Hill Road    | Shamrock Road    | SR-76            | 2-Ln                               | 8,700                       | 4,410                      | A             | 3,380    | A             | 1,030                                   | No                    |
| Camino Del Rey     | SR-76            | Old River Road   | 2-Ln                               | 10,900                      | 10,300                     | D             | 9,350    | D             | 950                                     | No                    |
| Camino Del Rey     | Old River Road   | W. Lilac Road    | 2-Ln                               | <del>10,900</del><br>9,800  | 11,960                     | E             | 8,640    | D             | 3,320                                   | Yes<br>> 200ADT       |
| Camino Del Rey     | W. Lilac Road    | Camino Del Cielo | 2-Ln w/ SM                         | 13,500                      | 9,550                      | D             | 6,730    | C             | 2,820                                   | No                    |
| Camino Del Rey     | Camino Del Cielo | Old Highway 395  | 2-Ln                               | <del>8,700</del><br>7,800   | 5,600                      | <del>AB</del> | 4,850    | A             | 750                                     | No                    |
| Gopher Canyon Road | E. Vista Way     | I-15 SB Ramps    | 2-Ln                               | <del>10,900</del><br>9,800  | <del>16,270</del><br>7,370 | F             | 15,310   | <del>EF</del> | <del>1,960</del><br>950                 | Yes<br>> 100ADT       |

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**TABLE 6.2  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| Roadway             | From                | To                  | With Cumulative Projects + Project |                             |                           |               | Existing |               | Cumulative<br>Projects +<br>Project ADT | Cumulative<br>Impact? |
|---------------------|---------------------|---------------------|------------------------------------|-----------------------------|---------------------------|---------------|----------|---------------|---|-----------------------|
|                     |                     |                     | Cross-<br>Section                  | LOS<br>Threshold<br>(LOS D) | ADT                       | LOS           | ADT      | LOS           |   |                       |
| Gopher Canyon Road  | I-15 SB Ramps       | I-15 NB Ramps       | 4-Ln                               | 30,800                      | <del>18,490</del><br>40   | B             | 12,390   | A             | <del>6,400</del><br>5,950               | No                    |
| Gopher Canyon Road  | I-15 NB Ramps       | Old Highway 395     | 4-Ln                               | 30,800                      | <del>18,470</del><br>60   | B             | 11,870   | A             | <del>6,600</del><br>290                 | No                    |
| Circle R Drive      | Old Highway 395     | Mountain Ridge Road | 2-Ln                               | <del>10,900</del><br>9,800  | <del>7,450</del><br>720   | D             | 4,030    | <del>BC</del> | <del>3,420</del><br>2,690               | No                    |
| Circle R Drive      | Mountain Ridge Road | W. Lilac Road       | 2-Ln                               | <del>10,900</del><br>9,800  | <del>2,010</del><br>3,040 | B             | 1,770    | <del>AB</del> | <del>240</del><br>770                   | No                    |
| Old Castle Road     | Old Highway 395     | Lilac Road          | 2-Ln                               | <del>10,900</del><br>9,800  | <del>10,380</del><br>780  | D             | 6,840    | <del>ED</del> | 3,540                                   | No                    |
| E. Vista Way        | SR-76               | Gopher Canyon Road  | 2-Ln w/<br>TWLTL                   | 13,500                      | 20,520                    | F             | 15,120   | E             | 5,400                                   | Yes<br>> 100ADT       |
| E. Vista Way        | Gopher Canyon Road  | Osborne Street      | 2-Ln w/<br>TWLTL                   | 13,500                      | 26,990                    | F             | 21,020   | F             | 5,970                                   | Yes<br>> 100ADT       |
| Old River Road      | SR-76               | Camino Del Rey      | 2-Ln                               | <del>10,900</del><br>9,800  | 4,790                     | C             | 4,070    | <del>BC</del> | 720                                     | No                    |
| Champagne Boulevard | Old Castle Road     | Lawrence Welk Drive | 2-Ln                               | <del>13,500</del><br>10,700 | <del>7,770</del><br>8,270 | <del>ED</del> | 4,170    | <del>BC</del> | 3,600                                   | No                    |
| Pankey Road         | Pala Mesa Drive     | SR-76               | 2-Ln                               | <del>10,900</del><br>4,500  | 16,520                    | F             | 70       | A             | <del>15,540</del><br>16,450             | Yes<br>> 100ADT       |
| Lilac Road          | Couser Canyon Road  | W. Lilac Road       | 2-Ln                               | <del>8,700</del><br>7,800   | 1,970                     | A             | 1,150    | A             | 820                                     | No                    |
| Lilac Road          | W. Lilac Road       | Old Castle Road     | 2-Ln                               | <del>8,700</del><br>7,800   | 3,830                     | A             | 2,640    | A             | 1,190                                   | No                    |
| Lilac Road          | Old Castle Road     | Anthony Road        | 2-Ln                               | 10,900                      | 11,590                    | E             | 9,010    | D             | 2,580                                   | Yes<br>> 200ADT       |

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**TABLE 6.2**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| Roadway            | From              | To                 | With Cumulative Projects + Project |                       |        |     | Existing |     | Cumulative Projects + Project ADT | Cumulative Impact? |
|--------------------|-------------------|--------------------|------------------------------------|-----------------------|--------|-----|----------|-----|-----------------------------------|--------------------|
|                    |                   |                    | Cross-Section                      | LOS Threshold (LOS D) | ADT    | LOS | ADT      | LOS |                                   |                    |
| Lilac Road         | Anthony Road      | Betsworth Road     | 2-Ln                               | 10,900                | 10,760 | D   | 8,740    | D   | 2,020                             | No                 |
| Lilac Road         | Betsworth Road    | Valley Center Road | 2-Ln                               | 13,500                | 11,920 | D   | 9,620    | D   | 2,300                             | No                 |
| Valley Center Road | Woods Valley Road | Lilac Road         | 4/Ln w/ TWLTL/RM                   | 27,000                | 24,280 | D   | 21,290   | C   | 2,990                             | No                 |
| Valley Center Road | Lilac Road        | Miller Road        | 4-Ln w/ RM                         | 33,400                | 27,000 | C   | 24,280   | B   | 2,720                             | No                 |
| Valley Center Road | Miller Road       | Cole Grade Road    | 4-Ln w/ RM                         | 27,000                | 24,950 | D   | 22,440   | C   | 2,510                             | No                 |
| Valley Center Road | Cole Grade Road   | Vesper Road        | 2-Ln                               | 13,500                | 12,760 | D   | 11,490   | D   | 1,270                             | No                 |
| Miller Road        | Misty Oak Road    | Valley Center Road | 2-Ln                               | 87,000                | 2,280  | A   | 1,460    | A   | 820                               | No                 |
| Cole Grade Road    | Fruitvale Road    | Valley Center Road | 2-Ln w/ TWLTL                      | 13,500                | 16,650 | E   | 10,660   | D   | 5,990                             | Yes<br>> 200ADT    |

Source: Chen Ryan Associates; ~~June 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

RM = Raised Median.

SM = Striped Median.

TWLTL = Two-Way Left-Turn Lane.

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

Changes in this table are also associated with "Change 3" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

Changes in this table are also associated with "Change 4" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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## Intersection Analysis

**Table 6.3** displays intersection level of service and average vehicle delay results under Existing Plus Cumulative Projects Plus Project conditions. Level of service calculation worksheets are provided in **Appendix ACAA**. As shown in the table, the following ~~fourteen (14)~~twelve (12) study intersections would operate at substandard LOS E or F under Existing Plus Cumulative Projects Plus Project conditions:

- E. Vista Way / Gopher Canyon Road (County) – LOS F during both the AM and PM peak hour, and the cumulative projects plus project traffic would add more than 1 second of additional delay to this signalized intersection.
- ~~SR-76 / Old River Road/E. Vista Way (Caltrans) – LOS F during both the AM and PM peak hours, and the cumulative project plus project traffic would add two seconds or more of additional delay to this signalized intersection.~~
- ~~SR-76 / Olive Hill Road/Camino Del Rey (Caltrans) – LOS F during both the AM and PM peak hours, and the cumulative projects plus project traffic would add two seconds or more of additional delay to this signalized intersection.~~
- Old River Road / Camino Del Rey (County) – LOS F during the AM peak hour, and the cumulative projects plus project traffic would not add more than 5 peak hour trips to the critical movement of this unsignalized intersection.
- SR-76 / Old Highway 395 (Caltrans) – LOS F during both the AM and PM peak hours, and the cumulative projects plus project traffic would add two seconds or more of additional delay to this signalized intersection.
- SR-76 / Pankey Road (Caltrans) – LOS F during both the AM and PM peak hours, and the cumulative projects plus project traffic would add two seconds or more additional delay to this unsignalized intersection.
- Old Highway 395 / E. Dulin Road (County) – LOS F during both the AM and PM peak hours, and the cumulative projects plus project traffic would add more than 5 peak hour trips to the critical movement of this unsignalized intersection.
- Old Highway 395 / W. Lilac Road (County) – LOS F during both the AM and PM peak hours, and the cumulative projects plus project traffic would add more than 5 peak hour trips to the critical movement of this unsignalized intersection.
- I-15 SB Ramps / Old Highway 395 (Caltrans) – LOS ~~EF~~ during both the AM ~~peak hour~~ and ~~LOS F during the~~ PM peak ~~hour~~hours, and the cumulative projects plus project traffic would add two seconds or more additional delay to this unsignalized intersection.
- I-15 SB Ramps / Old Highway 395 (Caltrans) – LOS F during the PM peak hour, and the cumulative projects plus project traffic would add two seconds or more additional delay to this unsignalized intersection.
- Old Highway 395 / Circle R Drive (County) – LOS F during both the AM and PM peak hours, and the cumulative projects plus project traffic would add more than 5 peak hour trips to the critical movement of this unsignalized intersection.

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- I-15 SB Ramps / Gopher Canyon Road (Caltrans) – LOS F during both the AM and PM peak hours, and the cumulative projects plus project traffic would add more than two seconds of additional delay to this unsignalized intersection.
  - I-15 NB Ramps / Gopher Canyon Road (Caltrans) – LOS F during both the AM and PM peak hour, and the cumulative projects plus project traffic would add more than two seconds of additional delay to this unsignalized intersection.

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**TABLE 6.3  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| Intersection                              | Traffic Control | With Cumulative Projects + Project |                       |                               |                       | Existing                                    |                           | Change in Delay (sec.) AM / PM                | Cumulative Projects + Project Traffic to Critical Movements AM / PM | Cumulative Impact?                        |
|---|-----------------|------------------------------------|-----------------------|-------------------------------|-----------------------|---|---------------------------|---|---|---|
|   |                 | AM Peak Hour                       |                       | PM Peak Hour                  |                       | Delay (sec.) AM / PM                        | LOS AM / PM               |   |   |   |
|   |                 | Avg. Delay (sec.)                  | LOS                   | Avg. Delay (sec.)             | LOS                   |   |                           |   |   |   |
| 1. E. Vista Way / Gopher Canyon Road      | Signal          | <del>34.5</del> <u>250.0</u>       | <del>E</del> <u>F</u> | <del>93.0</del> <u>275.5</u>  | F                     | <del>24.3 / 48.7</del> <u>172.8 / 212.0</u> | <del>C / D</del> <u>E</u> | <del>1077.2 / 44.3</del> <u>363.5</u>         | -   | Yes<br>County Int. LOS Degrade & > 1 sec. |
| 2. SR-76 / Old River Road/E. Vista Way    | Signal          | <del>269.1</del> <u>140.4</u>      | <del>F</del> <u>D</u> | <del>303.9</del> <u>951.4</u> | <del>F</del> <u>D</u> | <del>73.9 / 52.3</del> <u>23.7 / 32</u>     | <del>E / D</del> <u>C</u> | <del>195.2 / 251.6</del> <u>16.7 / 19.4</u>   | -   | Yes<br>Caltrans Int. No                   |
| 3. SR-76 / Olive Hill Road/Camino Del Rey | Signal          | <del>231.9</del> <u>140.8</u>      | <del>F</del> <u>D</u> | <del>363.0</del> <u>951.2</u> | <del>F</del> <u>D</u> | <del>4321.6 / 60.8</del> <u>34.5</u>        | <del>D / E</del> <u>C</u> | <del>188.3 / 30219.2</del> <u>16.7</u>        | -   | Yes<br>Caltrans Int. > 2 sec. No          |
| 4. Old River Road / Camino Del Rey        | OWSC            | 109.1                              | F                     | 27.3                          | C                     | 23.2 / 12.2                                 | D / B                     | 85.9 / 15.1                                   | AM: NBL +3  | No<br>County Int. < 5 trips               |
| 5. W. Lilac Road / Camino Del Rey         | OWSC            | 21.9                               | C                     | 15.4                          | B                     | 15. <del>4</del> <u>7</u> / 11.0            | C / B                     | 6. <del>5</del> <u>2</u> / 4.4                | -   | No  |
| 6. Old Highway 395 / SR-76                | Signal          | <del>219.7</del> <u>190.3</u>      | F                     | <del>214.6</del> <u>190.7</u> | F                     | <del>4329.0 / 42.2</del> <u>39.8</u>        | <del>D</del> <u>C</u> / D | <del>176.7 / 172.4</del> <u>161.3 / 150.9</u> | -   | Yes<br>Caltrans Int. > 2 sec.             |
| 7. Pankey Road / SR-76                    | TWSC            | OVFL                               | F                     | OVFL                          | F                     | 12.5 / 15.2                                 | B / C                     | <u>OVFL</u> / <u>OVFL</u>                     | -   | Yes<br>Caltrans Int. > 2 sec.             |
| 8. Old Highway 395 / E. Dulin Road        | OWSC            | 364.5                              | F                     | 179.1                         | F                     | <del>14.6</del> <u>12.8</u> / 11.2          | B / B                     | <del>349.9</del> <u>351.7</u> / 167.9         | AM : WBL +89<br>PM : WBL +180                                       | Yes<br>County Int. > 5 trips              |

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**TABLE 6.3  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| Intersection                             | Traffic Control | With Cumulative Projects + Project |                |                         |     | Existing  |                    | Change in Delay (sec.) AM / PM                               | Cumulative Projects + Project Traffic to Critical Movements AM / PM | Cumulative Impact?            |
|--|-----------------|------------------------------------|----------------|-------------------------|-----|---|--------------------|--|---|-------------------------------|
|  |                 | AM Peak Hour                       |                | PM Peak Hour            |     | Delay (sec.) AM / PM                                    | LOS AM / PM        |  |   |                               |
|  |                 | Avg. Delay (sec.)                  | LOS            | Avg. Delay (sec.)       | LOS |   |                    |  |   |                               |
| 9. Old Highway 395 / W. Lilac Road       | TWSC            | OVFL                               | F              | OVFL                    | F   | <del>18.5</del> 14.7 / 13.3                             | C / B              | OVFL / OVFL  | AM : WBL + <del>306</del> 352 PM : WBL + <del>233</del> 266         | Yes<br>County Int. > 5 trips  |
| 10. I-15 SB Ramps / Old Highway 395      | OWSC            | <del>41.3</del> 71.0               | <del>E</del> F | <del>213.8</del> 344.3  | F   | 10.6 / 12.1   | B / B              | <del>30.7</del> / <del>201.7</del> 60.4 / <del>332.2</del>   | -   | Yes<br>Caltrans Int. > 2 sec. |
| 11. I-15 NB Ramps / Old Highway 395      | OWSC            | <del>46.7</del> 20.6               | C              | <del>64.3</del> 129.9   | F   | 9.98 / 11.2   | A / B              | <del>610.8</del> / <del>53.1</del> 118.7                     | -   | Yes<br>Caltrans Int. > 2 sec. |
| 12. Old Highway 395 / Camino Del Rey     | OWSC            | 14.4                               | B              | <del>19</del> 20.4      | C   | 10.1 / 11.0   | B / B              | 4.3 / <del>89.4</del>  | -   | No                            |
| 13. Old Highway 395 / Circle R Drive     | OWSC            | <del>347.6</del> 354.5             | F              | <del>529.5</del> 742.3  | F   | 20.4 / 22.5   | C / C              | <del>327.2</del> / <del>507.0</del> 334.1 / <del>719.8</del> | AM : WBL + <del>156</del> 110 PM : WBL + <del>107</del> 74          | Yes<br>County Int. > 5 trips  |
| 14. I-15 SB Ramps / Gopher Canyon Road   | OWSC            | OVFL <del>245</del> 1.2            | F              | OVFL <del>452</del> 2.3 | F   | 468.2 / 173.0   | F / F              | <del>1983.0</del> / <del>4349.3</del> OVFL / OVFL            | -   | Yes<br>Caltrans Int. > 2 sec. |
| 15. I-15 NB Ramps / Gopher Canyon Road   | OWSC            | <del>428.5</del> 549.7             | F              | <del>8370.3</del> OVFL  | F   | 30.5 / 1945.4   | D / F              | <del>398.0</del> / <del>6424.9</del> 519.2 / OVFL            | -   | Yes<br>Caltrans Int. > 2 sec. |
| 16. Old Highway 395 / Gopher Canyon Road | Signal          | <del>21.4</del> 23.1               | C              | <del>25.9</del> 30.4    | C   | <del>16.1</del> / <del>8.8</del> 11.0 / <del>14.7</del> | B / <del>A</del> B | <del>5.3</del> / <del>17</del> 12.1 / <del>15.7</del>        | -   | No                            |

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**TABLE 6.3  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| Intersection                                   | Traffic Control | With Cumulative Projects + Project |     |                      |                | Existing                 |             | Change in Delay (sec.) AM / PM               | Cumulative Projects + Project Traffic to Critical Movements AM / PM | Cumulative Impact?              |
|--|-----------------|------------------------------------|-----|----------------------|----------------|--------------------------|-------------|--|---|---------------------------------|
|  |                 | AM Peak Hour                       |     | PM Peak Hour         |                | Delay (sec.) AM / PM     | LOS AM / PM |  |   |                                 |
|  |                 | Avg. Delay (sec.)                  | LOS | Avg. Delay (sec.)    | LOS            |                          |             |  |   |                                 |
| 17. Old Highway 395 / Old Castle Road          | Signal          | 14. <del>09</del>                  | B   | <del>17.9</del> 18.3 | B              | 13.9 / 15.7              | B / B       | <del>1.0</del> 1 / 2. <del>26</del>          | -   | No                              |
| 18. W. Lilac Road / Covey Lane                 | TWSC            | <del>10.9</del> 11.3               | B   | <del>10.9</del> 13.4 | B              | 8.8 / 9. <del>43</del>   | B / A       | <del>2.5</del> 4.1 <del>4</del><br>4.8       | -   | No                              |
| 19. Mountain Ridge Road / Circle R Drive       | TWSC            | <del>11.3</del> 12.2               | B   | <del>14.5</del> 13.1 | B              | 9.3 / 9.6                | A / A       | <del>2.0</del> 4.9 <del>1</del><br>3.5       | -   | No                              |
| 20. W. Lilac Road / Circle R Drive             | OWSC            | <del>13.4</del> 14.6               | B   | <del>11.5</del> 12.4 | B              | 9.3 / 9.3                | A / A       | <del>5.3</del> 8 / 2.2 <del>1</del><br>3.1   | -   | No                              |
| 21. Lilac Road / W. Lilac Road                 | OWSC            | 11.1                               | B   | 12.0                 | B              | 9.6 / 9.9                | A / A       | 1.5 / 2.1                                    | -   | No                              |
| 22. Lilac Road / Old Castle Road               | OWSC            | 17.0                               | B   | 32.6                 | D              | 11.8 / 17.8              | B / C       | 5.2 / 14.8                                   | -   | No                              |
| 23. Valley Center Rd / Lilac Road              | Signal          | 38.9                               | D   | 52.7                 | D              | 10.5 / 22.6              | B / C       | 28.4 / 30.1                                  | -   | No                              |
| 24. Miller Road / Valley Center Road           | OWSC            | 23.3                               | C   | 103.0                | F              | 16.9 / 25. <del>20</del> | C / D       | 6.4 / 77.8                                   | PM : SB +29   | Yes<br>County Int.<br>> 5 trips |
| 25. Cole Grade Road / Valley Center Road       | Signal          | 36.6                               | D   | 48.8                 | D              | 31.1 / 34.9              | C / C       | 5.5 / 13.9                                   | -   | No                              |
| 26. Street "O" / W. Lilac Road/Main Street     | RA              | <del>10</del> 12.3                 | B   | <del>14.0</del> 16.9 | <del>B</del> C | DNE                      | DNE         | <del>10</del> 12.3 /<br><del>14.0</del> 16.9 | -   | No                              |
| 27. Main Street / Street "C"                   | RA              | <del>7.2</del>                     | A   | <del>8.2</del> 9.1   | A              | DNE                      | DNE         | <del>7.2</del> 8.2 <del>7</del> /<br>9.1     | -   | No                              |
| 28. Lilac Hills Ranch Road / Main Street North | AWSC            | 8. <del>59</del>                   | A   | 8. <del>58</del>     | A              | DNE                      | DNE         | 8. <del>59</del> / 8. <del>58</del>          | -   | No                              |

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**TABLE 6.3**  
**PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS**  
**EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| Intersection                                   | Traffic Control | With Cumulative Projects + Project |     |                   |     | Existing             |             | Change in Delay (sec.) AM / PM | Cumulative Projects + Project Traffic to Critical Movements AM / PM | Cumulative Impact? |
|--|-----------------|------------------------------------|-----|-------------------|-----|----------------------|-------------|--------------------------------|---|--------------------|
|  |                 | AM Peak Hour                       |     | PM Peak Hour      |     | Delay (sec.) AM / PM | LOS AM / PM |                                |   |                    |
|  |                 | Avg. Delay (sec.)                  | LOS | Avg. Delay (sec.) | LOS |                      |             |                                |   |                    |
| 29. Lilac Hills Ranch Road / Main Street South | AWSC            | 8.39                               | A   | 9.711.1           | AB  | DNE                  | DNE         | 8.3/9.7 / 11.1                 | -   | No                 |
| 30. Street "Z" / Main Street                   | OWSC            | 8.7                                | A   | 9.0               | A   | DNE                  | DNE         | 8.7 / 9.0                      | -   | No                 |
| 31. W. Lilac Road/Street "F" / Main Street     | RA              | 4.4                                | A   | 4.56              | A   | DNE                  | DNE         | 4.4 / 4.56                     | -   | No                 |

Source: Chen Ryan Associates; May 20132014

**Notes:**

Bold letter indicates unacceptable LOS E of F.

AWSC = All-Way Stop Controlled.

TWSC = Two-Way Stop Controlled.

OWSC = One-Way Stop Controlled.

RA = Roundabout.

DNE = Does Not Exist.

For OWSC and TWSC intersections, the delay shown is the worst delay experienced by any of the approaches.

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

Changes in this table are also associated with "Change 4" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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- Miller Road / Valley Center Road (County) – LOS F during the PM peak hour, and the cumulative projects plus project would add more than 5 peak hour trips to the critical movement of this unsignalized intersection.

Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by the proposed Lilac Hills Ranch project and the other anticipated cumulative projects would result in cumulative impacts at all above mentioned intersections except for the intersection of Old River Road and Camino Del Rey.

### **Two-Lane Highway Analysis**

**Table 6.4** displays two-lane highway level of service analysis results for Old Highway 395 under Existing Plus Cumulative Projects Plus Project conditions. The two-lane highway level of service analysis was performed utilizing the methodology presented in Chapter 2.0.

As shown in the table, all segments along Old Highway 395 would operate at acceptable LOS D or better under Existing Plus Cumulative Projects Plus Project conditions and the additional traffic generated by the proposed Lilac Hills Ranch project and the other anticipated cumulative projects would not cause any direct impacts to Old Highway 395.

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TABLE 6.4  
TWO-LANE HIGHWAY LEVEL OF SERVICE RESULTS  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS

| 2-Ln Highway           | From                      | To                        | With Cumulative Projects + Project |               |                    | Existing      |                    | Cumulative<br>Projects +<br>Project<br>ADT | Cumulative<br>Impact? |
|------------------------|---------------------------|---------------------------|------------------------------------|---------------|--------------------|---------------|--------------------|--|-----------------------|
|                        |                           |                           | LOS<br>Threshold<br>(LOS D)        | ADT           | LOS                | ADT           | LOS                |  |                       |
| Old Highway 395        | Pala Mesa Drive           | SR-76                     | 16,200                             | 11,230        | D or better        | 4,770         | D or better        | 6,460                                      | No                    |
| Old Highway 395        | SR-76                     | E. Dulin Road             | 16,200                             | 9,890         | D or better        | 4,720         | D or better        | 5,170                                      | No                    |
| <u>Old Highway 395</u> | <u>E. Dulin Road</u>      | <u>W. Lilac Road</u>      | <u>16,200</u>                      | <u>13,280</u> | <u>D or better</u> | <u>4,340</u>  | <u>D or better</u> | <u>8,440</u>                               | <u>No</u>             |
| <u>Old Highway 395</u> | <u>W. Lilac Road</u>      | <u>I-15 SB Ramps</u>      | <u>16,200</u>                      | <u>15,060</u> | <u>D or better</u> | <u>4,450</u>  | <u>D or better</u> | <u>9,610</u>                               | <u>No</u>             |
| <u>Old Highway 395</u> | <u>I-15 SB Ramps</u>      | <u>I-15 NB Ramps</u>      | <u>16,200</u>                      | <u>11,600</u> | <u>D or better</u> | <u>3,600</u>  | <u>D or better</u> | <u>7,500</u>                               | <u>No</u>             |
| <u>Old Highway 395</u> | <u>I-15 NB Ramps</u>      | <u>Camino Del Rey</u>     | <u>16,200</u>                      | <u>7,070</u>  | <u>D or better</u> | <u>2,430</u>  | <u>D or better</u> | <u>4,390</u>                               | <u>No</u>             |
| <u>Old Highway 395</u> | <u>Camino Del Rey</u>     | <u>Circle R Drive</u>     | <u>16,200</u>                      | <u>9,770</u>  | <u>D or better</u> | <u>5,820</u>  | <u>D or better</u> | <u>3,700</u>                               | <u>No</u>             |
| <u>Old Highway 395</u> | <u>Circle R Drive</u>     | <u>Gopher Canyon Road</u> | <u>16,200</u>                      | <u>15,590</u> | <u>D or better</u> | <u>10,710</u> | <u>D or better</u> | <u>4,680</u>                               | <u>No</u>             |
| <u>Old Highway 395</u> | <u>Gopher Canyon Road</u> | <u>Old Castle Road</u>    | <u>16,200</u>                      | <u>10,310</u> | <u>D or better</u> | <u>8,660</u>  | <u>D or better</u> | <u>1,380</u>                               | <u>No</u>             |

Source: Chen Ryan Associates; May 2014

Notes:

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

Changes in this table are also associated with "Change 4" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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### Freeway Segment Analysis

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. **Table 6.5** displays the resulting level of service for I-15 under Existing Plus Cumulative Projects Plus Project conditions.

As shown in the table, eight (8) of the I-15 freeway segments would operate at substandard LOS E or F under Existing Plus Cumulative Projects Plus Project conditions:

- I-15, between the Riverside County Boundary and Old Highway 395 – LOS F, and the cumulative projects plus project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Old Highway 395 and SR-76 – LOS F, and the cumulative projects plus project traffic would increase the V/C ratio by more than 0.01;
- I-15, between SR-76 and Old Highway 395 – LOS F, and the cumulative projects plus project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Old Highway 395 and Gopher Canyon Road – LOS F, and the cumulative projects plus project traffic would increase the V/C ratio by more than 0.01;

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|                 |                    |                    |        |        |             |        |             |       |    |
|-----------------|--------------------|--------------------|--------|--------|-------------|--------|-------------|-------|----|
| Old Highway 395 | E. Dulin Road      | W. Lilac Road      | 16,200 | 12,780 | D or better | 4,340  | D or better | 8,440 | No |
| Old Highway 395 | W. Lilac Road      | I-15 SB Ramps      | 16,200 | 13,310 | D or better | 4,450  | D or better | 8,860 | No |
| Old Highway 395 | I-15 SB Ramps      | I-15 NB Ramps      | 16,200 | 10,490 | D or better | 3,600  | D or better | 6,890 | No |
| Old Highway 395 | I-15 NB Ramps      | Camino Del Rey     | 16,200 | 6,370  | D or better | 2,430  | D or better | 3,940 | No |
| Old Highway 395 | Camino Del Rey     | Circle R Drive     | 16,200 | 9,060  | D or better | 5,820  | D or better | 3,240 | No |
| Old Highway 395 | Circle R Drive     | Gopher Canyon Road | 16,200 | 15,690 | D or better | 10,710 | D or better | 4,980 | No |
| Old Highway 395 | Gopher Canyon Road | Old Castle Road    | 16,200 | 10,040 | D or better | 8,660  | D or better | 1,380 | No |

Source: Chen Ryan Associates: January 2013

|      |  |         |      |        |      |   |      |        |       |       |   |       |               |
|------|--|---------|------|--------|------|---|------|--------|-------|-------|---|-------|---------------|
| I-15 | Riverside County Boundary to Old Highway 395 | 202,880 | 8.4% | 17,140 | 0.64 | 4 | 0.95 | 6.75%  | 2,963 | 1.261 | F | 0.428 | Yes<br>> 0.01 |
| I-15 | Old Highway 395 to SR 76                     | 238,620 | 7.4% | 17,751 | 0.73 | 4 | 0.95 | 6.75%  | 3,532 | 1.503 | F | 0.659 | Yes<br>> 0.01 |
| I-15 | SR 76 to Old Highway 395                     | 169,420 | 7.8% | 13,252 | 0.69 | 4 | 0.95 | 8.40%  | 2,491 | 1.060 | F | 0.353 | Yes<br>> 0.01 |
| I-15 | Old Highway 395 to Gopher Canyon Road        | 167,170 | 8.1% | 13,501 | 0.67 | 4 | 0.95 | 8.40%  | 2,472 | 1.052 | F | 0.360 | Yes<br>> 0.01 |
| I-15 | Gopher Canyon Road to Deer Springs Road      | 166,620 | 8.1% | 13,456 | 0.67 | 4 | 0.95 | 13.20% | 2,521 | 1.073 | F | 0.319 | Yes<br>> 0.01 |
| I-15 | Deer Springs Road to Centre City Parkway     | 166,030 | 8.0% | 13,339 | 0.66 | 4 | 0.95 | 13.20% | 2,486 | 1.058 | F | 0.312 | Yes<br>> 0.01 |
| I-15 | Centre City Parkway to El Norte Parkway      | 157,230 | 8.0% | 12,632 | 0.66 | 4 | 0.95 | 13.20% | 2,354 | 1.002 | F | 0.295 | Yes<br>> 0.01 |

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|      |   |         |      |        |      |       |      |        |       |       |   |       |              |
|------|---|---------|------|--------|------|-------|------|--------|-------|-------|---|-------|--------------|
| I-15 | El Norte Parkway to SR 78                     | 171,220 | 7.9% | 13,477 | 0.66 | 4     | 0.95 | 10.00% | 2,476 | 1.053 | F | 0.272 | Yes<br>>0.01 |
| I-15 | SR 78 to W Valley Parkway                     | 216,870 | 8.1% | 17,650 | 0.60 | 5+2ML | 0.95 | 10.00% | 1,672 | 0.711 | G | 0.082 | No           |
| I-15 | W Valley Parkway to Auto Parkway              | 199,490 | 8.1% | 16,235 | 0.60 | 5+2ML | 0.95 | 10.00% | 1,538 | 0.654 | G | 0.067 | No           |
| I-15 | Auto Parkway to W Citracado Parkway           | 191,330 | 7.8% | 14,839 | 0.60 | 5+2ML | 0.95 | 10.00% | 1,397 | 0.595 | B | 0.060 | No           |
| I-15 | W Citracado Parkway to Via Rancho Parkway     | 208,340 | 7.8% | 16,158 | 0.60 | 5+2ML | 0.95 | 7.00%  | 1,500 | 0.638 | G | 0.038 | No           |
| I-15 | Via Rancho Parkway to Bernardo Drive          | 238,480 | 7.4% | 17,551 | 0.58 | 5+2ML | 0.95 | 7.00%  | 1,580 | 0.672 | G | 0.114 | No           |
| I-15 | Bernardo Drive to Rancho Bernardo Road        | 213,610 | 7.4% | 15,721 | 0.58 | 5+2ML | 0.95 | 7.00%  | 1,415 | 0.602 | B | 0.036 | No           |
| I-15 | Rancho Bernardo Road to Bernardo Center Drive | 215,140 | 7.3% | 15,795 | 0.54 | 5+2ML | 0.95 | 7.00%  | 1,318 | 0.561 | B | 0.016 | No           |
| I-15 | Bernardo Center Drive to Camino Del Norte     | 216,170 | 7.3% | 15,871 | 0.54 | 5+2ML | 0.95 | 7.00%  | 1,324 | 0.563 | B | 0.006 | No           |

Source: Chen-Ryan Associates: January 2013

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- I-15, between Gopher Canyon Road and Deer Springs Road – LOS F, and the cumulative projects plus project traffic would increase the V/C ratio by more than 0.01;
  - I-15, between Deer Springs Road and Centre City Parkway – LOS F, and the cumulative projects plus project traffic would increase the V/C ratio by more than 0.01;
  - I-15, between Centre City Parkway and El Norte Parkway – LOS F, and the cumulative projects plus project traffic would increase the V/C ratio by more than 0.01; and
  - I-15, between El Norte Parkway and SR-78 – LOS F, and the cumulative projects plus project traffic would increase the V/C ratio by more than 0.01.

Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by the proposed Lilac Hills Ranch project and the other anticipated cumulative projects would result in cumulative impacts at all eight (8) I-15 freeway segments identified above.

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TABLE 6.5  
FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS

| Freeway | Segment                                      | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS w/ Project | Change in V/C (compare to Existing) | Cumulative Impact?   |
|---------|--|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|-------------------------------------|----------------------|
| I-15    | Riverside County Boundary to Old Highway 395 | 203,380 | 8.4%        | 17,182           | 0.64              | 4                        | 0.95 | 6.75%              | 2,970            | 1.264 | F              | 0.431                               | <u>Yes &gt; 0.01</u> |
| I-15    | Old Highway 395 to SR-76                     | 239,120 | 7.4%        | 17,789           | 0.73              | 4                        | 0.95 | 6.75%              | 3,540            | 1.506 | F              | 0.6620                              | <u>Yes &gt; 0.01</u> |
| I-15    | SR-76 to Old Highway 395                     | 169,920 | 7.8%        | 13,291           | 0.69              | 4                        | 0.95 | 8.40%              | 2,498            | 1.063 | F              | 0.3560                              | <u>Yes &gt; 0.01</u> |
| I-15    | Old Highway 395 to Gopher Canyon Road        | 167,800 | 8.1%        | 13,551           | 0.67              | 4                        | 0.95 | 8.40%              | 2,481            | 1.056 | F              | 0.3640                              | <u>Yes &gt; 0.01</u> |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 167,120 | 8.1%        | 13,496           | 0.67              | 4                        | 0.95 | 13.20%             | 2,528            | 1.076 | F              | 0.323                               | <u>Yes &gt; 0.01</u> |
| I-15    | Deer Springs Road to Centre City Parkway     | 166,530 | 8.0%        | 13,379           | 0.66              | 4                        | 0.95 | 13.20%             | 2,494            | 1.061 | F              | 0.316                               | <u>Yes &gt; 0.01</u> |
| I-15    | Centre City Parkway to El Norte Parkway      | 157,730 | 8.0%        | 12,672           | 0.66              | 4                        | 0.95 | 13.20%             | 2,362            | 1.005 | F              | 0.298                               | <u>Yes &gt; 0.01</u> |
| I-15    | 171,7202                                     | 171,220 | 7.9%        | 13,516           | 0.66              | 4                        | 0.95 | 10.00%             | 2,483            | 1.057 | F              | 0.275                               | <u>Yes &gt; 0.01</u> |
| I-15    | SR-78 to W Valley Parkway                    | 217,370 | 8.1%        | 17,691           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,676            | 0.713 | C              | 0.083                               | No                   |
| I-15    | W Valley Parkway to Auto Parkway             | 199,990 | 8.1%        | 16,276           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,542            | 0.656 | C              | 0.069                               | No                   |
| I-15    | Auto Parkway to W Citracado Parkway          | 191,830 | 7.8%        | 14,878           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 1,401            | 0.596 | B              | 0.062                               | No                   |
| I-15    | W Citracado Parkway to Via Rancho Parkway    | 208,840 | 7.8%        | 16,197           | 0.60              | 5+2ML                    | 0.95 | 7.00%              | 1,503            | 0.640 | C              | 0.039                               | No                   |

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**TABLE 6.5  
FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| Freeway     | Segment  | ADT            | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF         | % of Heavy Vehicle | Volume (pc/h/ln) | V/C          | LOS w/ Project | Change in V/C (compare to Existing) | Cumulative Impact? |
|-------------|--|----------------|-------------|------------------|-------------------|--------------------------|-------------|--------------------|------------------|--------------|----------------|-------------------------------------|--------------------|
| <u>I-15</u> | <u>Via Rancho Parkway to Bernardo Drive</u>          | <u>238,980</u> | <u>7.4%</u> | <u>17,588</u>    | <u>0.58</u>       | <u>5+2ML</u>             | <u>0.95</u> | <u>7.00%</u>       | <u>1,583</u>     | <u>0.674</u> | <u>C</u>       | <u>0.116</u>                        | <u>No</u>          |
| <u>I-15</u> | <u>Bernardo Drive to Rancho Bernardo Road</u>        | <u>214,110</u> | <u>7.4%</u> | <u>15,758</u>    | <u>0.58</u>       | <u>5+2ML</u>             | <u>0.95</u> | <u>7.00%</u>       | <u>1,419</u>     | <u>0.604</u> | <u>B</u>       | <u>0.037</u>                        | <u>No</u>          |
| <u>I-15</u> | <u>Rancho Bernardo Road to Bernardo Center Drive</u> | <u>215,640</u> | <u>7.3%</u> | <u>15,832</u>    | <u>0.54</u>       | <u>5+2ML</u>             | <u>0.95</u> | <u>7.00%</u>       | <u>1,321</u>     | <u>0.562</u> | <u>B</u>       | <u>0.017</u>                        | <u>No</u>          |
| <u>I-15</u> | <u>Bernardo Center Drive to Camino Del Norte</u>     | <u>216,670</u> | <u>7.3%</u> | <u>15,908</u>    | <u>0.54</u>       | <u>5+2ML</u>             | <u>0.95</u> | <u>7.00%</u>       | <u>1,327</u>     | <u>0.565</u> | <u>B</u>       | <u>0.0070</u>                       | <u>No</u>          |

Source: Chen Ryan Associates: May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

ML = Managed Lane.

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

Changes in this table are also associated with "Change 4" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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## Ramp Intersection Capacity Analysis

Consistent with Caltrans' requirements, the signalized intersections along SR-76 within the study area were analyzed under Existing Plus Cumulative Projects Plus Project conditions using the ILV procedures as described in Chapter 2.0. ILV analysis results are displayed in **Table 6.6** and analysis worksheets are provided in **Appendix ADAP**.

TABLE 6.6  
RAMP INTERSECTION CAPACITY ANALYSIS  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS

| Ramp Intersection                      | Peak Hour | ILV / Hour | Description            |
|--|-----------|------------|------------------------|
| SR-76 / Old River Road/E. Vista Way    | AM        | 1,884      | >1500: (Over Capacity) |
|  | PM        | 1,996      | >1500: (Over Capacity) |
| SR-76 / Olive Hill Road/Camino Del Rey | AM        | 2,163      | >1500: (Over Capacity) |
|  | PM        | 2,558      | >1500: (Over Capacity) |
| SR-76 / Old Highway 395                | AM        | 2,262      | >1500: (Over Capacity) |
|  | PM        | 2,044      | >1500: (Over Capacity) |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

As shown in the table, all three (3) signalized intersections along SR-76 would operate at "Over Capacity" during both the AM and PM peak hours under the Existing Plus Cumulative Projects Plus Project conditions.

## 6.4 Existing Plus Cumulative Projects Plus Project Impact Significance and Mitigation

This section identifies required mitigation measures for roadway, intersection, two-lane highway, and freeway facilities that would be significantly impacted by project-related traffic under Existing Plus Cumulative Projects Plus Project conditions.

### Roadway Segments

The total traffic generated by anticipated cumulative projects and the proposed project would result in cumulative impacts at ~~eight (8) of the study area roadway segments~~ nine (9) of the study area roadway segments. Mitigation measures would be required to mitigate significant cumulative traffic impacts. Generally, impacts to roadway segments that are included in the list of facilities included in the County's TIF would be mitigated through payment of TIF fees. For facilities not included in the County's TIF program, specific mitigation measures are proposed.

The following improvements would be required to mitigate the identified cumulative impacts:

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- Camino Del Rey, between Old River Road and W. Lilac Road - this roadway segment is included in the list of facilities included in the County's TIF.<sup>1</sup> The project applicant would be responsible for making TIF payments. This cumulatively impacted roadway segment would be mitigated through payment of the TIF fee.
- Gopher Canyon Road, between Little Gopher Canyon Road and I-15 SB Ramps – this roadway segment is included in the list of facilities included in the County's TIF. (see footnote 1 below) The project applicant would be responsible for making TIF payments. This cumulatively impacted roadway segment would be mitigated through payment of the TIF fee.
- E. Vista Way, between SR-76 and Gopher Canyon Road – this roadway segment is included in the list of facilities included in the County's TIF. (see footnote 1 below) The project applicant would be responsible for making TIF payments. This cumulatively impacted roadway segment would be mitigated through payment of the TIF fee.
- E. Vista Way, between Gopher Canyon Road and Osborne Street – this roadway segment is included in the list of facilities included in the County's TIF. (see footnote 1 below) The project applicant would be responsible for making TIF payments. This cumulatively impacted roadway segment would be mitigated through payment of the TIF fee.
- Cole Grade Road, between Fruitvale Road and Valley Center Road – this roadway segment is included in the list of facilities included in the County's TIF. (see footnote 1 below) The project applicant would be responsible for making TIF payments. This cumulatively impacted roadway segment would be mitigated through payment of the TIF fee.
- W. Lilac Road, between Old Highway 395 and Main Street – improve to the General Plan Mobility Element classification of 2.2C. The project applicant would be responsible for making TIF payments or was also identified as causing a fair share contribution in which the direct impact at this segment under Existing Plus Project (Phase C) scenario and hence the project applicant would be responsible for the construction of this improvement is a part of an approved Plan or Program. This cumulatively impacted roadway segment would operate at LOS ~~DE~~ with the roadway widening.
- Camino Del Rey, between Old River Road and W. Lilac Road – improve to the a 2.2C consistent with General Plan Mobility Element classification of 4.2B. The project applicant would be responsible for making TIF payments or a fair share contribution in

<sup>1</sup>Although the improvement is included in the list of facilities to be improved from the currently approved TIF Program; it is anticipated that the currently approved TIF Program will be updated by the County to accommodate the land use changes that would result from the project's approval. This update would revise fee rates associated with incorporating the project's land uses to the program. The TIF program enables County new development to pay its "fair share" by providing a mechanism to mitigate their cumulative impacts in accordance with CEQA requirements. TIF program revenue in combination with reasonably projected revenues based off historic receipts and future expected revenues will fund the completion of the Mobility Element in balance with the land uses guided by the County General Plan.

which the improvement is a part of an approved Plan or Program. This cumulatively impacted roadway segment would operate at LOS A with the roadway widening. The recommended mitigation measure for this impact would be to improve the road to 2.2C, install a traffic signal at the intersection of intersection of Old Highway 395 / W. Lilac Road, as well as constructing a left-turn lane at the westbound W. Lilac Road approach. The arterial analysis shown in **Appendix AQ** and summarized in **Table 6.7** below shows that the average travel speed along this segment would be LOS B.

- ~~Gopher Canyon Road, between E. Vista Way and I-15 SB Ramps~~ improve to the General Plan Mobility Element classification of 4.1B. The project applicant would be responsible for making TIF payments or a fair share contribution in which the improvement is a part of an approved Plan or Program. This cumulatively impacted roadway segment would operate at LOS B with the roadway widening.
- ~~E. Vista Way, between SR 76 and Gopher Canyon Road~~ improve to the General Plan Mobility Element classification of 4.1A. The project applicant would be responsible for making TIF payments or a fair share contribution in which the improvement is a part of an approved Plan or Program. This cumulatively impacted roadway segment would operate at LOS B with the roadway widening.
- ~~E. Vista Way, between Gopher Canyon Road and Osborne Street~~ improve to the General Plan Mobility Element classification of 4.1A. The project applicant would be responsible for making TIF payments or a fair share contribution in which the improvement is a part of an approved Plan or Program. This cumulatively impacted roadway segment would operate at LOS C with the roadway widening.
- ~~Pankey Road, between Pala Mesa Drive and SR 76~~ improve to 4.2B and this would exceed the General Plan Mobility Element classification designation of 2.1A. The project applicant would be responsible for making TIF payments or a fair share contribution in which the improvement is a part of an approved Plan or Program. This cumulatively impacted roadway segment would operate at LOS A with the roadway widening.

~~Lilac Road, between Old Castle Road and Anthony Road~~ improve to the General Plan Mobility Element classification of 2.1C. The project applicant would be responsible for making TIF payments or a fair share contribution in which the improvement is a part of an approved Plan or Program. In the case such a Plan or Program is not in place, as an alternative mitigation to the cumulative impact at this segment, the project applicant would

**TABLE 6.7**  
**ARTERIAL LEVEL OF SERVICE RESULTS AFTER MITIGATION**  
**EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| Arterial   | AM Peak Hour |     | PM Peak Hour |     |
|--|--------------|-----|--------------|-----|
|  | Speed (mph)  | LOS | Speed (mph)  | LOS |
| W. Lilac Road, between Old Highway 395 and Main Street | 21.6         | B   | 23.8         | B   |

Source: Chen Ryan Associates; May 2014

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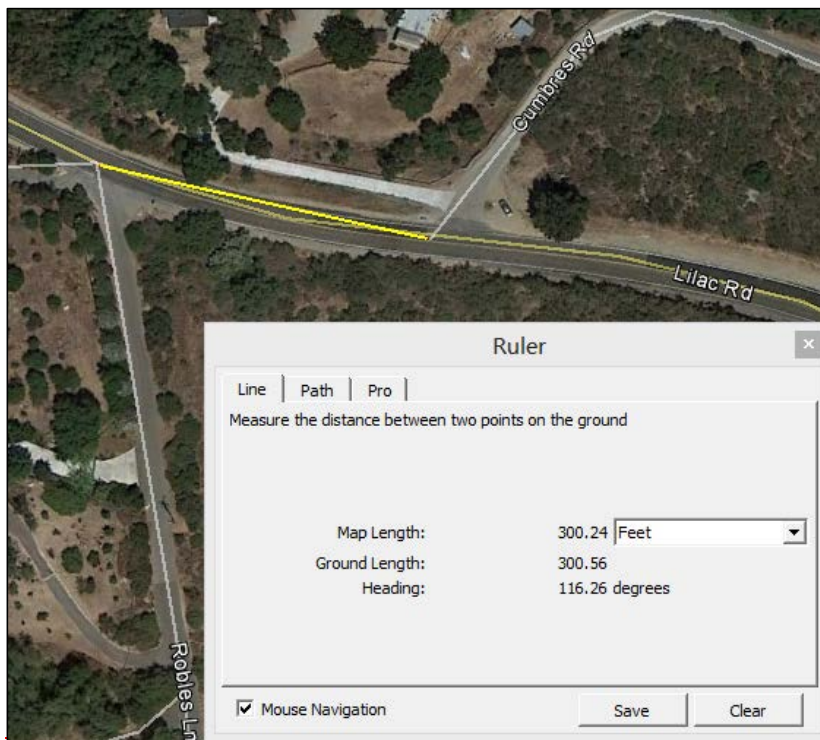
In addition, traffic control along W. Lilac Road includes a number of roundabouts, with implementation of the proposed project. It has been well documented by the La Jolla Bird Rock roundabouts and other national-level research that 2 lanes of travel with roundabouts can carry up to 25,000 cars per day, which exceeds the projected 14,560 ADT for W. Lilac Road. A multi-purpose trail is also provided along the south side of W. Lilac Road and this will greatly improve safety and comfort for pedestrians and bicyclists. Therefore, the cumulative impact with the mitigation measure described above at the segment of W. Lilac Road, between Old Highway 395 and Main Street would be reduced to less than significant.

- Gopher Canyon Road, between E. Vista Way and Little Gopher Canyon Road – construct of this portion of the Gopher Canyon Road, to its Mobility Element 4.1B classification. The proposed project contributes approximately 3.5 percent of the total trips to this road segment in the cumulative traffic condition. The cost of improving this 1.2 mile segment would be equivalent to approximately \$7,097,000 per mile pursuant to the County of San Diego TIF Update Facilities Cost Analysis (2012). This resulting construction costs would total approximately \$8.5M. The project’s small contribution to the cumulative condition would not be proportional to the cost of mitigation of improving this segment of Gopher Canyon Road. Pursuant to CEQA, mitigation measures must be roughly proportional to the environmental impacts caused by the project. Therefore the legal feasibility of improving this segment as a mitigation measure is uncertain in that the cost of the improvements would not be reasonably related to the project’s contribution of trips of 3.3 percent of the total trips and is not roughly proportional to the environmental impact caused by the project. There are no other feasible mitigation measures that would be comparable to mitigate the identified cumulative impact since the projected daily traffic volume along this segment would far exceed the threshold for a 2-lane roadway, thus the impact would remain significant and unavoidable.
- Pankey Road, between Pala Mesa Drive and SR-76 - construct of this portion of the Pankey Road from Pala Mesa Drive to SR-76 to Mobility Element 4.2B classification. The improvement exceeds the General Plan Mobility Element classification designation of 2.1A for this road. This segment of Pankey Road is currently required to be improved as conditions of the previously approved Campus Park and Meadowood projects. Specifically, these projects have been conditioned to construct the roadway to its current Mobility Element Road Classification of 2.1A. The environmental impacts associated with the improvement of Pankey Road are described in the Campus Park EIR. The additional improvement to Mobility Element 4.2B classification is attributable to the project’s cumulative contribution to cumulative impacts. The project contributes approximately 5.2 percent of the total trips to this road segment in the cumulative traffic condition. The cost of improving this 0.7 mile segment would be equivalent to \$3,082,000 per mile pursuant to the County of San Diego TIF Update Facilities Cost Analysis (2012). The resulting construction costs would total \$2.2M. The project’s small contribution to the cumulative condition would not be proportional to the cost of

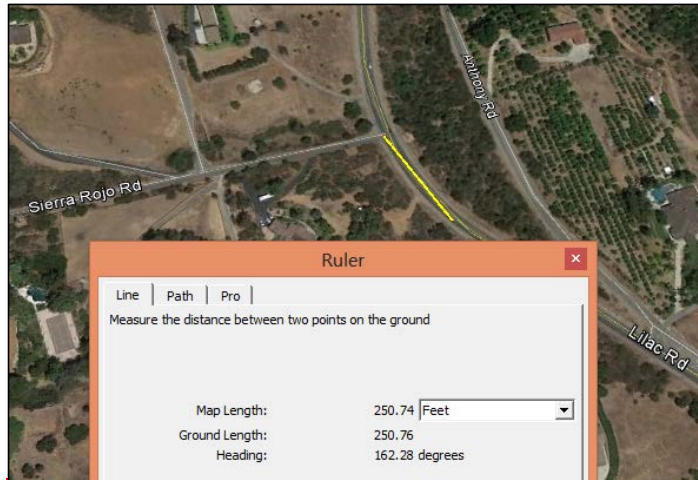
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mitigation of improving this segment of Panky Road. Pursuant to CEQA, mitigation measures must be roughly proportional to the environmental impacts caused by the project. Therefore the legal feasibility of improving this segment as a mitigation measure is uncertain in that the cost of the improvements would not be reasonably related to the project's contribution of trips of 5.2 percent of the total trips and is not roughly proportional to the environmental impact caused by the project. There are no other feasible mitigation measures that would be comparable to mitigate the identified cumulative impact since the projected daily traffic volume along this segment would far exceed the threshold for a 2-lane roadway, thus the impact would remain significant and unavoidable.

- *Lilac Road, between Old Castle Road and Anthony Road* - construct intermittent turn lanes at major access locations along Lilac Road, identified as 1) the segment between Robles Lane and Cumbres Road; and 2) the intersection at Sierra Rojo Road and Lilac Road. ~~Turn lane/pocket at these locations will eliminate left turning vehicles from blocking through traffic in the same direction, hence will increase roadway capacity and improve traffic operations. This cumulatively impacted roadway segment would operate at LOS D with the roadway widening.~~



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- ~~• **Cole Grade Road, between Fruitvale Road and Valley Center Road**—improve to **With** the General Plan Mobility Element classification **addition** of 4.2A. The project applicant would be responsible for making TIF payments or a fair share contribution **left-turn lanes** at these locations, left-turning vehicles would not impede through traffic moving in **which** the same direction, resulting in the increase of roadway capacity and an improvement **is a part of an approved Plan or Program.** This cumulatively impacted roadway segment of traffic operations along Lilac Road. These improvements would allow the roadway to operate at LOS A **with the roadway widening.**~~

~~**Table 6.7** displays level of service analysis results for the mitigated roadway segments under the Existing Plus Cumulative Projects Plus conditions. As shown, all of the cumulatively impacted roadway segments would operate at acceptable LOS-D or better with implementation of the respective improvement measures.~~

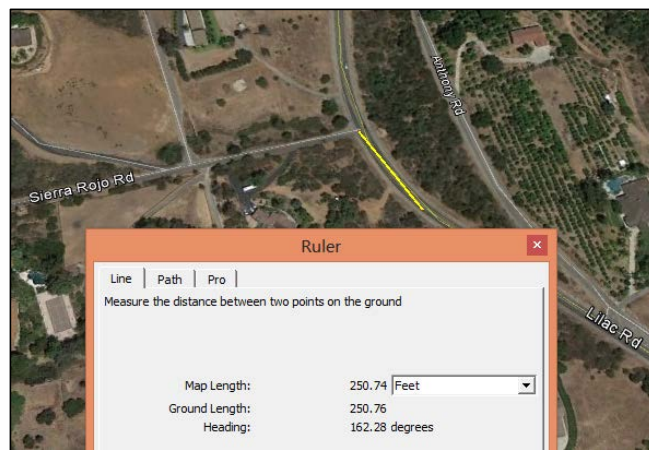
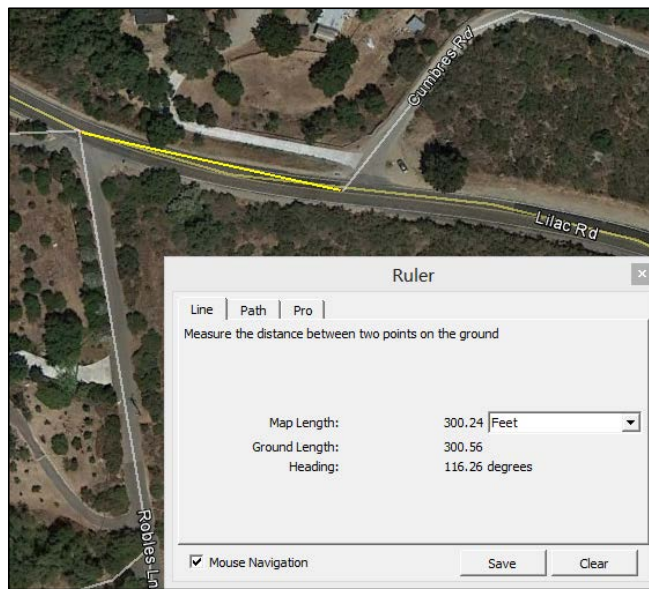
**TABLE 6.7**  
**MITIGATED ROADWAY SEGMENT LEVEL OF SERVICE**

| Roadway            | Segment                                       | ADT    | LOS-After Mitigation | LOS-Before Mitigation |
|--------------------|---|--------|----------------------|-----------------------|
| W. Lilac Road      | Between Old Highway 395 and Main Street       | 12,800 | D                    | F                     |
| Camino Del Rey     | Between Old River Road and W. Lilac Road      | 11,960 | A                    | E                     |
| Gopher Canyon Road | Between E. Vista Way and I-15 SB Ramps        | 16,270 | B                    | F                     |
| E. Vista Way       | Between SR 76 and Gopher Canyon Road          | 20,520 | B                    | F                     |
|                    | Between Gopher Canyon Road and Osborne Street | 26,990 | B                    | F                     |
| Pankey Road        | Between Pala Mesa Drive and SR 76             | 16,520 | A                    | F                     |
| Lilac Road         | Between Old Castle Road and Anthony Road      | 11,590 | D                    | E                     |
| Cole Grade Road    | Between Fruitvale Road and Valley Center Road | 16,650 | A                    | E                     |

Source: Chen-Ryan Associates; June 2013

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Should these improvements require additional grading outside the currently disturbed areas, potential impacts could result to surrounding biological and cultural resources. Pursuant to the County's vegetation mapping, the additional widening of Lilac Road necessary to add the turn lanes at the Robles Lane and Cumbres Road intersection could impact approximately 0.17 acre of chaparral. Impacts at Sierra Rojo and Lilac Road would affect approximately 0.14 acre of woodlands. Impacts to sensitive resources would be mitigated in accordance with the County's Biology Guidelines or relevant regulations. An additional mitigation measure would include a grading monitor to be present to assure the identification and proper handling of potential archeological resources that may be disturbed during grading of the limits of the road.



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### Intersections

The total traffic generated by anticipated cumulative projects and the proposed project would result in cumulative impacts at ~~thirteen (13) of the study area intersections.~~eleven (11) of the study area intersections. Mitigation measure would be required to mitigate significant cumulative traffic impacts. Impacts to intersections within or connecting to roadway segments that are included in the list of facilities included in the County's TIF, and would be mitigated through payment of TIF fees. For facilities not included in the County's TIF program, specific mitigation measures are proposed. The following improvements would be required to mitigate the identified cumulative impacts:

- ~~E. Vista Way / Gopher Canyon Road (County) – add one northbound through lane, one northbound right turn lane, this intersection is a TIF facility, and one southbound through lane at the E. Vista Way approach, and convert the current westbound left through right shared lane to a through right shared lane and add a dedicated westbound left turn lane at the Gopher Canyon Road approach. The project applicant would be responsible for making TIF payments or a fair share contribution in which the improvement is a part of an approved Plan or Program.~~
- ~~SR 76 / Old River Road/E. Vista Way (Caltrans) – add one northbound right turn lane, one northbound through lane, and one southbound through lane at the SR 76 approach. Convert the current eastbound left through right shared lane to an eastbound through right shared lane, add one dedicated eastbound left turn lane, and one dedicated eastbound right turn lane at the Old River Road approach. Convert the current westbound left through shared lane to a westbound right through shared lane, and add dedicated two westbound left turn lanes at the E. Vista Way approach. Convert the current traffic signal phasing from eastbound and westbound split phase to protective phase. The project applicant<sup>2</sup>. This cumulatively impacted intersection would be responsible for making a fair share contribution in which the improvement is a part of an approved Plan or Program. mitigated through payment of the TIF fee.~~
- ~~Old Highway 395 / W. SR 76 / Olive Hill Road/Camino Del Rey (Caltrans) – add one northbound through lane, one southbound through lane, and one southbound left turn lane at the SR 76 approach. Add one eastbound right turn lane at the Olive Hill approach, and add one westbound right turn lane at the Camino Del Rey approach. Convert the current traffic signal phasing from eastbound and westbound split phase to~~

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<sup>2</sup>Although the improvement is included in the list of facilities to be improved from the currently approved TIF Program; it is anticipated that the currently approved TIF Program will be updated by the County to accommodate the land use changes that would result from the project's approval. This update would revise fee rates associated with incorporating the project's land uses to the program. The TIF program enables County new development to pay its "fair share" by providing a mechanism to mitigate their cumulative impacts in accordance with CEQA requirements. TIF program revenue in combination with reasonably projected revenues based off historic receipts and future expected revenues will fund the completion of the Mobility Element in balance with the land uses guided by the County General Plan.

~~protective phase. The project applicant would be responsible for making a fair share contribution in which the improvement is a part of an approved Plan or Program.~~

- SR-76/Lilac Road (County) – this intersection is a TIF facility, and the project applicant would be responsible for making TIF payments. (see footnote 2 below) This cumulatively impacted intersection would be mitigated through payment of the TIF fee.
- I-15 SB Ramps / Old Highway 395 (Caltrans) – this intersection is a TIF facility, and the project applicant would be responsible for making TIF payments. (see footnote 2 below) This cumulatively impacted intersection would be mitigated through payment of the TIF fee.
- I-15 NB Ramps / Old Highway 395 (Caltrans) – this intersection is a TIF facility, and the project applicant would be responsible for making TIF payments. (see footnote 2 below) This cumulatively impacted intersection would be mitigated through payment of the TIF fee.
- I-15 SB Ramps / Gopher Canyon Road (Caltrans) – this intersection is a TIF facility, and the project applicant would be responsible for making TIF payments. (see footnote 2 below) This cumulatively impacted intersection would be mitigated through payment of the TIF fee.
- I-15 NB Ramps / Gopher Canyon Road (Caltrans) – this intersection is a TIF facility, and the project applicant would be responsible for making TIF payments. (see footnote 2 below) This cumulatively impacted intersection would be mitigated through payment of the TIF fee.
- SR-76 / Old Highway 395 (Caltrans) –convert the current northbound left-through-right shared lane to a northbound through- lane, add one dedicated northbound left-turn lane and one dedicated northbound right-turn lane at the Old Highway 395 northbound approach. ~~Convert, convert~~ the current southbound left-through-right shared lane to a southbound through-right shared lane and add two dedicated southbound left-turn lanes at the Old Highway 395 southbound approach. ~~Convert, convert~~ the current eastbound through-right shared lane to an eastbound through- lane, add one eastbound right-turn lane at the SR-76 approach. ~~Convert and convert~~ the current traffic signal phasing from northbound and southbound split phasing to a ~~protective~~protected phase. ~~The~~This intersection is a Caltrans facility in which the County does not have jurisdiction. In addition, Caltrans does not have a plan or program in place where the project applicant ~~would be responsible for making a~~could pay its fair-share contribution in which the improvement is a part ~~towards the cost of an approved Plan or Program.~~ such improvements. Therefore, mitigation is infeasible and the impacts would remain significant and unavoidable.
- SR-76 / Pankey Road (Caltrans) – ~~Signalizations~~signalization would be required at this intersection to mitigate cumulative traffic impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants.

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The signal warrant worksheet for this intersection is provided in **Appendix AE-ConvertAR**. ~~The following improvements would also be required to mitigate the impact: convert~~ the current northbound left-through-right shared lane to a northbound through- lane, add two dedicated northbound left-turn lanes, and one dedicated northbound right-turn lane at the Pankey Road approach. ~~Convert, convert~~ the current southbound left-through-right shared lane to a southbound through lane, add one dedicated southbound left-turn lane, and two dedicated southbound right-turn lanes with an overlap signal phasing at the Pankey Road approach. ~~Convert, convert~~ the current eastbound through-right shared lane to a through- lane, add one dedicated eastbound left-turn lane and right-turn lane at the SR-76 EB approach. ~~Convert, convert~~ the current westbound through-right shared lane to a westbound through lane and add one westbound right-turn lane at the SR-76 WB approach. ~~TheThis intersection is a Caltrans facility in which the County does not have jurisdiction. In addition, Caltrans does not have a plan or program in place where the project applicant would be responsible for making a could pay its fair- share contribution in which the improvement is a part towards the cost of an approved Plan or Program. such improvements. Therefore, mitigation is infeasible and the impacts would remain significant and unavoidable.~~

- ~~Old Highway 395 / E. Dulin Road (County) – Signalizationsignalization~~ would be required at this intersection to mitigate the cumulative impacts. ~~The signal warrant worksheet for this intersection is provided in Appendix AE. The project applicant would be responsible for making TIF payments or a fair share contribution in which the improvement is a part of an approved Plan or Program.~~
- ~~Old Highway 395 / W. Lilac Road (County) – Signalization would be required at this intersection to mitigate the impacts.~~ A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants. The signal warrant worksheet for this intersection is provided in Appendix AE. ~~In addition, add one eastbound left turn lane and one westbound left turn lane at the W. Lilac Road approaches to provide protected phasing for the eastbound and westbound left turn movements.AR.~~ The project applicant would be responsible for making TIF payments or a fair share contribution in which the constructing this improvement is a part of an approved Plan or Program.
- ~~Old Highway 395 / Circle R Drive (County) – Signalizationsignalization~~ would be required at this intersection to mitigate the impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic” warrants. The signal warrant worksheet for this intersection is provided in Appendix **AEAR**. The project was also identified as causing a direct impact at this intersection under Existing Plus Project (Phase D) scenario and hence the project applicant would be responsible for making TIF

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~~payments or a fair share contribution in which the the construction of this~~ improvement is a part of an approved Plan or Program.

- ~~I-15 SB Ramps / Old Highway 395 (Caltrans) – Traffic signal and one southbound right-turn lane~~  
~~Miller Road / Valley Center Road (County) – signalization~~ would be required at this intersection to mitigate ~~cumulative~~the impacts. A traffic signal warrant was conducted. Based upon *California Manual of Uniformed Traffic Control Devices (MUTCD) 2012 Edition Figure 4C-103 (CA)*, this intersection would meet ~~both the “Minimum Vehicular Volume” and the “Interruption of Continuous Traffic”~~warrant. The signal warrant worksheet for this intersection is provided in Appendix ~~AEAR~~. The project applicant would be responsible for ~~making a fair share contribution in which the constructing this~~ improvement.

**Table 6.8** displays level of service analysis results for the mitigated intersection under the Existing Plus Cumulative Project Plus Project conditions. Calculation worksheets for the intersection analysis are provided in **Appendix AFAS**.

TABLE 6.8  
MITIGATED INTERSECTION LEVEL OF SERVICE  
EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS

| Intersection   | After Mitigation |     |              |     | Before MitigationExisting      |                |
|--|------------------|-----|--------------|-----|--------------------------------|----------------|
|  | AM Peak Hour     |     | PM Peak Hour |     | Delay (sec.)<br>AM / PM        | LOS<br>AM / PM |
|  | Delay (Sec.)     | LOS | Delay (sec.) | LOS |                                |                |
| <u>E. Vista Way / Gopher Canyon RoadNon-TIF Intersection</u> |                  |     |              |     |                                |                |
| <u>1. SR 76 / Old River Road/E. Vista Way</u>                | 33.4             | G   | 48.1         | D   | 269.1 / 303.9                  | F / F          |
| <u>2. SR 76 / Olive Hill Road/Camino Del Rey</u>             | 42.6             | D   | 50.9         | D   | 231.9 / 363.0                  | F / F          |
| 6. Old Highway 395 / SR-76                                   | 53.4             | D   | 52.9         | D   | 219.7 /<br>214.643.0 /<br>42.2 | F / FD / D     |
| 7. Pankey Road / SR-76                                       | 49.9             | B   | 52.7         | D   | 12.5 / 15.2                    | F / FB / C     |
| 8. Old Highway 395 / E. Dulin Road                           | 12.1             | B   | 10.1         | B   | 364.5 /<br>179.112.8 /<br>11.2 | F / FB / B     |
| <u>9. Old Highway 395 / W. Lilac Road</u>                    | 32.9             | G   | 52.5         | D   | 67.8 / 188.3                   | E / F          |
| <u>10. I 15 SB Ramps / Old Highway 395</u>                   | 5.0              | A   | 7.7          | A   | 41.3 / 213.8                   | E / F          |
| <u>11. I 15 NB Ramps / Old Highway 395</u>                   | 7.9              | A   | 6.3          | A   | 16.7 / 64.3                    | C / F          |
| 13. Old Highway 395 / Circle R Drive                         | 48.54.0          | BA  | 45.84.1      | BA  | 347.6 /<br>52920.4 / 22.5      | F / FC / C     |
| <u>14. I 15 SB Ramps / Gopher Canyon Road</u>                | 41.4             | D   | 47.0         | B   | 245.12 /<br>4522.3             | F / F          |
| <u>15. I 15 NB Ramps / Gopher Canyon Road</u>                | 43.0             | B   | 40.0         | D   | 428.5 / 8370.3                 | F / F          |

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|                                      |     |   |     |   |  |                   |
|--------------------------------------|-----|---|-----|---|--|-------------------|
| 24. Miller Road / Valley Center Road | 5.6 | A | 7.3 | A | <del>23.3 / 103</del> <u>16.9</u><br><u>/ 25.0</u> | C / <del>FD</del> |
|--------------------------------------|-----|---|-----|---|--|-------------------|

Source: Chen Ryan Associates; May ~~2013~~ 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

Changes in this table are associated with "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

Changes in this table are associated with "Change 4" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

As shown in Table 6.8, ~~after~~ Old Highway 395 / SR-76 and Pankey Road / SR-76 are Caltrans facilities in which the County does not have jurisdiction. In addition, Caltrans does not have a plan or program in place where the project applicant could pay its fair-share towards the cost of such improvements. Therefore, mitigation is infeasible and the impacts would remain significant and unavoidable at these two intersections.

After implementation of the proposed mitigations, ~~all~~ the other three impacted intersections would operate at acceptable LOS ~~DB~~ or better during both the AM and PM peak hours under the cumulative traffic conditions.

### **Freeways**

The total traffic generated by anticipated cumulative projects and the proposed project would have cumulative impacts at the following eight (8) freeway segments:

- I-15, between the Riverside County Boundary and Old Highway 395;
- I-15, between Old Highway 395 and SR-76;
- I-15, between SR-76 and Old Highway 395;
- I-15, between Old Highway 395 and Gopher Canyon Road;
- I-15, between Gopher Canyon Road and Deer Springs Road;
- I-15, between Deer Springs Road and Centre City Parkway;
- I-15, between Centre City Parkway and El Norte Parkway; and
- I-15, between El Norte Parkway and SR-78.

According to the Regional Transportation Plan (RTP) 2050, I-15 between Riverside County Boundary and SR-78 is planned to be widened by adding four (4) toll lanes by 2050. However, no secured funding sources were identified, hence this improvement was not assumed in this study. In addition, I-15 (north of SR-78) mainline widening is not currently anticipated, ~~thus,~~ As the necessary improvements are outside of jurisdiction and control of the County, and the agency with jurisdiction, Caltrans, has no funding program in place into which the project could pay its fair-share, the cumulative impacts would remain significant and unmitigable.

**Table 6.9** summarizes potential cumulative impacts and recommended mitigation measures associated with anticipated cumulative projects and the proposed Lilac Hills Ranch project.

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**TABLE 6.9**  
**IMPACT AND MITIGATION SUMMARY**  
**EXISTING PLUS CUMULATIVE PROJECTS PLUS PROJECT CONDITIONS**

| <b>Potentially Impacted Facility</b>  | <b>Mitigation Measures</b>  |   |
|---|---|---|
|   | <b>Recommendation</b>   | <b>Rationale/Note</b>   |
| <b>Roadway Segment</b>  |   |   |
| <del>W. Lilac Road, between Old Highway 395 and Main Street</del>   | <del>Improve to 2.2C</del>  | <del>County GP Mobility Element Designation</del>   |
| Camino Del Rey, between Old River Road and W. Lilac Road  | <del>Improve to 4.2B</del> TIF Payments   | <del>County GP Mobility Element Designation</del>   |
| Gopher Canyon Road, between <del>E. Vista Way</del> <u>Little Gopher Canyon Road</u> and I-15 SB Ramps          | <del>Improve to 4.1B</del> TIF Payments   | <del>County GP Mobility Element Designation</del>   |
| E. Vista Way, between SR-76 and Gopher Canyon Road  | <del>Improve to 4.1A</del> TIF Payments   | <del>County GP Mobility Element Designation</del>   |
| <del>E. Vista Way, between Gopher Canyon Road and Osborne Street</del>  | <del>TIF Payments</del>   | <del>-</del>  |
| <del>Cole Grade Road, between Fruitvale Road and Valley Center Road</del>                                       | <del>TIF Payments</del>   | <del>-</del>  |
| <del>W. Lilac Road, between Old Highway 395 and Main Street</del>   | <ul style="list-style-type: none"> <li><del>Improve to 2.2C</del></li> <li><del>Install traffic signal at Old Highway 395 / W. Lilac Road and construct one left-turn lane at the westbound approach</del></li> </ul>   | <del>Also identified as a direct impact under Existing Plus Project (Phase C) scenario - project applicant would be responsible for the construction of these improvements.</del> |
| <del>between Gopher Canyon Road, between E. Vista Way and Osborne Street</del> <u>Little Gopher Canyon Road</u> | <del>Improve to 4.1A</del> B  | <del>County GP Mobility Element Designation</del> Disproportionality – not feasible under CEQA, and the impact would remain significant and unavoidable.                          |
| Pankey Road, between Pala Mesa Drive and SR-76  | <del>Improve to 4.2B</del> <del>Exceed Mobility Element Designation of 2.1A</del>   | <del>Cumulative projects may not be included in the GPU analysis.</del> Disproportionality – not feasible under CEQA, and the impact would remain significant and unavoidable.    |
| Lilac Road, between Old Castle Road and Anthony Road  | <ul style="list-style-type: none"> <li><del>Improve to 2.1C</del> provide intermittent turn lanes at major access locations along Lilac Road, identified as:               <ol style="list-style-type: none"> <li>1) the segment between Robles Lane and Cumbres Road; and</li> <li>2) the intersection at Sierra Rojo Road and Lilac Road</li> </ol> </li> </ul> | <del>County GP Mobility Element Designation</del>   |
| <b>Intersection</b>   |   |   |
| 1. E. Vista Way / Gopher Canyon Road  | <del>TIF Payments</del>   | <del>-</del>  |

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|   |   |   |
|---|---|---|
| 9. <del>SR-76 / Old River Highway 395 / W. Lilac Road</del> <del>E. Vista Way</del>                 | <u>TIF Payments</u>   | <u>Project to install traffic signal and +1WBL under Existing plus Project to mitigate direct impact.</u> |
| <u>10. I-15 SB Ramps / Old Highway 395</u>  | <u>TIF Payments</u>   | -   |
| <u>11. I-15 NB Ramps / Old Highway 395</u>  | <u>TIF Payments</u>   | -   |
| 14. <del>SR-76 / Olive Hill</del> <u>15 SB Ramps / Gopher Canyon Road</u> <del>Camino Del Rey</del> | <ul style="list-style-type: none"> <li><del>+1NBT</del></li> <li><del>+1SBT &amp; +1SBL</del></li> <li><del>+1EBR</del></li> <li><del>+1WBR</del></li> <li><u>Split to protected phase</u></li> </ul> <u>TIF Payments</u>   | -   |
| <u>15. I-15 NB Ramps / Gopher Canyon Road</u>   | <u>TIF Payments</u>   | -   |
| 6. Old Highway 395 / SR-76  | <ul style="list-style-type: none"> <li>• Conversion of NB L-T-R shared lane to NBT &amp; +1NBL &amp; <del>+1NB</del> <u>+1NBR</u></li> <li>• Conversion of SB L-T-R shared lane to SB T-R shared lane &amp; +2SBL</li> <li>• Conversion of EB T-R lane to EB T lane &amp; +1EBR</li> <li>• Split to protected phase</li> </ul>  | <u>Caltrans Facility - Significant and Unavoidable Impact</u>   |
| 7. Pankey Road / SR-76  | <ul style="list-style-type: none"> <li>• Signalization</li> <li>• Conversion of NB L-T-R shared lane to NBT &amp; +2NBL &amp; +1NBR</li> <li>• Conversion of SB L-T-R shared lane to SBT &amp; +1SBL &amp; +2SBR (RTOL)</li> <li>• +1EBL; conversion of EB T-R shared lane to EBT &amp; +1EBR</li> <li>• Conversion of WB T-R shared lane to WBT &amp; +1WBR</li> </ul> | <u>Caltrans Facility - Significant and Unavoidable Impact</u>   |
| 8. Old Highway 395 / E. Dulin Road  | • Signalization   | -   |
| <u>Lilac Road</u>   | <ul style="list-style-type: none"> <li><del>• Signalization</del></li> <li><del>• +1EBL &amp; +1WBL</del></li> <li><u>Protected phase</u></li> </ul>  |   |
| <u>10. I-15 SB Ramps / Old Highway 395</u>  | <ul style="list-style-type: none"> <li><del>• Signalization</del></li> <li><del>• +1SBR</del></li> </ul>  | -   |
| <u>11. I-15 NB Ramps / Old Highway 395</u>  | <ul style="list-style-type: none"> <li><del>• Signalization</del></li> <li><del>• +1NBL</del></li> </ul>  | -   |
| 13. Old Highway 395 / Circle R Drive  | • Signalization   | Direct Impact – Project Improvement   |
| <u>13. I-15 SB Ramps / Gopher Canyon Road</u>   | <ul style="list-style-type: none"> <li><del>• Signalization</del></li> <li><del>• +1EBT</del></li> <li><del>• +1SBR</del></li> </ul>  | -   |
| <u>14. I-15 NB Ramps / Gopher Canyon Road</u>   | <ul style="list-style-type: none"> <li><del>• Signalization</del></li> <li><del>• +1NBR</del></li> </ul>  | -   |

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|   |   |   |
|---|---|---|
| 24. Miller Road / Valley Center Road                        | • Signalization                               | -   |
| <i>Two-Lane Highway</i>                                     |   |   |
| None  | -   | -   |
| <i>Freeway</i>  |   |   |
| I-15, between Riverside County Boundary and Old Highway 395 | <del>None</del> <u>No feasible mitigation</u> | No planned improvement <del>—No feasible mitigation</del> <u>Significant and Unavoidable Impact</u> |
| I-15, between Old Highway 395 and SR-76                     | <del>None</del> <u>No feasible mitigation</u> | No planned improvement <del>—No feasible mitigation</del> <u>Significant and Unavoidable Impact</u> |
| I-15, between SR-76 and Old Highway 395                     | <del>None</del> <u>No feasible mitigation</u> | No planned improvement <del>—No feasible mitigation</del> <u>Significant and Unavoidable Impact</u> |
| I-15, between Old Highway 395 and Gopher Canyon Road        | <del>None</del> <u>No feasible mitigation</u> | No planned improvement <del>—No feasible mitigation</del> <u>Significant and Unavoidable Impact</u> |
| I-15, between Gopher Canyon Road and Deer Springs Road      | <del>None</del> <u>No feasible mitigation</u> | No planned improvement <del>—No feasible mitigation</del> <u>Significant and Unavoidable Impact</u> |
| I-15, between Deer Springs Road and Centre City Parkway     | <del>None</del> <u>No feasible mitigation</u> | No planned improvement <del>—No feasible mitigation</del> <u>Significant and Unavoidable Impact</u> |
| I-15, between Centre City Parkway and El Norte Parkway      | <del>None</del> <u>No feasible mitigation</u> | No planned improvement <del>—No feasible mitigation</del> <u>Significant and Unavoidable Impact</u> |
| I-15, between El Norte Parkway and SR-78                    | <del>None</del> <u>No feasible mitigation</u> | No planned improvement <del>—No feasible mitigation</del> <u>Significant and Unavoidable Impact</u> |

Source: Chen Ryan Associates; May 2013-2014

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## 7.0 Site Access and On-Site Circulation

This chapter presents an assessment of transportation facilities providing access to the proposed project. It also recommends functional classifications for all roadways internal to the project.

### 7.1 Site Access

As previously shown in Figure 3-1A, six (6) access points (study intersections #26 through #31) to the north are provided along Main Street to W. Lilac Road. Traffic controls consist of single-lane roundabouts at study intersections #26, 27, and 31, all-way stop controls in the one-way couplet at study intersections #28 and 29, and a one-way stop controlled T-intersection at study intersection #30. Main Street is anticipated to serve as the primary access for project trips.

Project access to the east is provided via Covey Lane to W. Lilac Road (study intersection #18, stop controlled). Covey Lane provides unrestricted access to community north of Covey Lane and a restricted access to the senior community to the southern portion of the project.

Project access to the south is provided via Mountain Ridge Road to Circle R Drive (study intersection #19, stop controlled). The southern third of the project (south of Covey Lane) is a gated senior community with a gate just south of Covey Lane on Lilac Hills Ranch Road and another gate at the southern terminus of Lilac Hills Ranch Road just north of the proposed church site. Mountain Ridge Road will provide access only for the Senior Residential located in SFS-5 and SFS-6, as well as the neighborhood park and the institutional (church) site. Visitors to the Church during days of worship will also have access thru the northern gate of the senior community.

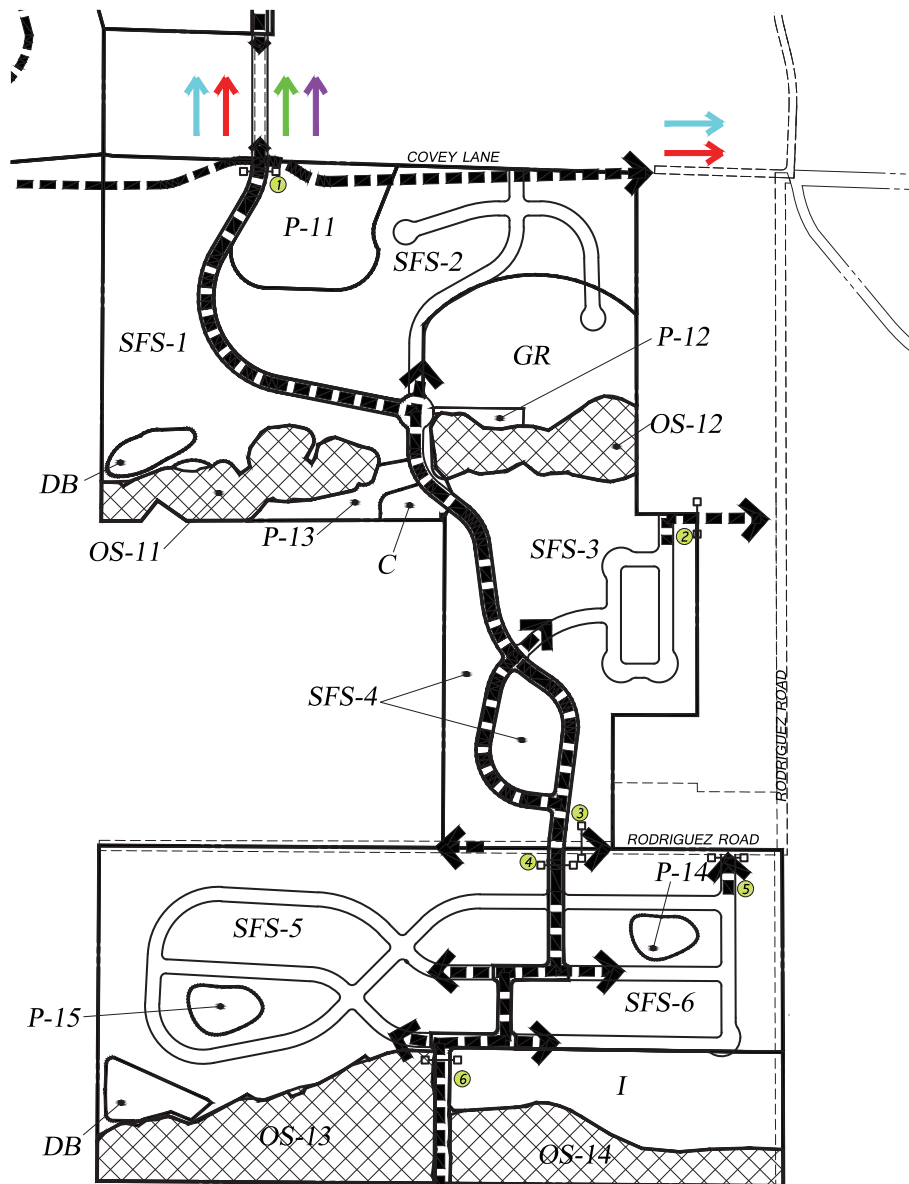
A secondary access is also provided via Birdsong Drive to W. Lilac Road. An additional gated emergency access is provided by Rodriguez Road. Figure 7-1 illustrates location of the project gated access.

Birdsong Drive, between Street "Z" and W. Lilac Road will serve as an interim secondary access route for the initial phase of Phase A (SFD-1 and SFD-2 as shown in Figure 1-3). After the construction of Main Street, between Street "Z" and W. Lilac Road, Birdsong Drive will be resumed as a private driveway for use by the owner of APN 128-280-56.

Based upon a review of the project site utilization plan and conditions in the field, the following comments on site access are offered:

- Sight distance analyses were conducted at the intersections of Mountain Ridge Road / Circle R Drive (southern project access) and Covey Lane / W. Lilac Road (eastern project access) by the project Civil Engineer, Landmark Consulting. Technical memorandums with findings and recommendations will be submitted under a separated cover, as attached in Appendix AT.

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| LEGEND   |     |
|--|-----|
| SINGLE FAMILY SENIOR                                       | SFS |
| COMMERCIAL/MIXED USE                                       | C   |
| DETENTION BASINS   | DB  |
| PARK   | P   |
| GROUP CARE/RESIDENTIAL                                     | GR  |
| INSTITUTIONAL/RELIGIOUS USE                                | I   |
| CIRCULATION ROADS  | --- |
| PRIMARY & SECONDARY ACCESS FOR SFS-1 & SFS-2               | →   |
| PRIMARY & SECONDARY ACCESS FOR SFS-3 & SFS-4               | →   |
| PRIMARY & SECONDARY ACCESS FOR SFS-5 & SFS-6               | →   |
| PRIMARY & SECONDARY ACCESS FOR INSTITUTIONAL USE           | →   |
| GATED ACCESS POINT NO. (SEE ATTACHED MEMO FOR DESCRIPTION) | ①   |
| FIRE APPARATUS ACCESS GATE                                 | □   |

| LILAC HILLS RANCH RESTRICTED ACCESS DESCRIPTION |   |   |
|---|---|---|
| GATED ACCESS #                                  | DESCRIPTION   | PLANNING AREAS WITH GATE ACCESS RIGHTS                    |
| 1   | FIRE APPARATUS ACCESS GATE: MANNED GATE HOUSE, ALLOWING PERMANENT RESIDENTS AND GUESTS TO TRAVEL THROUGH  | SFS-1, SFS-2, SFS-3, SFS-4, SFS-5, SFS-6, & INSTITUTIONAL |
| 2   | FIRE APPARATUS ACCESS GATE: RESTRICTED ACCESS GATES THAT OPEN DURING EMERGENCIES AND CAN BE ACTIVATED BY CODE, KNOX KEYS, OR COUNTY EMERGENCY RESPONSE CENTER   | SFS-3 and SFS-4   |
| 3   | FIRE APPARATUS ACCESS GATE: RESTRICTED ACCESS GATES THAT OPEN DURING EMERGENCIES AND CAN BE ACTIVATED BY CODE, KNOX KEYS, OR COUNTY EMERGENCY RESPONSE CENTER, AND AUTOMATIC ACCESS GATE FOR RESIDENTS ALONG RODRIGUEZ ROAD WITH A KEY FOB OR ACCESS CODE | SFS-3, SFS-4, SFS-5, & SFS-6                              |
| 4   | FIRE APPARATUS ACCESS GATE AND AUTOMATIC ACCESS GATE FOR RESIDENTS WITH A KEY FOB OR ACCESS CODE  | SFS-5 and SFS-6   |
| 5   | FIRE APPARATUS ACCESS GATE: RESTRICTED ACCESS GATES THAT OPEN DURING EMERGENCIES AND CAN BE ACTIVATED BY CODE, KNOX KEYS, OR COUNTY EMERGENCY RESPONSE CENTER   | SFS-5 and SFS-6   |
| 6   | FIRE APPARATUS ACCESS GATE AND AUTOMATIC ACCESS GATE FOR RESIDENTS WITH A KEY FOB OR ACCESS CODE  | SFS-5, SFS-6, & INSTITUTIONAL                             |

RECON

Not to Scale





- The Project Civil Engineer, Landmark Consulting, will ensure that all proposed roundabouts are designed to meet applicable safety and design standards. Roundabout experts, Reid Middleton, provided a peer review (included as Appendix A) on the design and analysis of the proposed roundabouts.
- Based on the analyses in the previous sections, all project access intersections/roundabouts (#18, 19, and 26-31) would operate at acceptable Levels of Service under the various study scenarios.

## 7.2 On-Site Circulation

A system of private roads, including Main Street, Lilac Hills Ranch Road, Street “F”, Mountain Ridge Road, and ~~Covey~~Covey Lane, is proposed to provide site access and on-site circulation for Lilac Hills Ranch.

Main Street would serve as the primary access carrying approximately 6% to ~~5660~~6% (east to west) of the project trip. A small percent (~~69~~6%) of the total project traffic would utilize Covey Lane ~~given that only about 9% of the project trips are anticipated to travel east of the project site as per SANDAG’s Select Zone Assignments.~~ Approximately ~~135.5~~5.5% of the total project traffic would access Mountain Ridge Road as this access is gated ~~north of the access to and restricted to southern half of Phase 5 (SRS-5, SFS-6, and the institutional (church) site) uses only.~~ The southern third of the project is a senior community with a gate between the main project and the senior community (at ~~Covey Lane~~Lilac Hills Ranch Road/Covey Lane), ~~another gate in the middle of Phase 5 development along Lilac Hills Ranch Road (just north of SRS-5/SFS-6),~~ as well as a gate at Lilac Hills Ranch Road/Mountain Ridge Road just north of the proposed church site. During days of worship, the northern gate at the senior community entrance will be opened to provide internal circulation and access for residents live on the north side of Covey Lane.

Based upon buildout of the proposed project land uses and trip generation, ADT volumes were estimated for the internal roadway segments within the Lilac Hills Ranch project site. Project trips were distributed and assigned to the internal roadway system based on the location and characteristics of the proposed land uses.

**Figure 7-12** displays the resulting internal roadway ADTs. As shown, Mountain Ridge Road, Covey Lane, Street “F”, as well as portions of Lilac Hills Ranch Road and Main Street would carry less than 2,500 estimated daily trips. The County’s Private Road Design Standards Section 3.1 (D) states that *where it is determined that the number of trips per day on a particular road will exceed 2,500, the Director of Public Works may require that the road be dedicated and improved in conformance with the “County of San Diego Public Road Standards”.* ~~The following roads are projected to carry more than this threshold:~~

- ~~Main Street, between W. Lilac Road and Street “C” — 8,430 ADT;~~
- ~~Main Street, between Street “C” and Lilac Hills Ranch Road — 7,180 ADT;~~
- ~~Main Street, between Lilac Hills Ranch Road and Street “Z” — 2,960 ADT; and~~

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- 
- ~~Lilac Hills Ranch Road, between Main Street and Street "F" — 4,450 ADT.~~

~~It is important to note that~~In addition, the Director of Public Works has the discretion to approve private roads with higher design standards as noted in Section 1.2 of the County's Private Road Design Standards indicates that *the requirements set forth in these standards are considered minimum design standards. They may be exceeded at the option of the developer, subject to the approval of the Director of Public Works.*

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The following roads are projected to carry more than the threshold of 2,500 ADT and are designed to exceed all minimum private road design standards in terms of road surfacing width, ROW, paved shoulders width, minimum curve radius, and maximum desirable grade:

- Main Street, between W. Lilac Road and Street "C" – 9,300 ADT;
- Main Street, between Street "C" and Lilac Hills Ranch Road – 8,040 ADT;
- Main Street, between Lilac Hills Ranch Road and Street "Z" – 2,860 ADT; and
- Lilac Hills Ranch Road, between Main Street and Street "F" – 5,390 ADT.

Arterial speed analysis was conducted for Main Street and Lilac Hills Ranch Road and **Table 7.1** summarizes the results. Highway Capacity Software (HCS) 2000 developed by McTrans was employed for this analysis. The HCS arterial analysis methodology is based upon Chapter 15 of the Highway Capacity Manual (HCM) 2000, which determines average travel speed and facility level of service according to roadway functional classification and characteristics. The respective analysis worksheets are included in **Appendix AGAU**.

TABLE 7.1  
INTERNAL ROADWAY ARTERIAL LEVEL OF SERVICE RESULTS

| Arterial   | ADT                     | Free-Flow<br>Speed<br>(mph) | AM Peak Hour          |     | PM Peak Hour          |                |
|--|-------------------------|-----------------------------|-----------------------|-----|-----------------------|----------------|
|  |                         |                             | Travel Speed<br>(mph) | LOS | Travel Speed<br>(mph) | LOS            |
| Main Street, between W. Lilac Road and Street "F"          | <del>8,430</del> 9,300* | 30                          | <del>24.2</del> 21.3  | B   | <del>17.8</del> 16.5  | C              |
| Lilac Hills Ranch Road, between Main Street and Street "F" | <del>4,540</del> 5,390  | 30                          | 24.21                 | B   | <del>19.0</del> 18.7  | <del>B</del> C |

Source: Chen Ryan Associates: ~~January 2013~~May 2014

Note:

\*The estimated daily traffic volumes along this facility range from 1,340 to 9,300, and the 9,300 ADT used in this analysis represents the highest volume and the worst case scenario.

As shown in the table, both Main Street and Lilac Hills Ranch Road would operate at LOS C or better at project buildout.

In addition to the operational arterial analysis, **Table 7.2** was created to compare the design features of all on-site circulation/spine roads (private) to the County's private and public road standards.

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**TABLE 7.2  
ON-SITE CIRCULATION / SPINE ROADS DESIGN FEATURES**

| Road  | Classification / ADT  | # Lanes / Lane Width | Road Surfacing Width                            | ROW/ Esmt. Width                            | Paved Shoulders (# / Width) | Min. Curve Radius | Max. Desirable Grade | Design / Observed Speed (mph) |
|---|---|----------------------|---|---|-----------------------------|-------------------|----------------------|-------------------------------|
| Standard  | Private / 2,500   | 2 / 12'              | 24'   | 28'   | -                           | 200'              | 20%                  | 30                            |
| Standard  | LPR, Residential Collector / 4,500  | 2 / 12'              | 40'   | 60'   | 2 / 8'                      | 300'              | 12%                  | 30                            |
| Standard  | 2.3C / 7,000  | 2 / 12'              | 40'   | 68'   | 2 / 8'                      | 350'              | 12%                  | 35                            |
| Standard  | 2.2F / 8,700  | 2 / 12'              | 28'   | 52'   | 2 / 2'                      | 500'              | 9%                   | 40                            |
| Standard  | 2.2E / 10,900   | 2 / 12'              | 40'   | 64'   | 2 / 8'                      | 500'              | 9%                   | 40                            |
| Main Street (excluding couplet)   | Private / <del>1,040</del><br><del>8,430</del> <u>340</u><br><del>9,300</del> | 2 / 12'              | <del>34'</del><br><del>42'</del> <u>40'-45'</u> | <del>51'</del><br><del>77'</del> <u>72'</u> | <del>5'</del> *             | 500'              | 9%                   | 30                            |
| Lilac Hills Ranch Road (north of <del>St "F"</del><br><del>excluding the</del> couplet) | Private / <del>4,540</del> <u>5,390</u>                                       | 2 / 12'              | 26'-40'   | 40'-60'                                     | 0'-8'                       | 500'              | 9%                   | 30                            |
| Lilac Hills Ranch Road (St "F" to Covey Ln)   | Private / <del>1,140</del> <u>930</u>   | 2 / 12'              | 26'-40'   | 40'-60'                                     | 0'-8'                       | 300'              | 10%                  | 30                            |
| Lilac Hills Ranch Road (Covey Ln to Mountain Ridge Rd)                                  | Private / <del>2,060</del> <u>1,390</u>                                       | 2 / 12'              | 26'-40'   | 40'-60'                                     | 0'-8'                       | 300'              | 10%                  | 30                            |
| Street "F"  | Private / <del>2,090</del> <u>10</u>  | 2 / 12'              | <del>26'-40'</del> <u>25'-37'</u>               | <del>26'-40'</del> <u>26'-5'-38.5'</u>      | 0'-8'                       | 300'              | 15%                  | <del>25-</del> <u>30</u>      |
| <u>Street "Z"</u>   | <u>Private / 1,580</u>  | <u>2 / 12'</u>       | <u>25'-37'</u>                                  | <u>26.5'-38.5'</u>                          | 0'-8'                       | <u>300'</u>       | <u>15%</u>           | <u>25-30</u>                  |
| Covey Lane (within project boundary)  | Private / <del>1,140</del> <u>390</u>   | 2 / 12'              | 24'   | 26'-40'                                     | 0'-8'                       | 200'              | 15%                  | 25-30                         |
| Covey Lane (project boundary to WLR)  | IOD / <del>1,140</del> <u>390</u>   | 2 / 12'              | <del>28'-29'</del>                              | <del>40'-60'</del> <u>74'</u>               | 2 / 2'                      | 1,000'            | 6.2%                 | <del>30-</del> <u>30</u>      |
| Mountain Ridge Road   | Private / <del>2,260</del> <u>1,190</u>                                       | 2 / 12'              | 24'   | 40'   | -                           | 200'              | 20%                  | <del>15-</del> <u>40</u>      |

Source: Landmark Consulting, Chen Ryan Associates; ~~January 2013~~May 2014

Note:

\*5' bike lane which is also counts as shoulder.

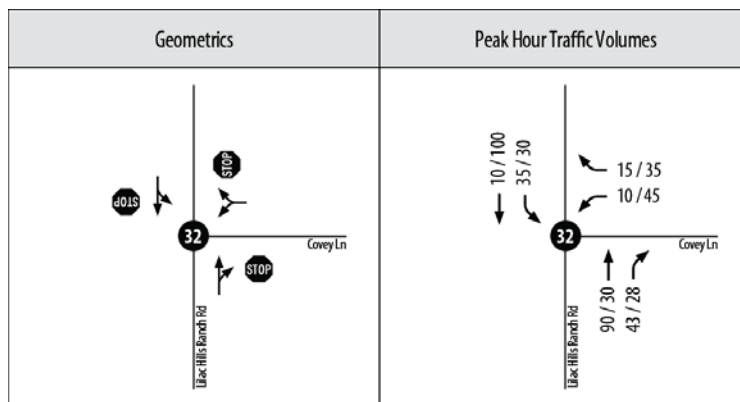
As shown, Lilac Hills Ranch Road south of Street "F", Street "F", Covey Lane, and Mountain Ridge Road meet and exceed all private road design requirements with estimated ADTs of 2,500 or less ~~—, with the exception of the design speed on Mountain Ridge Road. This design~~

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exception is discussed in detail previously in Chapter 1, under design exception #7 (pages 10-12).

Main Street and Lilac Hills Ranch Road north of Street “F” generally (with lower design speed) meet the design standards of 2.2E facilities, which have a capacity of 16,200 ADT (LOS D thresholds of 10,900 ADT). It is the project vision and desire to slow down traffic both through traffic calming measures (i.e. roundabouts) and design features (i.e. design speed) in the proposed town center and within the vicinity of the school and parks where high pedestrian activity is anticipated and encouraged.

Additionally, the intersection of Lilac Hills Ranch Road/Covey Lane was analyzed as an All-Way Stop Controlled (AWSC) intersection to ensure an acceptable LOS within the project site. The figure below displays the Lilac Hills Ranch Road/Covey Lane intersection geometrics as well as peak hour traffic volumes.



Source: Chen Ryan Associates; May 2014

Table 7.3 displays the intersection delay and LOS under the project buildout conditions. Level of service calculation worksheets are provided in Appendix AV.

TABLE 7.3  
PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
LILAC HILLS RANCH ROAD/COVEY LANE

| Intersection                        | Traffic Control | AM Peak Hour      |     | PM Peak Hour      |     |
|-------------------------------------|-----------------|-------------------|-----|-------------------|-----|
|                                     |                 | Avg. Delay (sec.) | LOS | Avg. Delay (sec.) | LOS |
| Lilac Hills Ranch Road / Covey Lane | AWSC            | 7.5               | A   | 7.8               | A   |

Source: Chen Ryan Associates; May 2014

As shown in Table 7.3, the intersection of Lilac Hills Ranch Road / Covey Lane would operate at acceptable LOS A during both the AM and PM peak hours.

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**Table 7.4** displays the projected daily volumes for two private roads, Covey Lane and Mountain Ridge Road, both of which provides access to the proposed Lilac Hills Ranch Project.

**TABLE 7.4**  
**COVEY LANE AND MOUNTAIN RIDGE ROAD**

| Facility            | Estimated ADT | Capacity* |
|---------------------|---------------|-----------|
| Covey Lane          | 1,390         | 2,500     |
| Mountain Ridge Road | 1,190         | 2,500     |

Source: Chen Ryan Associates; May 2014

Notes:

\*The capacity is based on the County Private Road Standards with observed travel speed.  
Observed speed is based on speed survey conducted by NDS included in Appendix D.

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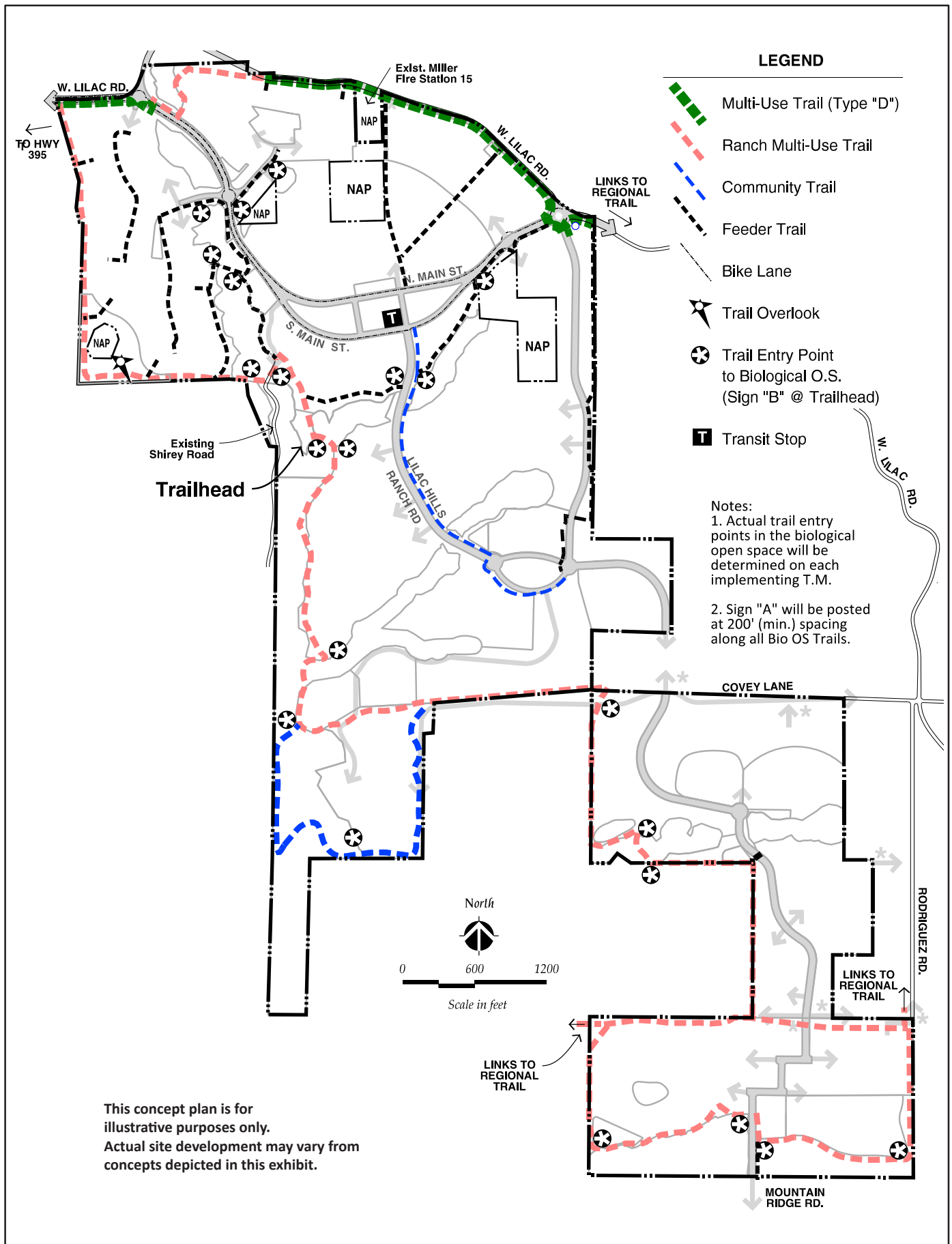
## 8.0 Hazards to Pedestrians and Bicyclists

Lilac Hills Ranch currently has two east-west public trail segments, one along the northern boundary of the project site (W. Lilac Road) and the other along the most southern portion of the project. In addition to the two public trails, the Lilac Hills Ranch project proposes developing a system of multi-purpose trails that traverse the project site, linking the northern and southern public trails. The Lilac Hills Ranch's multi-purpose trails network will provide connectivity to parks, private recreation, schools, and commercial areas within the project site. The multi-purpose trail network is proposed as a combination of smaller feeder and natural trails in the open space area of Lilac Hills Ranch, and an 8-foot community pathway that traverses the project site providing connectivity to the existing County Regional Trail System. All trails should be designed to County standards approved by the County as set forth in the Specific Plan for the Project to ensure the safety of pedestrians and bicyclists. A map of the proposed trail network is displayed in **Figure 8-1**.

In addition to the trails system, a number of roundabouts are proposed along W. Lilac Road and Main Street. Roundabouts have been proven to calm traffic, improve safety, and increase roadway capacity when designed correctly, thereby enhancing the comfort and safety of both cyclists and pedestrians. The Project Civil Engineer, Landmark Consulting, will ensure that all proposed roundabouts are designed to meet applicable safety and design standards.

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Lilac Hills Ranch Traffic Impact Study

Figure 8-1  
Trails Plan

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## 9.0 General Plan Consistency Analyses

This chapter discusses the correlation between the General Plan Land Use Element and Mobility Element at build-out of the Land Use Element as amended by the proposed project. Although a build-out analysis is not needed to evaluate project impacts under CEQA, projects that involve a general plan amendment must provide such an analysis as required by the County's Guidelines for Determining Significance, as modified on August 24, 2011. The purpose of the Buildout Analysis provided in Chapter 9 is to determine whether the proposed land use changes are consistent with the County's Circulation Element.

Mobility Element Policy 2.1 acknowledges that the preservation of valuable resources may outweigh the benefits of road improvements. Therefore, a lower LOS along specified roadways may be acceptable. Table M-4 of the Mobility Element identifies the deficient roadways and describes the rationale for accepting deficient roadway segments. Policy 2.1 requires development projects to provide associated road improvements necessary to achieve a level of service of "D" or higher on all Mobility Element roads except for those where a failing level of service has been accepted by the County pursuant to the specified criteria. The applicable situations for accepting a road classification where a LOS E or F is forecast includes those instances when the adverse impacts of adding travel lanes do not justify the resulting benefit of increased traffic capacity. This would include the following relevant situations:

- When marginal deficiencies are characterized along a short segment of a road and classifying the road with a designation that would add travel lanes for the entire road would be excessive; or
- When adding travel lanes to a road that would adversely impact environmental and cultural resources or in areas with steep slopes where widening roads would require massive grading, which would result in adverse environmental impacts and other degradation of the physical environment.

This chapter provides two plan-to-plan analyses assessing potential traffic impacts to the County's General Plan Mobility Element roadways due to changes in the proposed project's land use, density, intensity, and/or network proposals. In addition to the proposed project land uses described in Chapter 4, *the Lilac Hills Ranch project also proposes to downgrade W. Lilac Road, between Main Street (the most western project roundabout) and the planned Road 3 from 2.2C to 2.2F.* The two plan-to-plan analyses include comparisons of, first, the proposed project and the currently adopted GP Mobility Element (with Road 3); and second, the proposed project and the ~~reasonably expected~~ "Without Road 3" network ~~(without Road 3).~~ The purpose of these analyses is to determine whether the land use and network changes proposed by this project can be supported by the County's Mobility Element.

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## 9.1 Horizon Year Roadway Network and Traffic Volumes

The Horizon Year roadway network is based on the County's General Plan Mobility Element, with the alternatives of Road 3 in or out, to reflect the currently adopted General Plan (with Road 3) and the ~~reasonably expected "Without Road 3" network (without Road 3).~~ **Figure 9-1** displays the Horizon Year roadway geometrics.

SANDAG traffic model forecasts are required for the Horizon Year analysis. The current Series 12 Regional Transportation Model, yet to be calibrated or validated at the community plan level for the unincorporated County of San Diego, has been found to generate forecast roadway average daily traffic (ADT) volumes that are significantly different from those illustrated in the recently adopted General Plan Update Mobility Element (Series 10). Unfortunately, the Series 10 County GPU Model is no longer available for our use. In order to utilize the best available and most defensible data for the CEQA-level traffic analysis, the following approach was utilized and approved by both the County of San Diego and Caltrans for developing the Horizon Year volumes:

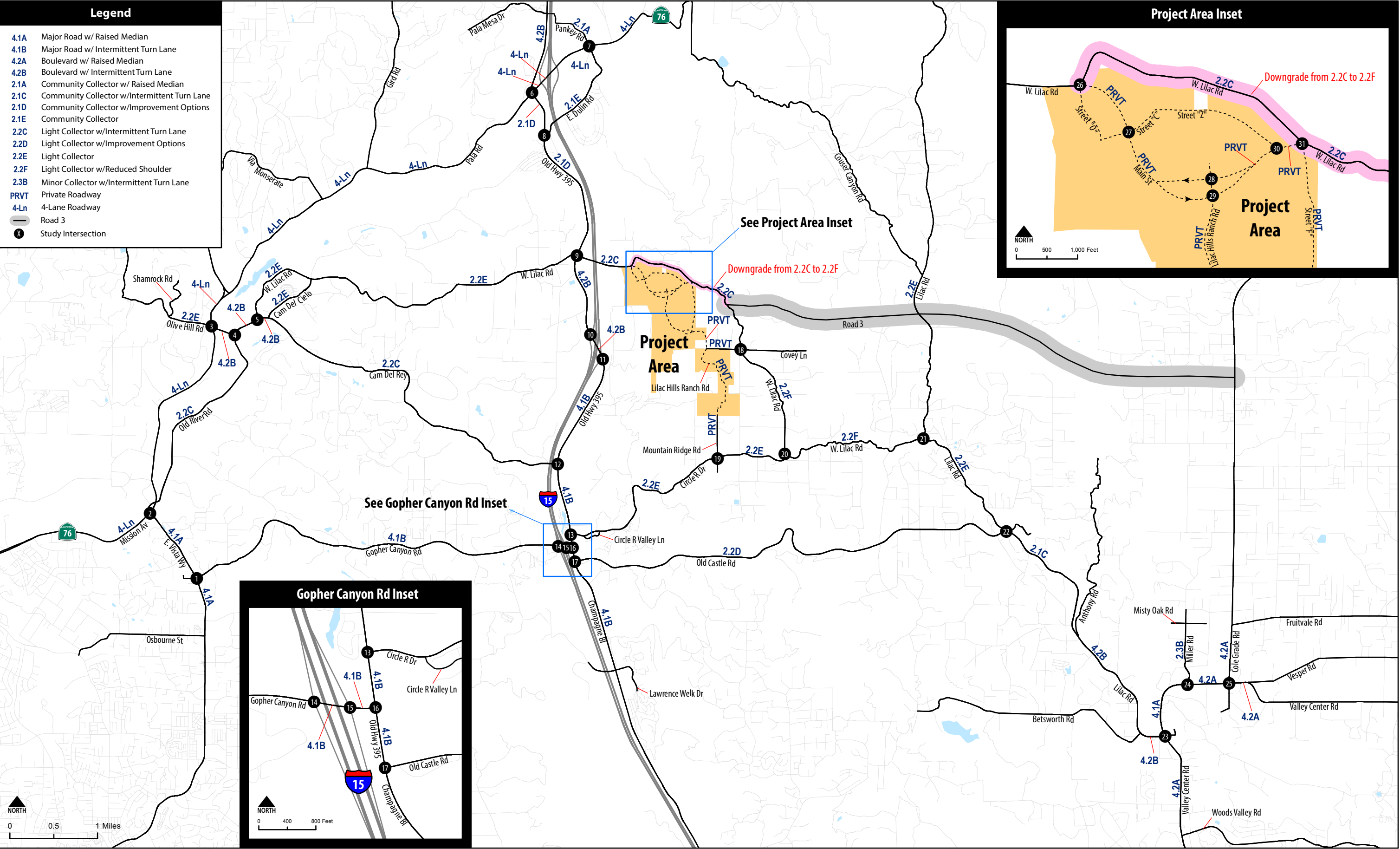
### County Facilities

- Utilize the Series 10 GPU 2030 model forecast ADT as a starting point – horizon year 2030 base volumes.
- Conduct "Select Zone" assignments for the proposed Lilac Hills Ranch project using the Series 12 Regional Transportation Model. Project trip distribution and assignment, as well as the potential study area, were derived from these "Select Zone" assignments.
- Compare the trip generation between the adopted and proposed land uses for the subject TAZs.
- The difference in trip generation between the adopted and proposed land uses, along with the proposed project distribution from the Select Zone assignments mentioned above, were used to derive 2030 ADTs for the proposed project.

### Caltrans Facilities

- Utilize forecast ADTs from Year 2050 of the Series 12 Regional Transportation Model as adopted in the 2050 RTP. While this regional model is not calibrated at the arterial and local street level, it is calibrated and approved for use at the state facility level.
- The difference in trip generation (between the adopted and proposed land uses for the subject TAZs), along with the proposed project distribution (from the Series 12 "Select Zone" assignments) was used to derive the Horizon Year with proposed project freeway/state highway segment ADTs.

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Lilac Hills Ranch Traffic Impact Study

Figure 9-1  
Roadway Geometrics - Horizon Year Conditions

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## 9.2 Horizon Year with Road 3 Traffic Conditions

The following two (2) scenarios are discussed in this section:

- Horizon Year Base Conditions with Road 3
- Horizon Year Base Plus Project Conditions with Road 3

Level of service analyses under the Horizon Year conditions with Road 3 were conducted using the methodologies described in Chapter 2.0. At the County's request, intersection analysis was not conducted under Horizon Year scenarios. Roadway and freeway segment level of service results are discussed separately below.

### 9.2.1 Horizon Year Base with Road 3

Average daily traffic volumes on study area roadway segments are displayed in **Figure 9-2**. Note that this figure was modified to reflect "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

#### Roadway Segment Analysis

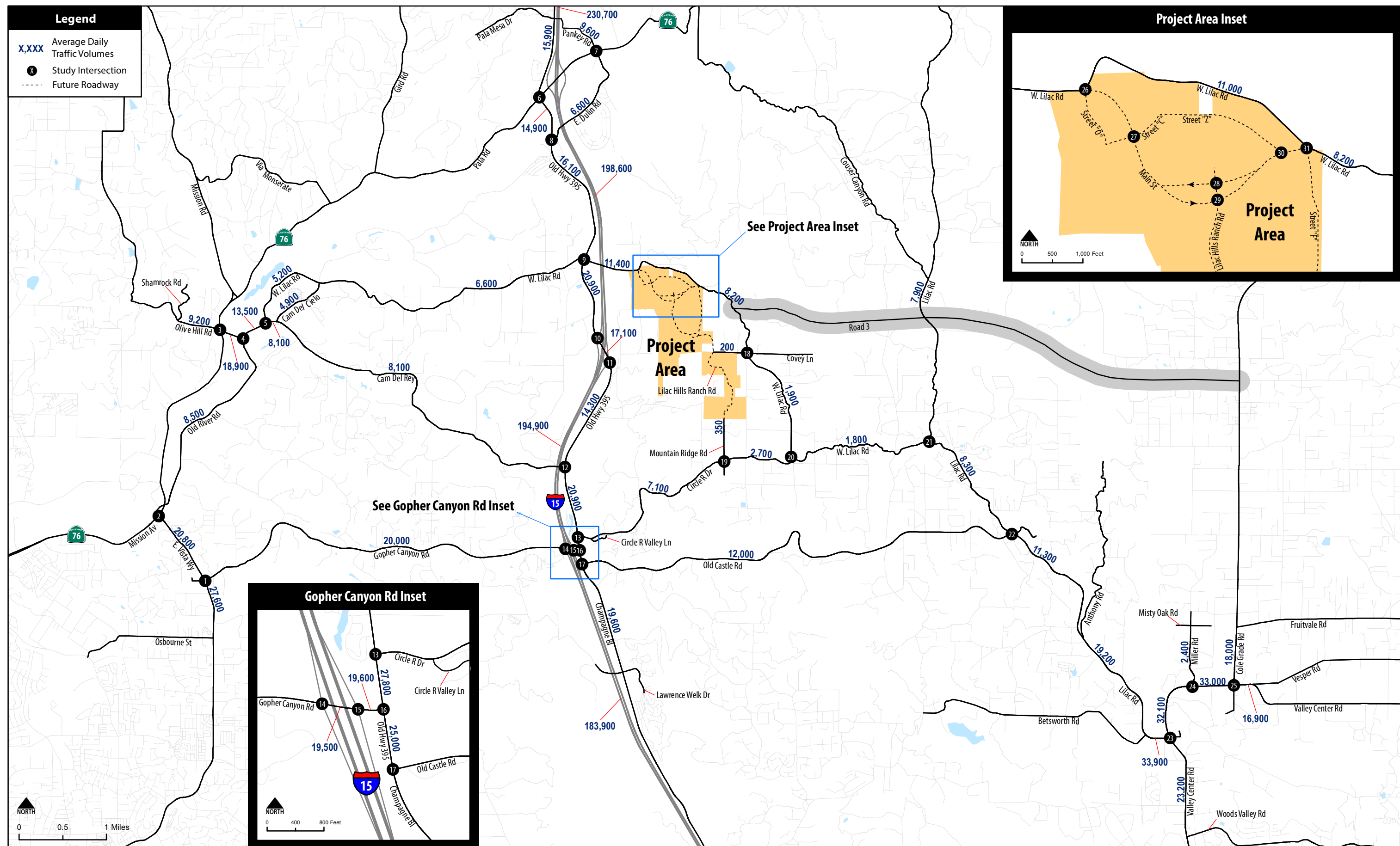
**Table 9.1** displays the level of service analysis results for key roadway segments under Horizon Year Base Conditions with Road 3.

As shown in Table 9.1, the following four (4) study area roadway segments are projected to operate at substandard LOS E/F under Horizon Year Base conditions with Road 3:

- Old Highway 395, between SR-76 and E. Dulin Road – LOS E, and the County General Plan Update has accepted LOS E/F operations along this segment;
- Old Highway 395, between E. Dulin Road and W. Lilac Road – LOS E;
- Lilac Road, between New Road 19 (east of Betsworth Road) and Valley Center Road – LOS F, and the County General Plan Update has accepted LOS E/F operations along this segment; and
- Valley Center Road, between Miller Road and Indian Creek Road – LOS F, and the County General Plan Update has accepted LOS E/F operations along this segment.

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# Lilac Hills Ranch Traffic Impact Study

Figure 9-2

**Roadway Average Daily Traffic Volumes -  
Horizon Year Base Conditions with Road 3**

TABLE 9.1  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE CONDITIONS  
(with Road 3)

| Roadway            | From                | To                  | Classification | LOS Threshold (LOS D) | Average Daily Traffic (ADT) | Level of Service (LOS) |
|--------------------|---------------------|---------------------|----------------|-----------------------|-----------------------------|------------------------|
| E. Dulin Road      | Old Highway 395     | SR-76               | 2.1E           | 10,900                | <del>5,810</del> 6,600      | C                      |
| W. Lilac Road      | Camino Del Rey      | Camino Del Cielo    | 2.2E           | 10,900                | <del>4,960</del> 5,200      | C                      |
| W. Lilac Road      | Camino Del Cielo    | Old Highway 395     | 2.2E           | 10,900                | <del>6,300</del> 6,000      | C                      |
| W. Lilac Road      | Old Highway 395     | Main Street         | 2.2C           | 13,500                | <del>8,110</del> 11,400     | <del>ED</del>          |
| W. Lilac Road      | Main Street         | Street "F"          | 2.2C           | 13,500                | <del>10,630</del> 11,000    | <del>ED</del>          |
| W. Lilac Road      | Street "F"          | Road 3              | 2.2C           | 13,500                | <del>10,660</del> 8,200     | C                      |
| W. Lilac Road      | Road 3              | Covey Lane          | 2.2F           | 8,700                 | <del>1,130</del> 200        | A                      |
| W. Lilac Road      | Covey Lane          | Circle R Drive      | 2.2F           | 8,700                 | <del>1,130</del> 200        | A                      |
| W. Lilac Road      | Circle R Drive      | Lilac Road          | 2.2F           | 8,700                 | <del>1,740</del> 800        | A                      |
| Camino Del Cielo   | Camino Del Rey      | W. Lilac Road       | 2.2E           | 10,900                | <del>4,890</del> 900        | C                      |
| Olive Hill Road    | Shamrock Road       | SR-76               | 2.2E           | 10,900                | <del>9,190</del> 200        | D                      |
| Camino Del Rey     | SR-76               | Old River Road      | 4.2B           | 25,000                | <del>18,780</del> 900       | B                      |
| Camino Del Rey     | Old River Road      | W. Lilac Road       | 4.2B           | 25,000                | <del>13,250</del> 500       | A                      |
| Camino Del Rey     | W. Lilac Road       | Camino Del Cielo    | 4.2B           | 25,000                | <del>8,080</del> 100        | A                      |
| Camino Del Rey     | Camino Del Cielo    | Old Highway 395     | 2.2C           | 13,500                | <del>8,080</del> 100        | C                      |
| Gopher Canyon Road | E. Vista Way        | I-15 SB Ramps       | 4.1B           | 30,800                | <del>19,850</del> 200       | B                      |
| Gopher Canyon Road | I-15 SB Ramps       | I-15 NB Ramps       | 4.1B           | 30,800                | <del>19,300</del> 500       | B                      |
| Gopher Canyon Road | I-15 NB Ramps       | Old Highway 395     | 4.1B           | 30,800                | <del>19,350</del> 600       | B                      |
| Circle R Drive     | Old Highway 395     | Mountain Ridge Road | 2.2E           | 10,900                | <del>6,640</del> 7,100      | <del>ED</del>          |
| Circle R Drive     | Mountain Ridge Road | W. Lilac Road       | 2.2E           | 10,900                | <del>2,640</del> 700        | B                      |
| Old Castle Road    | Old Highway 395     | Lilac Road          | 2.2D           | 13,500                | <del>7,780</del> 800        | C                      |
| E. Vista Way       | SR-76               | Gopher Canyon Road  | 4.1A           | 33,400                | <del>20,750</del> 800       | B                      |

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TABLE 9.1  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE CONDITIONS  
(with Road 3)

| Roadway             | From                                 | To                                   | Classification | LOS Threshold (LOS D) | Average Daily Traffic (ADT) | Level of Service (LOS) |
|---------------------|--------------------------------------|--------------------------------------|----------------|-----------------------|-----------------------------|------------------------|
| E. Vista Way        | Gopher Canyon Road                   | Osborne Street                       | 4.1A           | 33,400                | 27,520 <del>60</del><br>0   | C                      |
| Old River Road      | SR-76                                | Camino Del Rey                       | 2.2C           | 13,500                | 8,370 <del>500</del><br>0   | C                      |
| Old Highway 395     | Pala Mesa Drive                      | SR-76                                | 4.2B           | 25,000                | 15,730 <del>90</del><br>0   | A                      |
| Old Highway 395     | SR-76                                | E. Dulin Road                        | 2.1D           | 13,500                | 14,580 <del>90</del><br>0   | E accepted at LOS E/F  |
| Old Highway 395     | E. Dulin Road                        | W. Lilac Road                        | 2.1D           | 13,500                | 13,790 <del>16</del><br>100 | E                      |
| Old Highway 395     | W. Lilac Road                        | I-15 SB Ramps                        | 4.2B           | 25,000                | 19,520 <del>20</del><br>900 | <del>BC</del>          |
| Old Highway 395     | I-15 SB Ramps                        | I-15 NB Ramps                        | 4.2B           | 25,000                | 16,250 <del>17</del><br>100 | <del>AB</del>          |
| Old Highway 395     | I-15 NB Ramps                        | Camino Del Rey                       | 4.1B           | 30,800                | 13,960 <del>14</del><br>300 | B                      |
| Old Highway 395     | Camino Del Rey                       | Circle R Drive                       | 4.1B           | 30,800                | 20,540 <del>90</del><br>0   | B                      |
| Old Highway 395     | Circle R Drive                       | Gopher Canyon Road                   | 4.1B           | 30,800                | 27,290 <del>80</del><br>0   | <del>CD</del>          |
| Old Highway 395     | Gopher Canyon Road                   | Old Castle Road                      | 4.1B           | 30,800                | 24,740 <del>25</del><br>000 | C                      |
| Champagne Boulevard | Old Castle Road                      | Lawrence Welk Drive                  | 4.1B           | 30,800                | 19,360 <del>60</del><br>0   | B                      |
| Pankey Road         | Pala Mesa Drive                      | SR-76                                | 2.1A           | 15,000                | 9,360 <del>600</del><br>0   | <del>CA</del>          |
| Lilac Road          | Couser Canyon Road                   | W. Lilac Road                        | 2.2E           | 10,900                | 7,750 <del>900</del><br>0   | D                      |
| Lilac Road          | W. Lilac Road                        | Old Castle Road                      | 2.2E           | 10,900                | 8,130 <del>300</del><br>0   | D                      |
| Lilac Road          | Old Castle Road                      | Anthony Road                         | 2.1C           | 13,500                | 11,850 <del>30</del><br>0   | D                      |
| Lilac Road          | Anthony Road                         | New Road 19 (east of Betsworth Road) | 4.2B           | 25,000                | 19,140 <del>20</del><br>0   | B                      |
| Lilac Road          | New Road 19 (east of Betsworth Road) | Valley Center Road                   | 4.2B           | 25,000                | 33,880 <del>90</del><br>0   | F accepted at LOS E/F  |

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TABLE 9.1  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE CONDITIONS  
(with Road 3)

| Roadway            | From              | To                 | Classification | LOS Threshold (LOS D) | Average Daily Traffic (ADT) | Level of Service (LOS)       |
|--------------------|-------------------|--------------------|----------------|-----------------------|-----------------------------|------------------------------|
| Valley Center Road | Woods Valley Road | Lilac Road         | 4.2A           | 27,000                | 23,200                      | C                            |
| Valley Center Road | Lilac Road        | Miller Road        | 4.1A           | 33,400                | <del>32,990</del><br>10,000 | D                            |
| Valley Center Road | Miller Road       | Indian Creek Road  | 4.2A           | 27,000                | <del>32,990</del><br>33,000 | <b>F</b> accepted at LOS E/F |
| Valley Center Road | Indian Creek Road | Cole Grade Road    | 4.2A           | 27,000                | 23,790                      | C                            |
| Valley Center Road | Cole Grade Road   | Vesper Road        | 4.2A           | 27,000                | 16,900                      | A                            |
| Miller Road        | Misty Oak Road    | Valley Center Road | 2.3B           | 8,000                 | 2,400                       | A                            |
| Cole Grade Road    | Fruitvale Road    | Valley Center Road | 4.2A           | 27,000                | <del>17,990</del><br>18,000 | <b>AB</b>                    |

Source: Chen Ryan Associates; ~~June 2013~~ May 2014

Note/Notes:

Bold letter indicates unacceptable LOS E or F.

Changes in this table are associated with "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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## Freeway Segment Analysis

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. **Table 9.2** displays the resulting level of service for I-15 under Horizon Year Base conditions with Road 3. It should be noted that according to the 2050 RTP, I-15 between the Riverside County Boundary and SR-78 is planned to be widened by adding four (4) toll lanes by 2050. However, no secured funding sources were identified, hence this improvement was not assumed in this study.

As shown in the table, the following ten (10) freeway segments along I-15 are projected to operate at substandard LOS E or F under Horizon Year Base conditions with Road 3:

- I-15, between the Riverside County Boundary and Old Highway 395 – LOS F;
- I-15, between Old Highway 395 and SR-76 – LOS F;
- I-15, between SR-76 and Old Highway 395 – LOS F;
- I-15, between Old Highway 395 and Gopher Canyon Road – LOS F;
- I-15, between Gopher Canyon Road and Deer Springs Road – LOS F;
- I-15, between Deer Springs Road and Centre City Parkway – LOS F;
- I-15, between Centre City Parkway and El Norte Parkway – LOS F;
- I-15, between El Norte Parkway and SR-78 – LOS F;
- I-15, between SR-78 and W Valley Parkway – LOS E; and
- I-15, between Via Rancho Parkway and Bernardo Drive – LOS F.

### 9.2.2 Horizon Year Base Plus Project with Road 3

Average daily traffic volumes on study area roadway segments are displayed in **Figure 9-3**. Note that this figure was modified to reflect both “Change 1” and “Change 2” as described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”.

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**TABLE 9.2**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**HORIZON YEAR BASE CONDITIONS**  
**(with Road 3)**

| Freeway | Segment                                      | ADT                          | Peak Hour % | Peak Hour Volume           | Directional Split | # of Lanes Per Direction | Peak Hour Factor (PHF) | % of Heavy Vehicle | Volume (pc/h/ln)        | V/C                       | LOS |
|---------|--|------------------------------|-------------|----------------------------|-------------------|--------------------------|------------------------|--------------------|-------------------------|---------------------------|-----|
| I-15    | Riverside County Boundary to Old Highway 395 | 267,800                      | 8.4%        | 22,624                     | 0.64              | 4                        | 0.95                   | 6.75%              | 3,911                   | 1.664                     | F   |
| I-15    | Old Highway 395 to SR-76                     | 230,700                      | 7.4%        | 17,162                     | 0.73              | 4                        | 0.95                   | 6.75%              | 3,415                   | 1.453                     | F   |
| I-15    | SR-76 to Old Highway 395                     | 198,600                      | 7.8%        | 15,534                     | 0.69              | 4                        | 0.95                   | 8.40%              | 2,920                   | 1.243                     | F   |
| I-15    | Old Highway 395 to Gopher Canyon Road        | <del>192,300</del><br>94,900 | 8.1%        | <del>15,530</del><br>7,400 | 0.67              | 4                        | 0.95                   | 8.40%              | <del>2,844</del><br>882 | <del>1.210</del><br>0.226 | F   |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 183,900                      | 8.1%        | 14,852                     | 0.67              | 4                        | 0.95                   | 13.20%             | 2,782                   | 1.184                     | F   |
| I-15    | Deer Springs Road to Centre City Parkway     | 178,700                      | 8.0%        | 14,357                     | 0.66              | 4                        | 0.95                   | 13.20%             | 2,676                   | 1.139                     | F   |
| I-15    | Centre City Parkway to El Norte Parkway      | 169,200                      | 8.0%        | 13,594                     | 0.66              | 4                        | 0.95                   | 13.20%             | 2,534                   | 1.078                     | F   |
| I-15    | El Norte Parkway to SR-78                    | 193,600                      | 7.9%        | 15,238                     | 0.66              | 4                        | 0.95                   | 10.00%             | 2,799                   | 1.191                     | F   |
| I-15    | SR-78 to W Valley Parkway                    | 288,800                      | 8.1%        | 23,504                     | 0.60              | 5+2ML                    | 0.95                   | 10.00%             | 2,226                   | 0.947                     | E   |
| I-15    | W Valley Parkway to Auto Parkway             | 281,300                      | 8.1%        | 22,893                     | 0.60              | 5+2ML                    | 0.95                   | 10.00%             | 2,168                   | 0.923                     | D   |
| I-15    | Auto Parkway to W Citracado Parkway          | 276,100                      | 7.8%        | 21,413                     | 0.60              | 5+2ML                    | 0.95                   | 10.00%             | 2,016                   | 0.858                     | D   |
| I-15    | W Citracado Parkway to Via Rancho Parkway    | 279,100                      | 7.8%        | 21,646                     | 0.60              | 5+2ML                    | 0.95                   | 7.00%              | 2,009                   | 0.855                     | D   |
| I-15    | Via Rancho Parkway to Bernardo Drive         | 392,100                      | 7.4%        | 28,857                     | 0.58              | 5+2ML                    | 0.95                   | 7.00%              | 2,598                   | 1.105                     | F   |
| I-15    | Bernardo Drive to Rancho Bernardo Road       | 261,100                      | 7.4%        | 19,216                     | 0.58              | 5+2ML                    | 0.95                   | 7.00%              | 1,730                   | 0.736                     | C   |

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TABLE 9.2  
 FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
 HORIZON YEAR BASE CONDITIONS  
 (with Road 3)

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | Peak Hour Factor (PHF) | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------------------------|--------------------|------------------|-------|-----|
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 300,500 | 7.3%        | 22,063           | 0.54              | 5+2ML                    | 0.95                   | 7.00%              | 1,840            | 0.783 | C   |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 269,300 | 7.3%        | 19,772           | 0.54              | 5+2ML                    | 0.95                   | 7.00%              | 1,649            | 0.702 | C   |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

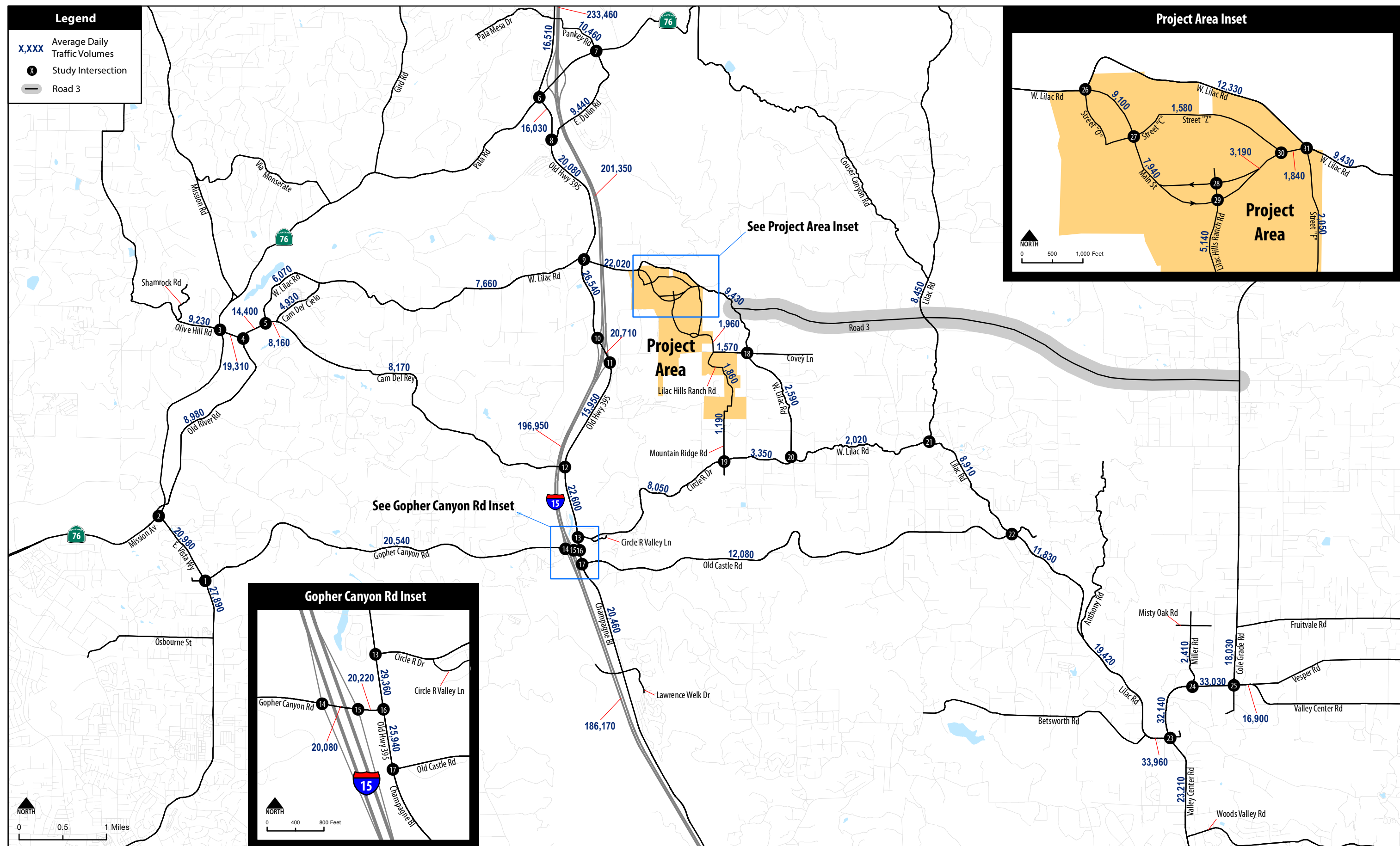
Notes:

Bold letter indicates unacceptable LOS E or F.

ML = Managed Lane.

Changes in this table are associated with a copy and pasta error.

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### Figure 9-3

### Roadway Average Daily Traffic Volumes - Horizon Year Base Plus Project Conditions with Road 3

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## Roadway Segment Analysis

**Table 9.3** displays the level of service analysis results for key roadway segments under Horizon Year Base Plus Project conditions with Road 3. Note that the Lilac Hills Ranch project proposes downgrading W. Lilac Road, between Main Street and the planned Road 3 from 2.2C to 2.2F.

As shown in the table, the following ~~seven (7)~~ eight (8) roadway segments are projected to operate at substandard LOS E or F:

- W. Lilac Road, between Old Highway 395 and Main Street – LOS ~~E~~, and the project would add more than ~~200~~100 daily trips.
- W. Lilac Road, between Main Street and Street “F” – LOS F, and the project would add more than 100 daily trips.
- W. Lilac Road, between Street “F” and Road 3 – LOS F, and the project would add more than 100 daily trips.
- Old Highway 395, between SR-76 and E. Dulin Road – LOS E, and the project would add more than 200 daily trips. The County General Plan Update has accepted LOS E/F operations along this segment.
- Old Highway 395, between E. Dulin Road and W. Lilac Road – LOS ~~E~~, and the project would add more than ~~200~~100 daily trips.
- Old Highway 395, between W. Lilac Road I-15 SB Ramps – LOS E, and the project would add more than 400 daily trips.
- Lilac Road, between New Road 19 (east of Betsworth Road) and Valley Center Road – LOS F, and the project would add less than 200 daily trips. In addition, the County General Plan Update has accepted LOS E/F operations at this segment.
- Valley Center Road, between Miller Road and Indian Creek Road – LOS F, and the project would add less than 200 daily trips. In addition, the County General Plan Update has accepted LOS E/F operations at this segment.

~~Based upon the significance criteria discussed in Section 2.8, the~~The additional traffic generated by the Lilac Hills Ranch project would ~~have traffic impacts (planning level initial assessment)~~result in GP inconsistencies to ~~56~~ out of ~~78~~ of the roadway segments identified above and there include:

- W. Lilac Road, between Old Highway 395 and Main Street;
- W. Lilac Road, between Main Street and Street “F”;
- W. Lilac Road, between Street “F” and Road 3;
- Old Highway 395, between SR-76 and E. Dulin Road;
- Old Highway 395, between E. Dulin Road and W. Lilac Road; and
- Old Highway 395, between W. Lilac Road and I-15 SB Ramps.

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**TABLE 9.3  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(with Road 3)**

| Roadway          | From             | To               | Horizon Year with Project |                       |                                |               | Horizon Year w/o Project       |               | Project ADT                   | Project Impact? GP Inconsistency?           |
|------------------|------------------|------------------|---------------------------|-----------------------|--------------------------------|---------------|--------------------------------|---------------|-------------------------------|---|
|                  |                  |                  | Classification            | LOS Threshold (LOS D) | ADT                            | LOS           | ADT                            | LOS           |                               |   |
| E. Dulin Road    | Old Highway 395  | SR-76            | 2.1E                      | 10,900                | <del>8,920</del> <u>9,440</u>  | D             | <del>5,810</del> <u>6,600</u>  | C             | <del>3,110</del> <u>2,840</u> | No  |
| W. Lilac Road    | Camino Del Rey   | Camino Del Cielo | 2.2E                      | 10,900                | <del>5,910</del> <u>6,070</u>  | C             | <del>4,960</del> <u>5,200</u>  | C             | <del>950</del> <u>870</u>     | No  |
| W. Lilac Road    | Camino Del Cielo | Old Highway 395  | 2.2E                      | 10,900                | <del>7,470</del> <u>6,600</u>  | D             | <del>6,300</del> <u>6,000</u>  | C             | <del>1,170</del> <u>600</u>   | No  |
| W. Lilac Road    | Old Highway 395  | Main Street      | 2.2C                      | 13,500                | <del>18,990</del> <u>2,020</u> | <del>EE</del> | <del>8,110</del> <u>11,400</u> | <del>ED</del> | <del>10,880</del> <u>620</u>  | Yes > <del>200</del> <u>ADT</u><br>> 100ADT |
| W. Lilac Road    | Main Street      | Street "F"       | 2.2F*                     | 8,700                 | <del>12,080</del> <u>330</u>   | F             | <del>10,630</del> <u>1,000</u> | D             | <del>1,450</del> <u>330</u>   | Yes > 100ADT                                |
| W. Lilac Road    | Street "F"       | Road 3           | 2.2F*                     | 8,700                 | <del>12,040</del> <u>230</u>   | F             | <del>10,660</del> <u>1,000</u> | D             | <del>1,350</del> <u>230</u>   | Yes > 100ADT                                |
| W. Lilac Road    | Road 3           | Covey Lane       | 2.2F                      | 8,700                 | <del>1,680</del> <u>9,430</u>  | A             | <del>1,130</del> <u>200</u>    | A             | <del>550</del> <u>1,230</u>   | No  |
| W. Lilac Road    | Covey Lane       | Circle R Drive   | 2.2F                      | 8,700                 | <del>1,420</del> <u>890</u>    | A             | <del>1,130</del> <u>200</u>    | A             | <del>290</del> <u>690</u>     | No  |
| W. Lilac Road    | Circle R Drive   | Lilac Road       | 2.2F                      | 8,700                 | <del>2,020</del> <u>1,980</u>  | A             | <del>1,740</del> <u>800</u>    | A             | <del>240</del> <u>220</u>     | No  |
| Camino Del Cielo | Camino Del Rey   | W. Lilac Road    | 2.2E                      | 10,900                | <del>4,920</del> <u>930</u>    | C             | <del>4,890</del> <u>900</u>    | C             | 30                            | No  |

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**TABLE 9.3  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(with Road 3)**

| Roadway            | From                | To                  | Horizon Year with Project |                       |                                    |     | Horizon Year w/o Project             |     | Project ADT                      | Project Impact? GP Inconsistency ? |
|--------------------|---------------------|---------------------|---------------------------|-----------------------|------------------------------------|-----|--------------------------------------|-----|----------------------------------|------------------------------------|
|                    |                     |                     | Classification            | LOS Threshold (LOS D) | ADT                                | LOS | ADT                                  | LOS |                                  |                                    |
| Olive Hill Road    | Shamrock Road       | SR-76               | 2.2E                      | 10,900                | 9,220 <sup>23</sup> <sub>0</sub>   | D   | 9,190 <sup>20</sup> <sub>0</sub>     | D   | 30                               | No                                 |
| Camino Del Rey     | SR-76               | Old River Road      | 4.2B                      | 25,000                | 19,230 <sup>3</sup> <sub>10</sub>  | B   | 18,780 <sup>9</sup> <sub>00</sub>    | B   | 450 <sup>410</sup>               | No                                 |
| Camino Del Rey     | Old River Road      | W. Lilac Road       | 4.2B                      | 25,000                | 14,230 <sup>4</sup> <sub>00</sub>  | A   | 13,250 <sup>5</sup> <sub>00</sub>    | A   | 980 <sup>900</sup>               | No                                 |
| Camino Del Rey     | W. Lilac Road       | Camino Del Cielo    | 4.2B                      | 25,000                | 8,140 <sup>16</sup> <sub>0</sub>   | A   | 8,080 <sup>10</sup> <sub>0</sub>     | A   | 60                               | No                                 |
| Camino Del Rey     | Camino Del Cielo    | Old Highway 395     | 2.2C                      | 13,500                | 8,160 <sup>17</sup> <sub>0</sub>   | C   | 8,080 <sup>10</sup> <sub>0</sub>     | C   | 80 <sup>70</sup>                 | No                                 |
| Gopher Canyon Road | E. Vista Way        | I-15 SB Ramps       | 4.1B                      | 30,800                | 20,440 <sup>5</sup> <sub>40</sub>  | B   | 19,850 <sup>2</sup> <sub>0,000</sub> | B   | 590 <sup>540</sup>               | No                                 |
| Gopher Canyon Road | I-15 SB Ramps       | I-15 NB Ramps       | 4.1B                      | 30,800                | 20,090 <sup>0</sup> <sub>80</sub>  | B   | 19,300 <sup>5</sup> <sub>00</sub>    | B   | 790 <sup>580</sup>               | No                                 |
| Gopher Canyon Road | I-15 NB Ramps       | Old Highway 395     | 4.1B                      | 30,800                | 20,330 <sup>2</sup> <sub>20</sub>  | B   | 19,350 <sup>6</sup> <sub>00</sub>    | B   | 980 <sup>620</sup>               | No                                 |
| Circle R Drive     | Old Highway 395     | Mountain Ridge Road | 2.2E                      | 10,900                | 8,440 <sup>5</sup> <sub>0</sub>    | D   | 6,640 <sup>7</sup> <sub>100</sub>    | ED  | 1,800 <sup>95</sup> <sub>0</sub> | No                                 |
| Circle R Drive     | Mountain Ridge Road | W. Lilac Road       | 2.2E                      | 10,900                | 2,880 <sup>3.3</sup> <sub>50</sub> | B   | 2,640 <sup>70</sup> <sub>0</sub>     | B   | 240 <sup>650</sup>               | No                                 |
| Old Castle Road    | Old Highway 395     | Lilac Road          | 2.2D                      | 13,500                | 7,870 <sup>88</sup> <sub>0</sub>   | C   | 7,780 <sup>80</sup> <sub>0</sub>     | C   | 90 <sup>80</sup>                 | No                                 |

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**TABLE 9.3  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(with Road 3)**

| Roadway         | From               | To                 | Horizon Year with Project |                       |                  |                       | Horizon Year w/o Project |                       | Project ADT   | Project Impact? GP Inconsistency? |
|-----------------|--------------------|--------------------|---------------------------|-----------------------|------------------|-----------------------|--------------------------|-----------------------|---------------|-----------------------------------|
|                 |                    |                    | Classification            | LOS Threshold (LOS D) | ADT              | LOS                   | ADT                      | LOS                   |               |                                   |
| E. Vista Way    | SR-76              | Gopher Canyon Road | 4.1A                      | 33,400                | 20,9509<br>80    | B                     | 20,7508<br>00            | B                     | 200180        | No                                |
| E. Vista Way    | Gopher Canyon Road | Osborne Street     | 4.1A                      | 33,400                | 27,8408<br>90    | C                     | 27,5206<br>00            | C                     | 320290        | No                                |
| Old River Road  | SR-76              | Camino Del Rey     | 2.2C                      | 13,500                | 8,90098<br>0     | C                     | 8,37050<br>0             | C                     | 530480        | No                                |
| Old Highway 395 | Pala Mesa Drive    | SR-76              | 4.2B                      | 25,000                | 16,4005<br>10    | A                     | 15,7309<br>00            | A                     | 670610        | No                                |
| Old Highway 395 | SR-76              | E. Dulin Road      | 2.1D                      | 13,500                | 15,8201<br>6,030 | E accepted at LOS E/F | 14,5809<br>00            | E accepted at LOS E/F | 1,24013<br>0  | Yes > 200ADT                      |
| Old Highway 395 | E. Dulin Road      | W. Lilac Road      | 2.1D                      | 13,500                | 18,1502<br>0,080 | EF                    | 13,7901<br>6,100         | E                     | 4,3603<br>980 | Yes → 200ADT > 100ADT             |
| Old Highway 395 | W. Lilac Road      | I-15 SB Ramps      | 4.2B                      | 25,000                | 24,9402<br>6,540 | DE                    | 19,5202<br>0,900         | BC                    | 5,42064<br>0  | No Yes > 400ADT                   |
| Old Highway 395 | I-15 SB Ramps      | I-15 NB Ramps      | 4.2B                      | 25,000                | 19,6002<br>0,710 | BC                    | 16,2501<br>7,100         | AB                    | 3,35061<br>0  | No                                |
| Old Highway 395 | I-15 NB Ramps      | Camino Del Rey     | 4.1B                      | 30,800                | 15,3109<br>50    | B                     | 13,9601<br>4,300         | B                     | 1,35065<br>0  | No                                |
| Old Highway 395 | Camino Del Rey     | Circle R Drive     | 4.1B                      | 30,800                | 21,9502<br>2,600 | B                     | 20,5409<br>00            | B                     | 1,41070<br>0  | No                                |

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**TABLE 9.3  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(with Road 3)**

| Roadway             | From                                 | To                                   | Horizon Year with Project |                       |                  |                       | Horizon Year w/o Project |                       | Project ADT  | Project Impact? GP Inconsistency? |
|---------------------|--------------------------------------|--------------------------------------|---------------------------|-----------------------|------------------|-----------------------|--------------------------|-----------------------|--------------|-----------------------------------|
|                     |                                      |                                      | Classification            | LOS Threshold (LOS D) | ADT              | LOS                   | ADT                      | LOS                   |              |                                   |
| Old Highway 395     | Circle R Drive                       | Gopher Canyon Road                   | 4.1B                      | 30,800                | 29,3103<br>60    | D                     | 27,2908<br>00            | <del>GD</del>         | 1,560        | No                                |
| Old Highway 395     | Gopher Canyon Road                   | Old Castle Road                      | 4.1B                      | 30,800                | 25,7709<br>40    | C                     | 24,7402<br>5,000         | C                     | 1,03094<br>0 | No                                |
| Champagne Boulevard | Old Castle Road                      | Lawrence Welk Drive                  | 4.1B                      | 30,800                | 20,3004<br>60    | B                     | 19,3606<br>00            | B                     | 940860       | No                                |
| Pankey Road         | Pala Mesa Drive                      | SR-76                                | 2.1A                      | 15,000                | 10,3004<br>60    | B                     | 9,3606<br>0              | <del>CA</del>         | 940860       | No                                |
| Lilac Road          | Couser Canyon Road                   | W. Lilac Road                        | 2.2E                      | 10,900                | 8,36045<br>0     | D                     | 7,75090<br>0             | D                     | 610550       | No                                |
| Lilac Road          | W. Lilac Road                        | Old Castle Road                      | 2.2E                      | 10,900                | 8,80091<br>0     | D                     | 8,13030<br>0             | D                     | 670610       | No                                |
| Lilac Road          | Old Castle Road                      | Anthony Road                         | 2.1C                      | 13,500                | 12,4301<br>1,830 | D                     | 11,8503<br>00            | D                     | 580530       | No                                |
| Lilac Road          | Anthony Road                         | New Road 19 (east of Betsworth Road) | 4.2B                      | 25,000                | 19,3804<br>20    | B                     | 19,1402<br>00            | B                     | 240220       | No                                |
| Lilac Road          | New Road 19 (east of Betsworth Road) | Valley Center Road                   | 4.2B                      | 25,000                | 33,9409<br>60    | F accepted at LOS E/F | 33,8809<br>00            | F accepted at LOS E/F | 60           | No < 200ADT                       |
| Valley Center Road  | Woods Valley Road                    | Lilac Road                           | 4.2A                      | 27,000                | 23,2202<br>10    | C                     | 23,200                   | C                     | 2010         | No                                |

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**TABLE 9.3  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(with Road 3)**

| Roadway            | From              | To                 | Horizon Year with Project |                       |                                |                              | Horizon Year w/o Project          |                              | Project ADT     | Project Impact? GP Inconsistency? |
|--------------------|-------------------|--------------------|---------------------------|-----------------------|--------------------------------|------------------------------|-----------------------------------|------------------------------|-----------------|-----------------------------------|
|                    |                   |                    | Classification            | LOS Threshold (LOS D) | ADT                            | LOS                          | ADT                               | LOS                          |                 |                                   |
| Valley Center Road | Lilac Road        | Miller Road        | 4.1A                      | 33,400                | 32,140                         | D                            | <del>32,090</del><br><u>100</u>   | D                            | <del>5040</del> | No                                |
| Valley Center Road | Miller Road       | Indian Creek Road  | 4.2A                      | 27,000                | <del>33,020</del><br><u>30</u> | <b>F</b> accepted at LOS E/F | <del>32,990</del><br><u>3,000</u> | <b>F</b> accepted at LOS E/F | 30              | No < 200ADT                       |
| Valley Center Road | Indian Creek Road | Cole Grade Road    | 4.2A                      | 27,000                | 23,820                         | C                            | 23,790                            | C                            | 30              | No                                |
| Valley Center Road | Cole Grade Road   | Vesper Road        | 4.2A                      | 27,000                | 16,900                         | A                            | 16,900                            | A                            | 0               | No                                |
| Miller Road        | Misty Oak Road    | Valley Center Road | 2.3B                      | 8,000                 | <del>2,420</del><br><u>410</u> | A                            | 2,400                             | A                            | <del>2010</del> | No                                |
| Cole Grade Road    | Fruitvale Road    | Valley Center Road | 4.2A                      | 27,000                | <del>18,020</del><br><u>30</u> | B                            | <del>17,990</del><br><u>8,000</u> | <b>AB</b>                    | 30              | No                                |

Source: Chen Ryan Associates; ~~June 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

\*Proposed downgrade from 2.2C to 2.2F.

Changes in this table are associated with both "Change 1" and "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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## Freeway Segment Analysis

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. **Table 9.4** displays the resulting level of service for I-15 under Horizon Year Base Plus Project conditions with Road 3. It should be noted that according to the 2050 RTP, I-15 between the Riverside County Boundary and SR-78 is planned to be widened by adding four (4) toll lanes by 2050. However, no secured funding sources were identified, hence this improvement was not assumed in this study.

As shown in the table, similar to the base (no-project) conditions, the following ten (10) freeway segments along I-15 would continue to operate at substandard LOS E or F under Horizon Year Base Plus Project conditions with Road 3:

- I-15, between the Riverside County Boundary and Old Highway 395 – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Old Highway 395 and SR-76 – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between SR-76 and Old Highway 395 – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Old Highway 395 and Gopher Canyon Road – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Gopher Canyon Road and Deer Springs Road – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Deer Springs Road and Centre City Parkway – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Centre City Parkway and El Norte Parkway – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between El Norte Parkway and SR-78 – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between SR-78 and W Valley Parkway – LOS E, and the project traffic would not increase the V/C ratio by more than 0.01; and
- I-15, between Via Rancho Parkway and Bernardo Drive – LOS F, and the project traffic would not increase the V/C ratio by more than 0.01.

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TABLE 9.4  
FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(with Road 3)

| Freeway | Segment                                      | ADT                           | Peak Hour % | Peak Hour Volume            | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln)          | V/C                      | LOS w/ Project | Change in V/C (compare to 2030 w/o project) | Project Impact? GP Inconsistency? |
|---------|--|-------------------------------|-------------|-----------------------------|-------------------|--------------------------|------|--------------------|---------------------------|--------------------------|----------------|---|-----------------------------------|
| I-15    | Riverside County Boundary to Old Highway 395 | 270,510                       | 8.4%        | 22,853                      | 0.64              | 4                        | 0.95 | 6.75%              | 3,950                     | 1.681                    | F              | 0.017                                       | Yes > 0.01                        |
| I-15    | Old Highway 395 to SR-76                     | 233,460                       | 7.4%        | 17,368                      | 0.73              | 4                        | 0.95 | 6.75%              | 3,456                     | 1.471                    | F              | 0.017                                       | Yes > 0.01                        |
| I-15    | SR-76 to Old Highway 395                     | 201,350                       | 7.8%        | 15,750                      | 0.69              | 4                        | 0.95 | 8.40%              | 2,960                     | 1.260                    | F              | 0.017                                       | Yes > 0.01                        |
| I-15    | Old Highway 395 to Gopher Canyon Road        | <del>194,240</del><br>196,950 | 8.1%        | <del>15,687</del><br>15,060 | 0.67              | 4                        | 0.95 | 8.40%              | <del>2,872</del><br>2,891 | <del>1.222</del><br>1.39 | F              | <del>0.01</del><br>0.2013                   | Yes > 0.01                        |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 186,170                       | 8.1%        | 15,035                      | 0.67              | 4                        | 0.95 | 13.20%             | 2,817                     | 1.199                    | F              | 0.015                                       | Yes > 0.01                        |
| I-15    | Deer Springs Road to Centre City Parkway     | 180,790                       | 8.0%        | 14,525                      | 0.66              | 4                        | 0.95 | 13.20%             | 2,707                     | 1.152                    | F              | 0.013                                       | Yes > 0.01                        |
| I-15    | Centre City Parkway to El Norte Parkway      | 171,000                       | 8.0%        | 13,738                      | 0.66              | 4                        | 0.95 | 13.20%             | 2,560                     | 1.090                    | F              | 0.011                                       | Yes > 0.01                        |
| I-15    | El Norte Parkway to SR-78                    | 195,280                       | 7.9%        | 15,370                      | 0.66              | 4                        | 0.95 | 10.00%             | 2,823                     | 1.201                    | F              | 0.010                                       | Yes > 0.01                        |
| I-15    | SR-78 to W Valley Parkway                    | 290,040                       | 8.1%        | 23,605                      | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 2,236                     | 0.951                    | E              | 0.004                                       | No < 0.01                         |
| I-15    | W Valley Parkway to Auto Parkway             | 282,360                       | 8.1%        | 22,980                      | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 2,177                     | 0.926                    | D              | 0.003                                       | No                                |

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TABLE 9.4  
FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(with Road 3)

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS w/ Project | Change in V/C (compare to 2030 w/o project) | Project Impact? GP Inconsistency? |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|------------------|-------|----------------|---|-----------------------------------|
| I-15    | Auto Parkway to W Citracado Parkway           | 277,100 | 7.8%        | 21,491           | 0.60              | 5+2ML                    | 0.95 | 10.00%             | 2,023            | 0.861 | D              | 0.003                                       | No                                |
| I-15    | W Citracado Parkway to Via Rancho Parkway     | 280,020 | 7.8%        | 21,717           | 0.60              | 5+2ML                    | 0.95 | 7.00%              | 2,016            | 0.858 | D              | 0.003                                       | No                                |
| I-15    | Via Rancho Parkway to Bernardo Drive          | 392,960 | 7.4%        | 28,921           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 2,604            | 1.108 | F              | 0.002                                       | No < 0.01                         |
| I-15    | Bernardo Drive to Rancho Bernardo Road        | 261,900 | 7.4%        | 19,275           | 0.58              | 5+2ML                    | 0.95 | 7.00%              | 1,735            | 0.738 | C              | 0.002                                       | No                                |
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 301,230 | 7.3%        | 22,116           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,845            | 0.785 | C              | 0.002                                       | No                                |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 269,980 | 7.3%        | 19,822           | 0.54              | 5+2ML                    | 0.95 | 7.00%              | 1,653            | 0.704 | C              | 0.002                                       | No                                |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

**~~Based upon~~ Note:**

~~Changes in this table are associated with both "Change 1" as described in the significance criteria discussed in Section 2.8, the "Summary of Major Changes to the TIS" section of the "Executive Summary".~~

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The additional traffic generated by the proposed project would result in ~~traffic impacts~~GP inconsistencies at eight (8) of the above freeway segments:

- I-15, between Riverside County Boundary and Old Highway 395;
- I-15, between Old Highway 395 and SR-76;
- I-15, between SR-76 and Old Highway 395;
- I-15, between Old Highway 395 and Gopher Canyon Road;
- I-15, between Gopher Canyon Road and Deer Springs Road;
- I-15, between Deer Springs Road and Centre City Parkway;
- I-15, between Centre City Parkway and El Norte Parkway; and
- I-15, between El Norte Parkway and SR-78.

### 9.2.3 Horizon Year with Road 3 ~~Impact Significance and Mitigation~~GP Inconsistencies

This section identifies ~~required mitigation~~recommended improvement measures for roadway and freeway facilities that would be ~~impacted by project-related traffic under Horizon Year Base Plus Project conditions~~considered inconsistent with ~~Road 3~~the currently adopted GP.

#### Roadway Segments

Based on the currently adopted County ~~planning level impact criteria~~General Plan, the project traffic would result in ~~traffic impacts~~GP inconsistencies at ~~five (5)~~six (6) of the study area roadway segments, ~~including~~:

- W. Lilac Road, between Old Highway 395 and Main Street;
- W. Lilac Road, between Main Street and Street "F";
- W. Lilac Road, between Street "F" and Road 3;
- Old Highway 395, between SR-76 and E. Dulin Road; ~~and~~
- Old Highway 395, between E. Dulin Road and W. Lilac Road; ~~and~~
- Old Highway 395, between W. Lilac Road and I-15 SB Ramps.

W. Lilac Road, between Main Street and Street "F" and between Street "F" and Road 3, ~~is~~are projected to operate at LOS F mainly due to the classification downgrade (from 2.2C to 2.2F) proposal while Road 3 is still assumed as a part of the Mobility Element. However, after adoption of the County General Plan Update, SANDAG acquired the 902-acre Rancho Lilac property through its EMP in October 2011. SANDAG recorded a conservation easement over the entire 902 acres and designated this land as part of a 1,600 acre open space preserve in the State Route 76 corridor in North San Diego County. This acquisition ~~would~~may prevent implementation of the County's planned Road 3, and make the deletion or substantial realignment of Road 3 from the currently adopted Mobility Element network a reasonably expected reasonable assumption for purposes of this scenario. ~~Thus, no mitigation measures~~

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~~would be required since this road would operate at acceptable levels of service without~~In addition, traffic control along W. Lilac Road ~~3~~includes a number of roundabouts, with implementation of the proposed project. It has been well documented by the La Jolla Bird Rock roundabouts and other national-level research that 2 lanes of travel with roundabouts can carry up to 25,000 cars per day, which exceeds the projected 12,330 ADT (maximum) for W. Lilac Road.

A more detailed arterial analysis was conducted for the other ~~34~~ segments. The Highway Capacity Software (HCS) 2000 developed by McTrans was employed for a more detailed arterial analysis. The HCS arterial analysis methodology is based upon Chapter 15 of the Highway Capacity Manual (HCM) 2000, which determines average travel speed and facility level of service according to roadway functional classification. The subject segments were evaluated with free-flow speeds (FFS) of 35-40 mph. **Table 9.5** displays the arterial travel speed and level of service for W. Lilac Road and Old Highway 395, and the respective analysis worksheets are included in **Appendix ~~AHAW~~**.

TABLE 9.5  
ARTERIAL LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(with Road 3)

| Arterial   | Free-Flow Speed (mph) | AM Peak Hour         |                | PM Peak Hour         |                |
|--|-----------------------|----------------------|----------------|----------------------|----------------|
|  |                       | Speed (mph)          | LOS            | Speed (mph)          | LOS            |
| W. Lilac Road, between Old Highway 395 and Main Street           | 35                    | 16. <del>40</del>    | C              | <del>16.4</del> 15.8 | C              |
| Old Highway 395, between SR-76 and E. Dulin Road                 | 40                    | <del>21.1</del> 20.9 | D              | <del>18.6</del> 17.7 | D              |
| Old Highway 395, between E. Dulin Road and W. Lilac Road         | 40                    | <del>30.4</del> 24.2 | <del>B</del> C | <del>29.8</del> 22.4 | <del>B</del> C |
| <u>Old Highway 395, between W. Lilac Road and I-15 SB Ramps.</u> | <u>40</u>             | <u>20.4</u>          | <u>D</u>       | <u>17.6</u>          | <u>D</u>       |

Source: Chen Ryan Associates; ~~January 2013~~May 2014

Note:  
Changes in this table are associated with both "Change 1" and "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

As shown in the table above, all ~~three (3)~~four (4) segments would operate at acceptable LOS D or better under Horizon Year Base Plus Project (with Road 3) conditions based on the arterial analysis. ~~Therefore, it is appropriate to consider that no mitigation measures would be necessary at these locations.~~

In addition, traffic control along W. Lilac Road includes a number of roundabouts, with implementation of the proposed project. It has been well documented by the La Jolla Bird Rock roundabouts and other national-level research that 2 lanes of travel with roundabouts can carry up to 25,000 cars per day, which exceeds the projected ~~18,990~~22,020 ADT (maximum) for W.

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Lilac Road. A multi-purpose trail is also provided along the south side of W. Lilac Road and this will greatly improve safety and comfort for pedestrians and bicyclists.

### Freeways

The additional traffic generated by the proposed Lilac Hills Ranch project would have significant impacts result in GP inconsistencies at eight (8) of the following eight (8) freeway segments:

- I-15, between Riverside County Boundary and Old Highway 395;
- I-15, between Old Highway 395 and SR-76;
- I-15, between SR-76 and Old Highway 395;
- I-15, between Old Highway 395 and Gopher Canyon Road;
- I-15, between Gopher Canyon Road and Deer Springs Road;
- I-15, between Deer Springs Road and Centre City Parkway;
- I-15, between Centre City Parkway and El Norte Parkway; and
- I-15, between El Norte Parkway and SR-78.

The 2050 RTP indicates that four (4) toll lanes are planned to be added along I-15, between the Riverside County Boundary and SR-78 by 2050. However, no secured funding sources were identified, hence this improvement was not assumed in this study. Furthermore, there are no planned I-15 (north of SR-78) mainline improvements as per SANDAG's 2050 RTP, thus the impacts GP inconsistencies would remain significant and unmitigable.

Table 9.6 summarizes potential impacts GP inconsistencies and recommended mitigation measures associated with the Lilac Hills Ranch project under Horizon Year with Road 3 conditions.

TABLE 9.6  
IMPACT AND MITIGATION GP CONSISTENCIES SUMMARY  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(with Road 3)

| Potentially Impacted Facility                          |                | Mitigation Measures  |
|--|----------------|--|
| GP Inconsistency Facility                              | Recommendation | Rationale  |
| <i>Roadway Segment</i>                                 |                |  |
| W. Lilac Road, between Old Highway 395 and Main Street | None           | <ul style="list-style-type: none"> <li>• Roundabouts increase operational capacity</li> <li>• Improve pedestrian and bicycle facility - multi-purpose trail</li> <li>• Acceptable arterial speed</li> <li>• R-O-W constrains at the I-15 overpass</li> </ul> |
| W. Lilac Road, between Main Street and Street "F"      | None           | <ul style="list-style-type: none"> <li>• Roundabouts increase operational capacity</li> <li>• Road 3 is likely to could be eliminated from</li> </ul>  |

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**TABLE 9.6**  
**IMPACT AND MITIGATION GP CONSISTENCIES SUMMARY**  
**HORIZON YEAR BASE PLUS PROJECT CONDITIONS**  
**(with Road 3)**

| <b>Potentially Impacted Facility</b>                            |   | <b>Mitigation Measures</b>   |
|---|---|--|
| <b>GP Inconsistency Facility</b>                                | <b>Recommendation</b>                         | <b>Rationale</b>   |
|   |   | the Mobility Element network – this road would operate at acceptable LOS as a 2.2F-<br><u>without Road 3.</u>  |
| W. Lilac Road, between Street "F" and Road 3                    | None  | <ul style="list-style-type: none"> <li>• <u>Roundabouts increase operational capacity</u></li> <li>• Road 3 <del>is likely to</del> could be eliminated from the Mobility Element network – this road would operate at acceptable LOS as a 2.2F-<br/><u>without Road 3.</u></li> </ul> |
| Old Highway 395, between SR-76 and E. Dulin Road                | Option 1 - None                               | <ul style="list-style-type: none"> <li>• Continue accepting LOS E/F as in the current GP</li> <li>• Acceptable arterial speed</li> </ul>   |
|   | Option 2 – Improve to 4.2B                    | Improve to acceptable LOS based on County's planning-level analysis.   |
| Old Highway 395, between E. Dulin Road and W. Lilac Road        | Option 1 - None                               | Acceptable arterial speed  |
|   | Option 2 – Improve to 4.2B                    | Improve to acceptable LOS based on County's planning-level analysis.   |
| <u>Old Highway 395, between W. Lilac Road and I-15 SB Ramps</u> | <u>Option 1 - None</u>                        | <u>Acceptable arterial speed</u>   |
|   | <u>Option 2 – Improve to 4.1B</u>             | <u>Improve to acceptable LOS based on County's planning-level analysis.</u>  |
| <b>Freeway</b>  |   |  |
| I-15, between Riverside County Boundary and Old Highway 395     | <del>None</del> <u>No feasible mitigation</u> | No planned improvement – <del>no feasible mitigation</del> – <u>Significant and Unavoidable Impact</u>   |
| I-15, between Old Highway 395 and SR-76                         | <del>None</del> <u>No feasible mitigation</u> | No planned improvement – <del>no feasible mitigation</del> – <u>Significant and Unavoidable Impact</u>   |
| I-15, between SR-76 and Old Highway 395                         | <del>None</del> <u>No feasible mitigation</u> | No planned improvement – <del>no feasible mitigation</del> – <u>Significant and Unavoidable Impact</u>   |
| I-15, between Old Highway 395 and Gopher Canyon Road            | <del>None</del> <u>No feasible mitigation</u> | No planned improvement – <del>no feasible mitigation</del> – <u>Significant and Unavoidable Impact</u>   |
| I-15, between Gopher Canyon Road and Deer Springs Road          | <del>None</del> <u>No feasible mitigation</u> | No planned improvement – <del>no feasible mitigation</del> – <u>Significant and Unavoidable Impact</u>   |
| I-15, between Deer Springs Road and Centre City Parkway         | <del>None</del> <u>No feasible mitigation</u> | No planned improvement – <del>no feasible mitigation</del> – <u>Significant and Unavoidable Impact</u>   |

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TABLE 9.6  
**IMPACT AND MITIGATION GP CONSISTENCIES SUMMARY**  
 HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
 (with Road 3)

| Potentially Impacted Facility                          | Mitigation Measures                    |   |
|--|--|---|
| GP Inconsistency Facility                              | Recommendation                         | Rationale   |
| I-15, between Centre City Parkway and El Norte Parkway | <del>None</del> No feasible mitigation | No planned improvement <del>—no feasible mitigation—</del> Significant and Unavoidable Impact |
| I-15, between El Norte Parkway and SR-78               | <del>None</del> No feasible mitigation | No planned improvement <del>—no feasible mitigation—</del> Significant and Unavoidable Impact |

Source: Chen Ryan Associates; January 2013–May 2014

Note:  
 Changes in this table are associated with both “Change 1” and “Change 2” as described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”.

### 9.3 Horizon Year without Road 3 Traffic Conditions

The following two (2) scenarios are discussed in this section:

- Horizon Year Base Conditions without Road 3
- Horizon Year Base Plus Project Conditions without Road 3

Level of service analyses under the Horizon Year conditions without Road 3 were conducted using the methodologies described in Chapter 2.0. At the County’s request, intersection analysis was not conducted under the Horizon Year scenarios. Roadway and freeway segment level of service results are discussed separately below.

#### 9.3.1 Horizon Year Base without Road 3

Average daily traffic volumes on study area roadway segments are displayed in **Figure 9-4**. Note that this figure was modified to reflect “Change 2” as described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”.

#### Roadway Segment Analysis

**Table 9.7** displays the level of service analysis results for key roadway segments under Horizon Year Base Conditions without Road 3.

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TABLE 9.7  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE CONDITIONS  
(without Road 3)

| Roadway            | From                | To                  | Classification | LOS Threshold (LOS D) | Average Daily Traffic (ADT) | Level of Service (LOS) |
|--------------------|---------------------|---------------------|----------------|-----------------------|-----------------------------|------------------------|
| E. Dulin Road      | Old Highway 395     | SR-76               | 2.1E           | 10,900                | <del>5,850</del> 6,700      | C                      |
| W. Lilac Road      | Camino Del Rey      | Camino Del Cielo    | 2.2E           | 10,900                | <del>4,450</del> 700        | C                      |
| W. Lilac Road      | Camino Del Cielo    | Old Highway 395     | 2.2E           | 10,900                | <del>5,900</del> 6,200      | C                      |
| W. Lilac Road      | Old Highway 395     | Main Street         | 2.2C           | 13,500                | <del>1,870</del> 3,600      | AB                     |
| W. Lilac Road      | Main Street         | Street "F"          | 2.2C           | 13,500                | <del>4,340</del> 400        | B                      |
| W. Lilac Road      | Street "F"          | Running Creek Road  | 2.2C           | 13,500                | <del>5,030</del> 300        | B                      |
| W. Lilac Road      | Running Creek Road  | Covey Lane          | 2.2F           | 8,700                 | <del>2,730</del> 3,000      | A                      |
| W. Lilac Road      | Covey Lane          | Circle R Drive      | 2.2F           | 8,700                 | <del>2,730</del> 1,300      | A                      |
| W. Lilac Road      | Circle R Drive      | Lilac Road          | 2.2F           | 8,700                 | <del>920</del> 1,900        | A                      |
| Camino Del Cielo   | Camino Del Rey      | W. Lilac Road       | 2.2E           | 10,900                | <del>4,890</del> 900        | C                      |
| Olive Hill Road    | Shamrock Road       | SR-76               | 2.2E           | 10,900                | <del>8,390</del> 400        | D                      |
| Camino Del Rey     | SR-76               | Old River Road      | 4.2B           | 25,000                | <del>18,280</del> 400       | B                      |
| Camino Del Rey     | Old River Road      | W. Lilac Road       | 4.2B           | 25,000                | <del>12,850</del> 13,100    | A                      |
| Camino Del Rey     | W. Lilac Road       | Camino Del Cielo    | 4.2B           | 25,000                | <del>8,080</del> 100        | A                      |
| Camino Del Rey     | Camino Del Cielo    | Old Highway 395     | 2.2C           | 13,500                | <del>8,180</del> 200        | C                      |
| Gopher Canyon Road | E. Vista Way        | I-15 SB Ramps       | 4.1B           | 30,800                | <del>19,300</del> 600       | B                      |
| Gopher Canyon Road | I-15 SB Ramps       | I-15 NB Ramps       | 4.1B           | 30,800                | <del>18,610</del> 19,100    | B                      |
| Gopher Canyon Road | I-15 NB Ramps       | Old Highway 395     | 4.1B           | 30,800                | <del>18,560</del> 19,100    | B                      |
| Circle R Drive     | Old Highway 395     | Mountain Ridge Road | 2.2E           | 10,900                | <del>5,460</del> 6,500      | C                      |
| Circle R Drive     | Mountain Ridge Road | W. Lilac Road       | 2.2E           | 10,900                | <del>1,380</del> 2,000      | AB                     |
| Old Castle Road    | Old Highway 395     | Lilac Road          | 2.2D           | 13,500                | <del>8,510</del> 9,100      | C                      |
| E. Vista Way       | SR-76               | Gopher Canyon Road  | 4.1A           | 33,400                | <del>20,680</del> 800       | B                      |
| E. Vista Way       | Gopher Canyon Road  | Osborne Street      | 4.1A           | 33,400                | <del>27,250</del> 400       | C                      |
| Old River Road     | SR-76               | Camino Del Rey      | 2.2C           | 13,500                | <del>8,370</del> 500        | C                      |
| Old Highway 395    | Pala Mesa Drive     | SR-76               | 4.2B           | 25,000                | <del>17,200</del> 400       | B                      |

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**TABLE 9.7**  
**ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**HORIZON YEAR BASE CONDITIONS**  
**(without Road 3)**

| Roadway             | From                                 | To                                   | Classification | LOS Threshold (LOS D) | Average Daily Traffic (ADT) | Level of Service (LOS) |
|---------------------|--------------------------------------|--------------------------------------|----------------|-----------------------|-----------------------------|------------------------|
| Old Highway 395     | SR-76                                | E. Dulin Road                        | 2.1D           | 13,500                | <del>13,960</del> 14,300    | E accepted at LOS E/F  |
| Old Highway 395     | E. Dulin Road                        | W. Lilac Road                        | 2.1D           | 13,500                | <del>13,310</del> 15,700    | <del>D</del> E         |
| Old Highway 395     | W. Lilac Road                        | I-15 SB Ramps                        | 4.2B           | 25,000                | <del>17,680</del> 18,100    | B                      |
| Old Highway 395     | I-15 SB Ramps                        | I-15 NB Ramps                        | 4.2B           | 25,000                | <del>15,730</del> 16,900    | <del>A</del> B         |
| Old Highway 395     | I-15 NB Ramps                        | Camino Del Rey                       | 4.1B           | 30,800                | 15,250900                   | B                      |
| Old Highway 395     | Camino Del Rey                       | Circle R Drive                       | 4.1B           | 30,800                | <del>22,540</del> 23,200    | <del>B</del> C         |
| Old Highway 395     | Circle R Drive                       | Gopher Canyon Road                   | 4.1B           | 30,800                | <del>27,180</del> 28,000    | <del>C</del> D         |
| Old Highway 395     | Gopher Canyon Road                   | Old Castle Road                      | 4.1B           | 30,800                | 27,030300                   | C                      |
| Champagne Boulevard | Old Castle Road                      | Lawrence Welk Drive                  | 4.1B           | 30,800                | 19,450700                   | B                      |
| Pankey Road         | Pala Mesa Drive                      | SR-76                                | 2.1A           | 15,000                | 9,460700                    | A                      |
| Lilac Road          | Couser Canyon Road                   | W. Lilac Road                        | 2.2E           | 10,900                | <del>4,280</del> 5,700      | C                      |
| Lilac Road          | W. Lilac Road                        | Old Castle Road                      | 2.2E           | 10,900                | <del>7,650</del> 8,600      | D                      |
| Lilac Road          | Old Castle Road                      | Anthony Road                         | 2.1C           | 13,500                | 12,570500                   | D                      |
| Lilac Road          | Anthony Road                         | New Road 19 (east of Betsworth Road) | 4.2B           | 25,000                | <del>23,340</del> 24,200    | D                      |
| Lilac Road          | New Road 19 (east of Betsworth Road) | Valley Center Road                   | 4.2B           | 25,000                | <del>40,280</del> 41,100    | F accepted at LOS E/F  |
| Valley Center Road  | Woods Valley Road                    | Lilac Road                           | 4.2A           | 27,000                | 23,160700                   | C                      |
| Valley Center Road  | Lilac Road                           | Miller Road                          | 4.1A           | 33,400                | <del>34,720</del> 35,000    | E                      |
| Valley Center Road  | Miller Road                          | Indian Creek Road                    | 4.2A           | 27,000                | 35,340600                   | F accepted at LOS E/F  |

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TABLE 9.7  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE CONDITIONS  
(without Road 3)

| Roadway            | From              | To                 | Classification | LOS Threshold (LOS D) | Average Daily Traffic (ADT) | Level of Service (LOS) |
|--------------------|-------------------|--------------------|----------------|-----------------------|-----------------------------|------------------------|
| Valley Center Road | Indian Creek Road | Cole Grade Road    | 4.2A           | 27,000                | 25,690680                   | D                      |
| Valley Center Road | Cole Grade Road   | Vesper Road        | 4.2A           | 27,000                | 16,370600                   | A                      |
| Miller Road        | Misty Oak Road    | Valley Center Road | 2.3B           | 8,000                 | 2,490500                    | A                      |
| Cole Grade Road    | Fruitvale Road    | Valley Center Road | 4.2A           | 27,000                | 20,080100                   | B                      |

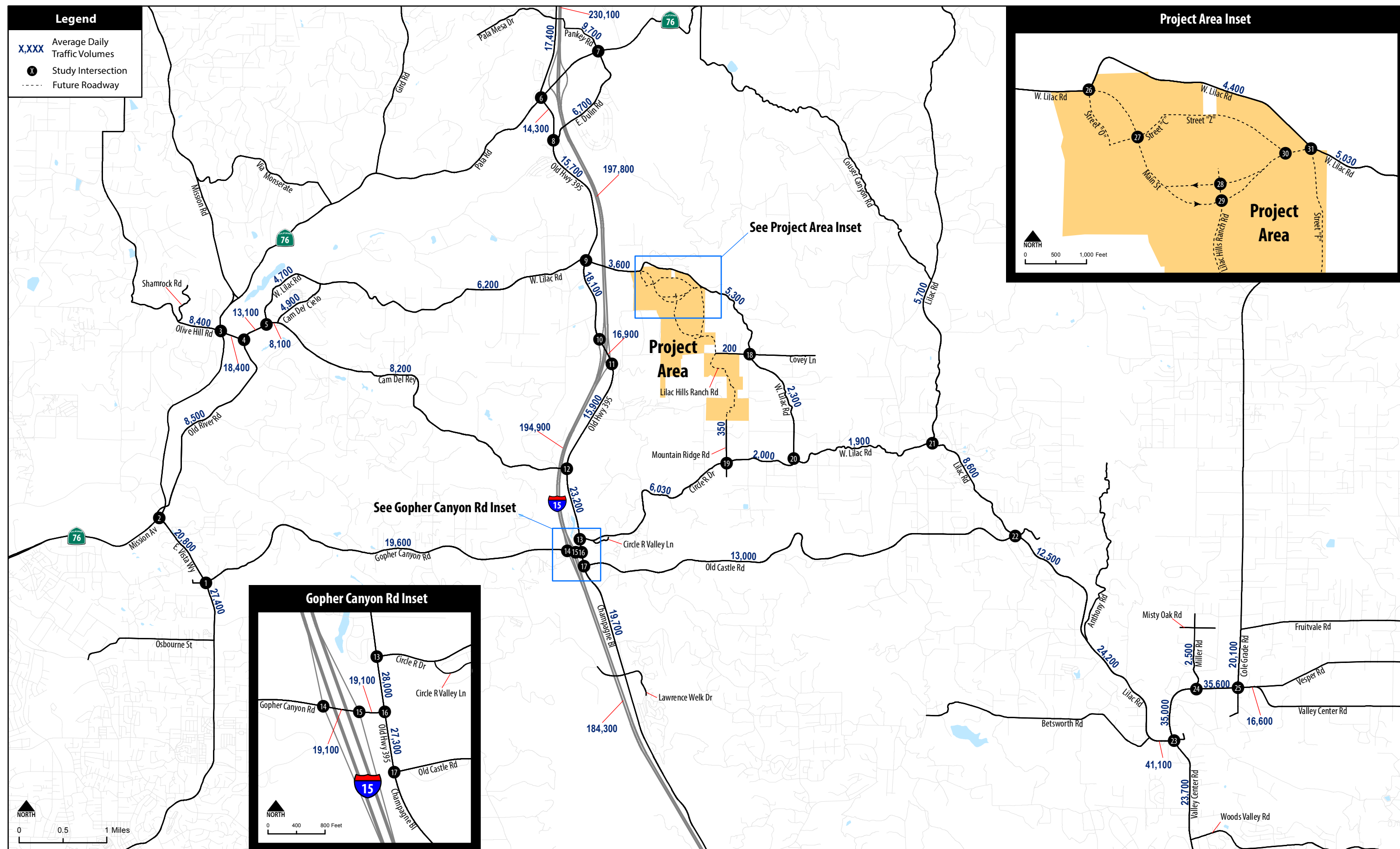
Source: Chen Ryan Associates; ~~June 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

Changes in this table are associated with "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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Lilac Hills Ranch Traffic Impact Study

Figure 9-4

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As shown in Table 9.7, the following ~~four (4)~~five (5) study area roadway segments are projected to operate at substandard LOS E/F under Horizon Year Base conditions without Road 3:

- Old Highway 395, between SR-76 and E. Dulin Road – LOS E, and the County General Plan Update has accepted LOS E/F operations along this segment;
- Old Highway 395, between E. Dulin Road and W. Lilac Road – LOS E;
- Lilac Road, between New Road 19 (east of Betsworth Road) and Valley Center Road – LOS F, and the County General Plan Update has accepted LOS E/F operations along this segment;
- Valley Center Road, between Lilac Road and Miller Road – LOS E; and
- Valley Center Road, between Miller Road and Indian Creek Road – LOS F, and the County General Plan Update has accepted LOS E/F operations along this segment.

### **Freeway Segment Analysis**

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. **Table 9.8** displays the resulting level of service for I-15 under Horizon Year Base Conditions without Road 3. It should be noted that according to the 2050 RTP, I-15 between the Riverside County Boundary and SR-78 is planned to be widened by adding four (4) toll lanes by 2050. However, no secured funding sources were identified, hence this improvement was not assumed in this study.

As shown in the table, similar to the Horizon Year Base with Road 3 scenario, the following ten (10) freeway segments along I-15 are projected to operate at substandard LOS E or F under Horizon Year Base conditions without Road 3:

- I-15, between the Riverside County Boundary and Old Highway 395 – LOS F;
- I-15, between Old Highway 395 and SR-76 – LOS F;
- I-15, between SR-76 and Old Highway 395 – LOS F;
- I-15, between Old Highway 395 and Gopher Canyon Road – LOS F;
- I-15, between Gopher Canyon Road and Deer Springs Road – LOS F;
- I-15, between Deer Springs Road and Centre City Parkway – LOS F;
- I-15, between Centre City Parkway and El Norte Parkway – LOS F;
- I-15, between El Norte Parkway and SR-78 – LOS F;
- I-15, between SR-78 and W Valley Parkway – LOS E; and
- I-15, between Via Rancho Parkway and Bernardo Drive – LOS F.

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### **9.3.2 Horizon Year Base Plus Project without Road 3**

Average daily traffic volumes on study area roadway segments are displayed in **Figure 9-5**. As shown in the table, the following five (5) roadway segments would operate at substandard LOS E or F:

- Old Highway 395, between SR-76 and E. Dulin Road — LOS E, and the project would add more than 200 daily trips. The County General Plan Update has accepted LOS E/F operations along this segment.

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**Figure 9-5 Roadway Average Daily Traffic Volumes – Horizon Year Base Plus Project Conditions without Road 3**

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**TABLE 9.8**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**HORIZON YEAR BASE CONDITIONS**  
**(without Road 3)**

| Freeway | Segment                                      | ADT                                 | Peak Hour % | Peak Hour Volume                  | Directional Split | # of Lanes Per Direction | Peak Hour Factor (PHF) | % of Heavy Vehicle | Volume (pc/h/ln)               | V/C                              | LOS |
|---------|--|-------------------------------------|-------------|-----------------------------------|-------------------|--------------------------|------------------------|--------------------|--------------------------------|----------------------------------|-----|
| I-15    | Riverside County Boundary to Old Highway 395 | 266,100                             | 8.4%        | 22,481                            | 0.64              | 4                        | 0.95                   | 6.75%              | 3,886                          | 1.654                            | F   |
| I-15    | Old Highway 395 to SR-76                     | 230,100                             | 7.4%        | 17,118                            | 0.73              | 4                        | 0.95                   | 6.75%              | 3,406                          | 1.449                            | F   |
| I-15    | SR-76 to Old Highway 395                     | 197,800                             | 7.8%        | 15,472                            | 0.69              | 4                        | 0.95                   | 8.40%              | 2,908                          | 1.238                            | F   |
| I-15    | Old Highway 395 to Gopher Canyon Road        | <del>192,700</del><br><u>94,900</u> | 8.1%        | <del>15,562</del><br><u>7,400</u> | 0.67              | 4                        | 0.95                   | 8.40%              | <del>2,850</del><br><u>882</u> | <del>1.213</del><br><u>0.226</u> | F   |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 184,300                             | 8.1%        | 14,884                            | 0.67              | 4                        | 0.95                   | 13.20%             | 2,788                          | 1.186                            | F   |
| I-15    | Deer Springs Road to Centre City Parkway     | 179,200                             | 8.0%        | 14,397                            | 0.66              | 4                        | 0.95                   | 13.20%             | 2,683                          | 1.142                            | F   |
| I-15    | Centre City Parkway to El Norte Parkway      | 169,500                             | 8.0%        | 13,618                            | 0.66              | 4                        | 0.95                   | 13.20%             | 2,538                          | 1.080                            | F   |
| I-15    | El Norte Parkway to SR-78                    | 193,700                             | 7.9%        | 15,246                            | 0.66              | 4                        | 0.95                   | 10.00%             | 2,801                          | 1.192                            | F   |
| I-15    | SR-78 to W Valley Parkway                    | 289,100                             | 8.1%        | 23,528                            | 0.60              | 5+2ML                    | 0.95                   | 10.00%             | 2,229                          | 0.948                            | E   |
| I-15    | W Valley Parkway to Auto Parkway             | 281,600                             | 8.1%        | 22,918                            | 0.60              | 5+2ML                    | 0.95                   | 10.00%             | 2,171                          | 0.924                            | D   |
| I-15    | Auto Parkway to W Citracado Parkway          | 276,300                             | 7.8%        | 21,429                            | 0.60              | 5+2ML                    | 0.95                   | 10.00%             | 2,018                          | 0.859                            | D   |
| I-15    | W Citracado Parkway to Via Rancho Parkway    | 279,100                             | 7.8%        | 21,646                            | 0.60              | 5+2ML                    | 0.95                   | 7.00%              | 2,009                          | 0.855                            | D   |
| I-15    | Via Rancho Parkway to Bernardo Drive         | 392,400                             | 7.4%        | 28,880                            | 0.58              | 5+2ML                    | 0.95                   | 7.00%              | 2,600                          | 1.106                            | F   |
| I-15    | Bernardo Drive to Rancho Bernardo Road       | 261,000                             | 7.4%        | 19,209                            | 0.58              | 5+2ML                    | 0.95                   | 7.00%              | 1,729                          | 0.736                            | C   |

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TABLE 9.8  
 FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
 HORIZON YEAR BASE CONDITIONS  
 (without Road 3)

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | Peak Hour Factor (PHF) | % of Heavy Vehicle | Volume (pc/h/ln) | V/C   | LOS |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------------------------|--------------------|------------------|-------|-----|
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 300,800 | 7.3%        | 22,085           | 0.54              | 5+2ML                    | 0.95                   | 7.00%              | 1,842            | 0.784 | C   |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 270,100 | 7.3%        | 19,831           | 0.54              | 5+2ML                    | 0.95                   | 7.00%              | 1,654            | 0.704 | C   |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

ML = Managed Lane.

Changes in this table are associated with a copy and paste error.

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### **9.3.2 Horizon Year Base Plus Project without Road 3**

Average daily traffic volumes on study area roadway segments are displayed in **Figure 9-5**. Note that this figure was modified to reflect both “Change 1” and “Change 2” as described in the “Summary of Major Changes to the TIS” section of the “Executive Summary”.

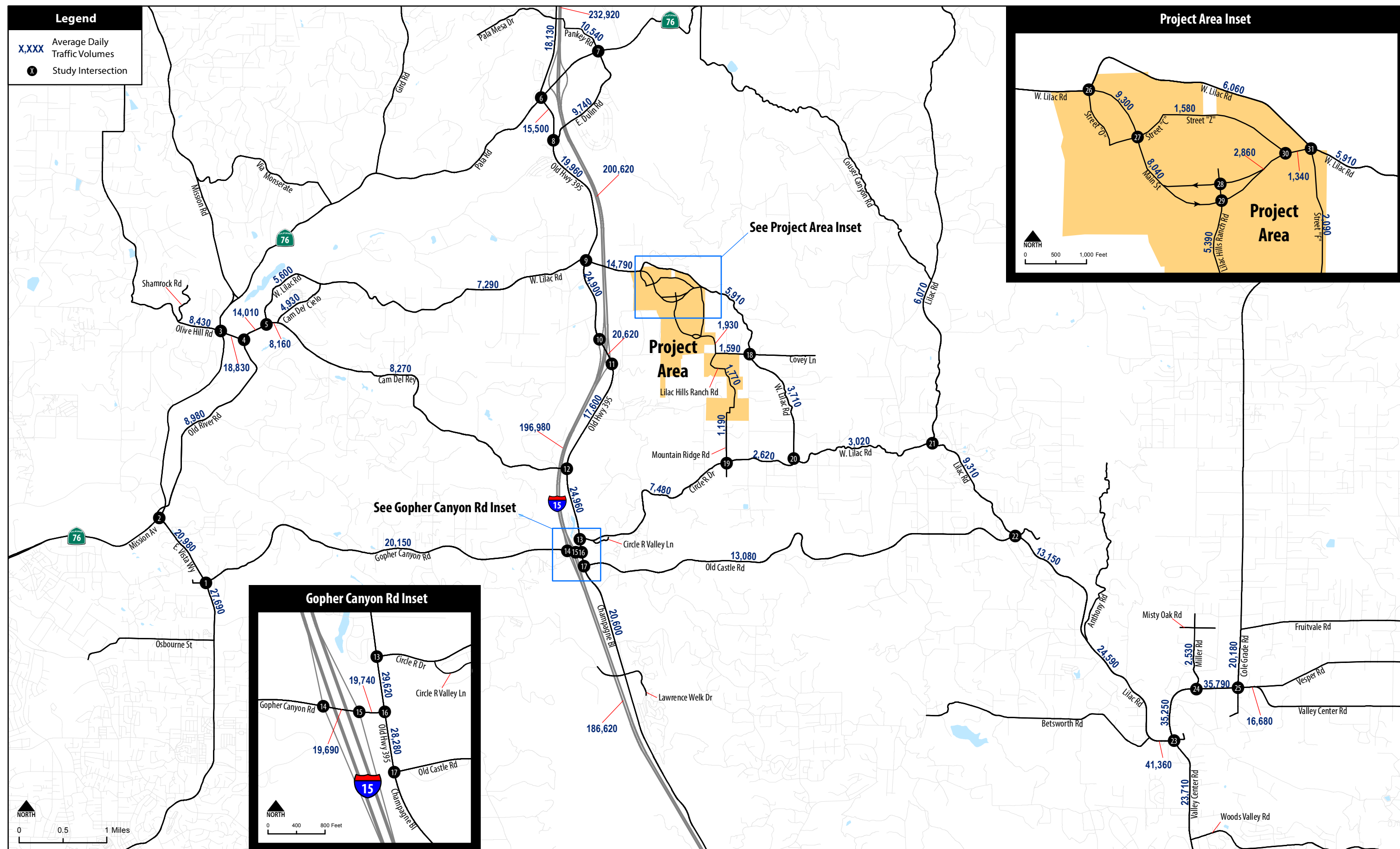
#### **Roadway Segment Analysis**

**Table 9.9** displays the level of service analysis results for key roadway segments under Horizon Year Base Plus Project Conditions without Road 3. Note that the Lilac Hills Ranch project proposes to downgrade W. Lilac Road, between Main Street and the planned Road 3 (Running Creek Road) from 2.2C to 2.2F.

As shown in the table, the following six (6) roadway segments would operate at substandard LOS E or F:

- W. Lilac Road, between Old Highway 395 and Main Street – LOS E, and the project would add more than 200 daily trips. The additional traffic generated by the Lilac Hills Ranch project would result in a GP inconsistency at this segment.
- Old Highway 395, between SR-76 and E. Dulin Road – LOS E, and the project would add more than 200 daily trips. The County General Plan Update has accepted LOS E/F operations along this segment. The additional traffic generated by the Lilac Hills Ranch project would result in a GP inconsistency at this segment.
- Old Highway 395, between E. Dulin Road and W. Lilac Road – LOS F, and the project would add more than 100 daily trips. The additional traffic generated by the Lilac Hills Ranch project would result in a GP inconsistency at this segment.
- Lilac Road, between New Road 19 (east of Betsworth Road) and Valley Center Road – LOS F, and the project would add more than 200 daily trips. The County General Plan Update has accepted LOS E/F operations at this segment. The additional traffic generated by the Lilac Hills Ranch project would result in a GP inconsistency at this segment.
- Valley Center Road, between Lilac Road and Miller Road - LOS E, and the project would add less than 400 daily trips. The additional traffic generated by the Lilac Hills Ranch project would not result in GP inconsistency at this segment.
- Valley Center Road, between Miller Road and Indian Creek Road – LOS F, and the project would add less than 200 daily trips. The County General Plan Update has accepted LOS E/F operations at this segment. The additional traffic generated by the Lilac Hills Ranch project would not result in GP inconsistency at this segment.
- Old Highway 395, between E. Dulin Road and W. Lilac Road – LOS E, and the project would add more than 200 daily trips.

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Lilac Hills Ranch Traffic Impact Study

Figure 9-5  
Roadway Average Daily Traffic Volumes -  
Horizon Year Base Plus Project Conditions without Road 3

TABLE 9.9  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(without Road 3)

| Roadway          | From               | To                 | Horizon Year with Project |                       |                  |     | Horizon Year w/o Project |     | Project ADT   | Project Impact? GP Inconsistency? |
|------------------|--------------------|--------------------|---------------------------|-----------------------|------------------|-----|--------------------------|-----|---------------|-----------------------------------|
|                  |                    |                    | Classification            | LOS Threshold (LOS D) | ADT              | LOS | ADT                      | LOS |               |                                   |
| E. Dulin Road    | Old Highway 395    | SR-76              | 2.1E                      | 10,900                | 9,480<br>740     | D   | 5,850<br>6700            | C   | 3,330<br>040  | No                                |
| W. Lilac Road    | Camino Del Rey     | Camino Del Cielo   | 2.2E                      | 10,900                | 5,430<br>600     | C   | 4,450<br>670             | C   | 980<br>900    | No                                |
| W. Lilac Road    | Camino Del Cielo   | Old Highway 395    | 2.2E                      | 10,900                | 7,400<br>290     | CD  | 5,900<br>6200            | C   | 1,090         | No                                |
| W. Lilac Road    | Old Highway 395    | Main Street        | 2.2C                      | 13,500                | 13,370<br>14,790 | DE  | 1,870<br>3600            | AB  | 11,500<br>190 | No Yes<br>> 200ADT                |
| W. Lilac Road    | Main Street        | Street "F"         | 2.2F*                     | 8,700                 | 6,460<br>600     | B   | 4,340<br>400             | B   | 1,820<br>660  | No                                |
| W. Lilac Road    | Street "F"         | Running Creek Road | 2.2F*                     | 8,700                 | 5,700<br>910     | A   | 5,030<br>300             | B   | 670<br>610    | No                                |
| W. Lilac Road    | Running Creek Road | Covey Lane         | 2.2F                      | 8,700                 | 3,400<br>610     | AB  | 2,730<br>3000            | A   | 670<br>610    | No                                |
| W. Lilac Road    | Covey Lane         | Circle R Drive     | 2.2F                      | 8,700                 | 3,810<br>2710    | A   | 2,730<br>1300            | A   | 1,080<br>410  | No                                |
| W. Lilac Road    | Circle R Drive     | Lilac Road         | 2.2F                      | 8,700                 | 2,150<br>3020    | A   | 920<br>1900              | A   | 1,230<br>120  | No                                |
| Camino Del Cielo | Camino Del Rey     | W. Lilac Road      | 2.2E                      | 10,900                | 4,920<br>930     | C   | 4,890<br>900             | C   | 30            | No                                |
| Olive Hill Road  | Shamrock Road      | SR-76              | 2.2E                      | 10,900                | 8,420<br>430     | D   | 8,390<br>400             | D   | 30            | No                                |

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**TABLE 9.9  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(without Road 3)**

| Roadway            | From                | To                  | Horizon Year with Project |                       |                  |     | Horizon Year w/o Project |     | Project ADT  | Project Impact? GP Inconsistency ? |
|--------------------|---------------------|---------------------|---------------------------|-----------------------|------------------|-----|--------------------------|-----|--------------|------------------------------------|
|                    |                     |                     | Classification            | LOS Threshold (LOS D) | ADT              | LOS | ADT                      | LOS |              |                                    |
| Camino Del Rey     | SR-76               | Old River Road      | 4.2B                      | 25,000                | 18,7508<br>30    | B   | 18,2804<br>00            | B   | 470430       | No                                 |
| Camino Del Rey     | Old River Road      | W. Lilac Road       | 4.2B                      | 25,000                | 13,8501<br>4,010 | A   | 12,8501<br>3,100         | A   | 1,00091<br>0 | No                                 |
| Camino Del Rey     | W. Lilac Road       | Camino Del Cielo    | 4.2B                      | 25,000                | 8,14016<br>0     | A   | 8,08010<br>0             | A   | 60           | No                                 |
| Camino Del Rey     | Camino Del Cielo    | Old Highway 395     | 2.2C                      | 13,500                | 8,26027<br>0     | C   | 8,18020<br>0             | C   | 8070         | No                                 |
| Gopher Canyon Road | E. Vista Way        | I-15 SB Ramps       | 4.1B                      | 30,800                | 19,9102<br>0,150 | B   | 19,3006<br>00            | B   | 610550       | No                                 |
| Gopher Canyon Road | I-15 SB Ramps       | I-15 NB Ramps       | 4.1B                      | 30,800                | 19,4106<br>90    | B   | 18,6101<br>9,100         | B   | 800590       | No                                 |
| Gopher Canyon Road | I-15 NB Ramps       | Old Highway 395     | 4.1B                      | 30,800                | 19,5607<br>40    | B   | 18,5601<br>9,100         | B   | 1,00064<br>0 | No                                 |
| Circle R Drive     | Old Highway 395     | Mountain Ridge Road | 2.2E                      | 10,900                | 7,29048<br>0     | DC  | 5,4606<br>500            | C   | 1,83098<br>0 | No                                 |
| Circle R Drive     | Mountain Ridge Road | W. Lilac Road       | 2.2E                      | 10,900                | 1,5902<br>620    | AB  | 1,3802<br>000            | AB  | 210620       | No                                 |
| Old Castle Road    | Old Highway 395     | Lilac Road          | 2.2D                      | 13,500                | 8,6009<br>180    | C   | 8,5109<br>100            | C   | 9080         | No                                 |
| E. Vista Way       | SR-76               | Gopher Canyon Road  | 4.1A                      | 33,400                | 20,8809<br>80    | B   | 20,6808<br>00            | B   | 200180       | No                                 |

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**TABLE 9.9  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(without Road 3)**

| Roadway         | From               | To                 | Horizon Year with Project |                       |                                    |                       | Horizon Year w/o Project           |                       | Project ADT                      | Project Impact? GP Inconsistency ? |
|-----------------|--------------------|--------------------|---------------------------|-----------------------|------------------------------------|-----------------------|------------------------------------|-----------------------|----------------------------------|------------------------------------|
|                 |                    |                    | Classification            | LOS Threshold (LOS D) | ADT                                | LOS                   | ADT                                | LOS                   |                                  |                                    |
| E. Vista Way    | Gopher Canyon Road | Osborne Street     | 4.1A                      | 33,400                | <del>27,570</del><br><u>27,900</u> | C                     | <del>27,250</del><br><u>27,000</u> | C                     | <del>320</del><br><u>290</u>     | No                                 |
| Old River Road  | SR-76              | Camino Del Rey     | 2.2C                      | 13,500                | <del>8,900</del><br><u>9,980</u>   | C                     | <del>8,370</del><br><u>8,500</u>   | C                     | <del>530</del><br><u>480</u>     | No                                 |
| Old Highway 395 | Pala Mesa Drive    | SR-76              | 4.2B                      | 25,000                | <del>18,000</del><br><u>18,300</u> | B                     | <del>17,200</del><br><u>17,000</u> | B                     | <del>800</del><br><u>730</u>     | No                                 |
| Old Highway 395 | SR-76              | E. Dulin Road      | 2.1D                      | 13,500                | <del>15,280</del><br><u>15,000</u> | E accepted at LOS E/F | <del>13,960</del><br><u>13,300</u> | E accepted at LOS E/F | <del>1,320</del><br><u>1,200</u> | Yes > 200ADT                       |
| Old Highway 395 | E. Dulin Road      | W. Lilac Road      | 2.1D                      | 13,500                | <del>17,980</del><br><u>17,960</u> | <del>EE</del>         | <del>13,310</del><br><u>13,700</u> | <del>DE</del>         | <del>4,670</del><br><u>4,260</u> | Yes > 200ADT > 100ADT              |
| Old Highway 395 | W. Lilac Road      | I-15 SB Ramps      | 4.2B                      | 25,000                | <del>23,270</del><br><u>23,400</u> | D                     | <del>17,680</del><br><u>17,800</u> | B                     | <del>5,590</del><br><u>5,800</u> | No                                 |
| Old Highway 395 | I-15 SB Ramps      | I-15 NB Ramps      | 4.2B                      | 25,000                | <del>19,200</del><br><u>19,620</u> | B                     | <del>15,730</del><br><u>15,900</u> | <del>AB</del>         | <del>3,470</del><br><u>3,720</u> | No                                 |
| Old Highway 395 | I-15 NB Ramps      | Camino Del Rey     | 4.1B                      | 30,800                | <del>16,660</del><br><u>16,600</u> | B                     | <del>15,250</del><br><u>15,000</u> | B                     | <del>1,410</del><br><u>1,070</u> | No                                 |
| Old Highway 395 | Camino Del Rey     | Circle R Drive     | 4.1B                      | 30,800                | <del>24,010</del><br><u>24,600</u> | C                     | <del>22,540</del><br><u>22,300</u> | <del>BC</del>         | <del>1,470</del><br><u>1,076</u> | No                                 |
| Old Highway 395 | Circle R Drive     | Gopher Canyon Road | 4.1B                      | 30,800                | <del>29,260</del><br><u>29,200</u> | D                     | <del>27,180</del><br><u>27,800</u> | <del>CD</del>         | <del>2,080</del><br><u>1,620</u> | No                                 |

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TABLE 9.9  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(without Road 3)

| Roadway             | From                                 | To                                   | Horizon Year with Project |                       |                                      |                       | Horizon Year w/o Project             |                       | Project ADT                      | Project Impact? GP Inconsistency ? |
|---------------------|--------------------------------------|--------------------------------------|---------------------------|-----------------------|--------------------------------------|-----------------------|--------------------------------------|-----------------------|----------------------------------|------------------------------------|
|                     |                                      |                                      | Classification            | LOS Threshold (LOS D) | ADT                                  | LOS                   | ADT                                  | LOS                   |                                  |                                    |
| Old Highway 395     | Gopher Canyon Road                   | Old Castle Road                      | 4.1B                      | 30,800                | 28,110 <sup>2</sup> <sub>80</sub>    | D                     | 27,030 <sup>3</sup> <sub>00</sub>    | C                     | 1,080 <sup>98</sup> <sub>0</sub> | No                                 |
| Champagne Boulevard | Old Castle Road                      | Lawrence Welk Drive                  | 4.1B                      | 30,800                | 20,430 <sup>6</sup> <sub>00</sub>    | B                     | 19,450 <sup>7</sup> <sub>00</sub>    | B                     | 980 <sup>900</sup>               | No                                 |
| Pankey Road         | Pala Mesa Drive                      | SR-76                                | 2.1A                      | 15,000                | 10,380 <sup>5</sup> <sub>40</sub>    | B                     | 9,460 <sup>70</sup> <sub>0</sub>     | A                     | 920 <sup>840</sup>               | No                                 |
| Lilac Road          | Couser Canyon Road                   | W. Lilac Road                        | 2.2E                      | 10,900                | 4,690 <sup>6</sup> <sub>070</sub>    | C                     | 4,280 <sup>5</sup> <sub>700</sub>    | C                     | 410 <sup>370</sup>               | No                                 |
| Lilac Road          | W. Lilac Road                        | Old Castle Road                      | 2.2E                      | 10,900                | 8,420 <sup>9</sup> <sub>310</sub>    | D                     | 7,650 <sup>8</sup> <sub>600</sub>    | D                     | 770 <sup>710</sup>               | No                                 |
| Lilac Road          | Old Castle Road                      | Anthony Road                         | 2.1C                      | 13,500                | 13,280 <sup>1</sup> <sub>50</sub>    | D                     | 12,570 <sup>5</sup> <sub>00</sub>    | D                     | 710 <sup>650</sup>               | No                                 |
| Lilac Road          | Anthony Road                         | New Road 19 (east of Betsworth Road) | 4.2B                      | 25,000                | 23,760 <sup>2</sup> <sub>4,590</sub> | D                     | 23,340 <sup>2</sup> <sub>4,200</sub> | D                     | 420 <sup>390</sup>               | No                                 |
| Lilac Road          | New Road 19 (east of Betsworth Road) | Valley Center Road                   | 4.2B                      | 25,000                | 40,570 <sup>4</sup> <sub>1,360</sub> | F accepted at LOS E/F | 40,280 <sup>4</sup> <sub>1,100</sub> | F accepted at LOS E/F | 290 <sup>260</sup>               | Yes > 200ADT                       |
| Valley Center Road  | Woods Valley Road                    | Lilac Road                           | 4.2A                      | 27,000                | 23,180 <sup>7</sup> <sub>10</sub>    | C                     | 23,160 <sup>7</sup> <sub>00</sub>    | C                     | 20 <sup>10</sup>                 | No                                 |
| Valley Center Road  | Lilac Road                           | Miller Road                          | 4.1A                      | 33,400                | 34,990 <sup>3</sup> <sub>5,250</sub> | E                     | 34,720 <sup>3</sup> <sub>5,000</sub> | E                     | 270 <sup>250</sup>               | No < 400ADT                        |

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TABLE 9.9  
ROADWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(without Road 3)

| Roadway            | From              | To                 | Horizon Year with Project |                       |              |                       | Horizon Year w/o Project |                       | Project ADT | Project Impact? GP Inconsistency? |
|--------------------|-------------------|--------------------|---------------------------|-----------------------|--------------|-----------------------|--------------------------|-----------------------|-------------|-----------------------------------|
|                    |                   |                    | Classification            | LOS Threshold (LOS D) | ADT          | LOS                   | ADT                      | LOS                   |             |                                   |
| Valley Center Road | Miller Road       | Indian Creek Road  | 4.2A                      | 27,000                | 35,559<br>90 | F accepted at LOS E/F | 35,340<br>00             | F accepted at LOS E/F | 210190      | <del>Yes</del><br>No<br>≤ 200ADT  |
| Valley Center Road | Indian Creek Road | Cole Grade Road    | 4.2A                      | 27,000                | 25,900<br>80 | D                     | 25,690<br>80             | D                     | 210190      | No                                |
| Valley Center Road | Cole Grade Road   | Vesper Road        | 4.2A                      | 27,000                | 16,670<br>80 | A                     | 16,580<br>00             | A                     | 9080        | No                                |
| Miller Road        | Misty Oak Road    | Valley Center Road | 2.3B                      | 8,000                 | 2,520<br>530 | A                     | 2,490<br>500             | A                     | 30          | No                                |
| Cole Grade Road    | Fruitvale Road    | Valley Center Road | 4.2A                      | 27,000                | 20,170<br>80 | B                     | 20,080<br>00             | B                     | 9080        | No                                |

Source: Chen Ryan Associates: ~~June 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

\*Proposed downgrade from 2.2C to 2.2F.

Changes in this table are associated with both "Change 1" and "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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- ~~Valley Center Road, between Lilac Road and Miller Road – LOS E, and the project would add less than 400 daily trips.~~
- ~~Valley Center Road, between Miller Road and Indian Creek Road – LOS F, and the project would add more than 200 daily trips. The County General Plan Update has accepted LOS E/F operations at this segment.~~

~~Based upon the significance criteria discussed in Section 2.8, the additional traffic generated by the Lilac Hills Ranch project would have traffic impacts (planning level initial assessment) to all but one segment (Valley Center Road, between Lilac Road and Miller Road) discussed above.~~

### Freeway Segment Analysis

The freeway segment level of service analysis was performed utilizing the methodology presented in Chapter 2.0. **Table 9.10** displays the resulting level of service for I-15 under Horizon Year Base Plus Project Conditions without Road 3. It should be noted that according to the 2050 RTP, I-15 between the Riverside County Boundary and SR-78 is planned to be widened by adding four (4) toll lanes by 2050. However, no secured funding sources were identified, hence this improvement was not assumed in this study.

As shown in the table, the following ten (10) freeway segments along I-15 would continue to operate at substandard LOS E or F under Horizon Year Base Plus Project conditions without Road 3:

- I-15, between the Riverside County Boundary and Old Highway 395 – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Old Highway 395 and SR-76 – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between SR-76 and Old Highway 395 – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Old Highway 395 and Gopher Canyon Road – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Gopher Canyon Road and Deer Springs Road – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Deer Springs Road and Centre City Parkway – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between Centre City Parkway and El Norte Parkway – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between El Norte Parkway and SR-78 – LOS F, and the project traffic would increase the V/C ratio by more than 0.01;
- I-15, between SR-78 and W Valley Parkway – LOS E, and the project traffic would not increase the V/C ratio by more than 0.01; and

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- 
- I-15, between Via Rancho Parkway and Bernardo Drive – LOS F, and the project traffic would not increase the V/C ratio by more than 0.01.

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**TABLE 9.10  
FREEWAY SEGMENT LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(without Road 3)**

| Freeway | Segment                                      | ADT                           | Peak Hour % | Peak Hour Volume            | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/ln)               | V/C                             | LOS w/ Project | Change in V/C (compare to 2030 w/o project) | Project Impact? GP Inconsistency? |
|---------|--|-------------------------------|-------------|-----------------------------|-------------------|--------------------------|------|--------------------|--------------------------------|---------------------------------|----------------|---|-----------------------------------|
| I-15    | Riverside County Boundary to Old Highway 395 | 268,880                       | 8.4%        | 22,716                      | 0.64              | 4                        | 0.95 | 6.75%              | 3,926                          | 1.671                           | F              | 0.017                                       | Yes > 0.01                        |
| I-15    | Old Highway 395 to SR-76                     | 232,920                       | 7.4%        | 17,327                      | 0.73              | 4                        | 0.95 | 6.75%              | 3,448                          | 1.467                           | F              | 0.018                                       | Yes > 0.01                        |
| I-15    | SR-76 to Old Highway 395                     | 200,620                       | 7.8%        | 15,692                      | 0.69              | 4                        | 0.95 | 8.40%              | 2,950                          | 1.255                           | F              | 0.018                                       | Yes > 0.01                        |
| I-15    | Old Highway 395 to Gopher Canyon Road        | <del>194,670</del><br>196,980 | 8.1%        | <del>15,721</del><br>15,080 | 0.67              | 4                        | 0.95 | 8.40%              | <del>2,879</del><br>2,991<br>3 | <del>1.225</del><br>1.252<br>40 | F              | <del>0.012</del><br>0.013                   | Yes > 0.01                        |
| I-15    | Gopher Canyon Road to Deer Springs Road      | 186,620                       | 8.1%        | 15,071                      | 0.67              | 4                        | 0.95 | 13.20%             | 2,823                          | 1.201                           | F              | 0.015                                       | Yes > 0.01                        |
| I-15    | Deer Springs Road to Centre City Parkway     | 181,330                       | 8.0%        | 14,568                      | 0.66              | 4                        | 0.95 | 13.20%             | 2,715                          | 1.155                           | F              | 0.014                                       | Yes > 0.01                        |
| I-15    | Centre City Parkway to El Norte Parkway      | 171,330                       | 8.0%        | 13,765                      | 0.66              | 4                        | 0.95 | 13.20%             | 2,565                          | 1.092                           | F              | 0.012                                       | Yes > 0.01                        |
| I-15    | El Norte Parkway to SR-78                    | 195,420                       | 7.9%        | 15,381                      | 0.66              | 4                        | 0.95 | 10.00%             | 2,826                          | 1.202                           | F              | 0.011                                       | Yes > 0.01                        |
| I-15    | SR-78 to W Valley Parkway                    | 290,370                       | 8.1%        | 23,632                      | 0.60              | 7                        | 0.95 | 10.00%             | 2,238                          | 0.952                           | E              | 0.004                                       | No < 0.01                         |
| I-15    | W Valley Parkway to Auto Parkway             | 282,690                       | 8.1%        | 23,007                      | 0.60              | 7                        | 0.95 | 10.00%             | 2,179                          | 0.927                           | D              | 0.004                                       | No                                |

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**TABLE 9.10**  
**FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**  
**HORIZON YEAR BASE PLUS PROJECT CONDITIONS**  
**(without Road 3)**

| Freeway | Segment                                       | ADT     | Peak Hour % | Peak Hour Volume | Directional Split | # of Lanes Per Direction | PHF  | % of Heavy Vehicle | Volume (pc/h/l) | V/C   | LOS w/ Project | Change in V/C (compare to 2030 w/o project) | Project Impact? <u>GP Inconsistency?</u> |
|---------|---|---------|-------------|------------------|-------------------|--------------------------|------|--------------------|-----------------|-------|----------------|---|--|
| I-15    | Auto Parkway to W Citracado Parkway           | 277,330 | 7.8%        | 21,509           | 0.60              | 7                        | 0.95 | 10.00%             | 2,025           | 0.862 | D              | 0.003                                       | No                                       |
| I-15    | W Citracado Parkway to Via Rancho Parkway     | 280,040 | 7.8%        | 21,719           | 0.60              | 7                        | 0.95 | 7.00%              | 2,016           | 0.858 | D              | 0.003                                       | No                                       |
| I-15    | Via Rancho Parkway to Bernardo Drive          | 393,280 | 7.4%        | 28,944           | 0.58              | 7                        | 0.95 | 7.00%              | 2,606           | 1.109 | <b>F</b>       | 0.002                                       | No < 0.01                                |
| I-15    | Bernardo Drive to Rancho Bernardo Road        | 261,810 | 7.4%        | 19,268           | 0.58              | 7                        | 0.95 | 7.00%              | 1,735           | 0.738 | C              | 0.002                                       | No                                       |
| I-15    | Rancho Bernardo Road to Bernardo Center Drive | 301,540 | 7.3%        | 22,139           | 0.54              | 7                        | 0.95 | 7.00%              | 1,847           | 0.786 | C              | 0.002                                       | No                                       |
| I-15    | Bernardo Center Drive to Camino Del Norte     | 270,770 | 7.3%        | 19,880           | 0.54              | 7                        | 0.95 | 7.00%              | 1,658           | 0.706 | C              | 0.002                                       | No                                       |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:  
 Bold letter indicates unacceptable LOS E or F.  
 ML = Managed Lane.

~~Bold letter indicates unacceptable LOS E or F.~~  
~~ML = Managed Lane.~~

~~Changes in this table are associated with both "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".~~

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The additional traffic generated by the proposed project would result in ~~traffic impacts~~GP inconsistencies at eight (8) of the above freeway segments:

- I-15, between Riverside County Boundary and Old Highway 395;
- I-15, between Old Highway 395 and SR-76;
- I-15, between SR-76 and Old Highway 395;
- I-15, between Old Highway 395 and Gopher Canyon Road;
- I-15, between Gopher Canyon Road and Deer Springs Road;
- I-15, between Deer Springs Road and Centre City Parkway;
- I-15, between Centre City Parkway and El Norte Parkway; and
- I-15, between El Norte Parkway and SR-78.

### 9.3.3 Horizon Year without Road 3 Impact Significance and Mitigation

This section identifies ~~required mitigation measures for roadway and freeway facilities that would be impacted by project-related traffic under Horizon Year Base Plus Project conditions~~inconsistencies with the currently adopted GP without Road 3.

#### Roadway Segments

Based on the County planning level impact criteria, the project traffic would result in ~~traffic impacts~~GP inconsistencies at four (4) of the study area roadway segments, including:

- W. Lilac Road, between Old Highway 395 and Main Street;
- Old Highway 395, between SR-76 and E. Dulin Road;
- Old Highway 395, between E. Dulin Road and W. Lilac Road; and
- Lilac Road, between New Road 19 (east of Betsworth Road) and Valley Center Road; ;
- ~~Valley Center Road, between Miller Road and Indian Creek Road.~~

A more detailed arterial analysis was conducted for these segments. The Highway Capacity Software (HCS) 2000 developed by McTrans was employed for a more detailed arterial analysis. The HCS arterial analysis methodology is based upon Chapter 15 of the Highway Capacity Manual (HCM) 2000, which determines average travel speed and facility level of service according to roadway functional classification. The subject segments were evaluated with free-flow speeds (FFS) of 35-40 mph. **Table 9.11** displays the arterial travel speed and level of service for Old Highway 395, Lilac Road and Valley Center Road, and the respective analysis worksheets are included in **Appendix A**~~A~~AX.

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**TABLE 9.11  
ARTERIAL LEVEL OF SERVICE RESULTS  
HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
(without Road 3)**

| Arterial   | Free-Flow<br>Speed<br>(mph) | AM Peak Hour            |               | PM Peak Hour            |               |
|--|-----------------------------|-------------------------|---------------|-------------------------|---------------|
|  |                             | Speed (mph)             | LOS           | Speed (mph)             | LOS           |
| <del>W. Lilac Road, between Old Highway 395, between SR-76 and E. Dulin Road</del><br><del>Main Street</del>   | <del>40</del><br>35         | <del>21.4</del><br>23.0 | <del>DB</del> | <del>18.2</del><br>22.6 | <del>DB</del> |
| Old Highway 395, between <del>SR-76 and E. Dulin Road</del><br><del>and W. Lilac Road</del>  | 40                          | <del>30.4</del><br>21.0 | <del>BD</del> | <del>29.8</del><br>18.0 | <del>BD</del> |
| <del>Lilac Road</del><br><del>Old Highway 395, between New E. Dulin Road 19 (east of Betsworth Road) and Valley Center</del><br><del>W. Lilac Road</del> | <del>35</del><br>40         | <del>19.3</del><br>22.6 | <del>DC</del> | <del>18.8</del><br>22.4 | <del>DC</del> |
| <del>Valley Center</del><br><del>Lilac Road, between Miller New Road and Indian Creek 19 (east of Betsworth Road) and Valley Center Road</del>           | 35                          | <del>18.6</del><br>19.3 | <del>ED</del> | <del>21.2</del><br>18.7 | <del>ED</del> |

Source: Chen Ryan Associates; ~~June 2013~~ May 2014

Note:

Changes in this table are associated with both "Change 1" and "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

As shown in the table above, all four (4) segments would operate at acceptable LOS D or better under Horizon Year Base Plus Project (without Road 3) conditions based on the arterial analysis. ~~Therefore, it is appropriate to consider that no mitigation measures would be necessary at these locations.~~

### Freeways

The additional traffic generated by the proposed Lilac Hills Ranch project would have ~~significant impacts result in GP inconsistencies~~ at the following eight (8) freeway segments:

- I-15, between Riverside County Boundary and Old Highway 395;
- I-15, between Old Highway 395 and SR-76;
- I-15, between SR-76 and Old Highway 395;
- I-15, between Old Highway 395 and Gopher Canyon Road;
- I-15, between Gopher Canyon Road and Deer Springs Road;
- I-15, between Deer Springs Road and Centre City Parkway;
- I-15, between Centre City Parkway and El Norte Parkway; and
- I-15, between El Norte Parkway and SR-78.

The 2050 RTP indicates that four (4) toll lanes are planned to be added along I-15, between the Riverside County Boundary and SR-78 by 2050. However, no secured funding sources were identified, hence this improvement was not assumed in this study. Furthermore, there are no

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planned I-15 (north of SR-78) mainline improvements as per SANDAG's 2050 RTP, thus the impacts would remain significant and unmitigable.

**Table 9.12** summarizes potential ~~impacts and recommended mitigation measures~~ **inconsistencies** associated with the Lilac Hills Ranch project under Horizon Year with Road 3 conditions.

**TABLE 9.12**  
**~~IMPACT AND MITIGATION~~ GP CONSISTENCIES SUMMARY**  
**HORIZON YEAR BASE PLUS PROJECT CONDITIONS**  
**(without Road 3)**

| <del>Potentially Impacted</del> Facility  | <del>GP Inconsistency</del>          | <del>Recommendation</del> Mitigation Measures | Rationale  |
|---|--------------------------------------|---|--|
| <b>Roadway Segment</b>  |                                      |   |  |
| <del>Roadway Segment</del> W. Lilac Road, between Old Highway 395 and Main Street |                                      | None  | <ul style="list-style-type: none"> <li>• Roundabouts increase operational capacity</li> <li>• Improve pedestrian and bicycle facility - multi-purpose trail</li> <li>• Acceptable arterial speed</li> <li>• R-O-W constrains at the I-15 overpass</li> </ul> |
| Old Highway 395, between SR-76 and E. Dulin Road                                  | Option 1 - None                      |   | <ul style="list-style-type: none"> <li>• Continue accepting LOS E/F as in the current GP</li> <li>• Acceptable arterial speed</li> </ul>   |
|   | Option 2 – Improve to 4.2B           |   | Improve to acceptable LOS based on County's planning-level analysis.   |
| Old Highway 395, between E. Dulin Road and W. Lilac Road                          | Option 1 - None                      |   | <ul style="list-style-type: none"> <li>• Acceptable arterial speed</li> </ul>  |
|   | Option 2 – Improve to 4.2B           |   | Improve to acceptable LOS based on County's planning-level analysis.   |
| Lilac Road, between New Road 19 (east of Betsworth Road) and Valley Center Road   | Option 1 - None                      |   | <ul style="list-style-type: none"> <li>• Continue accepting LOS E/F as in the current GP</li> <li>• Acceptable arterial speed</li> </ul>   |
|   | Option 2 – Improve to 6.2            |   | Improve to acceptable LOS based on County's planning-level analysis.   |
| <del>Valley Center Road, between Miller Road and Indian Creek Road</del>          | <del>Option 1 - None</del>           |   | <ul style="list-style-type: none"> <li><del>• Continue accepting LOS E/F as in the current GP</del></li> <li><del>• Acceptable arterial speed</del></li> </ul>   |
|   | <del>Option 2 – Improve to 6.2</del> |   | <del>Improve to acceptable LOS based on County's planning level analysis.</del>  |
| <b>Freeway</b>  |                                      |   |  |
| I-15, between Riverside County Boundary and Old Highway 395                       | None                                 |   | No planned improvement – no feasible mitigation  |
| I-15, between Old Highway 395 and SR-76   | None                                 |   | No planned improvement – no feasible mitigation  |

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TABLE 9.12  
~~IMPACT AND MITIGATION~~ GP CONSISTENCIES SUMMARY  
 HORIZON YEAR BASE PLUS PROJECT CONDITIONS  
 (without Road 3)

| <del>Potentially Impacted</del> Facility                | <del>GP Inconsistency</del> | Recommendation | <del>Mitigation Measures</del> | Rationale                                       |
|---|-----------------------------|----------------|--------------------------------|---|
| I-15, between SR-76 and Old Highway 395                 |                             | None           |                                | No planned improvement – no feasible mitigation |
| I-15, between Old Highway 395 and Gopher Canyon Road    |                             | None           |                                | No planned improvement – no feasible mitigation |
| I-15, between Gopher Canyon Road and Deer Springs Road  |                             | None           |                                | No planned improvement – no feasible mitigation |
| I-15, between Deer Springs Road and Centre City Parkway |                             | None           |                                | No planned improvement – no feasible mitigation |
| I-15, between Centre City Parkway and El Norte Parkway  |                             | None           |                                | No planned improvement – no feasible mitigation |
| I-15, between El Norte Parkway and SR-78                |                             | None           |                                | No planned improvement – no feasible mitigation |

Source: Chen Ryan Associates; ~~June 2013~~ May 2014

Note:

Changes in this table are associated with both "Change 1" and "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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## 10.0 Findings and Recommendations

This chapter provides a summary of the key findings and study recommendations, including the level of service results and traffic mitigation requirements associated with the various scenarios.

### 10.1 Summary of Roadway Segment Analysis

**Tables 10.1** displays roadway segment level of service results for each of the study scenarios analyzed. Note that Old Highway 395 was analyzed as a two-lane highway under Existing, Existing Plus Project (all phases), and Existing Plus Cumulative Projects Plus Project conditions.

### 10.2 Summary of Intersection Analysis

**Table 10.2** displays intersection level of service results for each of the analyzed scenarios. Note that based on the County's request, no intersection analysis was conducted under Horizon Year conditions.

### 10.3 Summary of Freeway Analysis

**Table 10.3** displays freeway level of service results for each of the analyzed scenarios.

### 10.4 Summary of Ramp Intersection Capacity Analysis

**Table 10.4** displays freeway ramp intersection capacity analysis level of service results for each of the scenarios analyzed.

### 10.5 Summary of Significant Impacts and Mitigation Recommendations

Based upon the significant impact criteria discussed in Section 2.8, **Table 10.5** summarizes identified significant project-related impacts and recommended mitigations to roadway segments, intersections, and freeway segments under each of the scenarios analyzed. Detailed rationale for mitigation measures are display at the end of each study scenario in previous chapters.

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**TABLE 10.1  
SUMMARY OF ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**

| Roadway            | Segment                                   | Existing  | E+P<br>(Ph A) | E+P<br>(Ph B) | E+P<br>(Ph C) | E+P<br>(Ph D) | E+P<br>(Buildout) | E+C+P     | Horizon<br>w/ Road<br>3 | H+P w/<br>Road 3 | Horizon<br>w/o<br>Road 3 | H+P w/o<br>Road 3 |
|--------------------|---|-----------|---------------|---------------|---------------|---------------|-------------------|-----------|-------------------------|------------------|--------------------------|-------------------|
| E. Dulin Road      | Old Highway 395 to SR-76                  | <u>AB</u> | B             | B             | B             | B             | <u>BC</u>         | D         | C                       | D                | C                        | D                 |
| W. Lilac Road      | Camino Del Rey to Camino Del Cielo        | A         | A             | A             | A             | A             | A                 | A         | C                       | C                | C                        | C                 |
| W. Lilac Road      | Camino Del Cielo to Old Highway 395       | A         | A             | A             | A             | A             | A                 | A         | C                       | D                | C                        | <u>CD</u>         |
| W. Lilac Road      | Old Highway 395 to Main Street            | A         | A             | A             | F             | D             | D                 | F         | <u>CD</u>               | <u>EE</u>        | <u>AB</u>                | <u>DE</u>         |
| W. Lilac Road      | Main Street to Street "F"                 | A         | A             | A             | A             | A             | A                 | A         | <u>CD</u>               | F                | B                        | B                 |
| W. Lilac Road      | Street "F" to Road 3 (Running Creek Road) | A         | A             | A             | A             | A             | A                 | A         | C                       | F                | B                        | A                 |
| W. Lilac Road      | Road 3 (Running Creek Road) to Covey Lane | A         | A             | A             | A             | A             | A                 | A         | A                       | A                | A                        | <u>AB</u>         |
| W. Lilac Road      | Covey Lane to Circle R Drive              | A         | A             | A             | A             | A             | A                 | A         | A                       | A                | A                        | A                 |
| W. Lilac Road      | Circle R Drive to Lilac Road              | A         | A             | A             | A             | A             | A                 | A         | A                       | A                | A                        | A                 |
| Camino Del Cielo   | Camino Del Rey to W. Lilac Road           | A         | A             | A             | A             | A             | A                 | A         | C                       | C                | C                        | C                 |
| Olive Hill Road    | Shamrock Road to SR-76                    | A         | A             | A             | A             | A             | A                 | A         | D                       | D                | D                        | D                 |
| Camino Del Rey     | SR-76 to Old River Road                   | D         | D             | D             | D             | D             | D                 | D         | B                       | B                | B                        | B                 |
| Camino Del Rey     | Old River Road to W. Lilac Road           | D         | D             | D             | D             | D             | D                 | E         | A                       | A                | A                        | A                 |
| Camino Del Rey     | W. Lilac Road to Camino Del Cielo         | C         | C             | C             | C             | C             | C                 | D         | A                       | A                | A                        | A                 |
| Camino Del Rey     | Camino Del Cielo to Old Highway 395       | A         | A             | A             | A             | A             | A                 | <u>AB</u> | C                       | C                | C                        | C                 |
| Gopher Canyon Road | E. Vista Way to I-15 SB Ramps             | <u>EE</u> | <u>EE</u>     | <u>EE</u>     | <u>EE</u>     | <u>EE</u>     | <u>EE</u>         | F         | B                       | B                | B                        | B                 |

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**TABLE 10.1  
SUMMARY OF ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**

| Roadway            | Segment                                | Existing      | E+P<br>(Ph A) | E+P<br>(Ph B) | E+P<br>(Ph C) | E+P<br>(Ph D) | E+P<br>(Buildout) | E+C+P       | Horizon<br>w/ Road<br>3        | H+P w/<br>Road 3               | Horizon<br>w/o Road<br>3       | H+P w/o<br>Road 3              |
|--------------------|--|---------------|---------------|---------------|---------------|---------------|-------------------|-------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
| Gopher Canyon Road | I-15 SB Ramps to I-15 NB Ramps         | A             | A             | A             | A             | A             | A                 | B           | B                              | B                              | B                              | B                              |
| Gopher Canyon Road | I-15 NB Ramps to Old Highway 395       | A             | A             | A             | A             | A             | A                 | B           | B                              | B                              | B                              | B                              |
| Circle R Drive     | Old Highway 395 to Mountain Ridge Road | <del>BC</del> | <del>BC</del> | C             | C             | C             | C                 | D           | <del>ED</del>                  | D                              | C                              | <del>C</del>                   |
| Circle R Drive     | Mountain Ridge Road to W. Lilac Road   | <del>AB</del> | <del>AB</del> | B             | B             | B             | B                 | B           | B                              | B                              | <del>AB</del>                  | <del>AB</del>                  |
| Old Castle Road    | Old Highway 395 to Lilac Road          | <del>ED</del> | <del>ED</del> | <del>ED</del> | <del>ED</del> | <del>ED</del> | <del>ED</del>     | D           | C                              | C                              | C                              | C                              |
| E. Vista Way       | SR-76 to Gopher Canyon Road            | E             | E             | E             | E             | E             | E                 | F           | B                              | B                              | B                              | B                              |
| E. Vista Way       | Gopher Canyon Road to Osborne Street   | F             | F             | F             | F             | F             | F                 | F           | C                              | C                              | C                              | C                              |
| Old River Road     | SR-76 to Camino Del Rey                | <del>BC</del> | C             | C             | C             | C             | C                 | C           | C                              | C                              | C                              | C                              |
| Old Highway 395*   | Pala Mesa Drive to SR-76               | D or better   | D or better   | D or better   | D or better   | D or better   | D or better       | D or better | A                              | A                              | B                              | B                              |
| Old Highway 395*   | SR-76 to E. Dulin Road                 | D or better   | D or better   | D or better   | D or better   | D or better   | D or better       | D or better | E<br>accepted<br>at LOS<br>E/F | E<br>accepted<br>at LOS<br>E/F | E<br>accepted<br>at LOS<br>E/F | E<br>accepted<br>at LOS<br>E/F |
| Old Highway 395*   | E. Dulin Road to W. Lilac Road         | D or better   | D or better   | D or better   | D or better   | D or better   | D or better       | D or better | E                              | <del>EE</del>                  | <del>DE</del>                  | <del>EE</del>                  |
| Old Highway 395*   | W. Lilac Road to I-15 SB Ramps         | D or better   | D or better   | D or better   | D or better   | D or better   | D or better       | D or better | <del>BC</del>                  | <del>DE</del>                  | B                              | D                              |
| Old Highway 395*   | I-15 SB Ramps to I-15 NB Ramps         | D or better   | D or better   | D or better   | D or better   | D or better   | D or better       | D or better | <del>AB</del>                  | <del>BC</del>                  | <del>AB</del>                  | B                              |

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**TABLE 10.1  
SUMMARY OF ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**

| Roadway             | Segment  | Existing      | E+P<br>(Ph A) | E+P<br>(Ph B) | E+P<br>(Ph C) | E+P<br>(Ph D) | E+P<br>(Buildout) | E+C+P         | Horizon<br>w/ Road<br>3 | H+P w/<br>Road 3      | Horizon<br>w/o Road<br>3 | H+P w/o<br>Road 3     |
|---------------------|--|---------------|---------------|---------------|---------------|---------------|-------------------|---------------|-------------------------|-----------------------|--------------------------|-----------------------|
| Old Highway 395*    | I-15 NB Ramps to Camino Del Rey                            | D or better   | D or better   | D or better   | D or better   | D or better   | D or better       | D or better   | B                       | B                     | B                        | B                     |
| Old Highway 395*    | Camino Del Rey to Circle R Drive                           | D or better   | D or better   | D or better   | D or better   | D or better   | D or better       | D or better   | B                       | B                     | <del>BC</del>            | C                     |
| Old Highway 395*    | Circle R Drive to Gopher Canyon Road                       | D or better   | D or better   | D or better   | D or better   | D or better   | D or better       | D or better   | <del>ED</del>           | D                     | <del>ED</del>            | D                     |
| Old Highway 395*    | Gopher Canyon Road to Old Castle Road                      | D or better   | D or better   | D or better   | D or better   | D or better   | D or better       | D or better   | C                       | C                     | C                        | D                     |
| Champagne Boulevard | Old Castle Road to Lawrence Welk Drive                     | <del>BC</del> | <del>BC</del> | <del>BC</del> | <del>BC</del> | <del>BC</del> | <del>BC</del>     | <del>ED</del> | B                       | B                     | B                        | B                     |
| Pankey Road         | Pala Mesa Drive to SR-76                                   | A             | A             | A             | A             | A             | A                 | F             | <del>EA</del>           | B                     | A                        | B                     |
| Lilac Road          | Couser Canyon Road to W. Lilac Road                        | A             | A             | A             | A             | A             | A                 | A             | D                       | D                     | C                        | C                     |
| Lilac Road          | W. Lilac Road to Old Castle Road                           | A             | A             | A             | A             | A             | A                 | A             | D                       | D                     | D                        | D                     |
| Lilac Road          | Old Castle Road to Anthony Road                            | D             | D             | D             | D             | D             | D                 | E             | D                       | D                     | D                        | D                     |
| Lilac Road          | Anthony Road to New Road 19 (east of Betsworth Road)       | D             | D             | D             | D             | D             | D                 | D             | B                       | B                     | D                        | D                     |
| Lilac Road          | New Road 19 (east of Betsworth Road) to Valley Center Road | D             | D             | D             | D             | D             | D                 | D             | F accepted at LOS E/F   | F accepted at LOS E/F | F accepted at LOS E/F    | F accepted at LOS E/F |
| Valley Center Road  | Woods Valley Road to Lilac Road                            | C             | C             | C             | C             | C             | C                 | D             | C                       | C                     | C                        | C                     |
| Valley Center Road  | Lilac Road to Miller Road                                  | B             | B             | B             | B             | B             | B                 | C             | D                       | D                     | E                        | E                     |

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**TABLE 10.1  
SUMMARY OF ROADWAY SEGMENT LEVEL OF SERVICE RESULTS**

| Roadway            | Segment                              | Existing | E+P<br>(Ph A) | E+P<br>(Ph B) | E+P<br>(Ph C) | E+P<br>(Ph D) | E+P<br>(Buildout) | E+C+P | Horizon<br>w/ Road<br>3               | H+P w/<br>Road 3                      | Horizon<br>w/o<br>Road 3               | H+P w/o<br>Road 3                     |
|--------------------|--------------------------------------|----------|---------------|---------------|---------------|---------------|-------------------|-------|---------------------------------------|---------------------------------------|--|---------------------------------------|
| Valley Center Road | Miller Road to Indian Creek Road     | C        | C             | C             | C             | C             | C                 | D     | <b>F</b><br>accepted<br>at LOS<br>E/F | <b>F</b><br>accepted<br>at LOS<br>E/F | <b>F</b><br>accepte<br>d at LOS<br>E/F | <b>F</b><br>accepted<br>at LOS<br>E/F |
| Valley Center Road | Indian Creek Road to Cole Grade Road | C        | C             | C             | C             | C             | C                 | D     | C                                     | C                                     | D                                      | D                                     |
| Valley Center Road | Cole Grade Road to Vesper Road       | D        | D             | D             | D             | D             | D                 | D     | A                                     | A                                     | A                                      | A                                     |
| Miller Road        | Misty Oak Road to Valley Center Road | A        | A             | A             | A             | A             | A                 | A     | A                                     | A                                     | A                                      | A                                     |
| Cole Grade Road    | Fruitvale Road to Valley Center Road | D        | D             | D             | D             | D             | D                 | E     | <b>AB</b>                             | B                                     | B                                      | B                                     |

Source: Chen Ryan Associates: ~~June 2013~~ May 2014

Notes:

Bold letter indicates unacceptable LOS E or F.

E = Existing

P = Project

Ph = Phase

C = Cumulative Projects

H = Horizon Year

\*Old Highway 395 was analyzed as a two-lane highway prior to the Horizon Year analyses.

Changes in this table are associated with both "Change 1" and "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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**TABLE 10.2  
SUMMARY OF INTERSECTION PEAK HOUR LEVEL OF SERVICE RESULTS**

| Intersection                              | Existing              | E+P<br>(Ph A)         | E+P<br>(Ph B)         | E+P<br>(Ph C)               | E+P<br>(Ph D)               | E+P<br>(Buildout)                  | E+C+P          |
|---|-----------------------|-----------------------|-----------------------|-----------------------------|-----------------------------|------------------------------------|----------------|
|   | AM / PM               | AM / PM               | AM / PM               | AM / PM                     | AM / PM                     | AM / PM                            | AM / PM        |
| 1. E. Vista Way / Gopher Canyon Road      | <u>G/D</u> / <u>E</u> | <u>G/D</u> / <u>E</u> | <u>G/D</u> / <u>E</u> | <u>G/D</u> / <u>E</u>       | <u>G</u> / D                | <u>G</u> / D                       | <u>G</u> / F   |
| 2. SR-76 / Old River Road/E. Vista Way    | <u>E/D</u> / <u>C</u> | <u>E/D</u> / <u>C</u> | <u>E/D</u> / <u>C</u> | <u>E/D</u> / <u>C</u>       | <u>E/D</u> / <u>C</u>       | <u>E/D</u> / <u>C</u>              | <u>F/F</u> / D |
| 3. SR-76 / Olive Hill Road/Camino Del Rey | <u>D/E</u> / <u>C</u> | <u>D/E</u> / <u>C</u> | <u>D/E</u> / <u>C</u> | <u>D/E</u> / <u>C</u>       | <u>D/E</u> / <u>C</u>       | <u>D/E</u> / <u>C</u>              | <u>F/F</u> / D |
| 4. Old River Road / Camino Del Rey        | D / B                 | D / B                 | D / B                 | D / B                       | D / B                       | D / B                              | F / C          |
| 5. W. Lilac Road / Camino Del Rey         | C / B                 | C / B                 | C / B                 | C / B                       | C / B                       | C / B                              | C / B          |
| 6. Old Highway 395 / SR-76                | <u>D</u> / D          | <u>D</u> / D          | <u>D</u> / D          | <u>D</u> / D                | <u>D</u> / D                | <u>D</u> / D                       | F / F          |
| 7. Pankey Road / SR-76                    | B / C                 | B / C                 | B / C                 | B / C                       | B / C                       | B / C                              | F / F          |
| 8. Old Highway 395 / E. Dulin Road        | B / B                 | B / B                 | B / B                 | C / D                       | C / C                       | C / D                              | F / F          |
| 9. Old Highway 395 / W. Lilac Road        | C / B                 | C / C                 | C / D                 | F / F                       | <u>B</u> / <u>C</u> / D     | C / <u>D</u>                       | F / F          |
| 10. I-15 SB Ramps / Old Highway 395       | B / B                 | B / B                 | B / B                 | B / B                       | B / C                       | B / C                              | <u>E</u> / F   |
| 11. I-15 NB Ramps / Old Highway 395       | A / B                 | B / B                 | B / B                 | B / C                       | B / C                       | B / C                              | C / F          |
| 12. Old Highway 395 / Camino Del Rey      | B / B                 | B / B                 | B / B                 | B / B                       | B / B                       | B / B                              | B / C          |
| 13. Old Highway 395 / Circle R Drive      | C / C                 | C / C                 | C / D                 | D / D                       | <u>E</u> / F                | <u>A</u> / <u>A</u> / B            | F / F          |
| 14. I-15 SB Ramps / Gopher Canyon Road    | F / F                 | F / F                 | F / F                 | <u>A</u> / <u>A</u> / F     | <u>A</u> / <u>A</u> / F     | <u>A</u> / <u>A</u> / F            | F / F          |
| 15. I-15 NB Ramps / Gopher Canyon Road    | D / F                 | D / F                 | D / F                 | <u>A</u> / <u>A</u> / D / F | <u>A</u> / <u>A</u> / D / F | <u>A</u> / <u>B</u> / <u>E</u> / F | F / F          |
| 16. Old Highway 395 / Gopher Canyon Road  | B / <u>A</u>          | B / <u>A</u>          | B / B                 | B / B                       | B / B                       | B / B                              | C / C          |
| 17. Old Highway 395 / Old Castle Road     | B / B                 | B / B                 | B / B                 | B / B                       | B / B                       | B / B                              | B / B          |
| 18. W. Lilac Road / Covey Lane            | B / A                 | A / A                 | A / A                 | A / B                       | <u>A</u> / <u>A</u> / B     | <u>A</u> / B                       | B / B          |
| 19. Mountain Ridge Road / Circle R Drive  | A / A                 | A / A                 | A / <u>A</u>          | A / B                       | A / B                       | <u>B</u> / C                       | B / B          |
| 20. W. Lilac Road / Circle R Drive        | A / A                 | A / A                 | A / A                 | B / B                       | B / <u>A</u>                | B / <u>B</u>                       | B / B          |
| 21. Lilac Road / W. Lilac Road            | A / A                 | A / B                 | A / B                 | B / B                       | B / B                       | B / B                              | B / B          |

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**TABLE 10.2  
SUMMARY OF INTERSECTION PEAK HOUR LEVEL OF SERVICE RESULTS**

| Intersection                                   | Existing | E+P<br>(Ph A) | E+P<br>(Ph B) | E+P<br>(Ph C) | E+P<br>(Ph D) | E+P<br>(Buildout) | E+C+P         |
|--|----------|---------------|---------------|---------------|---------------|-------------------|---------------|
|  | AM / PM  | AM / PM       | AM / PM       | AM / PM       | AM / PM       | AM / PM           | AM / PM       |
| 22. Lilac Road / Old Castle Road               | B / C    | B / C         | B / C         | B / C         | B / C         | B / C             | B / D         |
| 23. Valley Center Rd / Lilac Road              | B / C    | B / C         | B / C         | B / C         | B / C         | B / C             | D / D         |
| 24. Miller Road / Valley Center Road           | C / D    | C / D         | C / D         | C / D         | C / D         | C / D             | C / F         |
| 25. Cole Grade Road / Valley Center Road       | C / C    | C / C         | C / D         | C / C         | C / D         | C / D             | D / D         |
| 26. Street "O" / W. Lilac Road/Main Street     | DNE      | A / A         | A / A         | A / A         | A / B         | <b>AB</b> / B     | B / <b>BC</b> |
| 27. Main Street / Street "C"                   | DNE      | A / A         | A / A         | A / A         | A / A         | A / A             | A / A         |
| 28. Lilac Hills Ranch Road / Main Street North | DNE      | DNE           | DNE           | A / A         | A / A         | A / A             | A / A         |
| 29. Lilac Hills Ranch Road / Main Street South | DNE      | DNE           | DNE           | A / A         | A / A         | A / B             | A / <b>AB</b> |
| 30. Street "Z" / Main Street                   | DNE      | A / A         | A / A         | A / A         | A / A         | A / A             | A / A         |
| 31. W. Lilac Road/Street "F" / Main Street     | DNE      | A / A         | A / A         | A / A         | A / A         | A / A             | A / A         |

Source: Chen Ryan Associates; May ~~2013~~2014

Notes:

Bold letter indicates unacceptable LOS E or F.

DNE = Does Not Exist

E = Existing

P = Project

Ph = Phase

C = Cumulative Projects

Changes in this table are associated with both "Change 1" and "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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**TABLE 10.3  
SUMMARY OF FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**

| Freeway | Segment                                      | Existing | E+P<br>(Ph A) | E+P<br>(Ph B) | E+P<br>(Ph C) | E+P<br>(Ph D) | E+P<br>(Buildout) | E+C+P | Horizon<br>w/<br>Road 3 | H+P w/<br>Road 3 | Horizon<br>w/o<br>Road 3 | H+P w/o<br>Road 3 |
|---------|--|----------|---------------|---------------|---------------|---------------|-------------------|-------|-------------------------|------------------|--------------------------|-------------------|
| I-15    | Riverside County Boundary to Old Highway 395 | D        | D             | D             | D             | D             | D                 | F     | F                       | F                | F                        | F                 |
| I-15    | Old Highway 395 to SR-76                     | D        | D             | D             | D             | D             | D                 | F     | F                       | F                | F                        | F                 |
| I-15    | SR-76 to Old Highway 395                     | C        | C             | C             | C             | C             | C                 | F     | F                       | F                | F                        | F                 |
| I-15    | Old Highway 395 to Gopher Canyon Rd          | C        | C             | C             | C             | C             | C                 | F     | F                       | F                | F                        | F                 |
| I-15    | Gopher Canyon Rd to Deer Springs Rd          | C        | C             | C             | C             | C             | C                 | F     | F                       | F                | F                        | F                 |
| I-15    | Deer Springs Rd to Centre City Pkwy          | C        | C             | C             | C             | C             | C                 | F     | F                       | F                | F                        | F                 |
| I-15    | Centre City Pkwy to El Norte Pkwy            | C        | C             | C             | C             | C             | C                 | F     | F                       | F                | F                        | F                 |
| I-15    | El Norte Pkwy to SR-78                       | C        | C             | C             | C             | C             | C                 | F     | F                       | F                | F                        | F                 |
| I-15    | SR-78 to W Valley Pkwy                       | B        | C             | C             | C             | C             | C                 | C     | F                       | F                | F                        | F                 |
| I-15    | W Valley Pkwy to Auto Pkwy                   | B        | B             | B             | B             | B             | B                 | C     | F                       | F                | F                        | F                 |
| I-15    | Auto Pkwy to W Citracado Pkwy                | B        | B             | B             | B             | B             | B                 | B     | F                       | F                | F                        | F                 |
| I-15    | W Citracado Pkwy to Via Rancho Pkwy          | B        | B             | B             | B             | B             | B                 | C     | E                       | E                | E                        | E                 |
| I-15    | Via Rancho Pkwy to Bernardo Dr               | B        | B             | B             | B             | B             | B                 | C     | F                       | F                | F                        | F                 |

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**TABLE 10.3  
SUMMARY OF FREEWAY SEGMENT LEVEL OF SERVICE RESULTS**

| Freeway | Segment                                  | Existing | E+P<br>(Ph A) | E+P<br>(Ph B) | E+P<br>(Ph C) | E+P<br>(Ph D) | E+P<br>(Buildout) | E+C+P | Horizon<br>w/ <del>E</del><br>Road 3 | H+P w/ <del>E</del><br>Road 3 | Horizon<br>w/o<br>Road 3 | H+P w/o<br>Road 3 |
|---------|--|----------|---------------|---------------|---------------|---------------|-------------------|-------|--------------------------------------|-------------------------------|--------------------------|-------------------|
| I-15    | Bernardo Dr to Rancho Bernardo Rd        | B        | B             | B             | B             | B             | B                 | B     | E                                    | E                             | E                        | E                 |
| I-15    | Rancho Bernardo Rd to Bernardo Center Dr | B        | B             | B             | B             | B             | B                 | B     | F                                    | F                             | F                        | F                 |
| I-15    | Bernardo Center Dr to Camino Del Norte   | B        | B             | B             | B             | B             | B                 | B     | E                                    | E                             | E                        | E                 |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:  
 Bold letter indicates unacceptable LOS E or F.  
 E = Existing  
 P = Project  
 Ph = Phase  
 C = Cumulative Projects  
 H = Horizon Year

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**TABLE 10.4  
SUMMARY OF RAMP INTERSECTION CAPACITY ANALYSIS**

| Ramp Intersection                      | Peak Hour | Existing | E+P<br>(Ph A) | E+P<br>(Ph B) | E+P<br>(Ph C) | E+P<br>(Ph D) | E+P<br>(Buildout) | E+C+P |
|--|-----------|----------|---------------|---------------|---------------|---------------|-------------------|-------|
| SR-76 / Old River Road/E. Vista Way    | AM        | Over     | Over          | Over          | Over          | Over          | Over              | Over  |
|  | PM        | At       | At            | At            | At            | At            | At                | Over  |
| SR-76 / Olive Hill Road/Camino Del Rey | AM        | At       | At            | At            | At            | At            | At                | Over  |
|  | PM        | At       | At            | At            | At            | At            | At                | Over  |
| SR-76 / Old Highway 395                | AM        | Under    | Under         | Under         | Under         | Under         | Under             | Over  |
|  | PM        | Under    | Under         | Under         | Under         | Under         | Under             | Over  |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

Notes:  
E = Existing  
P = Project  
Ph = Phase  
C = Cumulative Projects

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TABLE 10.5  
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

| Location  | E+P<br>(Phase A)   | E+P (Phases B) | E+P (Phases C)                          | E+P (Phases D)                          | E+P (Buildout)                          | Existing + Cumulative Projects +<br>Project   | Horizon + Project (w/ Road 3)   | Horizon + Project (w/o Road 3)  |
|---|--|----------------|---|---|---|---|---|---|
| Roadway Segment   |  |                |   |   |   |   |   |   |
| Camino Del Rey, Old River Road to W. Lilac Road                                       | -  | -              | -                                       | -                                       | -                                       | Cumulative Impact<br><del>Improve to 4.2B</del> TIF Payments  | -   | -   |
| W. Lilac Road, Old Highway 395 to Main Street   | -  | -              | Direct Impact<br>Improve to 2.2C        | -                                       | -                                       | Cumulative Impact – also Direct Impact under E+P (Phase C) <ul style="list-style-type: none"><li><del>Improve</del>Project Improvement to 2.2C</li><li>Signalization at Old Highway 395 / W. Lilac Road and +1WBL</li></ul> | General Plan Inconsistency<br><u>Recommended Mitigation</u><br><del>None</del> – Roundabouts increase operational capacity; improving pedestrian and bicycle facility via multi-purpose trail; acceptable arterial speed; R-O-W constrains at the I-15 overpass.                          | -   |
| <del>W. Lilac Road, Main Street to Street "F"</del>                                   | -  | -              | -                                       | -                                       | -                                       | -   | General Plan Inconsistency<br><u>Recommended Mitigation</u><br><del>None</del> – Road 3 is likely to be eliminated from the Mobility Element network – this road would operate at acceptable LOS as a 2.2F.   | -   |
| <del>W. Lilac Road, Street "F" to Road 3</del>  | -  | -              | -                                       | -                                       | -                                       | -   | General Plan Inconsistency<br><u>Recommended Mitigation</u><br><del>None</del> – Road 3 is likely to be eliminated from the Mobility Element network – this road would operate at acceptable LOS as a 2.2F.   | -   |
| <del>Old Highway 395, SR 76 to E. Dulin Road</del>                                    | -  | -              | -                                       | -                                       | -                                       | -   | General Plan Inconsistency<br><u>Recommended Mitigation</u><br><del>Option 1:</del> <del>None</del> – Continue accepting LOS E/F as the current GP with acceptable arterial speed.<br><del>Option 2:</del> Improve to 4.2B with acceptable LOS based on County's planning level analysis. | General Plan Inconsistency<br><u>Recommended Mitigation</u><br><del>Option 1:</del> <del>None</del> – Continue accepting LOS E/F as the current GP with acceptable arterial speed.<br><del>Option 2:</del> Improve to 4.2B with acceptable LOS based on County's planning level analysis. |
| <del>Old Highway 395, E. Dulin Road to W. Lilac Road</del>                            | -  | -              | -                                       | -                                       | -                                       | -   | General Plan Inconsistency<br><u>Recommended Mitigation</u><br><del>Option 1:</del> <del>None</del> – Acceptable arterial speed.<br><del>Option 2:</del> Improve to 4.2B with acceptable LOS based on County's planning level analysis.   | General Plan Inconsistency<br><u>Recommended Mitigation</u><br><del>Option 1:</del> <del>None</del> – Acceptable arterial speed.<br><del>Option 2:</del> Improve to 4.2B with acceptable LOS based on County's planning level analysis.   |
| Gopher Canyon Road, E. Vista Way to I-15 SB Ramps<br><u>Little Gopher Canyon Road</u> | <u>Direct Impact</u><br><del>+1WBR @ E. Vista Way / Gopher Canyon Road</del> | -              | Direct Impact<br>No Mitigation Required | Direct Impact<br>No Mitigation Required | Direct Impact<br>No Mitigation Required | Cumulative Impact<br><del>Widen to 4.1B</del> No feasible mitigation  | -   | -   |

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TABLE 10.5  
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

| Location  | E+P<br>(Phase A)   | E+P (Phases B) | E+P (Phases C)  | E+P (Phases D)  | E+P (Buildout)  | Existing + Cumulative Projects +<br>Project   | Horizon + Project (w/ Road 3) | Horizon + Project (w/o Road 3)   |
|---|--|----------------|---|---|---|---|-------------------------------|--|
| Gopher Canyon Road, Little Canyon Road to I-15 SB Ramps                           | <u>Direct Impact</u><br><u>+1WBR @ E. Vista Way / Gopher Canyon Road</u> | -              | -   | -   | -   | <u>Cumulative Impact</u><br><u>TIF Payments</u>                                     | -                             | -  |
| E. Vista Way, SR-76 to Gopher Canyon Road   | -  | -              | -   | -   | Direct Impact<br><del>No Mitigation Required</del><br><u>+1WBR &amp; +1 NBR @ E. Vista Way / Gopher Canyon Road</u> | Cumulative Impact<br><del>Widen to 4.1A</del> <u>TIF Payments</u>                   | -                             | -  |
| E. Vista Way, Gopher Canyon Road to Osborne Street                                | -  | -              | Direct Impact<br><del>No Mitigation Required</del><br><u>+1WBR &amp; +1 NBR @ E. Vista Way / Gopher Canyon Road</u> | <del>Direct Impact</del><br><del>No Mitigation Required</del> | <del>Direct Impact</del><br><del>No Mitigation Required</del>   | Cumulative Impact<br><del>Widen to 4.1A</del> <u>TIF Payments</u>                   | -                             | -  |
| Pankey Road, Pala Mesa Drive to SR-76   | -  | -              | -   | -   | -   | Cumulative Impact<br><del>Widen to 4.2B</del> <u>No feasible mitigation</u>         | -                             | -  |
| Lilac Road, Old Castle Road to Anthony Road                                       | -  | -              | -   | -   | -   | Cumulative Impact<br><del>Widen to 2.1C</del> <u>Provide intermittent turn-lane</u> | -                             |  |
| <del>Lilac Road, New Road 19 (east of Betsworth Road) to Valley Center Road</del> | -  | -              | -   | -   | -   | -   | -                             | <b>General Plan Inconsistency</b><br><u>Recommended Mitigation</u><br><del>Option 1: None – Continue accepting LOS E/F as the current GP with acceptable arterial speed.</del><br><del>Option 2: Improve to 6.2 with acceptable LOS based on County's planning level analysis.</del> |
| <del>Valley Center Road, Miller Road to Indian Creek Road</del>                   | -  | -              | -   | -   | -   | -   | -                             | <b>General Plan Inconsistency</b><br><u>Recommended Mitigation</u><br><del>Option 1: None – Continue accepting LOS E/F as the current GP with acceptable arterial speed.</del><br><del>Option 2: Improve to 6.2 with acceptable LOS based on County's planning level analysis.</del> |
| Cole Grade Road, Fruitvale Road and Valley Center Road                            | -  | -              | -   | -   | -   | Cumulative Impact<br><del>Widen to 4.2A</del> <u>TIF Payments</u>                   | -                             | -  |
| Intersection  |  |                |   |   |   |   |                               |  |

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TABLE 10.5  
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

| Location   | E+P<br>(Phase A)                        | E+P (Phases B) | E+P (Phases C) | E+P (Phases D) | E+P (Buildout) | Existing + Cumulative Projects +<br>Project  | Horizon + Project (w/ Road 3) | Horizon + Project (w/o Road 3) |
|--|---|----------------|----------------|----------------|----------------|--|-------------------------------|--------------------------------|
| 1. E. Vista Way / Gopher Canyon Road                 | <u>-Direct Impact</u><br>• <u>+1WBR</u> | -              | -              | -              | -              | <b>Cumulative Impact</b><br>• <u>+1NBT; +1NBR</u><br>• <u>+1SBT</u><br><u>Conversion of WB L T R shared lane to T R shared lane &amp; TIF Payments</u>   | N/A                           | N/A                            |
| 2. <del>SR 76 / Old River Road/E. Vista Way</del>    | -                                       | -              | -              | -              | -              | <b>Cumulative Impact</b><br>• <u>+1NBR &amp; +1NBT</u><br>• <u>+1SBT</u><br>• <u>Conversion of EB L T R shared lane to EBTR &amp; +1EBL &amp; +1EBR</u><br>• <u>Conversion of WB L T shared lane to WB T R shared lane &amp; +2WBL</u><br>• <u>Split to protected phase</u>  | N/A                           | N/A                            |
| 3. <del>SR 76 / Olive Hill Road/Camino Del Rey</del> | -                                       | -              | -              | -              | -              | <b>Cumulative Impact</b><br>• <u>+1NBT</u><br>• <u>+1SBT &amp; +1SBL</u><br>• <u>+1EBR</u><br>• <u>+1WBR</u><br>• <u>Split to protected phase</u>  | N/A                           | N/A                            |
| 6. Old Highway 395 / SR-76                           | -                                       | -              | -              | -              | -              | <b>Cumulative Impact</b><br>• <u>Conversion of NB L T R shared lane to NBT &amp; +1NBL &amp; +1NBR</u><br>• <u>Conversion of SB L T R shared lane to SB T R shared lane &amp; +2SBL</u><br>• <u>Conversion of EBTR shared lane to EBT &amp; +1EBR</u><br><u>Split to protected phase</u> <u>Caltrans Facility – Significant and Unavoidable Impact</u>   | N/A                           | N/A                            |
| 7. Pankey Road / SR-76                               | -                                       | -              | -              | -              | -              | <b>Cumulative Impact</b><br>• <u>Signalization</u><br>• <u>Conversion of NB L T R shared lane to NBT &amp; +2NBL &amp; +1NBR</u><br>• <u>Conversion of SB L T R shared lane to SBT &amp; +1SBL &amp; +2SBR (RTOL)</u><br>• <u>+1EBL; conversion of EB T R shared lane to EBT &amp; +1EBR</u><br><u>Conversion of WB T R shared lane to WBT &amp; +1WBR</u> <u>Caltrans Facility – Significant and Unavoidable Impact</u> | N/A                           | N/A                            |
| 8. Old Highway 395 / E. Dulin Road                   | -                                       | -              | -              | -              | -              | <b>Cumulative Impact</b><br>• <u>Signalization</u>   | N/A                           | N/A                            |

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TABLE 10.5  
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

| Location   | E+P<br>(Phase A) | E+P (Phases B)  | E+P (Phases C)   | E+P (Phases D)   | E+P (Buildout)   | Existing + Cumulative Projects +<br>Project  | Horizon + Project (w/ Road 3)                          | Horizon + Project (w/o Road 3)                         |
|--|------------------|---|--|--|--|--|--|--|
| 9. Old Highway 395 / W. Lilac Road                 | -                | -   | Direct Impact<br>• <del>-Signalization</del><br>• +1WBL  | -  | -  | Cumulative Impact – also Direct Impact under E+P (Phase C)<br>• <del>TIF Payments</del><br>• <del>Project Improvements for Signalization</del><br>• <del>+1EBL &amp; +1WBL</del><br>• <del>Protected phase</del> | N/A  | N/A  |
| 10. I-15 SB Ramps / Old Highway 395                | -                | -   | -  | -  | -  | Cumulative Impact<br>• <del>Signalization</del><br>• <del>+1SBRTIF Payments</del>  | N/A  | N/A  |
| 11. I-15 NB Ramps / Old Highway 395                | -                | -   | -  | -  | -  | Cumulative Impact<br>• <del>Signalization</del><br>• <del>+1NBLTIF Payments</del>  | N/A  | N/A  |
| 13. Old Highway 395 / Circle R Drive               | -                | -   | -  | Direct Impact<br>• Signalization   | -  | Cumulative Impact<br>• Signalization   | N/A  | N/A  |
| 14. I-15 SB Ramps / Gopher Canyon Road             | -                | Direct Impact<br>• Signalization – Caltrans’ facility, significant and unavoidable impact | <del>-Direct Impact</del><br>• <del>Signalization – Caltrans’ facility, significant and unavoidable impact</del> | <del>-Direct Impact</del><br>• <del>Signalization – Caltrans’ facility, significant and unavoidable impact</del> | <del>-Direct Impact</del><br>• <del>Signalization – Caltrans’ facility, significant and unavoidable impact</del> | Cumulative Impact<br>• <del>Signalization</del><br>• <del>+1EBT</del><br>• <del>+1SBRTIF Payments</del>  | N/A  | N/A  |
| 15. I-15 NB Ramps / Gopher Canyon Road             | -                | Direct Impact<br>• Signalization – Caltrans’ facility, significant and unavoidable impact | <del>-Direct Impact</del><br>• <del>Signalization – Caltrans’ facility, significant and unavoidable impact</del> | <del>-Direct Impact</del><br>• <del>Signalization – Caltrans’ facility, significant and unavoidable impact</del> | <del>-Direct Impact</del><br>• <del>Signalization – Caltrans’ facility, significant and unavoidable impact</del> | Cumulative Impact<br>• <del>Signalization</del><br>• <del>+1NBLTIF Payments</del>  | N/A  | N/A  |
| 24. Miller Road / Valley Center Road               | -                | -   | -  | -  | -  | Cumulative Impact<br>Signalization   | N/A  | N/A  |
| Freeway Segment                                    |                  |   |  |  |  |  |  |  |
| I-15, Riverside County Boundary to Old Highway 395 | -                | -   | -  | -  | -  | Cumulative Impact<br>No feasible mitigation  | Cumulative Impact<br><del>No feasible mitigation</del> | Cumulative Impact<br><del>No feasible mitigation</del> |
| I-15, Old Highway 395 to SR-76                     | -                | -   | -  | -  | -  | Cumulative Impact<br>No feasible mitigation  | Cumulative Impact<br><del>No feasible mitigation</del> | Cumulative Impact<br><del>No feasible mitigation</del> |
| I-15, SR-76 to Old Highway 395                     | -                | -   | -  | -  | -  | Cumulative Impact<br>No feasible mitigation  | Cumulative Impact<br><del>No feasible mitigation</del> | Cumulative Impact<br><del>No feasible mitigation</del> |
| I-15, Old Highway 395 to Gopher Canyon Rd          | -                | -   | -  | -  | -  | Cumulative Impact<br>No feasible mitigation  | Cumulative Impact<br><del>No feasible mitigation</del> | Cumulative Impact<br><del>No feasible mitigation</del> |

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TABLE 10.5  
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

| Location                                  | E+P<br>(Phase A) | E+P (Phases B) | E+P (Phases C) | E+P (Phases D) | E+P (Buildout) | Existing + Cumulative Projects +<br>Project | Horizon + Project (w/ Road 3)               | Horizon + Project (w/o Road 3)              |
|---|------------------|----------------|----------------|----------------|----------------|---|---|---|
| I-15, Gopher Canyon Rd to Deer Springs Rd | -                | -              | -              | -              | -              | Cumulative Impact<br>No feasible mitigation | Cumulative Impact<br>No feasible mitigation | Cumulative Impact<br>No feasible mitigation |
| I-15, Deer Springs Rd to Centre City Pkwy | -                | -              | -              | -              | -              | Cumulative Impact<br>No feasible mitigation | Cumulative Impact<br>No feasible mitigation | Cumulative Impact<br>No feasible mitigation |
| I-15, Centre City Pkwy to El Norte Pkwy   | -                | -              | -              | -              | -              | Cumulative Impact<br>No feasible mitigation | Cumulative Impact<br>No feasible mitigation | Cumulative Impact<br>No feasible mitigation |
| I-15, El Norte Pkwy to SR-78              | -                | -              | -              | -              | -              | Cumulative Impact<br>No feasible mitigation | Cumulative Impact<br>No feasible mitigation | Cumulative Impact<br>No feasible mitigation |

Source: Chen Ryan Associates; May 2013Notes: May2014

Notes:  
E = Existing  
P = Project  
N/A = Not Analyzed  
Changes in this table are associated with "Change 1" - "Change 4" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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## 11.0 Construction Traffic

This chapter identifies potential traffic impacts associated with the Lilac Hills Ranch project construction traffic.

### 11.1 Construction Related Traffic Generation

Project construction is expected to be phased over up to 20 years. It is assumed that the worst case scenario occurs during the last project phase (Phase E) after which previous phases (will be occupied. Therefore, Phase D plus construction traffic is assumed as the worst case scenario.

All earthwork associated with the construction of this project will be balanced on-site; therefore, no import or export of soil is anticipated. The construction traffic analyzed here mainly focuses on construction material transport activities and trips generated by construction workers. Neither construction material transport activities nor construction workers will generate traffic during the peak commute hours (both AM and PM) since all deliveries and pick-ups are planned to occur during off-peak hours, while construction workers are scheduled to arrive before 7 a.m. and leave by 3:30 p.m.. Therefore, no intersection peak hour analysis is necessary for assessing potential construction related traffic impacts.

Based upon information provided by RECON Environmental, Inc., approximately 66 daily truck trips and 372 daily construction worker trips will be generated by the last project construction phase. **Table 11.1** displays the assumed construction related vehicle trip generation.

TABLE 11.1  
PROJECT CONSTRUCTION TRIP GENERATION

| Type                | Daily Trips | PCE | Daily Vehicle Trips |
|---------------------|-------------|-----|---------------------|
| Truck               | 66          | 2.5 | 165                 |
| Construction Worker | 372         | 1.0 | 372                 |
| Total               | -           | -   | 537                 |

Source: RECON Environmental, Inc., Chen Ryan Associates: ~~May 2014~~ January 2013

As shown in the table, a total of 537 daily vehicle trips would be generated during the last construction phase.

Additionally, the project is expected to generate 6 truck trips (equivalent to 15 vehicle trips) per day from waste water transport activities between the project site to the Moosa Water Reclamation Facility located along Circle R Drive, just east of Old Highway 395. Note that this waste water transport activity only happens for the first 100 units, after which a temporary line from the project site down to the Moosa facility will be construed via Mountain Ridge Road to Circle R Drive.

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## 11.2 Construction Related Traffic Impacts

As described previously in Section 11.1, the worst case scenario during construction represents “Phase D Plus Construction Traffic”. **Table 11.2** displays the total daily trips generate by the worst case scenario.

TABLE 11.2  
WORST CASE TRIP GENERATION  
DURING CONSTRUCTION

| Scenario                         | Daily Trips |
|----------------------------------|-------------|
| Phase D (displayed in Table 4.7) | 12,936      |
| Construction                     | 537         |
| Total                            | 13,473      |

Source: Chen Ryan Associates: ~~May 2014~~ January 2013

As shown above, the worst case scenario (Phase D Plus Construction) would generate a total of 13,473 daily trips. Project impacts for both Phase D and Phase E (project buildout) were discussed in Chapter 5. It is reasonable to believe that the worst case scenario associated with construction impacts would be less than impacts associated with buildout of the project since Phase E (buildout) would generate a total of 15,151 external daily trips (greater than 13,473 ADT). It can be concluded that no additional (to Phase E) impacts associated with construction related traffic would occur to the study area roadway network.

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## 12.0 No-School Alternative

This chapter provides a discussion of the “No School” alternative and how this alternative would affect the study area network.

### 12.1 No-School Project Trip Generation

It is important to note that no other trip generating land uses will be proposed in place of the school, in other words, the proposed “with school” land uses represents the worst case in terms of project trips generation, as shown in Table 4.98. **Table 12.1** displays the total and external project traffic generated by the “No School” alternative. As shown, a total of 18,334 daily trips including 1,316 AM peak hour trips and 1,730 PM peak hour trips would be generated by project buildout “without school” as opposed to the 19,428~~406~~ daily trips generated by the proposed “with school” scenario.

### 12.2 Students Trip Generation, Distribution, and Assignment

The residential trip generation rates provided in the SANDAG’s *Guide to Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002) already account for all trip purposes including home-work, home-shopping, home-school, etc. However, to address potential concerns of school needs not being met on-site, an AM peak hour intersection analysis was conducted assuming all students from the Lilac Hills Ranch project would travel to Valley Center proper. PM peak hour intersection operation was not analyzed since school dismissals occur prior to the commute peak hour (4 p.m. – 6 p.m.).

The Valley Center-Pauma Unified School District uses 0.5 elementary school students per household and 0.2 high school students per household factors to estimate the number of students generated by future developments. **Table 12.2** displays the total number of students expected to attend school. SANDAG’s *Guide to Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002) was utilized for student trip generation.

As shown in Table 12.2, the Lilac Hills Ranch project would generate 256 high school students and 639 elementary school students resulting in 1,354 average daily trips with 393 trips in the AM peak hour.

The AM peak hour trips generated by students needing to attend school outside of the project site were distributed to Valley Center proper along W. Lilac Road, Lilac Road and Valley Center Road. This should represent the worst case scenario for evaluating potential student traffic impacts on the transportation network in Valley Center. These trips were added to the Existing Plus Project Buildout (Phase E) with “No School” scenario. **Figure 12.1** displays both the route to school and the AM peak hour intersection volumes.

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**TABLE 12.1  
LILAC HILLS RANCH INTERNAL AND EXTERNAL PROJECT TRIPS  
NO SCHOOL ALTERNATIVE**

| Land Use                   | Quantity  | Total Trips |                           |                           |            | Internal Trips |                        |                         |            | External Trips |                           |                           |
|----------------------------|-----------|-------------|---------------------------|---------------------------|------------|----------------|------------------------|-------------------------|------------|----------------|---------------------------|---------------------------|
|                            |           | Daily       | AM Peak Hour              | PM Peak Hour              | % Internal | Daily          | AM Peak Hour           | PM Peak Hour            | % External | Daily          | AM Peak Hour              | PM Peak Hour              |
| Single Family              | 903 DU    | 9,030       | 722<br>(217-in / 506-out) | 903<br>(632-in / 271-out) | 10%        | 903            | 72<br>(22-in / 51-out) | 90<br>(63-in / 27-out)  | 90%        | 8,127          | 650<br>(195-in / 455-out) | 813<br>(569-in / 244-out) |
| Multi-Family               | 375 DU    | 2,250       | 180<br>(36-in / 144-out)  | 203<br>(142-in / 61-out)  | 10%        | 225            | 18<br>(4-in / 14-out)  | 20<br>(14-in / 6-out)   | 90%        | 2,025          | 162<br>(32-in / 130-out)  | 182<br>(128-in / 55-out)  |
| Senior Community           | 468 DU    | 1,872       | 94<br>(37-in / 56-out)    | 131<br>(79-in / 52-out)   | 10%        | 187            | 9<br>(4-in / 6-out)    | 13<br>(8-in / 5-out)    | 90%        | 1,685          | 84<br>(34-in / 51-out)    | 118<br>(71-in / 47-out)   |
| Assisted Living            | 200 bed   | 500         | 20<br>(12-in / 8-out)     | 40<br>(20-in / 20-out)    | 10%        | 50             | 2<br>(1-in / 1-out)    | 4<br>(2-in / 2-out)     | 90%        | 450            | 18<br>(11-in / 7-out)     | 36<br>(18-in / 18-out)    |
| Specialty/Strip Commercial | 61.5 KSF  | 2,460       | 74<br>(44-in / 30-out)    | 221<br>(111-in / 111-out) | 50%        | 1,230          | 37<br>(22-in / 15-out) | 111<br>(55-in / 55-out) | 50%        | 1,230          | 37<br>(22-in / 15-out)    | 111<br>(55-in / 55-out)   |
| Office                     | 28.5 KSF  | 399         | 60<br>(54-in / 6-out)     | 60<br>(12-in / 48-out)    | 10%        | 40             | 6<br>(5-in / 1-out)    | 6<br>(1-in / 5-out)     | 90%        | 359            | 54<br>(48-in / 5-out)     | 54<br>(11-in / 43-out)    |
| Country Inn / B&B          | 50 room   | 450         | 36<br>(14-in / 22-out)    | 41<br>(24-in / 16-out)    | 10%        | 45             | 4<br>(1-in / 2-out)    | 4<br>(2-in / 2-out)     | 90%        | 405            | 32<br>(13-in / 19-out)    | 36<br>(22-in / 15-out)    |
| Church                     | 10.7 AC   | 321         | 16<br>(10-in / 6-out)     | 26<br>(13-in / 13-out)    | 50%        | 161            | 8<br>(5-in / 3-out)    | 13<br>(6-in / 6-out)    | 50%        | 161            | 8<br>(5-in / 3-out)       | 13<br>(6-in / 6-out)      |
| Elementary School (K-5)    | 0 student | 0           | 0<br>(0-in / 0-out)       | 0<br>(0-in / 0-out)       | 80%        | 0              | 0<br>(0-in / 0-out)    | 0<br>(0-in / 0-out)     | 20%        | 0              | 0<br>(0-in / 0-out)       | 0<br>(0-in / 0-out)       |
| Middle School (6-8)        | 0 student | 0           | 0<br>(0-in / 0-out)       | 0<br>(0-in / 0-out)       | 80%        | 0              | 0<br>(0-in / 0-out)    | 0<br>(0-in / 0-out)     | 20%        | 0              | 0<br>(0-in / 0-out)       | 0<br>(0-in / 0-out)       |
| Recreation Center          | 40.0 KSF  | 915         | 108<br>(57-in / 51-out)   | 95<br>(38-in / 57-out)    | 50%        | 458            | 54<br>(29-in / 25-out) | 48<br>(19-in / 29-out)  | 50%        | 458            | 54<br>(29-in / 25-out)    | 48<br>(19-in / 29-out)    |

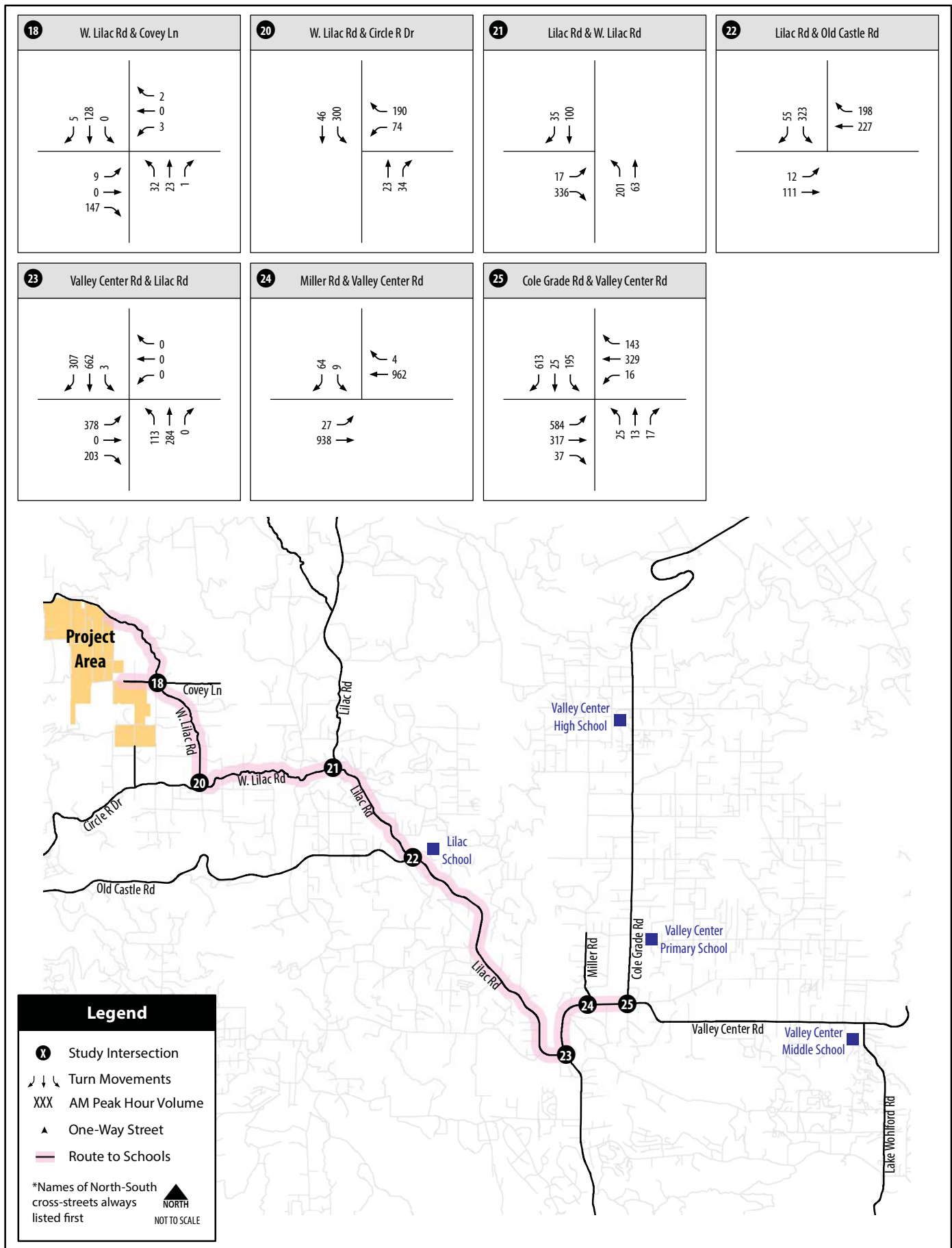
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**TABLE 12.1  
LILAC HILLS RANCH INTERNAL AND EXTERNAL PROJECT TRIPS  
NO SCHOOL ALTERNATIVE**

| Land Use                     | Quantity | Total Trips   |                                     |                                      |            | Internal Trips |                                  |                                   |            | External Trips |                                     |                                     |
|------------------------------|----------|---------------|-------------------------------------|--------------------------------------|------------|----------------|----------------------------------|-----------------------------------|------------|----------------|-------------------------------------|-------------------------------------|
|                              |          | Daily         | AM Peak Hour                        | PM Peak Hour                         | % Internal | Daily          | AM Peak Hour                     | PM Peak Hour                      | % External | Daily          | AM Peak Hour                        | PM Peak Hour                        |
| Neighborhood/<br>County Park | 23.8 AC  | 119           | 5<br>(2-in / 2-out)                 | 10<br>(5-in / 5-out)                 | 80%        | 95             | 4<br>(2-in / 2-out)              | 8<br>(4-in / 4-out)               | 20%        | 24             | 1<br>(0-in / 0-out)                 | 2<br>(1-in / 1-out)                 |
| Water<br>Reclamation         | 2.4 AC   | 14            | 2<br>(1-in / 1-out)                 | 1<br>(1-in / 1-out)                  | 50%        | 7              | 1<br>(0-in / 0-out)              | 1<br>(0-in / 0-out)               | 50%        | 7              | 1<br>(0-in / 0-out)                 | 1<br>(0-in / 0-out)                 |
| Recycling Center             | 0.6 AC   | 4             | 0<br>(0-in / 0-out)                 | 0<br>(0-in / 0-out)                  | 50%        | 2              | 0<br>(0-in / 0-out)              | 0<br>(0-in / 0-out)               | 50%        | 2              | 0<br>(0-in / 0-out)                 | 0<br>(0-in / 0-out)                 |
| <b>Total</b>                 |          | <b>18,334</b> | <b>1,316<br/>(485-in / 831-out)</b> | <b>1,730<br/>(1076-in / 655-out)</b> | <b>19%</b> | <b>3,402</b>   | <b>215<br/>(95-in / 120-out)</b> | <b>317<br/>(176-in / 141-out)</b> | <b>81%</b> | <b>14,932</b>  | <b>1,102<br/>(390-in / 712-out)</b> | <b>1,413<br/>(900-in / 513-out)</b> |

Source: Chen Ryan Associates; ~~January 2013~~ May 2014

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Lilac Hills Ranch Traffic Impact Study

Figure 12-1



**TABLE 12.2  
LILAC HILLS RANCH STUDENT TRIP GENERATION**

| Land Use          | # of Residential Units | Student Generation Factor | # of Students | Trip Rate     | Daily Trips | AM Peak Hour |                           |
|-------------------|------------------------|---------------------------|---------------|---------------|-------------|--------------|---------------------------|
|                   |                        |                           |               |               |             | %            | Trips                     |
| Elementary School | 1,278*                 | .5 / DU                   | 639           | 1.6 / Student | 1,022       | 32%          | 327<br>(196-in / 131-out) |
| High School       |                        | .2 / DU                   | 256           | 1.3 / Student | 332         | 20%          | 66<br>(46-in / 20-out)    |
| Total             |                        |                           | 895           |               | 1,354       |              | 393<br>(243-in / 151-out) |

Source: Valley Center-Pauma Unified School District, SANDAG Trip Generation Manual, Chen Ryan Associates: ~~January 2013~~ May 2014

Note:

1,278 DU = Total of 1,746 DU – 468 Senior DU.

### 12.3 Project Buildout (Phase E) without On-Site School Traffic Impact

**Table 12.3** displays AM peak hour intersection level of service and average vehicle delay results under Existing Plus Project (Phases E) without On-Site School conditions. Level of service calculation worksheets are provided in **Appendix ~~AJAY~~**.

**TABLE 12.3  
AM PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS  
EXISTING PLUS PROJECT BUILDOUT WITHOUT ON-SITE SCHOOL CONDITIONS**

| Intersection                             | Traffic Control | With Project Buildout no On-Site School |                | Existing          |     | Change in Delay (sec.)      | Direct Impact? |
|--|-----------------|---|----------------|-------------------|-----|-----------------------------|----------------|
|  |                 | Avg. Delay (sec.)                       | LOS            | Avg. Delay (sec.) | LOS |                             |                |
| 18. W. Lilac Road / Covey Lane           | TWSC            | <del>11.58</del>                        | B              | 8.8               | B   | <del>2.73</del> 0           | No             |
| 20. W. Lilac Road / Circle R Drive       | OWSC            | <del>23.2</del> <u>25.6</u>             | <del>E</del> D | 9.3               | A   | <del>13.9</del> <u>16.3</u> | No             |
| 21. Lilac Road / W. Lilac Road           | OWSC            | 17.0                                    | C              | 9.6               | A   | 7.4                         | No             |
| 22. Lilac Road / Old Castle Road         | OWSC            | 30.5                                    | D              | 11.8              | B   | 18.7                        | No             |
| 23. Valley Center Rd / Lilac Road        | Signal          | 13.4                                    | B              | 10.5              | B   | 2.9                         | No             |
| 24. Miller Road / Valley Center Road     | OWSC            | 23.1                                    | C              | 16.9              | C   | 6.2                         | No             |
| 25. Cole Grade Road / Valley Center Road | Signal          | 35.6                                    | D              | 31.1              | C   | 4.5                         | No             |

Source: Chen Ryan Associates: ~~January 2013~~ May 2014

Notes:

OWSC = One-Way Stop Controlled.

TWSC = Two-Way Stop Controlled.

For two-way stop controlled intersections, the delay shown is the worst delay experienced by any of the approaches.

Changes in this table are associated with both "Change 1" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

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As shown in table 12.3, all intersections along the route to school (in Valley Center proper) would operate at LOS D or better during the AM peak hour under the Existing Plus Project Buildout (Phase E) without On-Site School scenario. Student traffic would not result in any significant impact to Valley Center intersections along the assumed school route if no schools are being built on-site of the Lilac Hills Ranch project.

## 13.0 Weekend Church Traffic

This chapter identifies and documents potential traffic impacts associated with weekend church traffic since churches generate higher traffic on weekends, particularly Sundays. During days of worship, the northern gate at the senior community entrance (Lilac Hills Ranch Road/Covey Lane) will be opened to provide internal circulation and access for residents living on the north side of Covey Lane. Mountain Ridge Road, a private road with a 2,500 ADT design capacity, provides primary and direct access for churchgoers from outside of the Lilac Hills Ranch development. Given the nature of non-peak hour services of most churches, this chapter focuses on the weekend roadway (Mountain Ridge Road) daily traffic, rather than intersection peak hour conditions.

It is very important to note that unlike churches, most other land uses generate less traffic on the weekend when compared to weekdays. For example, according to the *ITE Trip Generation Manual 9<sup>th</sup> Edition* Land Use Code 251, a senior detached unit generates approximately 63% of all trips on Sunday when compared to weekdays (2.32 vs. 3.68). The Lilac Hills Ranch gated senior community has 468 senior units and will primarily take access from Mountain Ridge Road.

**Table 13.1** displays the estimated weekend daily traffic along Mountain Ridge Road when the proposed church is in service.

TABLE 13.1  
MOUNTAIN RIDGE ROAD WEEKEND ADT  
WITH CHURCH SERVICES

| Mountain Ridge Road                                      | Daily Traffic    | Source or Calculation  |
|--|------------------|--|
| Existing Weekend   | 130              | Data collected by NDS on 9/15 and 9/16/2012, included in <b>Appendix AKAZ</b> .  |
| <u>Modified</u> Weekday Project Buildout Trip Assignment | <u>2,060,840</u> | Figure 4-14A   |
| Additional Weekend Church Traffic                        | 480              | <ul style="list-style-type: none"> <li>quadruple church trip generation rate on Sunday @ 120/acre (30/acre weekday -&gt; <math>10.7 \times 120 = 1,284</math> ADT)</li> <li>subtract church trips already included in trip assignment -&gt; <math>1,284 - 321 = 963</math> ADT</li> <li>assume 50% churchgoers live in Lilac Hills Ranch development -&gt; 481 ADT</li> </ul>  |
| Lower Weekend Trip Generation by Senior Housing          | <u>-620,250</u>  | <ul style="list-style-type: none"> <li>senior community weekday trip generation rate -&gt; 4/du</li> <li>Sunday trip generation derived from SANDAG rate -&gt; <math>4 \times 63\% = 2.52</math>/du</li> <li><u>468</u> senior detached units in <u>SFS-5 and SFS-6</u> of Lilac Hills Ranch</li> <li>Sunday traffic generated by senior units -&gt; <math>468 \times 2.52 = 1,180.471</math> ADT</li> <li>weekday traffic generated by senior units -&gt; <math>468 \times 4 = 1,872</math> ADT</li> <li>approximately 90% of the senior units would utilize Mountain Ridge Road</li> </ul> |
| Total Weekend  | <u>2,050,120</u> | Sum of above.  |

Source: NDS, SANDAG Trip Generation Manual, Chen Ryan Associates; January 2013 May 2014

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Note:

Changes in this table are associated with both "Change 1" and "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

As shown, Mountain Ridge Road is estimated to carry a maximum of ~~2,050~~1,200 ADT on the weekend, within the 2,500 ADT design capacity for this road. Therefore, the Lilac Hills Ranch church weekend trips would not have a significant impact on Mountain Ridge Road.

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## 14.0 North County Specific Residential Trip Generation and Effects

LOS Engineering has conducted trip generation surveys (included in **Appendix A-LAAA**) for both single family and multi-family uses in North County, specifically in the communities of Valley Center, Bonsall, and Fallbrook. Based upon our review of the LOS Engineering's analysis, it appeared that the surveyed North County specific residential trip generation rates represent a more recent and relevant trip generation to the proposed project location and surrounding environments when compared to the current SANDAG trip generation rates for the following reasons:

- Outdated (residential has five data points from 1994 and one from 1998 while multifamily has four data points from 1980, two from 1981, and two from 1998);
- Single family rates based on data collected south of SR-56 with one data point from Oceanside; and
- Multi-family rates based on data collected south of SR-56 with one data point from Carlsbad (as shown in Figure 2).

### 14.1 Trip Generation Comparison

**Table 14.1** displays both the SANDAG and the North County specific residential trip generation rates.

TABLE 14.1  
RESIDENTIAL TRIP GENERATION RATE COMPARISONS

| Land Use                       | Rate Source | Daily Rate | AM Peak Hour |                  | PM Peak Hour |                  |
|--------------------------------|-------------|------------|--------------|------------------|--------------|------------------|
|                                |             |            | %            | (In : Out) Ratio | %            | (In : Out) Ratio |
| Single Family                  | SANDAG      | 10 / DU    | 8%           | (3 : 7)          | 10%          | (7 : 3)          |
|                                | NC Specific | 6.9 / DU   | 9.4%         | (2.5 : 7.5)      | 8.7%         | (6.3 : 3.7)      |
| Multi-Family<br>(> 20 DU / AC) | SANDAG      | 6 / DU     | 8%           | (2 : 8)          | 9%           | (7 : 3)          |
|                                | NC Specific | 4.8 / DU   | 7.9%         | (3.4 : 6.6)      | 9.1%         | (6.2 : 3.8)      |

Source: SANDAG Trip Generation Manual, LOS Engineering: ~~January 2013~~ May 2014

As shown, the surveyed North County specific residential trip generation rates are generally lower than the SANDAG trip generation rates by 20-30%. When ~~apply~~ these rates are applied to the proposed project land uses, a total of 12,226 external daily trips would be generated by project buildout, including 1,014 AM peak hour trips and 1,073 PM peak hour trips.

External project trip generation based on the SANDAG rates were discussed in Chapter 4 of this report and utilized as the basis for all impact analyses in order to provide the worst case scenario, as well as to be consistent with the common practice in our region. As reported in Table 4.9, the proposed project would generate 15,151 external daily trips with 1,171 in the AM peak hour and 1,433 in the PM peak hour.

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## 14.2 Effects of the North County Specific Rates

To better understand how the surveyed North County specific residential trip generation rates would affect the study area traffic operations, analyses were conducted for the various facility types (roadway, intersection, two-lane highway, and freeway) using identical methodology as described in Chapter 2.

**Table 14.2** summarizes and compares the potential project direct and cumulative impacts, as well as General Plan inconsistencies (Horizon Year) for project traffic generated based on both the North County specific residential trip generation rates and the SANDAG rates.

As shown in the table, project traffic generated with the North County specific residential rates would not result in project impacts at the following locations when compared to project traffic generated with the SANDAG rates:

### Existing Plus Project (Phase C)

- E. Vista Way, between Gopher Canyon Road and Osborne Street

### Existing Plus Project (Phase E, Buildout)

- E. Vista Way, between SR-76 and Gopher Canyon Road

### Horizon Year Base Plus Project with Road 3

- I-15, between Centre City Parkway and El Norte Parkway
- I-15, between El Norte Parkway and SR-78

### Horizon Year Base Plus Project without Road 3

- Valley Center Road, between Miller Rd and Indian Creek Rd
- I-15, between Centre City Parkway and El Norte Parkway
- I-15, between El Norte Parkway and SR-78

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TABLE 14.2  
SIGNIFICANT IMPACT COMPARISONS  
NORTH COUNTY SPECIFIC RATES VS. SANDAG RATES

| Impacted Facility  | E+P (Ph A) |     | E+P (Ph B) |     | E+P (Ph C) |     | E+P (Ph D) |     | E+P (Ph E, Buildout) |     | E+C+P |     | H+P (w/ Rd 3) |     | H+P (w/o Rd 3) |     |
|--|------------|-----|------------|-----|------------|-----|------------|-----|----------------------|-----|-------|-----|---------------|-----|----------------|-----|
|  | NC         | SAN | NC         | SAN | NC         | SAN | NC         | SAN | NC                   | SAN | NC    | SAN | NC            | SAN | NC             | SAN |
| <b>Roadway</b>   |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Camino Del Rey, Old River Rd to W. Lilac Rd                                    |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| W. Lilac Rd, Old Highway 395 to Main St  |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| W. Lilac Rd, Main St to St "F"   |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| W. Lilac Rd, St "F" to Covey Ln  |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Old Highway 395, E. Dulin Rd to W. Lilac Rd                                    |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Old Highway 395, <del>E. Dulin Rd to W. Lilac Rd</del> <u>to I-15 SB Ramps</u> |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Gopher Canyon Rd, E. Vista Wy to I-15 SB Ramps                                 |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| E. Vista Wy, SR-76 to Gopher Canyon Rd   |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| E. Vista Wy, Gopher Canyon Rd to Osborne St                                    |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Pankey Rd, Pala Mesa Dr to SR-76   |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Lilac Rd, Old Castle Rd to Anthony Rd  |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Lilac Rd, New Road 19 (east of Betsworth Rd) to Valley Center Rd               |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| <del>Valley Center Rd, Miller Rd to Indian Creek Rd</del>                      |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| <b>Intersection</b>  |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| E. Vista Way / Gopher Canyon Road  |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |

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**TABLE 14.2**  
**SIGNIFICANT IMPACT COMPARISONS**  
**NORTH COUNTY SPECIFIC RATES VS. SANDAG RATES**

| Impacted Facility                               | E+P (Ph A) |     | E+P (Ph B) |     | E+P (Ph C) |     | E+P (Ph D) |     | E+P (Ph E, Buildout) |     | E+C+P |     | H+P (w/ Rd 3) |     | H+P (w/o Rd 3) |     |
|---|------------|-----|------------|-----|------------|-----|------------|-----|----------------------|-----|-------|-----|---------------|-----|----------------|-----|
|   | NC         | SAN | NC         | SAN | NC         | SAN | NC         | SAN | NC                   | SAN | NC    | SAN | NC            | SAN | NC             | SAN |
| SR-76 / Old River Road/E. Vista Way             |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| SR-76 / Olive Hill Road/Camino Del Rey          |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Old Highway 395 / SR-76                         |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Pankey Road / SR-76                             |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Old Highway 395 / E. Dulin Road                 |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Old Highway 395 / W. Lilac Road                 |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| I-15 SB Ramps / Old Highway 395                 |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| I-15 NB Ramps / Old Highway 395                 |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Old Highway 395 / Circle R Drive                |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| I-15 SB Ramps / Gopher Canyon Road              |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| I-15 NB Ramps / Gopher Canyon Road              |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| Miller Road / Valley Center Road                |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| <b>Freeway</b>                                  |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| I-15, Riverside Co. Boundary to Old Highway 395 |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| I-15, Old Highway 395 to SR-76                  |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| I-15, SR-76 to Old Highway 395                  |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |
| I-15, Old Highway 395 to Gopher Canyon Rd       |            |     |            |     |            |     |            |     |                      |     |       |     |               |     |                |     |

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**TABLE 14.2**  
**SIGNIFICANT IMPACT COMPARISONS**  
**NORTH COUNTY SPECIFIC RATES VS. SANDAG RATES**

| Impacted Facility                         | E+P (Ph A) |     | E+P (Ph B) |     | E+P (Ph C) |     | E+P (Ph D) |     | E+P (Ph E, Buildout) |     | E+C+P |     | H+P (w/ Rd 3) |     | H+P (w/o Rd 3) |     |
|---|------------|-----|------------|-----|------------|-----|------------|-----|----------------------|-----|-------|-----|---------------|-----|----------------|-----|
|   | NC         | SAN | NC         | SAN | NC         | SAN | NC         | SAN | NC                   | SAN | NC    | SAN | NC            | SAN | NC             | SAN |
| I-15, Gopher Canyon Rd to Deer Springs Rd |            |     |            |     |            |     |            |     |                      |     | ●     | ●   | ●             | ●   | ●              | ●   |
| I-15, Deer Springs Rd to Centre City Pkwy |            |     |            |     |            |     |            |     |                      |     | ●     | ●   | ●             | ●   | ●              | ●   |
| I-15, Centre City Pkwy to El Norte Pkwy   |            |     |            |     |            |     |            |     |                      |     | ●     | ●   |               | ●   |                | ●   |
| I-15, El Norte Pkwy to SR-78              |            |     |            |     |            |     |            |     |                      |     | ●     | ●   |               | ●   |                | ●   |

Source: Chen Ryan Associates; ~~May 2013~~ May 2014

Notes:

E = Existing

P = Project

Ph = Phase

C = Cumulative Projects

H = Horizon Year

NC = North County Specific

SAN = SANDAG

N/A = Not Analyzed

Changes in this table are associated with both "Change 1" and "Change 2" as described in the "Summary of Major Changes to the TIS" section of the "Executive Summary".

● Impacted under North County Specific Rates.

● Impacted under SANDAG Rates.

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## **15.0      Transportation Demand Management Program**

To reduce the number of vehicle trips generated by the proposed development, the project applicant proposes implementation of all or some of Transportation Demand Management (TDM) measures listed below in order to reduce vehicle trips in favor of alternative modes of transportation. The TDM program will facilitate increased opportunities for transit, bicycling, and pedestrian travel, as well as providing the resources, means and incentives for ridesharing and carpooling opportunities. The following measures may be included in the TDM:

1. As shown in Figure 8-1, the project has developed a comprehensive trails network that was designed to provide safe bicycle and pedestrian access between the various project phases, land uses, parks/open spaces, schools and the Town Center area. The trails network will also provide connections to the various recreational trails and multi-modal facilities accessing the project site.
2. Provide bicycle racks along main travel corridors, adjacent to commercial developments, and at public parks and open spaces within the project site.
3. Provide bicycle racks at the office, multi-family and live/work buildings within the project site.
4. Coordinate a ride share or shuttle system that connects the various phases of the project to the Town Center area, as well as to external transit facilities and resources.
5. To help encourage carpooling, the project will include or identify a Park-n-Ride lot that will be available to its residents and employees.
6. Coordinate with SANDAG's iComute program for Carpool, Vanpool, and rideshare programs that are specific to the Lilac Hills development.
7. Promote available websites providing transportation options for residents and businesses.
8. Create and distribute a "new resident" information packet addressing alternative modes of transportation.
9. Coordinate with NCTD/MTS and SANDAG as to the future sighting of transit stops/stations within the project site.
10. Provide interim connections between Lilac Hills Ranch and the planned regional transit system, until such transit system is extended to the community. This will reduce vehicle trips and vehicle miles traveled (VMT) and could reduce the incidence of obesity, heart disease and hypertension by encouraging daily physical activity. The interim private transit services would be provided at complete buildout of the community and would terminate when a public transit linkage is proposed by the local transit district.
  - a) Service would be provided on demand rather than a service that is operated whether or not someone wants to travel at that time.

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- b) Subsidize rides on commercially available services such as taxis and/or shuttle vans.
  - c) Pick-ups and drop-offs would be at a central location in the development.
  - d) The HOA would set up accounts with the providers allowing residents to call a dispatcher to request service and obtain the discounted rate. The same or similar service could be called to return the rider to Lilac Hills Ranch.

Additional Options - The subsidized private or group shuttle trips could be supplemented by any of the options below to provide alternative ways to make connections to the regional transit system or to local destinations not served by that system:

- 1) Provide subsidized transit passes to encourage use of public or private transit. The subsidized private or group shuttle rides would increase the convenience of the regional public transportation system and therefore encourage a higher level of utilization.
- 2) Provide coordination/support of a Car Sharing system for those who want/need the improved convenience of driving to encourage Lilac Hills Ranch residents to drive themselves and other residents to their employment destination or a regional transit center.
- 4)3) Provide coordination/support for ride sharing or shuttle services with volunteer drivers such as the ones sponsored by the Independent Transportation Network once 75% of the community is occupied. ITN chapters around the country use volunteer drivers to provide rides to seniors. There is no reason that a general public version of this volunteer service could not operate successfully. The service could be coordinated/supported by the Homeowners' Association or by the local Transportation Management Organization.

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