Letter I51d

July 22, 2014

To: Mark Slovick, Project Manager
County of San Diego Planning and Development Services
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Subject: Revised DEIR Public Comments Regarding the DEIR Chapter 2.3 Traffic with regard to the Proposed Accretive Lilac Hills Ranch General Plan Amendment and Specific Plan PDS2012-3800-12-001(GPA), PDS2012-3810-12-001 (SP).

Dear Mr. Slovick:

Subject: DEIR Public Comment to the Proposed Accretive Lilac Hills Ranch General Plan Amendment and Specific Plan PDS2012-3800-12-001(GPA), PDS2012-3810-12-001 (SP), DEIR Chapter 2.3 Traffic; Traffic Impact Study of the proposed Lilac Hills Ranch (LHR) Project

The DEIR Chapter 2.3 text reads as if it is an advocacy document for the Applicant. There are many general statements that are unsupported by facts and indicate to the Public that the County has not performed adequate independent critical review of Traffic and Traffic related Safety Issues. I51d-1

General Comments

Overview
Traffic - Chapter 2.3 of the DEIR and the Traffic Impact Study have failed to disclose significant impacts and have failed to mitigate previously identified impacts. I51d-2

This project requires in excess of 30 acts of taking of Private Land to construct off-site road improvements. The County has not provided adequate disclosure of these Impacts. I51d-3

Additionally, the County has identified significant cumulative impacts and has claimed that mitigation is infeasible. For nine impacts, CALTRANS does not agree with the County's Infeasibility assessment. We request the County to provide comprehensive and complete justification for the County's "Infeasibility" assessment as is enumerated below. I51d-4

Project Baseline

The County has not presented a Project for review. The County has presented a listing of incomplete Alternatives that cannot be reasonably assessed for Environmental Impact and Mitigations. I51d-5

The County of San Diego's Baseline condition for the Traffic Study should be in full compliance with the General Plan, all applicable Road Standards, and in consonance with current Agreements with other Governmental Agencies. I51d-6

I51d-1 The comment expresses the opinions of the commentator only. The comment will be included as part of the record and made available to the decision makers prior to a final decision on the proposed project. However, because the comment does not raise an environmental issue, no further response is required.

I51d-2 The comment is an introduction comments that follow and addresses general subject areas, which received extensive analysis in the FEIR. The comment does not raise any specific issue regarding that analysis and, therefore, no more specific response can be provided or is required. FEIR Table 2.3-23 and Table 2.3-24, as well as Table 10.5 of the Lilac Hills Ranch Traffic Impact Study (June 3, 2014) [FEIR Appendix E] (TIS) disclose all applicable significant traffic related impacts, as identified per the County of San Diego - Guidelines for Determining Significance and Report Format and Content Requirements - Transportation and Traffic; June 20, 2012. The comment will be included as part of the record and made available to the decision makers prior to a decision on the proposed project.

I51d-3 The comment is an introduction to specific comments that follow. Please see the responses to comments I51d-8 and I51d-9 below.

I51d-4 The comment is an introduction to specific comments that follow. Please see the response to comment I51d-12 below.

I51d-5 The comment addresses general subject areas that received extensive analysis in the FEIR. The comment does not raise any specific issue regarding that analysis and, therefore, no more specific response can be provided or is required. The comment will be included as part of the record and made available to the decision makers prior to a final decision on the project. However, the FEIR addresses the potential impacts of the proposed project, as described in FEIR Chapter 1.0, Project Description, Location and Environmental Setting. Analysis of alternatives to the proposed project is provided in FEIR Chapter 4.0, Project Alternatives.

I51d-6 The baseline condition utilized in the TIS to assess project impacts was the existing, on the ground conditions, consistent with County and CEQA requirements. Please see TIS Section 5.0, Existing Plus Project Conditions, and Section 6.0, Cumulative Traffic Conditions.

The Traffic Impact study should be baselined as follows:

- In compliance with the General Plan
- No Exceptions to Road Design Standards
- Without an additional on-site School, which is the current agreement with the Bonsall and Valley Center/Pauma School Districts.

I51d-6 (cont.)

The County has used the as the baseline the Applicant's Specific Plan proposal (requiring 10 exceptions to Road Standards), with incremental partial compliance with laws and regulations analyzed as **Alternatives**. The Alternatives lack depth, linkage and integration with the Project's Impacts. The Alternatives do not fully capture even most of the possible cumulative impacts of the likely permutations of Phase implementation.

I51d-7

Specific Comments

1). The need to take land for Off-Site Improvements The Project needs in excess of 30 acts of Eminent Domain to construct the Project's proposed road improvements to the Reduced Standards that the Project requires. Further taking of private land is necessary to build the Project in compliance with County of San Diego Road Standards.

I51d-8

The County needs to disclose the following information so that impacts are identified and required Mitigation can be implemented.

Please provide evidence that there is adequate Project rights for construction of these improvements, including temporary encroachment permissions for construction that enable continued use of the road by Residents during construction.

A). Required Disclosure of Relevant Information regarding legal rights for construction of Off Site Improvements as well as how the Applicant intends to gain legal rights

In the DEIR, the County has not provided adequate disclosure regarding off-site impacts of the Project and its Alternatives to surrounding property owners.

This information is necessary to demonstrate Project Feasibility that the Project can ever be legally built.

For the Project and each of its Alternatives, provide the following information regarding off-site improvements for which Accretive Investments currently holds less than full legal right of way. For each impacted parcel, indicate what the Applicant has done to attempt to secure legal rights. Disclose how the Applicant or the County intends to secure the necessary legal rights for these parcels:

Parcel Number	Property Owner	sq ft. Right of Way required	sq.ft.Slope Easement	Total sq. ft. Encroachment

I51d-9a

i) West Lilac Road

Scenario 1 – Construction of West Lilac Road from Old Hwy 395 to proposed new Road 3b to 2.2 C Road Standards as is the General Plan Baseline. No information on offsite improvements has been provided by the County for the full route of this Alternative, which is the present

I51d-9b

I51d-7 The comment is a continuation of Comment No. I51d-6 and is incorrect. As noted in response to comment I51d-6, project impacts were assessed against existing conditions.

I51d-8 The project does not propose reduced standards as the comment states, but rather the project proposes modifications to design standards as allowed under the County's adopted Public Road Standards. To the extent additional property is required to implement the County's standards, such property will be acquired consistent with applicable law.

I51d-9a The FEIR adequately analyzes the potential environmental impacts associated with construction of the off-site physical improvements as required under CEQA. With respect to related property rights, please see the Global Response: Off-Site Improvements – Environmental and Easement Analysis Summary Table, which describes the respective off-site improvements, corresponding environmental analysis, status of easement rights, and affected properties. Please also see Global Responses: Easements (Mountain Ridge Road and Covey Lane) and Off-site Improvements - Environmental Analysis and Easement Summary Table, for additional information responsive to this comment.

I51d-9b Proposed improvements to West Lilac Road are discussed in their entirety in Chapter 1.0 of the FEIR. Specifically, the project proposes improvements to West Lilac Road from Old Highway 395 to Road 3. Details of the proposed roads are included in the table referenced above.

Impacts associated with these improvements have been considered throughout the FEIR, primarily under off-site improvements, and included in the cumulative impacts section of each subject as well. A figurative illustration of the improvements is included on Table 2.5-2a of the FEIR. Please also see response to comment I51d-9a above and related reference materials for additional information responsive to this comment.

General Plan Mobility Element baseline.

Scenario 2 a – As per "Right of Way Analysis W. Lilac Rd Alt 1 2.2C/2.2F dated Oct 31, 2013 **with additional land necessary to incorporate Reid Middleton Roundabout design modification recommendations identified.** The Oct 31, 2013 study found that 22 parcels were impacted for a total of 4.3 acres. The Study did not quantify the additional parcels impacted by Roundabout redesigns recommended by Reid Middleton. Please include a current and accurate disclosure of the parcels as impacted by Roundabout redesign. I51d-9c

Scenario 2 b – As per "Right of Way Analysis W. Lilac Rd Alt 1 2.2 C dated Oct 31, 2013 **with additional land necessary to incorporate Reid Middleton Roundabout design modification recommendations identified.** The Oct 31, 2013 study found that 22 parcels were impacted for a total of 5.6 acres. The Study did not quantify the additional parcels impacted by Roundabout redesigns recommended by Reid Middleton. Please include a current and accurate disclosure of the parcels as impacted by Roundabout redesign. I51d-9d

Scenario 3 – Impact of improvement from non-compliant 2.2F to 2.2E configuration to improve horizontal curves and provide bicycle lanes in each direction and 8 foot shoulders for West Lilac Road from Easterly boundary of Subdivision (existing Lilac Walk private road/West Lilac Road intersection) to Covey Lane. This scenario is discussed further in section 2).Direct Impacts to West Lilac Road section of this letter. I51d-9e

ii). Covey Lane/West Lilac Intersection

Scenario 1 – Impact of construction to Applicant's proposed design **including Sight Distance Clearance and turn tapers. Please carefully analyze the need for Additional Slope Easements beyond those granted in IOD's. How is the Project going to construct the improvements without further encroachment beyond easement boundaries? How is the road going to remain in service during construction for existing residents?** I51d-9f

iii). Mountain Ridge Private Road including Mountain Ridge/Circle R Intersection

Scenario 1 – Impact of improvement to Applicant's proposed design **including Sight Distance Clearance and turn tapers. . How is the Project going to construct the improvements without further encroachment beyond easement boundaries? How is the road going to remain in service during construction for existing residents?**

Scenario 2 – Impact of improvement of Mountain Ridge Private Road to 30 Mph Private Road Design Speed Standards **including Sight Distance Clearance and turn tapers. . How is the Project going to construct the improvements without further encroachment beyond easement boundaries? How is the road going to remain in service during construction for existing residents?**

Scenario 3 – Impact of construction of Mountain Ridge Private Road to Public Road Design Standards **including Sight Distance Clearance and turn tapers. . How is the Project going to construct the improvements without further encroachment beyond easement boundaries? How is the road going to remain in service during construction for existing residents?** I51d-9g

I51d-9c The commenter accurately represents that a redesign of the roundabouts resulted from the Reid Middleton Roundabout Study. This is the design reflected in the project's current description. All impacts from the redesigned roundabouts will be located within the footprints of the originally designed roundabouts. The roundabouts do impact off-site areas; however, these are within existing IODs with both slope and drainage rights. No new impacts have occurred based on the roundabout redesign. Please also see response to comment I51d-9a above and related reference materials for additional information responsive to this comment.

I51d-9d The commenter is referencing a second alignment study associated with the Reid Middleton Roundabout Study. This design was not selected to be included in the project and is not relevant for inclusion in the project's CEQA analysis. See response to comment I51d-9c. Please also see response to comment I51d-9a above and related reference materials for additional information responsive to this comment.

I51d-9e Please see response to comment I51d-9d, above.

I51d-9f Please see Global Responses: Easements (Mountain Ridge Road and Covey Lane) and Off-site Improvements - Environmental Analysis and Easement Summary Table, for additional information responsive to this comment.

I51d-9g Mountain Ridge Road is currently a two-lane private road that provides limited access from the project site to the County's public road system via Circle R Drive. Mountain Ridge Road is not improved to its designated road design standard. As described in Chapter 1.0 of the FEIR and shown in Table 1-2, the project proposes to design Mountain Ridge Road as a wider roadway with a 30 mph design speed. As proposed, the project would reduce vertical curves along the roadway. Additionally, the project proposes to remove the taper requirement at the intersection of Circle R Drive in order to provide a smoother and less impactive transition onto this road. As shown on FEIR Table 2.5-2 and illustrated in Figure 2.5-2b, no off-site impacts would occur to existing biology as a result of the road design, Additionally, no sight distance issue exists as the County recently cleared vegetation at this location.

iv). Rodriguez private road. Please further enumerate the all improvements proposed for Rodriguez Road as represented in Master Preliminary Grading Plan TM 5571 RPL 4 Sheet 7 of 12. Provide the legal basis of rights to construct the improvements to Rodriguez Road. Provide a copy for Public Review of document 2013-0021800 Rec. 1-11-2013. . **How is the Project going to construct the improvements without further encroachment beyond easement boundaries? How is the road going to remain in service during construction for existing residents?**

I51d-9h

2). Cumulative Significant Impact Mitigation summarily dismissed as "Infeasible" when in fact Mitigation is Feasible.

The County has identified the following Cumulative Significant Impacts and Mitigation:

TABLE 2.3-24
CUMULATIVE TRAFFIC IMPACTS AND MITIGATION SUMMARY

Impact	Mitigation
Impact TR-10: W. Lilac Road, Old Highway 395 and Main Street	**M-TR-4** and **M-TR-6** (see above)
Impact TR-11: Camino Del Rey, Old River Road and West Lilac Road	**M-TR-8:** Prior to issuance of any building permit for new structures within the Lilac Hills Ranch Specific Plan, the applicant, or its designee, shall pay all applicable fees to the TIF Program, which the County should be updates to include the changes to the Land Use and Mobility Elements proposed by the project.
Impact TR-12: Gopher Canyon Road, E. Vista Way to Little Gopher Canyon Road	While improvement of this segment to a 4.1B classification would mitigate the project impact, such mitigation is infeasible.
Impact TR-13: Gopher Canyon Road, Little Gopher Canyon Road to I-15 SB Ramps	**M-TR-8** (see above)
Impact TR-14: E. Vista Way between SR-76 and Gopher Canyon Road	**M-TR-8** (see above)
Impact TR-15: E. Vista Way between Gopher Canyon Road and Osborne Street	**M-TR-8** (see above)
Impact TR-16: Pankey Road between Pala Mesa Drive and SR-76	While improvement of this segment to a 4.2B classification would mitigate the project impact, such mitigation is infeasible.
Impact TR-17: Lilac Road between Old Castle Road and Anthony Road	**M-TR-9**: Prior to issuance of any building permit for new structures within the Lilac Hills Ranch Specific Plan, the applicant or its designee shall construct intermittent turn lanes at all major access locations along Lilac Road from Old Castle Road to Anthony Road, including the segment between Robles Lane and Cumbres Road, and the intersection of Sierra Rojo Road and Lilac Road.

I51d-10

2.3-68

I51d-9g (cont)

With respect to the widening of Mountain Ridge Road to Public Road standards, all impacts are discussed in subchapter 4.9 of the FEIR. Additional biological resources affected by the road widening are identified and mitigation is proposed (See subchapter 4.9.2.5). Please also see response to comment I51d-9a above and related reference materials for additional information responsive to this comment.

I51d-9h Rodriquez Road is an existing 40-foot-wide private easement road that would require surface improvements necessary to accommodate the secondary emergency access requirement for the Phases 4 and 5. Specifically, Rodriguez Road would be improved from its current state to a 28 foot graded/ 24 foot paved roadway. The improvements needed by the project have been previously approved under the Sukup TM. Please also see response to comment I51d-9a above and related reference materials for additional information responsive to this comment.

I51d-10 The comment is an introduction to comments that follow. No further response is required.

TABLE 2.3-24
CUMULATIVE TRAFFIC IMPACTS AND MITIGATION SUMMARY
(continued)

Impact	Mitigation
Impact TR-18: Cole Grade Road, between Fruitvale Road and Valley Center Road	M-TR-8 (see above)
Impact TR-19: E. Vista Way/Gopher Canyon Road	M-TR-8 (see above)
Impact TR-20: SR-76/Old Highway 395 (Caltrans)	While intersection improvements would reduce these project impacts to below a level of significance, such mitigation is infeasible because these intersections are under Caltrans jurisdiction.-
Impact TR-21: SR-76/Pankey Road (Caltrans)	
Impact TR-22: Old Highway 395/E. Dulin Road	M-TR-10: Prior to issuance of any building permit for new structures within the Lilac Hills Ranch Specific Plan, the applicant or its designee shall construct a traffic signal at the Old Highway 395/East Dulin Road intersection.
Impact TR-23: Old Highway 395/West Lilac Road	M-TR-8 (see above)
Impact TR-24: I-15 SB Ramps/Old Highway 395 (Caltrans)	M-TR-8 (see above)
Impact TR-25: I-15 SB Ramps/Old Highway 395 (Caltrans)	M-TR-8 (see above)
Impact TR-26: Old Highway 395/Circle R Drive	M-TR-5 (see above)
Impact TR-27: I-15 SB Ramps/Gopher Canyon Road (Caltrans)	M-TR-8 (see above)
Impact TR-28: I-15 NB Ramps/Gopher Canyon Road (Caltrans)	M-TR-8 (see above)
Impact TR-29: Miller Road/Valley Center Road	M-TR-11: Prior to issuance of any building permit for new structures within the Lilac Hills Ranch Specific Plan, the applicant or its designee shall construct a traffic signal at the Miller Road/Valley Center Road intersection.
Impact TR-30: I-15 between Riverside County Boundary and Old Highway 395	While there are plans to widen I-15 between Riverside County and SR-78 that would mitigate cumulative I-15 impacts, there is no secured funding for the improvement and there is no mechanism in place to provide contributions to the improvement. Ultimately, mitigation is infeasible because the I-15 is under Caltrans jurisdiction.
Impact TR-31: I-15 between Old Highway 395 and SR-76	
Impact TR-32: I-15 between SR-76 and Old Highway 395	
Impact TR-33: I-15 between Old Highway 395 and Gopher Canyon Road	
Impact TR-34: I-15 between Gopher Canyon Road and Deer Springs Road	
Impact TR-35: I-15 between Deer Springs Road and Centre City Parkway	
Impact TR-36: I-15 between Centre City Parkway and El Norte Parkway	
Impact TR-37: I-15 between El Norte Parkway and SR-78	

I51d-10 (cont.)

The County has stated that two impacts to County Jurisdiction Roads, TR-12 and TR-16 are infeasible to mitigate. Please discuss at length the County's rationale on why it is not possible for the Applicant to contribute to mitigation of these two impacts. Include complete citation reference to all applicable County, SANDAG, and State (if applicable) regulations and Public Laws that support the County's "Infeasibility" statement. If a Fair Share Payment is proposed as mitigation, provide the calculation methodology and result and cite references to procedure and Public Law the Fair Share methodology is enumerated in.

I51d-11

The County has stated that impacts, TR-2, 3, 4, 20, 21, 24, 25, 27, and 28 are infeasible to mitigate, because the Intersection is under CALTRANS jurisdiction.

I51d-12

I51d-11 The comment questions the FEIR determination that significant cumulative impacts to two roads within the jurisdiction of the County (TR-12 and TR-16) are infeasible to mitigate. The referenced cumulative impacts are to Gopher Canyon Road between E. Vista Way and Little Gopher Canyon Road (TR-12), and Pankey Road between Pala Mesa Drive and SR-76 (TR-16). (FEIR, p. 2.3-39.) Both the FEIR and TIS explain the basis for the infeasibility determination. (FEIR, pp. 2.3-70 to 2.3-71; TIS Section 6.4.)

As explained in the FEIR, the improvements necessary to mitigate the identified significant cumulative impacts are to construct the segment of Gopher Canyon Road to Mobility Element 4.1B classification, and the segment of Pankey Road to Mobility Element 4.2B classification. In each case, while the project would add a small amount of traffic (3.5% and 5.2%, respectively), it would be necessary for the project to fund the full cost of the necessary improvements because these improvements are not currently included in the County's traffic impact fee (TIF) program. Based on the County of San Diego Transportation Impact Fee Program (TIF) Update Facility Cost Analysis (AECOM, August 2012), the cost of improving the 1.2-mile segment of Gopher Canyon road would be $8.5 million (equivalent to $7,097,000/mile for a roadway consistent with the requirements of a 4.1B classified roadway). The cost of improving the 0.7-mile segment of Pankey Road segment would be $5.0 million (equivalent to $7,165,000/ mile for a roadway consistent with the requirements of a 4.2B classified roadway). (see also, County of San Diego General Plan, Mobility Element Tables M-1a, M-1b and M-2). As such, the cost of the improvement is disproportionate to (i.e., not roughly proportional to) the identified impact and, therefore, conditioning the project to construct the improvements is not feasible under CEQA. There are no other feasible improvements to mitigate the identified cumulative impacts because the projected daily traffic volume along each segment would far exceed the threshold for a 2-lane roadway, thereby requiring widening to 4 lanes; thus, as disclosed in FEIR subchapter 2.2, the impact would remain significant and unavoidable.

In Attachment 2 - June 24, 2014 letter, CALTRANS completely disagrees with the County's "Infeasibility" mitigation position taken for the above impacts. I51d-12 (cont.)

The County is required to mitigate these impacts. Please propose **specific** mitigation measures. If a Fair Share Payment is proposed as mitigation, provide the calculation methodology and result and cite references to procedure and Public Law the Fair Share methodology is enumerated in. I51d-13

For the I-15 Freeway Segment Impacts TR- 30 through 37, other forms of mitigation are feasible other than I-15 lane widening. Please provide effective mitigation for this Impact of the Project. I51d-14

3). Impacts have not been identified in this DEIR. Required improvements to West Lilac Public road are based on unrealistically low estimated Project Traffic loads, without consideration of the Safety Hazards in the 'as built' configuration of the road. I51d-15 I51d-16

The General Plan Mobility Element plans an upgrade to 2.2C with added turn lanes from the intersection of Proposed Road 3 westerly to Old Highway 395. We do agree with the County that there is likelihood that Road 3 may not be built. I51d-17

We strongly believe that fairly evaluated traffic loads generated by this Project and existing substandard 'as built' configurations of the road require West Lilac Road to be improved from the Project's eastern boundary from Lilac Walk private road to Circle R Drive. I51d-18

Existing limited visibility curves and no shoulders do not safely transport Vehicle, Bicycle and Pedestrian traffic from this Urban Project. There is the potential requirement for turn lanes to service intersecting private roads. This is a direct impact of this Project. I51d-19

We concur with the Applicant that Road 3 segment from Lilac Road to West Lilac is unlikely to be built.

That said, the Applicant's proposed Project will place such an increased load on this section of road that it needs to be upgraded to accommodate the increased load safely.

Additionally, the Applicant has projected below normal vehicle traffic because their "Project design encourages alternate transportation such as bicycles and walking." I51d-20

How can people safely ride bikes or walk on this section of road in its existing condition with limited visibility due to curves, zero bike lanes and next to zero shoulder?? I51d-21

How can the many residential driveways and private roads safely intersect with West Lilac without significant safety hazards and incidents?? I51d-22

This segment of West Lilac Road **requires** improvement from the Project's Western entry to Circle R Drive with reduced horizontal curves, Class II bike lanes, and 8 foot shoulders as a minimum. The County should also carefully evaluate private road and driveway intersections to determine whether turn lanes are necessary. Whether this is a conforming 2.2F or 2.2E road doesn't matter, it just needs to be of adequate capacity and of a safe design. I51d-23

Required Action - List the Assessor Parcel Numbers and number of existing residential driveways and private roads that intersect directly with West Lilac Road from Old Highway 395 I51d-24

I51d-12 The comment refers to significant intersection impacts that the comment contends the FEIR determined were infeasible to mitigate as the intersections are outside the County's jurisdiction and within the jurisdiction of Caltrans. (FEIR, pp. 2.3-60, 2.3-68 to 2.3-69.) Preliminarily, the comment incorrectly refers to impact TR-2, which is not a Caltrans facility and, in any event, would be mitigated to less than significant. (FEIR, pp. 2.3-60, 2.3-67.)

As to impacts TR-3 and TR-4 [I-15 SB and NB Ramps/Gopher Canyon Road], the FEIR includes mitigation requiring that the applicant either install traffic signals at the intersection, or provide funding for the signalization. (FEIR, subchapter 2.3.) However, because the improvements are not under the County's jurisdiction, there was no assurance the improvements could be implemented and, therefore, impacts were considered significant and unavoidable. (FEIR, pp. 2.3-54, 2.3-62 and 2.3-63.) Since circulation of the FEIR for public review, Caltrans has submitted a letter informing the County that it is not opposed to the installation of traffic signals at the I-15 Gopher Canyon Road intersection. (Letter, Armstrong to Slovick, September 4, 2014.) As such, the project applicant will work with Caltrans to obtain the necessary encroachment permit in order to install the recommended traffic signals. (See County Responses to Letter A2, Caltrans dated June 24, 2014.)

As to impacts TR-20 [SR-76/Old Highway 395] and TR-21 [SR-76/Pankey Road], County staff coordinated with Caltrans and Caltrans confirmed that it has no project, funding, or program to make the necessary improvements to which the applicant can pay a fair-share contribution. (FEIR, pp. 2.3-73 and 2.3-58.) Therefore, because the necessary improvements are outside the County's jurisdiction and there is no plan or program in place to assure construction of the necessary improvements, mitigation is infeasible and the impacts are significant and unavoidable. See discussion below regarding impacts to I-15.

I51d-12 (cont.)

As to impacts TR-24 [I-15 SB Ramps/Old Hwy 395], TR-25 [I-15 NB Ramps/Old Hwy 395], TR-27 [I-15 SB Ramps/Gopher Canyon Road], and TR-28 [I-15 NB Ramps/Gopher Canyon Road], each of the identified intersections is included within the County's transportation impact fee (TIF) program. (FEIR, p. 2.3-72; TIS p. 281.) The TIF program includes the improvements to these roadways required to provide adequate circulation through buildout of the County's General Plan. (FEIR, p. 2.3-72.) Mitigation measure M-TR-8 requires that the applicant pay all applicable TIF fees prior to issuance of any building permit. (FEIR, p. 2.3-56.) With payment of the TIF fees, impacts would be reduced to less than significant. (FEIR, p. 2.3-72.)

Lastly, the comment refers to the June 24, 2014 comment letter submitted by Caltrans regarding the significant and unavoidable cumulative impacts to Interstate-15, and states that the County is required to mitigate these impacts. As explained in the responses to the Caltrans comments, the FEIR determined that the proposed project, in combination with other cumulative traffic, would result in significant cumulative impacts on I-15 from SR-78 north to the Riverside County boundary. (FEIR, pp. 2.3-41 to 2.3-42; TIS, pp. 267-272, 356-357.) To mitigate the identified impacts it would be necessary to add additional I-15 travel lanes to provide increased capacity. However, there are no plans with a corresponding funding program in place to provide the additional lanes within the timeframe necessary to mitigate the identified impacts. Under CEQA, in circumstances as these in which the necessary improvements are outside of the jurisdiction and control of the lead agency (i.e., County), and the party with jurisdiction and control (i.e., Caltrans) has no plan or program in place to fund and construct the necessary improvements within the necessary timeframe, mitigation is infeasible and the impact is deemed significant and unavoidable. (FEIR, p. 2.3-59; TIS, p. 284.) Please see Global Response: Significant and Unavoidable Impacts to I-15, for additional information responsive to the comment

As discussed in Global Response: Significant and Unavoidable Impacts to I-15, in order to mitigate the identified impacts to below a level of significance and achieve acceptable level of service (LOS) D or better, freeway mainline capacity would need to be increased by

I51d-12 (cont.)

widening the freeway from the current 4 lanes in each direction to 5 or more lanes in each direction. Nonetheless, in an effort to reduce project vehicle trips, as part of the project an interim private on-demand transit service would be established to facilitate resident access to I-15 transit services until the necessary transit linkage is available. (Lilac Hills Ranch Specific Plan (June 2014) (Specific Plan), Section III, Development Standards and Regulations, pp. III-11 to III-12; see also FEIR, Table 1-3, Additional Project Considerations, p. 1-54.) In addition, the project includes a requirement that a Transportation Demand Management program be implemented to foster alternative modes of transportation. (Specific Plan, pp. III-11 to III-12; FEIR Table 1-3, Additional Project Design Considerations, p. 1-54.) Please see Global Response: Significant and Unavoidable Impacts to I-15, for additional information regarding these project features and other information responsive to the comment.

I51d-13 Please see response to comment I51d-12 above.

I51d-14 Please see response to comment I51d-12 above and Global Response: Significant and Unavoidable Impacts to I-15.

I51d-15 and 151d-16

FEIR Table 2.3-23 & Table 2.3-24, as well as Table 10.5 of the Revised TIS, disclose all applicable significant traffic related impacts, as identified per the County of San Diego - Guidelines for Determining Significance and Report Format and Content Requirements - Transportation and Traffic; June 20, 2012. As documented in both the RDEIR and the Revised TIS, the project trip generation was determined using SANDAG's Guide to Vehicular Traffic Generation Rates for the San Diego Region (SANDAG, April 2002) and the distribution of the external project trips was determined 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, in combination with identified project access control (i.e. gates) within the project site . The "Select Zone" assignments are included in Appendix K of the Revised TIS.

I51d-15 and 151d-16 (cont.)

The methodology outlined above is the regionally accepted industry standard for determining project trips along on the transportation network. Thus the number of project trips along W. Lilac Road, which was determined using standard regional practice, is reasonable.

The current substandard conditions of select local roadways within the project study area, including W. Lilac Road, were taken into consideration. As a result, the roadway capacity of these substandard roadway segments was reduced 10% to provide a conservative analysis of the project impact under existing conditions. Please see page 41 of the Revised TIS for more detail. Since W. Lilac Road between Old Highway 395 and Circle R Drive is a 4 miles long roadway with different roadway characteristics, please see response to individual roadway segments below:

W. Lilac Road between Old Highway 395 and Circle R Drive: The project proposes to construct this roadway segment to its General Plan classification of 2.2C, this mitigation measure would improve the currently facility conditions, as well as provide turn lanes, thus improving the safety condition of this roadway segment.

W. Lilac Road, between Main Street and Street “F”: The project is forecast to increase the ADT on this section of W. Lilac Road from the current 1,150 ADT to 2,960 ADT. While this is a significant percentage increase, an ADT of 2,960 is only about 3 cars per minute during peak periods, and this amount would not significantly contribute to any safety issues along the roadway.

W. Lilac Road between Street “F” and Covey Lane: The project is forecasted to increase the ADT on this section of W. Lilac Road from the current 1,150 ADT to 1,810 ADT. An ADT of 1,810 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.

W. Lilac Road between Covey Lane and Circle R Drive: The project is forecast to increase the ADT on this section of W. Lilac Road from the current 480 ADT to 2,470 ADT. While this is a significant percentage increase, an ADT of 2,470 ADT is only about 3 cars per minute during peak periods, and this amount would not significantly contribute to any safety issues along the roadway.

	I51d-17 The comment is noted. No further response is required. I51d-18 As noted in the responses to comments number 15 through 17 above, the project trip distribution and trip assignment were determined using the Series 12 Year 2050 SANDAG Transportation Model for all studied scenarios. Thus, the project trips were loaded correctly onto W. Lilac Road between Old Highway 395 and Circle R Drive. As shown in TIS Figure 4-3 through Figure 4-9, the majority of project trips is projected to load onto W. Lilac Road between Old Highway 395 and Main Street. It should be noted that the project proposes to improve W. Lilac Road between Old Highway 395 and Main Street to the General Plan Mobility Element classification of 2.2C; please see TIS page 162 for more detail. This improvement likely would encourage project trips to use Lilac Hills Ranch Road/Main Street to travel to W. Lilac Road (between Old Highway 395 and Main Street) instead of using the segment of W. Lilac Road between Main Street and Circle R Drive. However, in order to provide a conservative analysis of W. Lilac Road (between Main Street and Circle R Drive), a small portion of the project trips were assigned to this segment; please see TIS Chapter 4 for additional information. I51d-19 Preliminarily, please see response to comment I51d-15 and I51d-16 above regarding traffic loads on West Lilac Road, the subject of the comment. Additionally, specific to safe bicycle and pedestrian travel, the project includes an extensive and thoroughly integrated, 16 plus mile Trail Network, including community pedestrian and bike paths, linking together the major project components, including the Town Center and Neighborhood Centers, Neighborhoods, the K-8 school, and the 13.5 acre central park. The trails include a staging area in the Town Center, and three trail connections at the north and south ends of the project to trails defined in the County Trails Master Plan (CTMP). See FEIR, Figure 1-4a (Lotting Study) and Figure 1-8 (Trails Plan) showing the integration of the project as a whole with the Trail Network. As to West Lilac Road, the Project proposes to dedicate and install the designated CTMP segment along the entire length of the south side of West Lilac Road; this public trail would be built as a

	I51d-19 (cont) Type D pathway. (FEIR, p. 2.3-37.) The trails would be designed to County standards as set forth in the Specific Plan to ensure the safety of pedestrians and bicyclists. (TIS, p. 297.) The project is not expected to generate a large amount of off-site bicycle and pedestrian travel. The TIS took into account the presence of horizontal curves and narrow shoulders by lowering the capacity of substandard road segments within the study area, including West Lilac Road. (TIS Section 3.3, pp. 37-42.) As shown in TIS Table 5.34, W. Lilac Road between Street "F" (eastern project boundary) and Circle R Drive is projected to operate at acceptable LOS A under project buildout conditions. Additionally, the project would add minimal traffic to private roads near the project site and, therefore, turn lanes are not warranted. I51d-20 The comment is noted with respect to the Road 3 segment. With respect to traffic loads on West Lilac Road, as noted in the response to comment I51d-19 above, W. Lilac Road between Street “F” (eastern project boundary) and Circle R Drive was analyzed with a reduced capacity due to horizontal curves and narrow shoulders. As shown in TIS Table 5.34, W. Lilac Road between Street “F” and Circle R Drive is projected to operate at acceptable LOS A under project buildout conditions. Thus, the project would not result in a significant impact to this roadway segment; therefore, no additional mitigation measures are necessary. I51d-21 It is not expected that this portion of the road will be travelled by bikes and pedestrians. As noted in the response to comment I51d-19, the project includes an extensive and thoroughly integrated, 16 plus mile Trail Network, including community pedestrian and bike paths, linking together the major project components, including the Town Center and Neighborhood Centers, Neighborhoods, the K-8 school, and the 13.5 acre central park. The trails include a staging area in the Town Center, and three trail connections at the north and south ends of the project to trails defined in the County Trails Master Plan (CTMP). See FEIR, Figure 1-4a (Lotting Study) and Figure 1-8 (Trails Plan) showing the integration of the project as a whole with the Trail Network. The trails would be designed to County standards as set forth in the Specific Plan to ensure the safety of pedestrians and bicyclists. (TIS, p. 297.)

	I51d-21 (cont.) Given the proposed internal facilities intended to accommodate pedetrians and bikers, there will be little demand to use this portion of the roadway for that purpose. I51d-22 Please see the response to comments I51d-15 and I51d-16, above. I51d-23 As shown in TIS Table 5.34, W. Lilac Road between Main Street (project's Western entry) and Circle R Drive, is projected to operate at acceptable LOS A under project buildout conditions. Thus, the project would not cause an impact to this roadway segment. Therefore, no additional mitigation measures would be necessary. Please see response to comment number I51d-15 and I51d-16 for additional information responsive to this comment. I51d-24 The proposed project would improve W. Lilac Road between Old Highway 395 and Main Street to the General Plan Mobility Element classification of 2.2C; please see TIS page 162 for additional information. This improvement likely would result in project trips utilizing Lilac Hills Ranch Road/Main Street to travel to W. Lilac Road (between Old Highway 395 and Main Street) instead of using the substandard segment of W. Lilac Road between Main Street and Circle R Drive. Additionally, as addressed in the TIS, the addition of project traffic to W. Lilac Road between Main Street and Circle R Drive (including the portion listed by the commenter as between Lilac Walk private road and Circle R Drive) would not result in a significant impact. Additionally, the assumption of 100 bicycle trips per day and 50 pedestrian trips per day on the shoulders of West Lilac Road is not supported by evidence. In light of the information presented here, a "safety review" is not warranted. I51d-25 The project trip distribution and assignment (i.e., project traffic loads) was derived using a SANDAG Series 12 Select Zone Assignment; use of the SANDAG model is accepted practice throughout San Diego County. As shown on Figure 4-7 of the project TIS (Project Trip Distribution – Phase E, Buildout), the project is anticipated to contribute a maximum of 7.8 percent of its total daily traffic (or 1,180 ADT) to Circle R Drive between Old Highway 395 and W. Lilac Road. See SANDAG Series 12 Select Zone Assignment, which is provided in Appendix K of the TIS.

to Circle R Drive. Perform a Safety Review that assumes that there will be 100 bicycle trips/day and 50 pedestrian trips/day on the shoulders of this road. Discuss safety hazards associated with weekly trash collection pick up on West Lilac and daily School Bus pick up/drop off. Propose Road redesign to safely mitigate all hazards. Disclose all off site improvements required. I51d-24 (cont.)

4). Impacts have not been identified in this DEIR. Required improvements to Circle R Drive Public road are based on unrealistically low estimated Project Traffic loads, without consideration of the Safety Hazards in the 'as built' configuration of the road. I51d-25

We strongly believe that fairly evaluated traffic loads generated by this Project and existing substandard 'as built' configurations of the road require Circle R Drive to be improved from West Lilac Road to Old Highway 395. I51d-26

Existing limited visibility curves and zero shoulders do not safely transport Bicycle and Pedestrian traffic from this Urban Project. There is the potential requirement for turn lanes to service intersecting private roads. This is a direct impact of this Project. I51d-27

This segment of Circle R Drive requires improvement reduced horizontal and vertical curves, sight lines, Class II bike lanes, and 8 foot shoulders as a minimum. The County should also carefully evaluation private road and driveway intersections to determine whether turn lanes are necessary. Whether this is a conforming 2.2F or 2.2E road doesn't matter, it just needs to be of adequate capacity and of a safe design. I51d-28

Required Action - List the Assessor Parcel Numbers and number of existing residential driveways and private roads that intersect directly with Circle R Drive from West Lilac Road to Old Highway 395. Perform a Safety Review that assumes that there will be 100 bicycle trips/day and 50 pedestrian trips/day on the shoulders of this road. Discuss safety hazards associated with weekly trash collection pick up on Circle R Drive and daily School Bus pick up/drop off. Propose Road redesign to safely mitigate all hazards. I51d-29

5) Safety of Intersection Design – Covey Lane/Rodriguez Private Road and West Lilac Road

The intersection is not designed to County standards (not within 10 degrees of perpendicular), no right hand turn taper for eastbound Covey travel is provided, and the sight distance is inadequate. County Standard intersection spacing requirements are not met by the County's proposed intersection design. I51d-30

Additionally, a Two Way Stop control is inadequate at this intersection for the Project's traffic volumes. At this intersection, Rodriguez Road shares in a nonstandard 5 way intersection and there is a proposed 15X increase in vehicle, bicycle and pedestrian traffic for the Project. I51d-31

Staff has explained that Rodriguez Road is an existing roadway and is not proposed as access for the project and would only be used for emergencies. Even if Rodriguez Road is only used for Emergencies and an injury accident attributable to intersection design occurs, **does the County really NOT want to review this intersection for hazards??** Please have County Counsel refer to *West v County of San Diego 37-2008-00058195-CU-PO-NC*. I51d-32

Required Action – Based upon fair and unbiased Traffic projections which include Project vehicle, bicycle and pedestrian traffic, perform a Safety evaluation of the design of this intersection. If there are any improvements required, provide a plan that indicates construction I51d-33

I51d-25 (cont.)

As documented on Page 50 of the TIS, project access to Circle R Drive via Mountain Ridge Road will be gated (code access only) with only the senior community and assisted living facilities south of Covey Lane having access to the gate. Please refer to Figure 7-1 of the TIS for the proposed locations of the gates.

Phase 5 of the project, which is projected to generate a maximum of 1,594 ADT (please refer to Figure 4-2D of the TIS for Phase 5 geographical location) will be the only area within the project that will directly access Mountain Ridge Road (which provides a direct connection to Circle R Drive). As shown in Appendix L of the TIS, 65% of Phase 5 of the project will access Circle R Drive via Mountain Ridge Road, resulting in 1,036 trips from Phase 5 traveling directly to Circle R Drive. The remaining 144 trips (which when added to 1,036 = 1,180 as stated above) are traffic from Phases 1-4 of the project that choose to use Circle R Drive via Covey Lane and W. Lilac Road (south of Covey Lane) to access the regional network.

I51d-26 Please see response to comment I51d-25 above in regards to the project trip distribution and assignment to Circle R Drive. As shown in Table 10.1 of the TIS (page 315 of the TIS), Circle R Drive would operate at level of service (LOS) D) or better under all scenarios, which does not exceed County LOS standards. Since Circle R Drive is projected to operate at acceptable LOS under all scenarios, the proposed project would not have a significant impact on Circle R Drive and, thus, the project is not required to improve this road.

Additionally, the project is proposing to signalize the intersection of Old Highway 395/Circle R Drive, which will improve both the safety and operations at this intersection and the adjoining roadway segments.

I51d-27 Preliminarily, please see responses to comments I51d-25 and I51d-26 above regarding traffic loads on Circle R Drive, the subject of the comment. Additionally, specific to safe bicycle and pedestrian travel, as noted in prior responses, the project includes an extensive and thoroughly integrated, 16 plus mile Trail Network, including community pedestrian and bike paths, linking together the major project components, including the Town Center and Neighborhood Centers, Neighborhoods, the K-8 school, and the 13.5 acre central

I51d-27 (cont.)

park. The trails include a staging area in the Town Center, and three trail connections at the north and south ends of the project to trails defined in the County Trails Master Plan (CTMP). See FEIR, Figure 1-4a (Lotting Study) and Figure 1-8 (Trails Plan) showing the integration of the project as a whole with the Trail Network. The trails would be designed to County standards as set forth in the Specific Plan to ensure the safety of pedestrians and bicyclists. (TIS, p. 297.)

The TIS took into account the presence of horizontal curves and narrow shoulders in reducing the capacity of roads within the study area, including Circle R Drive. (TIS, pp. 37-42.) The project would add minimal traffic to private roads near the project site and, therefore, turn lanes are not warranted.

I51d-28 As shown in TIS Table 3.1, Circle R Drive, as well as other existing substandard built roadways, were conservatively analyzed assuming a reduced roadway capacity threshold under Existing Conditions (Circle R Drive was analyzed with a reduced LOS D threshold of 9,800 ADT as compared to 10,900 ADT, which is standard for a 2.2E roadway).

At a worst case scenario, Circle R Drive is projected to carry 8,050 ADT under the Horizon Year Base Plus Project conditions (with Road 3). This is within the County 2.2E roadway LOS D capacity threshold (10,900 ADT) and the assumed reduced Existing Conditions LOS D capacity threshold (9,800 ADT). Thus, Circle R Drive would be able to accommodate the anticipated future demand. Additionally, the project adds minimal traffic to private roads near the project site and therefore turn lanes are not warranted.

I51d-29 The assumption of 100 bicycle trips per day and 50 pedestrian trips per day on the shoulders of Circle R Drive is not supported by evidence. Additionally, as identified in the FEIR and TIS, the addition of project traffic to Circle R Drive would not result in a significant traffic impact requiring road improvements. Therefore, the “safety review” is not warranted.

	I51d-30 The intersection is designed to County standards as shown on the Tentative Map. A right-turn taper for eastbound Covey Lane travel is not required for private road. The sight distance is an existing condition that we are proposing to correct with clear space easement. This is not a "proposed" intersection; it is existing and these conditions, while deficient, are existing. I51d-31 The two-way stop control analysis for the intersection of W. Lilac Road/Covey Lane was conducted based on the methodologies contained in the Highway Capacity Manual 2010 (HCM 2010), which is standard practice for the County of San Diego, as well as the national standard for all traffic engineering. The analysis results were calculated using SYNCHRO 8 traffic analysis software, which is the standard analysis software used throughout the industry. Details regarding the analysis methodology are provided in Chapter 2 of the TIS. As shown in TIS Table 6.3, the intersection of W. Lilac Road/Covey Lane is projected to operate at acceptable Level of Service B under the Existing Plus Cumulative Projects Plus Project condition. LOS B is an acceptable condition based on County standards and, therefore, two way stop control is sufficient. Additionally, based on the projected volume under Horizon Year Base Plus Project Conditions without Road 3, the intersection of W. Lilac Road / Covey Lane would not meet meet the traffic threshold for needing a signal. Please see Attachment A for the signal warrant. I51d-32 The comment references the sight distance at the intersection of Covey and West Lilac, which also intersects with Rodriguez Road. As discussed in Chapter 1.0 of the FEIR, per the County sight distance requirements, the minimum corner intersection sight distance is 480 feet for a prevailing speed of 48 miles per hour, and 400 feet for a prevailing speed of 40 miles per hour. The existing maximum line of sight at the intersection of Covey Lane and West Lilac Road is 330 feet. A line-of-sight distance of 480 feet would be achieved by grading and clearing on property APN 129-190-44. This area is comprised of ornamental trees and a number of coast live oaks. The bank would be lowered and a number of trees removed. Please refer to subchapter 2.5 for a discussion of biological impacts. Standard County conditions of approval for a Tentative Map require all street intersections to conform to the intersectional sight distance

details, including details of off-site improvements required. Process (yet another) Exception Request if necessary.

I51d-33 (cont.)

6) Safety of Intersection Design – Covey Lane (proposed to be Public) and existing Covey Lane Private Road

The proposed intersection of the two roadways is not designed to Standard. No exception request has been processed.

Required Action – Analyze the intersection and either propose construction to standard or prepare (yet another) Exception Request.

I51d-34

7) Safety of Intersection Design – existing Covey Lane Private Road and Lilac Hills Ranch Road (LHRR) (LHRR route across APN's 128-290-78 and 129-010-69)

We requested a review of the limited sight line of this intersection, and to include intersection design details in August, 2013 for compliance with standards.

This information, its related Impacts and Mitigation potential has not been assessed in the EIR.

Information has been provided about a different intersection of Lilac Hills Ranch Road and a new proposed and not yet built Covey Lane Private Road all within the boundaries of the proposed subdivision within the boundaries of current APN 129-010-69. We have no questions about this intersection.

Required actions – Provide off-site grading plan details of Lilac Hills Ranch Road across APN 128-290-78 to 129-010-69. Provide intersection details of the intersection of 'as built' existing Covey Lane private road and Lilac Hills Ranch Road. Analyze the intersection for conformance to design standards and process (yet another) Exception Request if necessary.

I51d-35

8) Safety of Intersection Design – Mountain Ridge Private Road and Circle R Public Road
The Applicant's March 8, 2011 instrumentation of Circle R Drive at Mountain Ridge recorded an 85th percentile speed of 49 Mph Eastbound and a 47 Mph Westbound. This intersection likely needs additional intersection control beyond a Stop Sign on Mountain Ridge at the levels of increased traffic the Project proposes.

Required Action – Perform intersection Traffic Safety analysis and recommend compliant intersection designs in conformance Public Road Design Standards. If this has been done, perform a Critical Review of the analysis and share it with the Public.

I51d-36

9) Estimate of Student Population and its impact on Traffic – The Project has arbitrarily used non-standard estimating factors to project the number of Students, and therefore has understated the Student population and directly related Trip Generation.

The table below recaps how the Applicant has excluded the 468 Senior Dwelling Units from a Student Population Factor.

I51d-37

I51d-32 (cont.) criteria of the Public Road Standards of the Department of Public Works. The project proponent would therefore, request an off-site Clear Space Easement from the property owners. Should an easement not be granted, the County would acquire the sight distance by condemnation through funds provided by the project applicant.

I51d-33 The underlying premise of the comment is incorrect; the traffic projections were determined based on standard methodology utilized throughout San Diego County. The anticipated project trip generation was derived based on the rates and methodologies contained in the SANDAG Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002, which is the standard for estimating project trip generation within the County of San Diego and the region as a whole. Project trip distribution was based on a SANDAG Series 12 Transportation Forecast Select Zone Assignment, which is the standard methodology (for projects generating over 2,400 daily trips) within the County of San Diego, as documented in the County of San Diego - Guidelines for Determining Significance and Report Format and Content Requirements - Transportation and Traffic; August 24, 2011.

As shown in TIS Table 6.3, the intersection of W. Lilac Road/Covey Lane is projected to operate at acceptable Level of Service B under the Existing Plus Cumulative Projects Plus Project conditions. Based on the projected operations, the intersection would not require any additional improvements to accommodate project traffic.

I51d-34 There are no issues with this intersection. All intersections associated with the development have been analyzed. There are no issues, line of sight, or otherwise with these two intersections in question.

I51d-35 There are no issues with this intersection. All intersections associated with the development have been analyzed. There are no issues, line of sight, or otherwise with these two intersections in question.

I51d-36 An analysis of the Mountain Ridge Road / Circle R Drive intersection performed in the TIS determined that a stop sign control on Mountain Ridge Road is adequate to accommodate build-out project traffic. Please also see Global Response: Easements (Covey Lane and Mountain Ridge Road), for additional information responsive to the comment.

I51d-37 The FEIR did not use arbitrary factors to project the number of students and has not underestimated student population, as detailed below.

Student Generation Factors:

Subchapter 3.1.5.2 of the FEIR discusses the projects potential demand on schools. Specifcally, FEIR Table 3.1.5 provides an estimate of new student generation based on Student Generation Rates (SGR) associated with type of dwelling units as applied by the assiciated Valley Center and Bonsall school districts. Table 3.1.5 estimates that the project could generate a total of 1,038 new students.

In order to assure the adequacy of the FEIR analysis, the most recent School Fee Justifcation Reports for the relevant school districts were referenced and the calculation revised based on these SGR. The following table reflects the updated calculations:

School District	Grade	Student Generation Rate (student/DU)	Proposed Residential Units Within District	Project Student Generation[2]
VCPUSD[1]	K-6	SFD = 0.1658 SFA = 0.1165	SFD = 173 SFA = 105	SFD = 29 SFA = 12
	7-8	SFD= 0.0868 SFA = 0.0767		SFD = 15 SFA = 8
	9-12	SFD = 0.1383 SFA = 0.0952		SFD = 23 SFA = 10
				Total: 97
BUSD[3]	K-8	SFD = 0.369 SFA = 0.379	SFD = 730 SFA = 270	SFD = 269 SFA = 102
	9-12[4]	SFD = 0.1383 SFA = 0.0952		SFD = 101 SFA = 26
				Total: 498

I51d-37 (cont.)

As shown, using the 2012 SGR, the project would generate a total of approximately 595 students. These factors result in the project's current SGR to be lower than that included in the FEIR. Notwithstanding, the FEIR analysis remains unchanged. Even using the higher SGR impacts associated with the increases in school aged students, impacts would be less than significant.

With respect to the comment that the FEIR should include the 468 Senior Dwelling Units in the SGR calculations, the School Fee Justification Reports do not support the claim. While these homes would be required to pay school fees, they would not be utilized in the factors to determine the number of students generated from the project site because no students would be generated from these homes.

Project Student ADT Generation

As shown in Table 12.2 of the Lilac Ranch Traffic Impact Study (FEIR Appendix E), the project would generate 1,354 daily trips based on a total of 895 students. The calculation of ADT is based on a higher SGR than shown above, and is therefore based on a greater number of students than would be generated based on the 2012 School Fee Justification Reports. Table 12.2 does not take Senior Dwelling Units into account because these units do not generate students. However, the table below does assume the senior homes are added to this scenario (as a worst case scenario), no additional significant impacts would occur as LOS D or better operations would be maintained at the subject study area intersections.

Table 12.2 included in TIS Section 12.0, provides a supplemental analysis of a no school alternative; that is, if no school were built on the project site, how would this alternative affect study area traffic. The comment points out that in calculating the number of students that would be generated by the proposed project, the analysis excluded senior housing. However, no additional significant impacts would occur as LOS D or better operations would be maintained at the subject study area intersections.

I51d-37 (cont.)

TABLE A
AM PEAK HOUR INTERSECTION LEVEL OF SERVICE RESULTS
EXISTING PLUS PROJECT BUILDOUT WITHOUT ON-SITE SCHOOL CONDITIONS

Intersection	Traffic	With Project Buildout no On-Site School		Existing		Change	Direct
		Avg.	LOS	Avg.	LOS		
18. W. Lilac Road / Covey Lane	TWSC	23.8	C	8.8	B	15.0	No
20. W. Lilac Road / Circle R Drive	OWSC	33.6	D	9.3	A	24.3	No
21. Lilac Road / W. Lilac Road	OWSC	25.8	D	9.6	A	16.2	No
22. Lilac Road / Old Castle Road	OWSC	33.1	D	11.8	B	21.3	No
23. Valley Center Rd / Lilac Road	Signal	15.2	B	10.5	B	4.7	No
24. Miller Road / Valley Center Road	OWSC	24.1	C	16.9	C	7.2	No
25. Cole Grade Road / Valley Center Road	Signal	37.2	D	31.1	C	6.1	No

Synchro analysis worksheets are included as Attachment B to the response to comments.

APPLICANT'S		K-8 Students		High School Students		ADT/Student		Total Student		Total
CALCULATION		Students/		Students/		Factor		ADT Generation		ADT
Dwelling Units (DU)		DU	Students	DU	Students	K-8	9-12	K-8	9-12	
Non- Senior	1278	0.5	639	0.2	256	1.6	1.3	1022	332	
Senior	468	0	0	0	0	1.6	1.3	0	0	
Total	1746		639		256			1022	332	1355

SCHOOL DISTRICT		K-8 Students		High School Students		ADT/Student		Total Student		Total
CALCULATION		Students/		Students/		Factor		ADT Generation		ADT
Dwelling Units (DU)		DU	Students	DU	Students	K-8	9-12	K-8	9-12	
Non- Senior	1278	0.5	639	0.2	256	1.6	1.3	1022	332	
Senior	468	0.5	234	0.2	94	1.6	1.3	374	122	
Total	1746		873		349			1397	454	1851
							UNDERSTATEMENT OF ADT			496

The San Diego County Office of Education has explained that the ratio of Students/Dwelling Unit is based on current San Diego County total Housing demographics, including Senior Housing. ALL Dwelling Units need to be multiplied by the Student/DU factor.

Required actions- The Project has understated its ADT generation by 496. Increase the Trip Generation by 496. Increase the Student Count and rerun the Traffic simulation.

I51d-37 (cont.)

10) Traffic Impact of On Site v. Off Site Schools – The Project TIS baseline was run with the assumption that there would be an on-site K-8 school. There is no agreement from either Bonsall or Valley Center Pauma School Districts to place a School on site.

The on-site school assumption yielded a total Project ADT of 19.408 total trips, 15,151 external.

The offsite Alternate School TIS analysis represents a revised total Project ADT of 18,334 total trips, 14,932 external.

This analysis does not appear to be correct.

While the on-site School would have been attracting a few trips from outside the Project, the on-site school was a major part of the Project's argument for lower than standard external trip distribution, because the school traffic remained internal to the project.

The off-site school scenario with car trips to Bonsall and bus and car trips to Valley Center should produce HIGHER external trips.

Required action- Please provide a comprehensive explanation of the why external trips did not increase for the "No School" Alternative Chapter 12 in the TIS.

I51d-38

11) Project Trip Generation - Trip Generation was challenged in Aug 13 at 19,428 as being 12% low. Accretive's response after comments is 19,406 ADT. Respond in detail to each question raised in the attached August, 2013 comments on the Traffic Impact Study by an independent certified Traffic Engineer.

The County has accepted on THE APPLICANT"S UNILATERAL assessment of the trip

I51d-39

I51d-38 The traffic analysis with the on-site schools option was conducted under the assumption that the on-site school would attract additional external trips to/from the project site, including students from outside of the project area, delivery vehicles, and school staff trips. Students from within the project site are assumed to bike, walk, or be dropped-off by a parent. These trips would not leave the project site.

As shown in TIS Table 4.8, the project would generate 19,408 total trips with 15,151 external trips, resulting in a 22 percent internal capture (trips that remain within the project site). Under the off-site school alternative, the project would generate 18,334 total trips (due to the removal of the on-site school) with 14,932 external trips, resulting in a 19% internal capture. (TIS pp. 366-371.) As shown in the calculation above, without the on-site school, the project would have a lower internal capture rate, but overall trips would be reduced since the on-site school would attract trips from outside the area as well, which would no longer be generated under the off-site school scenario

I51d-39 he trip generation comments contained in the referenced August 2013 comment letter addressed the commercial trip generation rates utilized in the originally circulated Draft EIR and corresponding traffic study, primarily the rate for a market to be included in the Town Center. In response, both the FEIR and corresponding TIS addressed the subject. (See, FEIR, pp. 2.3-18 to 2.3-20; TIS, pp.67-73.) In addition, responses to the August 2013 comment letter have been prepared and are included in these responses to comments. Please see responses to Letter I51L. As explained in the responses that follow, the trip generation rates utilized in the FEIR and corresponding TIS for the proposed market are correct.

generation of the commercial land uses, even though a licensed Professional Traffic Engineer found that the Trip Generation should be 21,744 ADT, nearly 12% higher. I51d-39 (cont.)

The Applicant's top level qualitative argument "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 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."

This argument is nothing other than arm waving without substance. I51d-40

Figure 1.4a in Chapter 1 identifies the same store as "Anchor Grocery." The appropriate trip generation metrics for this use should be "Grocery Supermarket." The Project argues that "their pedestrian-friendly" design will facilitate people walking to the "General Store. The Project's Trip Generation argument is unsupported by facts. I51d-41

Required Action – At the Applicant's expense, have an independent licensed Traffic Engineer selected by a DPW selection team that is "firewalled" from contact with any representative of the Applicant or any County of San Diego employee involved with the Project. Allow the 3d party Traffic Engineer to analyze the disparity in Trip Generation and fairly and equitably adjudicate the difference. I51d-42

12). Internal Capture – was challenged as being high at 22% in Aug 13 and without support. AM peak has climbed to 30% with even less substantiation.

Required Action – At the Applicant's expense, have an independent licensed Traffic Engineer selected by a DPW selection team that is "firewalled" from contact with any representative of the Applicant or any County of San Diego employee involved with the Project. Allow the 3d party Traffic Engineer to analyze the disparity in Internal Capture and fairly and equitably adjudicate the difference. I51d-43

13) Mountain Ridge, Covey Lane, and Rodriguez Road traffic (Where did 780 trips go?)- The table below analyzes the difference in TIS Project Traffic ADT at Covey Lane and Mountain Ridge. Rodriguez Road information is not provided, and the TIS insists that Rodriguez is only used for Emergency Access.

PROJECT + EXISTING ADT ESTIMATES
BUILDOUT (from Table 7.2 TIS)

	Jun-13 TIS	Jun-14 TIS	Increase/ (Decrease)
Mountain Ridge Pvt Road	2260	1190	(1070)
Covey Lane Pvt Road	1100	1390	290
Total ADT			(780)

So, where did the 780 trips go? The only other way out other than Rodriguez Road is Lilac Hills Ranch Road to Main Street, and the Traffic did not increase correspondingly at those locations. And the Applicant insists Rodriguez is only used for Emergency Access. I51d-44

I51d-40 The FEIR and TIS contain quantitative support for the trip generation rates utilized in the traffic analysis. See FEIR, p. pp. 2.3-18 to 2.3-20; TIS, pp.61-73.

Specific to the commercial uses, the proposed project would include a neighborhood-serving general store located within the Town Center. (Lilac Hills Ranch Specific Plan (June 2014), p. III-67.) As described in TIS Section 4.3, p. 68, the town center would include a general store of up to 25,000 square feet of leasable area, designed as a rural general merchandise store that carries a broad selection of merchandise, staple food items, household goods and specialty items. The store would be intended as the place where people from the town and surrounding rural areas come to purchase general goods. The difference from a convenience store or grocery store is that the proposed store would be community-serving rather than a regional grocery store that typically exceeds 50,000 square feet of leasable area.

The trip generation rates utilized in the FEIR traffic analysis were developed utilizing SANDAG's Guide to Vehicular Traffic Generation Rates for the San Diego Region. (TIS, pp. 68-73.) Specific to the neighborhood serving commercial uses, including the general store, the analysis utilized the SANDAG "Specialty Retail/Strip Commercial" (SR/SC) of 40 vehicle trips per thousand square feet (ADT/1,000 SF). The shopping areas provided as examples of this category of use in the SANDAG Guide (e.g, Flower Hill Mall, Del Mar Plaza) include within the shopping area high traffic generating land uses such as sit down high turnover restaurants that independently would generate 160 ADT/1,000SF, fast food restaurants and convenience stores that independently would generate 700 ADT/1,000 SF, and a small general market. Thus, despite the presence of a number of high traffic generating land uses, SANDAG has assigned a trip rate of 40 ADT/1,000 SF to these areas, which accounts for the fact that each use is located within walking distance of the other uses – one vehicle trip to 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

I51d-40 (cont.)

the residential units would be located within one-half mile of the community serving commercial areas, and the commercial areas would include multiple businesses. 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 SC/SR rate, (the proposed project land uses are expected to generate less traffic than what the SANDAG-defined commercial uses would generate); however, the SR/SC rate is the most appropriate for the analysis as it accounts for the worst case senario of high-turnover commercial uses that generate high traffic volumes.

To illustrate the propriety of use of the 40/1,000 SF trip generation rate for the Lilac Hills Ranch commercial/retail uses, the project traffic engineer worked with SANDAG to conduct a new select zone 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 Ralph's. And, in response to comments submitted on the originally circulated Draft EIR, 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.

The results of the analysis showed that the two alternative land uses would result in a higher internal capture rate (trips that remain within the project site) and lower external rate (trips that go off the project site) than resulted in the TIS, which reflects the higher attraction rate attributable to a "supermarket" use than "specialty retail/strip commercial" uses. This increased internal capture, in turn, resulted in the number of external trips being almost identical to the number that would be generated under the land uses and corresponding trip rates utilized in the TIS. Therefore, the conclusions reached in the TIS would not change even if different trip rates had been utilized for the proposed uses.

I51d-41 Please see response to comment I51d-40 for information responsive to the comment.

I51d-42 Please see responses to comments I51d-41. For these reasons, no further analysis of the trip generation rates utilized in the TIS is warranted.

I51d-43 The comment is incorrect; overall internal trip capture is unchanged at 22%. As explained in the TIS at pp. 66-67, 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. 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.

As shown on TIS 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 the TIS. The higher AM peak hour internal capture rate is attributable to the proposed on-site K-8 school; according to SANDAG's trip generation guide, approximately one-third of school trip generation occurs during the AM peak hour. Therefore, a higher AM peak hour internal capture rate was utilized.

For comparison purposes, and to validate the internal capture rates utilized in the TIS, a SANDAG Select Zone Assignment was conducted with all land uses modeled in one Traffic Analysis Zone (TAZ). The model output identified a 28.8% overall daily internal capture rate (as noted above, the TIS utilized a 22% daily rate). An ITE Multi-Use Trip Generation Calculation also was performed and it resulted in internal capture rates of 22.2% (daily), 35.8% (AM peak), and 22.3% (PM peak). (TIS, pp. 66-67.)

I51d-44 The 2013 traffic study assumed Phases 4 and 5 of the project would utilize Mountain Ridge Road. The current site plan limits the use of Mountain Ridge Road to only Phase 5, which is the reason for the decrease in Mountain Ridge Road traffic and the increase in Covey

I51d-44 (cont.)

Lane traffic when comparing the two reports. Under this scenario, the balance of the Mountain Ridge road trips would use the project access points to Main Street.

In addition, the two 7.2 Tables, (in the 2013 and 2014 reports) are not comparable since the 2014 table includes cumulative project traffic as well. However, a comparison of the traffic in Table 7.2 of the 2013 report to Figure 4.14A in the 2014 report shows the total volumes are almost identical, with the only difference being due to rounding.

	June 2013 TIS (Table 7.2)	**June 2014 TIS* (Table 7.2)**	**June 2014 TIS (Figure 4-14A)**
Mountain Ridge Road	2,260	1,190	840
Covey Lane	920	1,390	1,190
Main Street (West)	8,430	9,300	9,300
Main Street (East)	1,040	1,340	1,340
Total	12,650	13,220	12,670
Different (2014 vs. 2013)		-570	-20

*Includes project and cumulative traffic

Required Action – Answer this question: Where did the 780 trips go? Also please detail the **precise** conditions under which Rodriguez Road is proposed to be used for "Emergency Access" and by whom.

I51d-44 (cont.)

14) Mountain Ridge Project Grading and Environmental Impacts

Another interesting "oh, by the way" disclosure in Table 7.2 of the TIS is the fact that the Project proposes grading improvements on Parcels 129-300-31 and 129-300-36 to lengthen vertical curves.

Please provide evidence that there is adequate Project rights for construction of these improvements, including temporary encroachment permissions for construction that enable continued use of the road by Residents during construction.

I51d-45

Please also discuss where in the DEIR the Environmental Impacts of these proposed off site improvements are analyzed. We have yet to locate any of the Impacts related to specific Construction disruption, noise, and other encroachment impacts for the grading required as indicated in the Master Preliminary Grading Plan Sheet 6 of 12. Also, is there net import or export of fill soil?

I51d-46

15) Respond to the specific questions in Attachment 1 – Aug 16, 2013 Traffic Impact Comments

The County has avoided directly answering the Questions in the Aug 16, 2013 Darnell Associates independent review of the Traffic Impact Study. The revised TIS does not directly and comprehensively answer the questions raised.

Answer the questions in Attachment 1 – Aug 16 2013 Independent Review of the Lilac Hills Traffic Impact Study directly and support the answers with factual verifiable data.

I51d-47

16) Project's Improvement of Mountain Ridge Road at Southern boundary of APN 129-300-09 – no details provided

The Project proposes on encroaching on a Section 404 wetland to construct Mountain Ridge Road. We find no details of the proposed encroachment in any map, grading plan or Study.

The County should have included this information in the RDEIR, as it was requested in August 2013.

Differing forms of Construction have differing Environmental Impacts. Is it a Bridge?? The Environmental Impacts cannot be determined because there is inadequate design disclosure by the County.

Required Action - Disclose the design for Mountain Ridge road across the Section 404 wetland.

I51d-48

17) The Project does not have adequate legal right of way for the to use Mountain Ridge Private Road for Secondary Access Road compliance with the County's Consolidated Fire Code

Please refer to 3 Attach Mountain Ridge ROW limitations.

I51d-49

I51d-45 Please see the Global Response: Off-Site Improvements – Environmental Analysis and Easement Summary, which describes the respective off-site improvements, corresponding environmental analysis, status of easement rights, and affected properties.

I51d-46 The potential noise impacts associated with construction of the proposed project are addressed in FEIR subchapter 2.8. Project grading is addressed in FEIR Chapter 1.0. With respect to the net import or export of fill, project construction would be a balanced cut/fill operation, as shown on FEIR Table 1-4. During construction phasing, however, there would be some areas with a net cut and others with a net import. Those sites with net cut would be used as borrow sites. For example, there would be nearly one-half million cubic yards of net cut in Phase 3A, which is located directly adjacent to Phase 1. This area would be used for stockpiling, as needed through the subsequent phases.

I51d-47 Responses to the August 16, 2013 Darnell Associates comments are provided in these responses to comments. Please see responses to Letter 151I.

I51d-48 Environmental impacts associated with the widening of Mountain Ridge Road are analyzed in the Biological Resources section of the FEIR (subchapter 2.5). As discussed therein, and shown on Table 2.5-2, no impacts to the existing riparian habitat would occur as a result of the project's improvements to Mountain Ridge Road.

I51d-49 Please see Global Responses: Easements (Covey Lane and Mountain Ridge Road) and Off-site Improvements - Environmental Analysis and Easement Summary, for information regarding rights-of-way to Mountain Ridge Road.

The referenced Attachment obtained from the County indicates clearly that 32 offsite parcels must grant right of way for the Project to use Mountain Ridge Road for **any** of the Project's proposed uses. To date, none of the 32 parcels have granted rights for the Project to use Mountain Ridge Road for any purpose such as Emergency Access.

The County clearly knows this, because this information was provided by the County Staff.

Yet the County continues to state in its EIR that the Project complies with the Consolidated Fire Code for Secondary Road Access. How can this be?? Elaborate why the County believes that the Project complies with Consolidated Fire Code Secondary Access Road requirements.

I51d-49 (cont.)

Sincerely,

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1 Attach August 16 2013 Comment Letter on Traffic Impact Study
2 Attach CALTRANS LHR RDEIR Comments June 24 2014
3 Attach Mountain Ridge ROW limitations

Attachment Darnell-A

ITE Multi-Use Trip Generation Calculation					
Primary Land Use	ADT	AM - In	AM - Out	PM - In	PM - Out
Residential (903 DU SF + 375 DU MF + 468 DU Senior Community + 200 Beds Congregate Care)	11,280	302	714	872	404
Commercial (61,500 SF)	2,460	44	30	111	111
Office (28,500 SF)	399	54	6	12	48
School (568 Elementary Students + 132 Middle School Students)	1,094	208	139	39	59
Recreation (40,000 SF Recreation Center + 23.8 Acres Park)	1,034	60	53	43	62
Church	321	10	6	13	13
Total Trips	16,588	1,625		1,787	
Total Internal Trips from Worksheet	3,683	581.5		398.5	
Internal Capture Percentage	22.2%	35.8%		22.3%	
Internal Capture Percentage used in TIS	22.00%	29.60%		21.60%	

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Vol, veh/h	9	0	191	3	0	2	122	122	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	70	70	42	42	42	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	273	7	0	5	163	163	1

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	810	808	319	945	813	163	324	0	0
Stage 1	319	319	-	489	489	-	-	-	-
Stage 2	491	489	-	456	324	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	298	315	722	242	313	882	1236	-	-
Stage 1	693	653	-	561	549	-	-	-	-
Stage 2	559	549	-	584	650	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	263	269	722	134	268	882	1236	-	-
Mov Cap-2 Maneuver	263	269	-	134	268	-	-	-	-
Stage 1	593	653	-	480	469	-	-	-	-
Stage 2	475	469	-	363	650	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	14.3	23.8	4.2
HCM LOS	B	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1236	-	-	669	203	1414	-	-
HCM Lane V/C Ratio	0.132	-	-	0.427	0.059	-	-	-
HCM Control Delay (s)	8.4	0	-	14.3	23.8	0	-	-
HCM Lane LOS	A	A	-	B	C	A	-	-
HCM 95th %tile Q(veh)	0.5	-	-	2.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	

Movement	SBL	SBT	SBR
Vol, veh/h	0	173	5
Conflicting Peds, #/hr	0	0	0
Sign Control	Free	Free	Free
RT Channelized	-	-	None
Storage Length	-	-	-
Veh in Median Storage, #	-	0	-
Grade, %	-	0	-
Peak Hour Factor	55	55	55
Heavy Vehicles, %	2	2	2
Mvmt Flow	0	315	9

Major/Minor	Major2		
Conflicting Flow All	164	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.12	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.218	-	-
Pot Cap-1 Maneuver	1414	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1414	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SB
HCM Control Delay, s	0
HCM LOS	

Minor Lane/Major Mvmt

Intersection	
Int Delay, s/veh	15.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	74	190	26	34	389	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	83	83	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	83	213	31	41	486	58

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1082	52	0	0	72	0
Stage 1	52	-	-	-	-	-
Stage 2	1030	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	241	1016	-	-	1528	-
Stage 1	970	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	162	1016	-	-	1528	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	231	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.6	0	7.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	410	1528	-
HCM Lane V/C Ratio	-	-	0.723	0.318	-
HCM Control Delay (s)	-	-	33.6	8.5	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	5.6	1.4	-

Intersection	
Int Delay, s/veh	16

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	17	425	256	63	100	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	82	82	75	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	634	312	77	133	47

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	858	157	180	0	-	0
Stage 1	157	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	327	889	1396	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	492	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	251	889	1396	-	-	-
Mov Cap-2 Maneuver	251	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	377	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.8	6.7	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1396	-	810	-	-
HCM Lane V/C Ratio	0.224	-	0.814	-	-
HCM Control Delay (s)	8.3	0	25.8	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.9	-	8.9	-	-

Intersection	
Int Delay, s/veh	14.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	12	111	227	253	412	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	170	-	-	80	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	82	82	94	94	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	135	241	269	448	60

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	241	0	-	0	406	241
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	165	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1326	-	-	-	601	798
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1326	-	-	-	594	798
Mov Cap-2 Maneuver	-	-	-	-	594	-
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	854	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	33.1
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1326	-	-	-	612
HCM Lane V/C Ratio	0.011	-	-	-	0.829
HCM Control Delay (s)	7.7	-	-	-	33.1
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	8.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	444	0	203	0	0	0	113	284	0	3	662	348
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	539	0	86	0	0	0	128	323	0	3	752	372
Adj No. of Lanes	2	0	1	0	1	0	2	2	0	1	2	0
Peak Hour Factor	0.89	0.89	0.89	0.92	0.92	0.92	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	733	0	327	0	4	0	222	1988	0	6	1150	568
Arrive On Green	0.21	0.00	0.21	0.00	0.00	0.00	0.06	0.56	0.00	0.00	0.50	0.50
Sat Flow, veh/h	3548	0	1583	0	1863	0	3442	3632	0	1774	2298	1134
Grp Volume(v), veh/h	539	0	86	0	0	0	128	323	0	3	579	545
Grp Sat Flow(s),veh/h/ln	1774	0	1583	0	1863	0	1721	1770	0	1774	1770	1663
Q Serve(g_s), s	7.5	0.0	2.4	0.0	0.0	0.0	1.9	2.3	0.0	0.1	12.7	12.8
Cycle Q Clear(g_c), s	7.5	0.0	2.4	0.0	0.0	0.0	1.9	2.3	0.0	0.1	12.7	12.8
Prop In Lane	1.00		1.00	0.00		0.00	1.00		0.00	1.00		0.68
Lane Grp Cap(c), veh/h	733	0	327	0	4	0	222	1988	0	6	886	832
V/C Ratio(X)	0.74	0.00	0.26	0.00	0.00	0.00	0.58	0.16	0.00	0.52	0.65	0.65
Avail Cap(c_a), veh/h	1121	0	500	0	585	0	301	1988	0	152	886	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	0.0	17.5	0.0	0.0	0.0	23.9	5.5	0.0	26.1	9.7	9.7
Incr Delay (d2), s/veh	1.5	0.0	0.4	0.0	0.0	0.0	2.4	0.2	0.0	57.3	3.7	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	1.1	0.0	0.0	0.0	1.0	1.2	0.0	0.1	7.0	6.7
LnGrp Delay(d),s/veh	21.0	0.0	17.9	0.0	0.0	0.0	26.2	5.7	0.0	83.4	13.5	13.7
LnGrp LOS	C		B				C	A		F	B	B
Approach Vol, veh/h		625			0			451			1127	
Approach Delay, s/veh		20.5			0.0			11.5			13.8	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	33.5		14.8	7.4	30.3		0.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.5	26.4		16.6	4.6	26.3		16.5
Max Q Clear Time (g_c+I1), s	2.1	4.3		9.5	3.9	14.8		0.0
Green Ext Time (p_c), s	0.0	9.6		1.4	0.0	6.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	27	1004	1003	4	9	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	90	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	70	70	70	70	65	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	39	1434	1433	6	14	98

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1439	0	-	0	2230	719
Stage 1	-	-	-	-	1436	-
Stage 2	-	-	-	-	794	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	468	-	-	-	36	371
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	406	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	468	-	-	-	33	371
Mov Cap-2 Maneuver	-	-	-	-	126	-
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	372	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	24.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	468	-	-	-	299
HCM Lane V/C Ratio	0.082	-	-	-	0.376
HCM Control Delay (s)	13.4	-	-	-	24.1
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	628	339	37	16	341	143	25	13	17	195	25	641
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	683	368	11	22	461	107	33	17	11	238	30	660
Adj No. of Lanes	2	1	1	1	2	0	0	1	0	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.74	0.74	0.74	0.75	0.75	0.75	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	835	827	703	36	633	146	63	33	21	360	45	633
Arrive On Green	0.24	0.44	0.44	0.02	0.22	0.22	0.07	0.07	0.07	0.23	0.23	0.23
Sat Flow, veh/h	3442	1863	1583	1774	2857	659	952	490	317	1584	200	2787
Grp Volume(v), veh/h	683	368	11	22	284	284	61	0	0	268	0	660
Grp Sat Flow(s),veh/h/ln	1721	1863	1583	1774	1770	1746	1759	0	0	1784	0	1393
Q Serve(g_s), s	12.4	9.0	0.3	0.8	9.8	10.0	2.2	0.0	0.0	9.0	0.0	15.0
Cycle Q Clear(g_c), s	12.4	9.0	0.3	0.8	9.8	10.0	2.2	0.0	0.0	9.0	0.0	15.0
Prop In Lane	1.00		1.00	1.00		0.38	0.54		0.18	0.89		1.00
Lane Grp Cap(c), veh/h	835	827	703	36	392	387	117	0	0	405	0	633
V/C Ratio(X)	0.82	0.44	0.02	0.62	0.73	0.73	0.52	0.00	0.00	0.66	0.00	1.04
Avail Cap(c_a), veh/h	1146	919	781	199	482	476	506	0	0	405	0	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.6	12.7	10.3	32.1	23.9	23.9	29.8	0.0	0.0	23.2	0.0	25.5
Incr Delay (d2), s/veh	3.4	0.4	0.0	16.0	4.2	4.5	3.5	0.0	0.0	4.0	0.0	47.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	4.7	0.1	0.6	5.3	5.3	1.2	0.0	0.0	4.8	0.0	9.9
LnGrp Delay(d),s/veh	27.0	13.1	10.3	48.2	28.0	28.4	33.3	0.0	0.0	27.2	0.0	73.1
LnGrp LOS	C	B	B	D	C	C	C			C		F
Approach Vol, veh/h		1062			590			61			928	
Approach Delay, s/veh		22.0			29.0			33.3			59.9	
Approach LOS		C			C			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		8.4	5.3	33.3		19.0	20.0	18.6
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		19.0	7.4	32.6		15.0	22.0	18.0
Max Q Clear Time (g_c+I1), s		4.2	2.8	11.0		17.0	14.4	12.0
Green Ext Time (p_c), s		0.2	0.0	5.3		0.0	1.6	2.7

Intersection Summary	
HCM 2010 Ctrl Delay	37.2
HCM 2010 LOS	D