LSC TRANSPORTATION CONSULTANTS, INC.

TRANSPORTA
CONSULTAN

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ings, CO 80903
(719) 633-2868
(719) 633-5430
c@lsctrans.com

Since there are no significant changes to Jackson Ranch Filings 2, 3, and 4 compared to the approved traffic study for the preliminary plan (from 27 lots to 25 lots). and the approved TIS dated May 9, 2016 is less than three years, the TIS is acceptable.

Replace the submitted TIS with the approved Transportation Memorandum Update by LSC dated May 9, 2016 for Jackson Ranch Filings 2-5.

Jackson Ranch Filings 2-5

Transportation Memorandum

(LSC #134711)

November 12, 2015

Traffic Engineer's Statement

This traffic report and supporting information were prepared under my responsible charge and they comport with the standard of care. So far as is consistent with the standard of care, said report was prepared in general conformance with the criteria established by the County for traffic reports.

Jeffrey C. Hodsdon, P.E. #31684

COLORADO LICENSED
JEFFREY C. HODSDON
31684
PROFESSIONAL ENGINEER

Date 11/12/15

Developer's Statement

I, the Developer, have read and will comply with all commitments made on my behalf within this report.

Marlene Brown

~~Mr. Marshall Brown~~
Four Gates Land Development LLC
17435 Roller Coaster Road
Colorado Springs, CO 80132
Marlene Brown

Date 5/12/17

Add "PCD Project No. SF-17-016"

LSC TRANSPORTATION CONSULTANTS, INC.

545 East Pikes Peak Avenue, Suite 210
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November 12, 2015

Mr. Marshal Brown
Four Gates Land Development LLC
17435 Roller Coaster Road
Monument, CO 80132

RE: Jackson Ranch Filings 2-5
Transportation Memorandum
LSC #134711

Dear Mr. Brown:

In response to your request, LSC Transportation Consultants, Inc. has prepared this transportation memorandum for the proposed Jackson Ranch subdivision Filings 2 through 5 to be located northeast of the intersection of Higby Road and Roller Coaster Road in El Paso County, Colorado, as shown on Figure 1. LSC prepared a Transportation Memorandum for Jackson Ranch dated March 26, 2014. Since completion of that report six lots for single-family homes on the west side of the site have been platted as Filing 1. The currently proposed Jackson Ranch Filings 2 through 5 include the remaining area assumed in the 2014 report plus an additional 59.84 acres to the north.

REPORT CONTENTS

The report contains the following: the existing roadway and traffic conditions adjacent to the site including the intersection lane geometries, traffic controls, posted speed limits, street classifications, etc.; an evaluation of the intersection sight distance at the site access points; existing traffic volumes at the west intersection of Higby Road/Roller Coaster (west) and at Charter Pines Drive/Roller Coaster Road and estimates of future background traffic volumes; the projected average weekday and peak-hour vehicle-trips to be generated by the site; the assignment of the projected site-generated traffic volumes to the adjacent roadways and intersections; the resulting total traffic volumes; and the resulting traffic impacts. The traffic impacts have been quantified by determining the future levels of service at the intersection of Higby/Roller Coaster (west) and the site access points. The report presents findings relative to rural roadway upgrades and auxiliary turn lanes at Higby Road/ Roller Coaster Road and the site access points.

LAND USE AND ACCESS

The site plan for the Jackson Ranch Subdivision is shown in Figure 2. The six lots in Filing 1, located on the west side of the subdivision are currently platted. The access for Filing 1 has been constructed but none of the lots are occupied as of this report. The proposed Jackson Ranch subdivision is planned to contain lots for 37 single-family homes. Ten of these lots would have access to Roller Coaster Road via a street planned to align with Charter Pines Drive about 1,110 feet north of the existing Filing 1 access. The remaining 27 lots would access a new local road that would extend north from the existing intersection of Higby Road and Oldborough Heights through this development. The March 2014 report assumed this road would serve 38 single-family homes (18 lots were included as part of the site and 20 lots were included as background development).

Access Sight Distance

LSC has field-measured the sight distance along Higby Road and Roller Coaster Road at the proposed access points. The intersection sight distance on Roller Coaster Road from the proposed Filing 5 site access would meet El Paso County *Engineering Criteria Manual (ECM)* standards in table 2-21 of section 2.3.6G. The sight distance at the proposed access to Higby Road was measured assuming the exiting lane from the north would align with the entering lane on the south side of Higby. The intersection sight distance on Higby Road to the east from the proposed site access was measured to be 550 feet. To the west the sight distance was measured to be about 425 feet. At a distance of about 500-600 feet there is a low point/sag vertical curve in the roadway profile where oncoming vehicles cannot be seen from the access point location. Just west of this low point, oncoming vehicles can be seen. The ECM standard intersection sight distance for 40-mile-per-hour (mph) design speed is 445 feet. Although the field-measured sight distance is 20 feet short of the 445-foot standard, the proposed access location would be acceptable as the access is at the crest of the hill and the eastbound approach to the site access is on a significant upgrade, making a minor speed adjustment by approaching eastbound motorists (to allow a vehicle to enter eastbound Higby) much easier as deceleration is easier on an upgrade. Moreover, a street already exists on the south side of Higby Road aligning with the proposed access point. As it is very common for intersections and access points in rural northern El Paso County to be located at the crests of hills, drivers traveling along Higby will expect an access point/intersection at this location.

ROADWAY AND TRAFFIC CONDITIONS

Area Roadways

The major roadways in the vicinity of the site are shown on Figure 1 and are described below.

- **Higby Road** is classified as a two-lane Collector and extends east from Jackson Creek Parkway to Roller Coaster Road. The posted speed limit on Higby Road adjacent to the site is 35 miles per hour. The roadway is currently a two-lane rural roadway.

- **Roller Coaster Road** is classified as a two-lane Collector and extends north from North Gate Boulevard to Higby Road. Roller Coaster then continues north from Higby Road about one-half mile to the west and extends to County Line Road. The posted speed limit on Roller Coaster Road adjacent to the site is 35 miles per hour. The roadway is currently a two-lane rural roadway.

Existing Traffic Volumes

Figure 3 shows the morning and afternoon peak-hour traffic volumes at the intersections of Higby Road and Roller Coaster Road (west) and Charter Pines Drive and Roller Coaster Road. These volumes are based on manual traffic counts by LSC in October 2015. The traffic count reports are attached. Figure 3 also shows estimated average daily traffic based on factored peak-hour counts.

Existing Level of Service

Level of service (LOS) is a quantitative measure of the level of congestion or delay at an intersection. Level of service is indicated on a scale from "A" to "F." LOS A represents control delay of less than 10 seconds for unsignalized and signalized intersections. LOS F represents control delay of more than 50 seconds for unsignalized intersections and more than 80 seconds for signalized intersections. Table 1 shows the level of service delay ranges.

Table 1
Intersection Levels of Service Delay Ranges

Level of Service	Signalized Intersections	Unsignalized Intersections
	Control Delay (seconds per vehicle)	
A	10 sec or less	10 sec or less
B	10-20 sec	10-15 sec
C	20-35 sec	15-25 sec
D	35-55 sec	25-35 sec
E	55-80 sec	35-50 sec
F	80 sec or more	50 sec or more

The intersections of Higby/Roller Coaster (west) and Charter Pines Drive/Roller Coaster Road were analyzed based on the unsignalized method of analysis procedures from the *Highway Capacity Manual, 2010 Edition* by the Transportation Research Board. As shown in Figure 3, these intersections are currently operating at a satisfactory level of service (LOS B or better). The level of service reports are attached.

2035 BACKGROUND TRAFFIC

Figure 4 shows the projected background traffic volumes for the year 2035. Background traffic is the traffic projected to be on the adjacent roadways and intersections without consideration of the proposed development. The background traffic volumes include through traffic and traffic generated by other area potential developments, but assumes that zero traffic is generated by the site. The 2035 background traffic volumes assume buildout of Filing 1 of the Jackson Ranch subdivision and buildout of the JT Ranch subdivision located southeast of the intersection of Higby Road and Roller Coaster Road (west). The overall traffic volume growth rate used (including site traffic) is 2.2 percent per year on Roller Coaster Road and about 3.5 percent per year on Higby Road adjacent to the site.

TRIP GENERATION

Estimates of the vehicle-trips to be generated by the site have been estimated using trip generation rates from *Trip Generation, 9th Edition, 2012* by the Institute of Transportation Engineers (ITE). Table 2 shows the average weekday and peak-hour trip generation estimates.

Jackson Ranch Filings 2 through 5 are projected to generate about 352 new vehicle-trips on the average weekday, with about half entering and half exiting the site. During the morning peak hour, which generally occurs for one hour between 6:30 and 8:30 a.m., about seven vehicles would enter and 21 vehicles would exit the site. During the afternoon peak hour, which generally occurs for one hour between 4:15 and 6:15 p.m., about 23 vehicles would enter and 14 vehicles would exit the site.

TRIP DISTRIBUTION AND ASSIGNMENT

The estimated directional distribution of the site-generated traffic volumes on the adjacent roadways is an important factor in determining the site's traffic impacts. Figure 5 shows the directional distribution estimates for the site-generated traffic volumes. The directional distribution estimates were based on the following factors: existing area development, the area roadway system, the site's proposed land use, and the existing traffic counts.

SITE-GENERATED TRAFFIC

When the directional distribution percentages (from Figure 5) were applied to the trip generation estimates (from Table 2), the resulting site-generated traffic volumes were determined. Figure 6 shows the site-generated traffic volumes.

SHORT-TERM TOTAL TRAFFIC

Figure 7 shows the sum of the existing traffic volumes (from Figure 3) plus traffic estimated to be generated by Jackson Ranch Filing 1 plus the site-generated traffic volumes from Jackson Ranch Filings 2 through 5 (from Figure 6). These volumes identify the short-term impacts of the development.

2035 TOTAL TRAFFIC

Figure 8 shows the total traffic volumes for the year 2035. The 2035 total traffic volumes are the sum of the site-generated traffic volumes (from Figure 6) and the 2035 background traffic volumes (from Figure 4).

PROJECTED LEVELS OF SERVICE

The intersection of Higby/Roller Coaster (west) and the site access points were analyzed to determine the projected levels of service based on existing plus site-generated, 2035 background, and 2035 total traffic. The results of the analysis are shown in Figures 4, 7, and 8. As shown on the figures, all the analyzed intersections are projected to operate at a satisfactory level of service (LOS B or better) as two-way Stop-sign-controlled intersections based on projected existing plus site-generated, 2035 background, and 2035 total traffic volumes. The level of service reports are attached.

CONCLUSIONS AND RECOMMENDATIONS

Trip Generation

- Jackson Ranch Filings 2 through 5 are projected to generate about 352 new vehicle-trips on the average weekday, with about half entering and half exiting the site. During the morning peak hour, about seven vehicles would enter and 21 vehicles would exit the site. During the afternoon peak hour, about 23 vehicles would enter and 14 vehicles would exit the site.

Projected Levels of Service

- The intersection of Higby/Roller Coaster (west) is projected to continue to operate at a satisfactory level of service as a two-way Stop-sign-controlled intersection based on existing plus site-generated, 2035 background, and 2035 total traffic volumes.

- The site access points to Roller Coaster Road and Higby Road are both projected to operate at a satisfactory level of service as two-way Stop-sign-controlled intersections based on existing plus site-generated, 2035 background, and 2035 total traffic volumes.

Roadway Classifications

- Based on the 2035 total average daily traffic volumes, the cul de sac off Roller Coaster Road, which would serve the ten lots in Filing 5, should be classified as Rural Local.

- Based on the 2035 total average daily traffic volumes the new street that will extend north from the intersection of Higby Road and Oldborough Heights through Jackson Ranch serving Filings 2 through 4 should be classified as a Rural Local street.

Auxiliary Turn Lanes

- Based solely on the existing turning volume as shown in Figure 3 and the criteria contained in the El Paso County *Engineering Criteria Manual,* an eastbound left turn is currently required on Higby Road approaching Roller Coaster Road (west) (existing deficiency). Traffic added to this turning movement by this project is projected to be only two vehicles per hour (an increase of less than five percent); therefore, this project should not be required to install this turn lane.

- The 2035 total westbound right-turning volume at the intersection of Higby Road/Roller Coaster (west) as shown in Figure 8 is projected to be approaching the criteria contained in the El Paso County *Engineering Criteria Manual* for a right-turn deceleration lane. Traffic added to this turning movement by this project is projected to be five vehicles per hour (an increase of less than five percent). Therefore, this project should not be required to install this turn lane. **The applicant should dedicate the extra right-of-way (ROW) needed to accommodate this right-turn lane should it be needed in the future. Based on the existing design speed of 40 mph (posted 35 mph), the westbound right-turn lane on Higby Road approaching Roller Coaster (west) would need to be 155 feet long plus a 160-foot taper. Should Higby Road be upgraded to a Rural Major Collector with a design speed of 50 mph (posted 45 mph), this lane would need to be 235 feet long plus a 200-foot taper. Based on these potential dimensions, an additional rectangular ROW dedication of 12 feet wide by 235 feet long (for the deceleration portion of the lane) plus a 200-foot-long triangular section beginning 12 feet wide and tapering back to the 15-foot ROW dedication line (for the taper portion) is recommended to accommodate this future lane. This ROW dedication is shown on the Preliminary Plan.**

- Based on the criteria contained in the El Paso County *Engineering Criteria Manual*, no auxiliary turn lanes would be required on Higby Road approaching the south site access nor on Roller Coaster Road approaching the west site access.

- Roller Coaster Road and Higby Road are candidates for rural roadway upgrades in the future. Based on the daily volumes projected, these roads would likely be upgraded to Rural Major Collector standards (the *Major Transportation Corridors Plan* shows these roadways as Collectors) depending on actual growth in the area and growth in traffic volumes on these roadways. This project does not impact these roadways to a level requiring any improvements by this project. However, the project would be paying countywide roadway improvement program fees. The plan shows right-of-way dedications of 15 feet on both Higby Road and Roller Coaster Road. The 15 feet plus the existing 30 feet from the centerline would total 45 feet or one-half of a Rural Minor Collector right-of-way (90 feet).

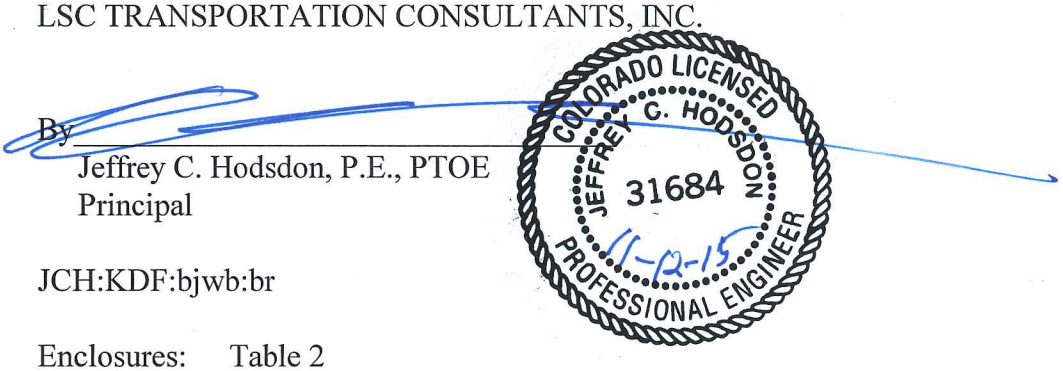
- This project will be required to participate in the countywide roadway improvement fee program. The specific PID option selected and associated fee amounts will be addressed with the final plats.

* * * * *

We trust this transportation memorandum will assist you in gaining approval of the proposed Jackson Ranch subdivision. Please contact me if you have any questions or need further assistance.

Sincerely,

LSC TRANSPORTATION CONSULTANTS, INC.



By _____
Jeffrey C. Hodsdon, P.E., PTOE
Principal

JCH:KDF:bjwb:br

Enclosures: Table 2
Figures 1-8
Traffic Count Reports
Levels of Service Reports

Table 2
Trip Generation Estimate
Jackson Ranch

Filing	Land Use Code	Land Use Description	Trip Generation Units	Trip Generation Rates [1] Average Weekday Traffic	Trip Generation Rates [1] Morning Peak Hour In	Trip Generation Rates [1] Morning Peak Hour Out	Trip Generation Rates [1] Afternoon Peak Hour In	Trip Generation Rates [1] Afternoon Peak Hour Out	Total Trips Generated Average Weekday Traffic	Total Trips Generated Morning Peak Hour In	Total Trips Generated Morning Peak Hour Out	Total Trips Generated Afternoon Peak Hour In	Total Trips Generated Afternoon Peak Hour Out
Platted (Not Part of This Plan)													
1	210	Single-Family Detached Housing	6 DU[2]	9.52	0.19	0.56	0.63	0.37	57	1	3	4	2
Currently Proposed Filings													
2,3,4	210	Single-Family Detached Housing	27 DU	9.52	0.19	0.56	0.63	0.37	257	5	15	17	10
5	210	Single-Family Detached Housing	10 DU	9.52	0.19	0.56	0.63	0.37	95	2	6	6	4
		Total Currently Proposed Filings 2 through 5	**37**						**352**	**7**	**21**	**23**	**14**
		Total Filings 1 through 5	**43**						**409**	**8**	**24**	**27**	**16**
Land Use Assumed in the *Jackson Ranch Updated Transportation Memorandum* by LSC, March 26, 2014													
1	210	Single-Family Detached Housing	6 DU	9.52	0.19	0.56	0.63	0.37	57	1	3	4	2
Future	210	Single-Family Detached Housing	18 DU	9.52	0.19	0.56	0.63	0.37	171	3	10	11	7
Background	210	Single-Family Detached Housing	20 DU	9.52	0.19	0.56	0.63	0.37	190	4	11	13	7
			44						**418**	**8**	**24**	**28**	**16**

Notes:

(1) Source: "*Trip Generation, 9th Edition, 2012* " by the Institute of Transportation Engineers (ITE)

(2) DU = dwelling unit

Source: LSC Transportation Consultants, Inc.

Approximate Scale
Scale: 1"= 2,000'

Figure 1

Vicinity Map

Jackson Ranch Filings 2-5 (LSC #134711)

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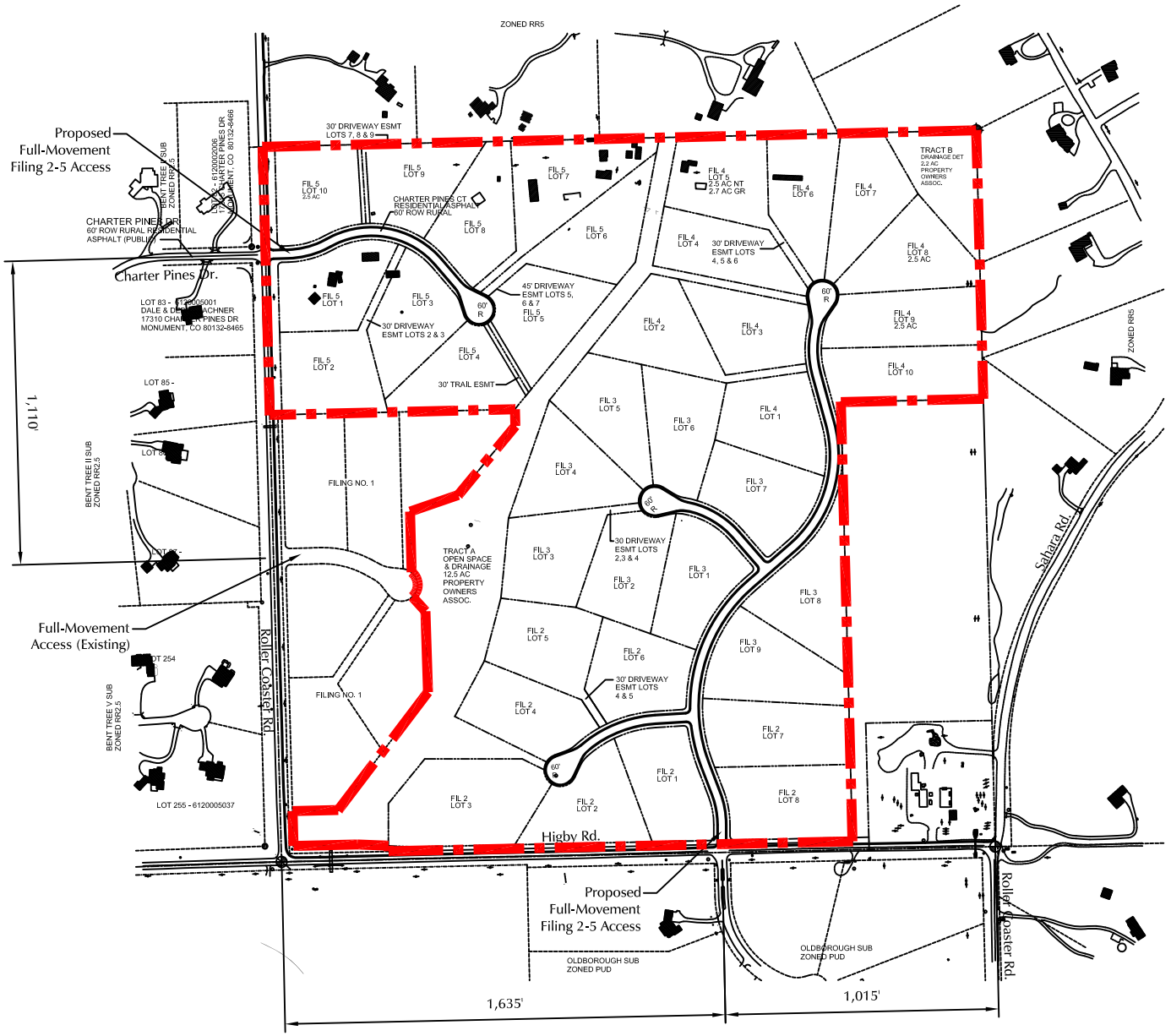

Figure 2

Site Plan

Jackson Ranch Filings 2-5 (LSC #134711)

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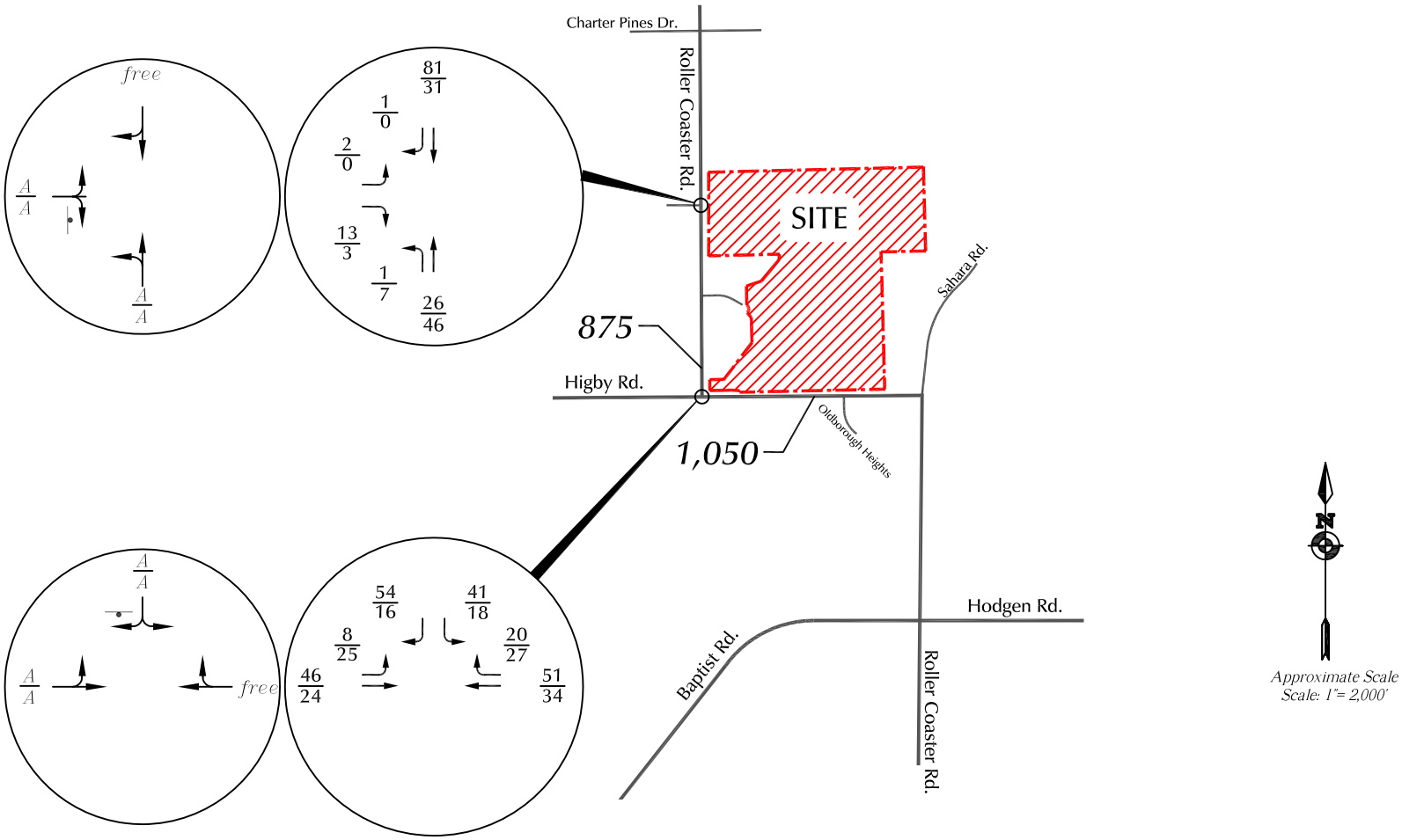

LEGEND:

⊢ = Stop Sign

$\frac{26}{31}$ = AM Weekday Peak–Hour Traffic (vehicles per hour) / PM Weekday Peak–Hour Traffic (vehicles per hour) Based on counts by LSC Oct 2015

$\frac{A}{B}$ = AM Individual Movement Peak–Hour Level of Service / PM Individual Movement Peak–Hour Level of Service

7,398 = Average Weekday Traffic (vehicles per day) Estimates by LSC

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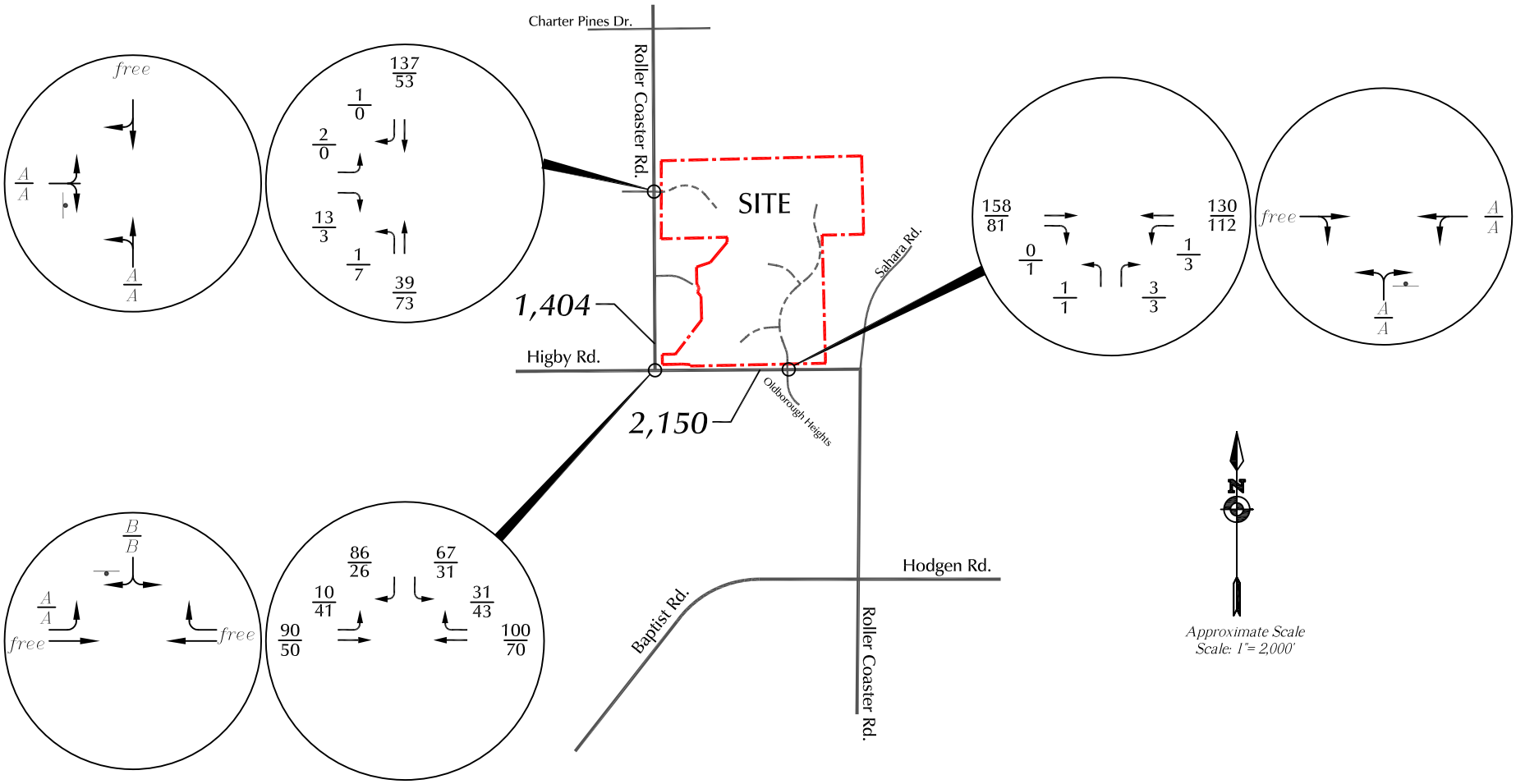
Figure 3

Existing Traffic, Lane Geometry, Traffic Control and Level of Service

Jackson Ranch Filings 2-5 (LSC #134711)



LEGEND:

⊦ = Stop Sign

$\frac{26}{31}$ = $\frac{\text{AM Weekday Peak-Hour Traffic (vehicles per hour)}}{\text{PM Weekday Peak-Hour Traffic (vehicles per hour)}}$

$\frac{A}{B}$ = $\frac{\text{AM Individual Movement Peak-Hour Level of Service}}{\text{PM Individual Movement Peak-Hour Level of Service}}$

7,398 = Average Weekday Traffic (vehicles per day) Estimates by LSC

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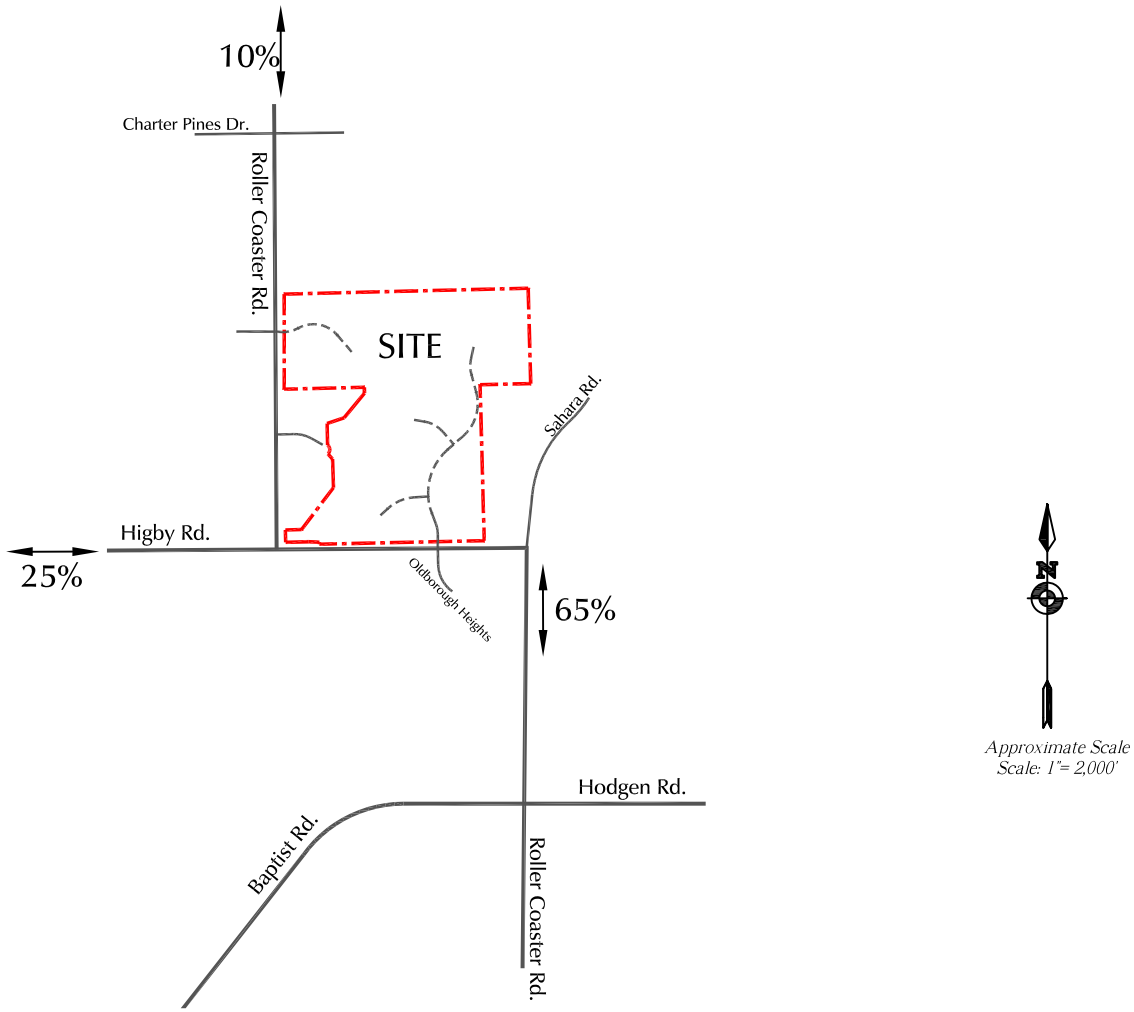
Figure 4

Year 2035 Background Traffic, Lane Geometry, Traffic Control and Level of Service

Jackson Ranch Filings 2-5 (LSC #134711)



LEGEND:

35% = Percent Directional Distribution

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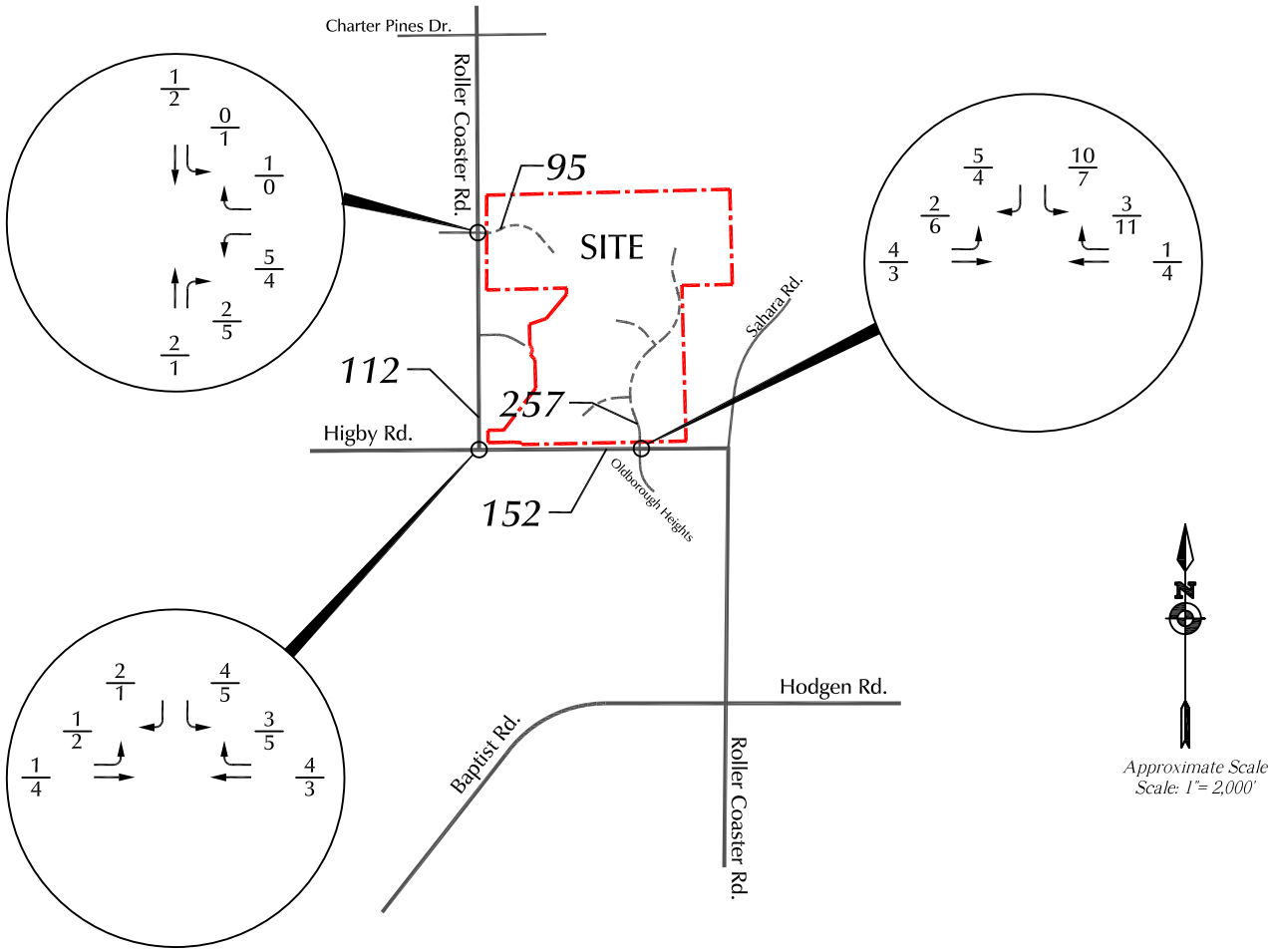
Figure 5

Directional Distribution of Site-Generated Traffic

Jackson Ranch Filings 2-5 (LSC #134711)



LEGEND:

$\frac{26}{31}$ = AM Weekday Peak–Hour Traffic (vehicles per hour) / PM Weekday Peak–Hour Traffic (vehicles per hour)

7,398 = Average Weekday Traffic (vehicles per day) Estimates by LSC

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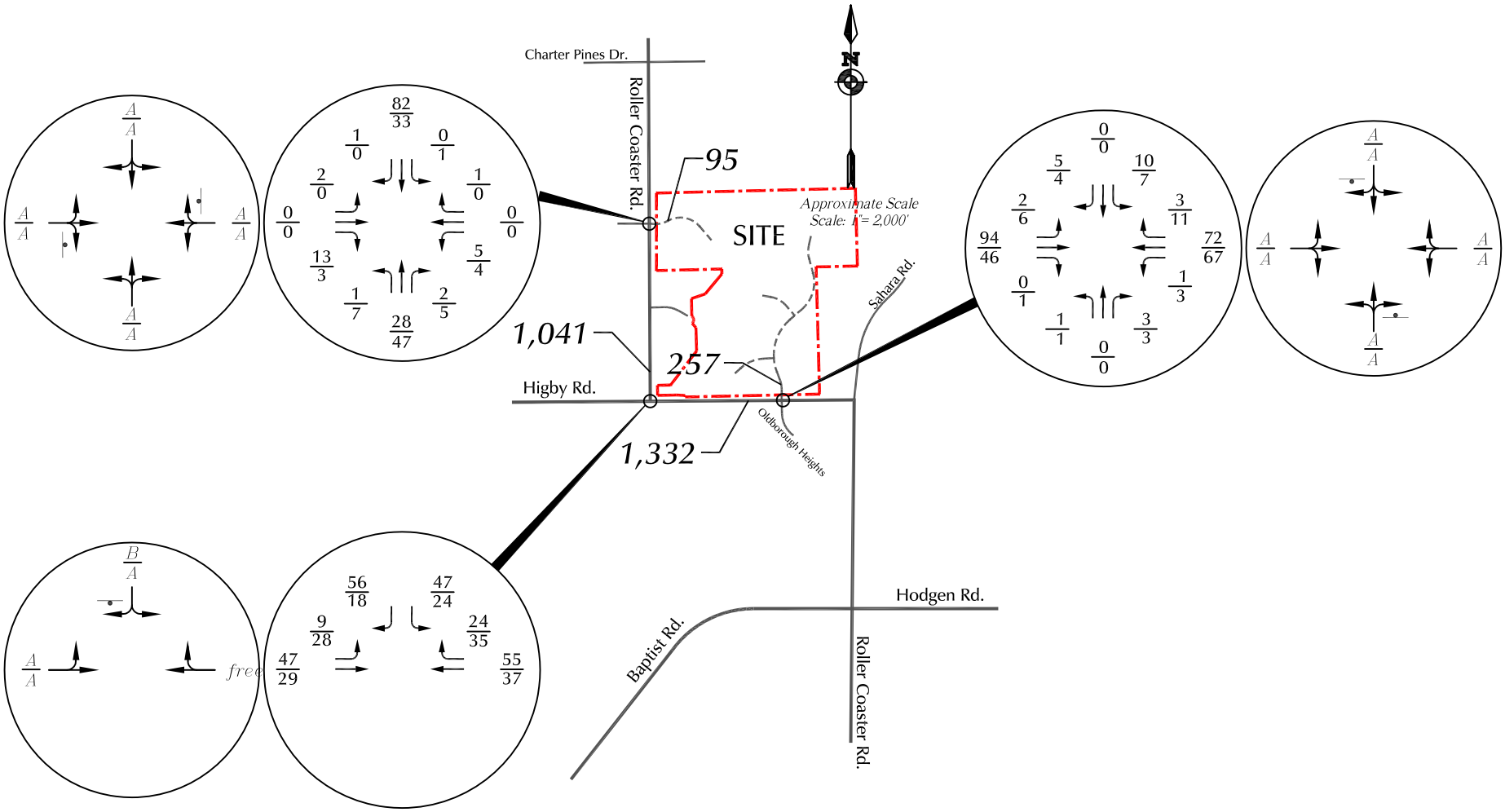
Figure 6

Assignment of Site-Generated Traffic

Jackson Ranch Filings 2-5 (LSC #134711)



LEGEND:

⊦ = Stop Sign

$\frac{26}{31}$ = AM Weekday Peak-Hour Traffic (vehicles per hour) / PM Weekday Peak-Hour Traffic (vehicles per hour)

$\frac{A}{B}$ = AM Individual Movement Peak-Hour Level of Service / PM Individual Movement Peak-Hour Level of Service

7,398 = Average Weekday Traffic (vehicles per day) Estimates by LSC

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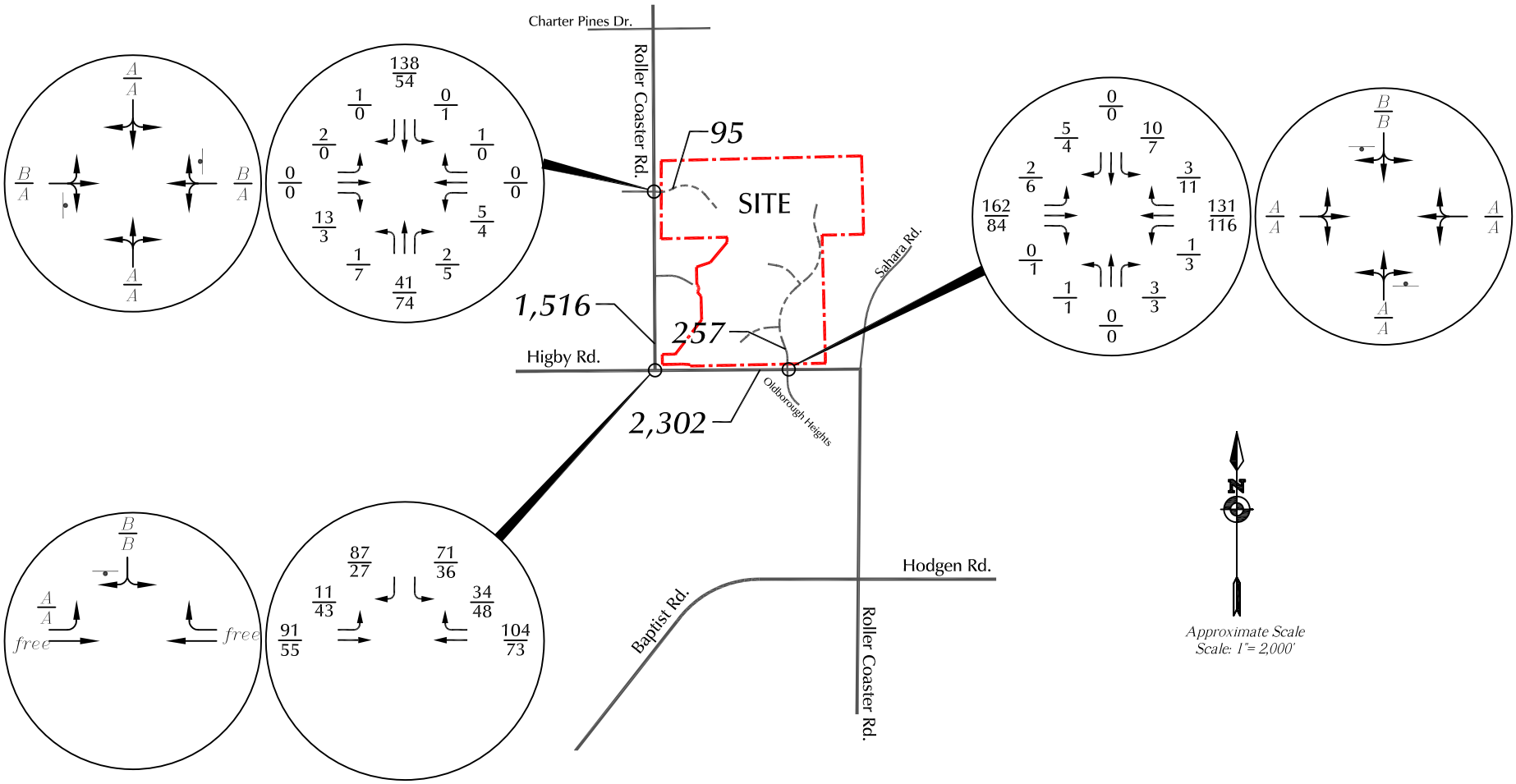
Figure 7

Short-Term Total Traffic, Lane Geometry Traffic Control and Level of Service

Jackson Ranch Filings 2-5 (LSC #134711)



LEGEND:

⊦ = Stop Sign

$\frac{26}{31}$ = AM Weekday Peak-Hour Traffic (vehicles per hour) / PM Weekday Peak-Hour Traffic (vehicles per hour)

$\frac{A}{B}$ = AM Individual Movement Peak-Hour Level of Service / PM Individual Movement Peak-Hour Level of Service

7,398 = Average Weekday Traffic (vehicles per day) Estimates by LSC

TRANSPORTATION CONSULTANTS, INC.

Figure 8

Year 2035 Total Traffic, Lane Geometry Traffic Control and Level of Service

Jackson Ranch Filings 2-5 (LSC #134711)

LSC Transportation Consultants, Inc.
516 N. Tejon St.
Colorado Springs, CO
(719) 633-2868

LSC Transportation Consultants, Inc.

File Name : Roller Coaster Rd- Higby Rd AM
Site Code : 00134711
Start Date : 11/04/2015
Page No : 1

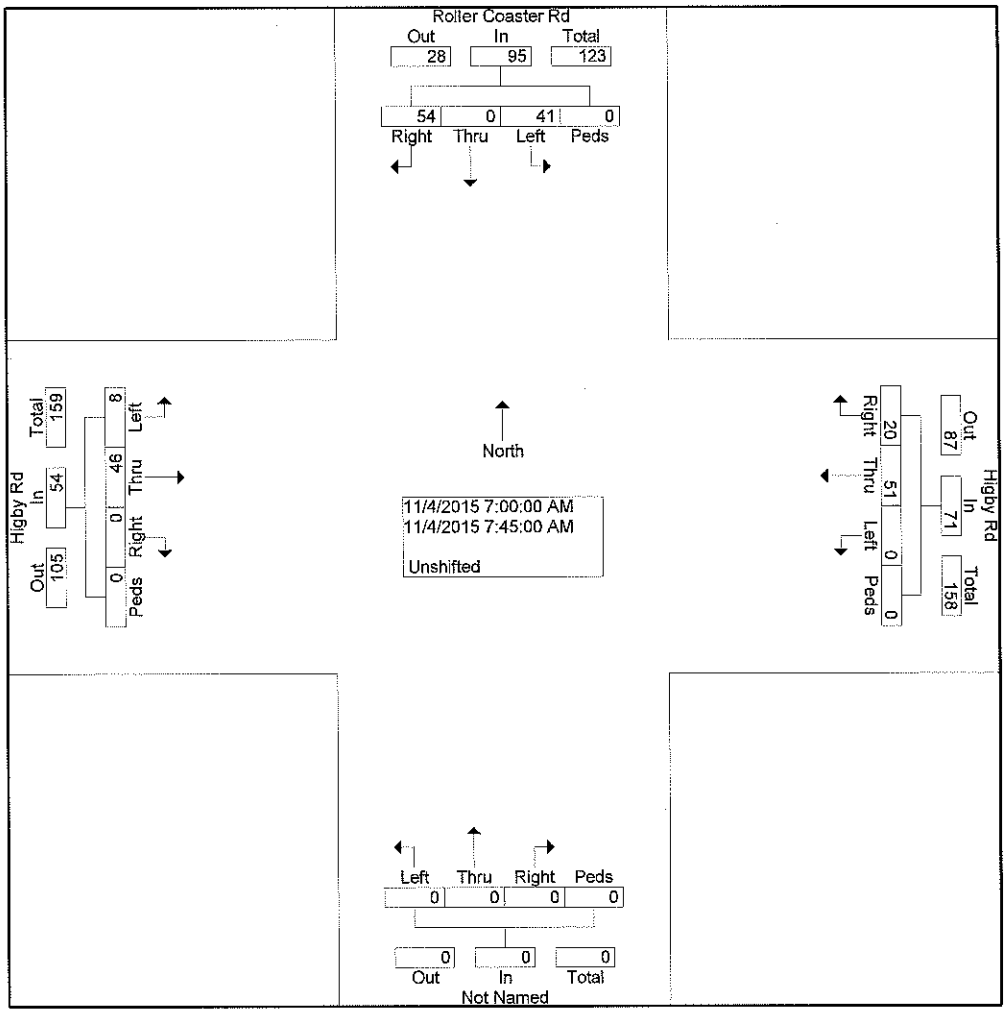
Groups Printed- Unshifted

	Roller Coaster Rd From North				Higby Rd From East				From South				Higby Rd From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	2	0	4	0	0	7	0	0	0	0	0	0	0	6	1	0	20
06:45 AM	4	0	8	0	3	7	0	0	0	0	0	0	0	10	0	0	32
Total	6	0	12	0	3	14	0	0	0	0	0	0	0	16	1	0	52
07:00 AM	16	0	5	0	5	22	0	0	0	0	0	0	0	15	1	0	64
07:15 AM	28	0	14	0	5	19	0	0	0	0	0	0	0	8	2	0	76
07:30 AM	3	0	11	0	7	4	0	0	0	0	0	0	0	17	4	0	46
07:45 AM	7	0	11	0	3	6	0	0	0	0	0	0	0	6	1	0	34
Total	54	0	41	0	20	51	0	0	0	0	0	0	0	46	8	0	220
08:00 AM	2	0	5	0	6	5	0	0	0	0	0	0	0	4	4	0	26
08:15 AM	0	0	4	0	4	3	0	0	0	0	0	0	0	8	4	0	23
Grand Total	62	0	62	0	33	73	0	0	0	0	0	0	0	74	17	0	321
Apprch %	50.0	0.0	50.0	0.0	31.1	68.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.3	18.7	0.0	
Total %	19.3	0.0	19.3	0.0	10.3	22.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1	5.3	0.0	

LSC Transportation Consultants, Inc.
516 N. Tejon St.
Colorado Springs, CO
(719) 633-2868

File Name : Roller Coaster Rd- Higby Rd AM
Site Code : 00134711
Start Date : 11/04/2015
Page No : 2

	Roller Coaster Rd From North					Higby Rd From East					From South					Higby Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	54	0	41	0	95	20	51	0	0	71	0	0	0	0	0	0	46	8	0	54	220
Percent	56.8	0.0	43.2	0.0		28.2	71.8	0.0	0.0		0.0	0.0	0.0	0.0		0.0	85.2	14.8	0.0		
07:15 Volume	28	0	14	0	42	5	19	0	0	24	0	0	0	0	0	0	8	2	0	10	76
Peak Factor																					0.724
High Int.	07:15 AM					07:00 AM					6:15:00 AM					07:30 AM					
Volume	28	0	14	0	42	5	22	0	0	27	0	0	0	0	0	0	17	4	0	21	
Peak Factor					0.565					0.657										0.643	



LSC Transportation Consultants, Inc.
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Colorado Springs, CO
(719) 633-2868

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File Name : Roller Coaster Rd- Higby Rd PM
Site Code : 00134711
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Groups Printed- Unshifted

	Roller Coaster Rd From North				Higby Rd From East				From South				Higby Rd From West				
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Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	5	0	7	0	8	8	0	0	0	0	0	0	0	6	5	0	39
04:15 PM	2	0	3	0	10	8	0	0	0	0	0	0	0	4	3	0	30
04:30 PM	4	0	6	0	4	9	0	0	0	0	0	0	0	5	9	0	37
04:45 PM	2	0	5	0	5	6	0	0	0	0	0	0	0	7	5	0	30
Total	13	0	21	0	27	31	0	0	0	0	0	0	0	22	22	0	136
05:00 PM	8	0	4	0	8	11	0	0	0	0	0	0	0	8	8	0	47
05:15 PM	6	0	1	0	5	5	0	0	0	0	0	0	0	10	2	0	29
05:30 PM	1	0	6	0	7	11	0	0	0	0	0	0	0	8	4	0	37
Grand Total	28	0	32	0	47	58	0	0	0	0	0	0	0	48	36	0	249
Apprch %	46.7	0.0	53.3	0.0	44.8	55.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.1	42.9	0.0	
Total %	11.2	0.0	12.9	0.0	18.9	23.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.3	14.5	0.0	

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File Name : Roller Coaster Rd- Higby Rd PM
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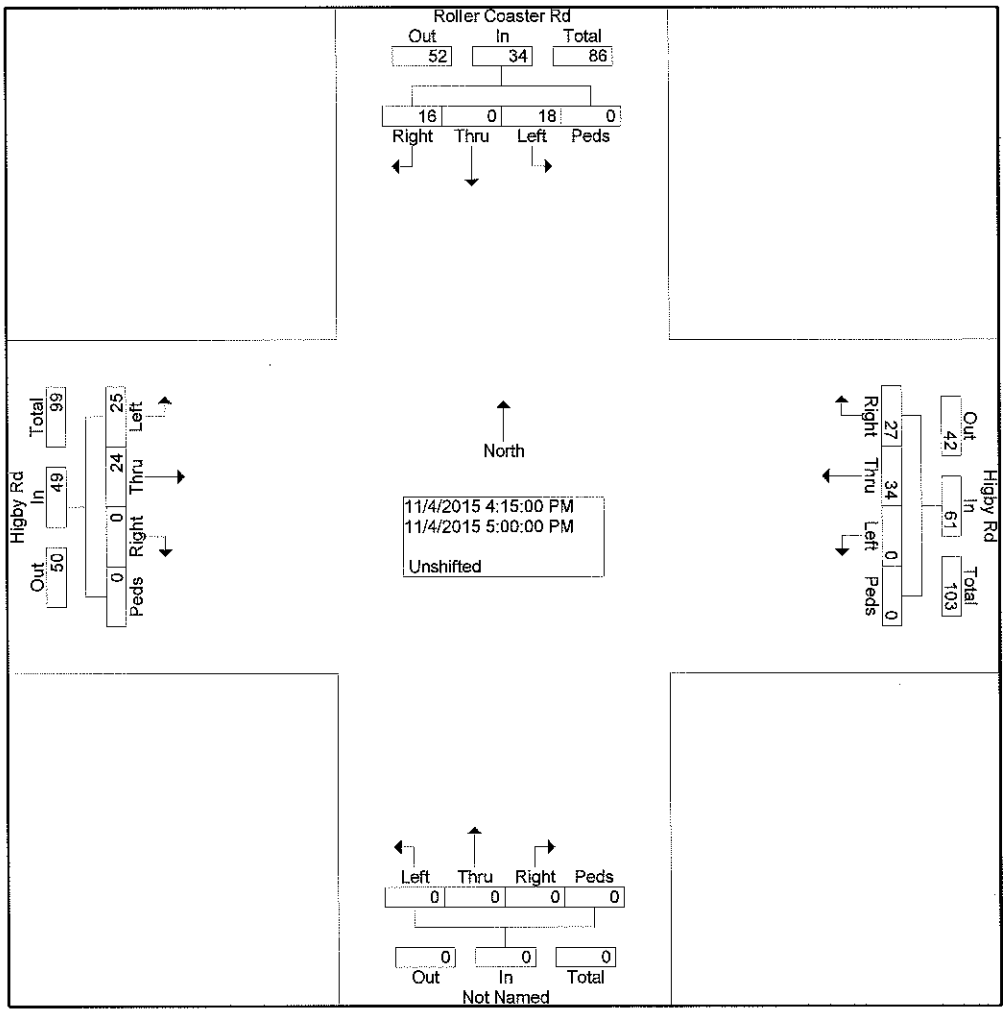
	Roller Coaster Rd From North					Higby Rd From East					From South					Higby Rd From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:30 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	16	0	18	0	34	27	34	0	0	61	0	0	0	0	0	0	24	25	0	49	144
Percent	47.1	0.0	52.9	0.0		44.3	55.7	0.0	0.0		0.0	0.0	0.0	0.0		0.0	49.0	51.0	0.0		
05:00 Volume	8	0	4	0	12	8	11	0	0	19	0	0	0	0	0	0	8	8	0	16	47
Peak Factor																					0.766
High Int.	05:00 PM					05:00 PM					3:45:00 PM					05:00 PM					
Volume	8	0	4	0	12	8	11	0	0	19	0	0	0	0	0	0	8	8	0	16	
Peak Factor					0.708					0.803										0.766	



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File Name : Roller Coaster Rd - Charter Pines Dr AM
Site Code : 00134711
Start Date : 11/04/2015
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Groups Printed- Unshifted

	Rollercoaster Rd From North				From East				Rollercoaster Rd From South				Charter Pines Dr From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
06:30 AM	0	4	0	0	0	0	0	0	0	1	0	0	2	0	0	0	7
06:45 AM	0	10	0	0	0	0	0	0	0	3	0	0	2	0	0	0	15
Total	0	14	0	0	0	0	0	0	0	4	0	0	4	0	0	0	22
07:00 AM	0	15	0	0	0	0	0	0	0	4	1	0	4	0	1	0	25
07:15 AM	1	41	0	0	0	0	0	0	0	7	0	0	2	0	0	0	51
07:30 AM	0	11	0	0	0	0	0	0	0	11	0	0	4	0	0	0	26
07:45 AM	0	14	0	0	0	0	0	0	0	4	0	0	3	0	1	0	22
Total	1	81	0	0	0	0	0	0	0	26	1	0	13	0	2	0	124
08:00 AM	0	8	0	0	0	0	0	0	0	10	1	0	1	0	0	0	20
Grand Total	1	103	0	0	0	0	0	0	0	40	2	0	18	0	2	0	166
Apprch %	1.0	99.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	95.2	4.8	0.0	90.0	0.0	10.0	0.0	
Total %	0.6	62.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.1	1.2	0.0	10.8	0.0	1.2	0.0	

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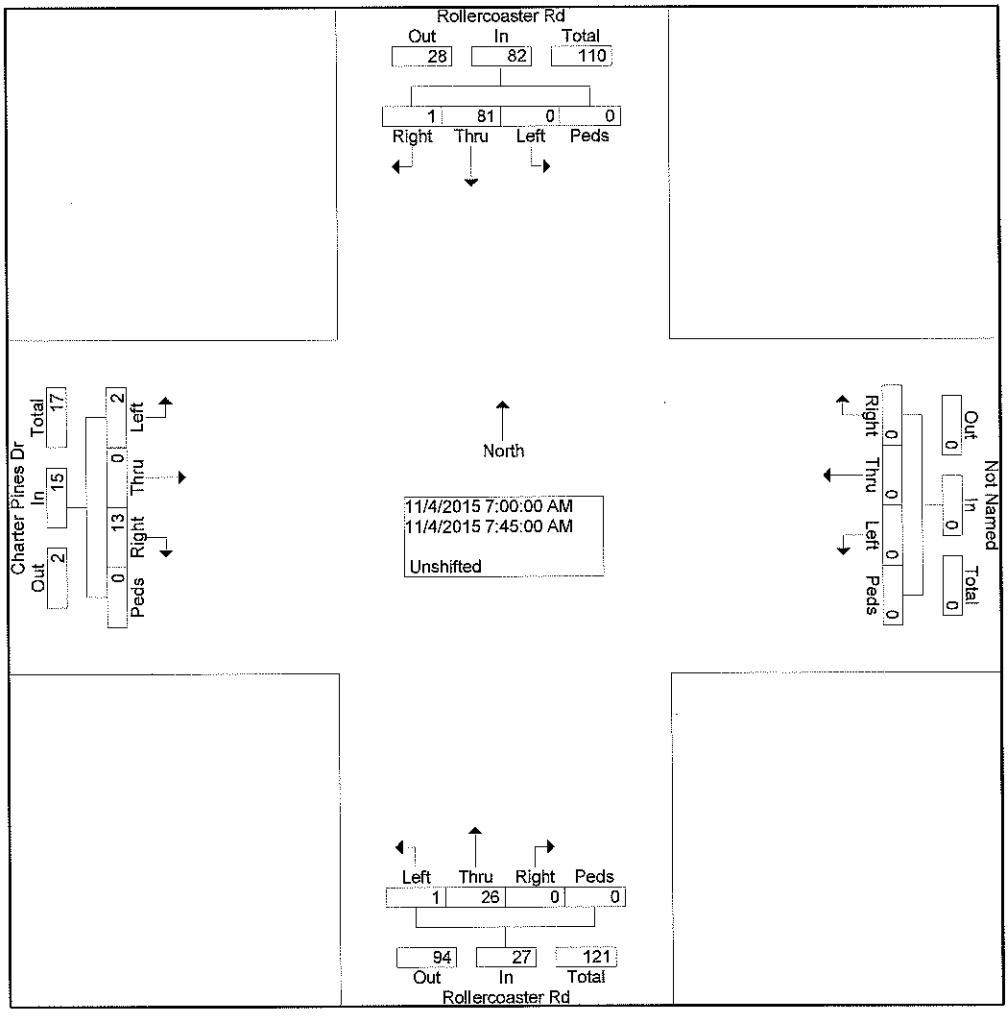
File Name : Roller Coaster Rd - Charter Pines Dr AM
Site Code : 00134711
Start Date : 11/04/2015

	Rollercoaster Rd From North					From East					Rollercoaster Rd From South					Charter Pines Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 06:30 AM to 08:00 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	1	81	0	0	82	0	0	0	0	0	0	26	1	0	27	13	0	2	0	15	124
Percent	1.2	98.8	0.0	0.0		0.0	0.0	0.0	0.0		0.0	96.3	3.7	0.0		86.7	0.0	13.3	0.0		
07:15 Volume	1	41	0	0	42	0	0	0	0	0	0	7	0	0	7	2	0	0	0	2	51
Peak Factor																					0.608
High Int.	07:15 AM					6:15:00 AM					07:30 AM					07:00 AM					
Volume	1	41	0	0	42	0	0	0	0	0	0	11	0	0	11	4	0	1	0	5	
Peak Factor					0.488										0.614					0.750	



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File Name : Roller Coaster Rd - Charter Pines Dr PM
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Groups Printed- Unshifted

	Roller Coaster Rd From North				From East				Roller Coaster Rd From South				Charter Pines Dr From West				
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
04:00 PM	0	10	0	0	0	0	0	0	0	11	1	0	2	0	0	0	24
04:15 PM	0	4	0	0	0	0	0	0	0	13	2	0	1	0	0	0	20
04:30 PM	0	8	0	0	0	0	0	0	0	12	1	0	1	0	0	0	22
04:45 PM	0	8	0	0	0	0	0	0	0	9	1	0	0	0	0	0	18
Total	0	30	0	0	0	0	0	0	0	45	5	0	4	0	0	0	84
05:00 PM	0	11	0	0	0	0	0	0	0	12	3	0	1	0	0	0	27
05:15 PM	1	7	0	0	0	0	0	0	0	5	2	0	0	0	0	0	15
05:30 PM	0	6	0	0	0	0	0	0	0	7	4	0	1	0	0	0	18
Grand Total	1	54	0	0	0	0	0	0	0	69	14	0	6	0	0	0	144
Apprch %	1.8	98.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.1	16.9	0.0	100.0	0.0	0.0	0.0	
Total %	0.7	37.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.9	9.7	0.0	4.2	0.0	0.0	0.0	

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File Name : Roller Coaster Rd - Charter Pines Dr PM
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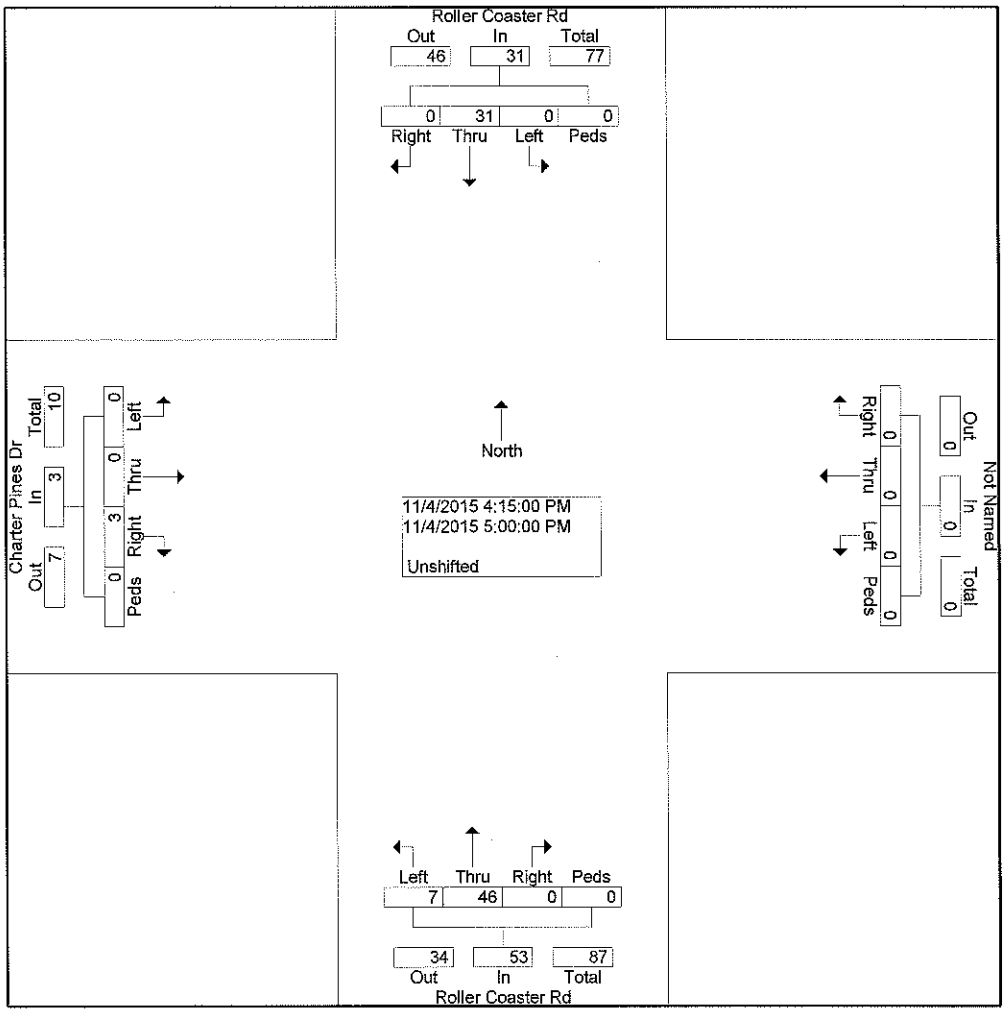
	Roller Coaster Rd From North					From East					Roller Coaster Rd From South					Charter Pines Dr From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:30 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	0	31	0	0	31	0	0	0	0	0	0	46	7	0	53	3	0	0	0	3	87
Percent	0.0	100.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	86.8	13.2	0.0		100.0	0.0	0.0	0.0		
05:00 Volume	0	11	0	0	11	0	0	0	0	0	0	12	3	0	15	1	0	0	0	1	27
Peak Factor																					0.806
High Int.	05:00 PM					3:45:00 PM					04:15 PM					04:15 PM					
Volume	0	11	0	0	11	0	0	0	0	0	0	13	2	0	15	1	0	0	0	1	
Peak Factor					0.705										0.883					0.750	



Intersection	
Int Delay, s/veh	5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	8	46	51	20	41	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	74	74	57	57
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	46	69	27	72	95

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	96	0	-	0	144	82
Stage 1	-	-	-	-	82	-
Stage 2	-	-	-	-	62	-
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	1498	-	-	-	849	978
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	961	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1498	-	-	-	845	978
Mov Cap-2 Maneuver	-	-	-	-	845	-
Stage 1	-	-	-	-	941	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1498	-	-	-	916
HCM Lane V/C Ratio	0.005	-	-	-	0.182
HCM Control Delay (s)	7.4	0	-	-	9.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	2	13	1	26	81	1
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	100	100	96	96	49	49
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	13	1	27	165	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	195	166	167	0	-	0
Stage 1	166	-	-	-	-	-
Stage 2	29	-	-	-	-	-
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	794	878	1411	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	994	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	793	878	1411	-	-	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	993	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1411	-	866	-	-
HCM Lane V/C Ratio	0.001	-	0.017	-	-
HCM Control Delay (s)	7.6	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	25	24	34	27	18	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	80	80	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	31	42	34	25	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	76	0	-	0	155	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	96	-
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	1523	-	-	-	836	1007
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	928	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1523	-	-	-	818	1007
Mov Cap-2 Maneuver	-	-	-	-	818	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	909	-

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1523	-	-	-	897
HCM Lane V/C Ratio	0.021	-	-	-	0.053
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	3	7	46	31	0
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	75	75	88	88	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	8	52	44	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	112	44	44	0	-	0
Stage 1	44	-	-	-	-	-
Stage 2	68	-	-	-	-	-
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	885	1026	1564	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	881	1026	1564	-	-	-
Mov Cap-2 Maneuver	881	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1564	-	1026	-	-
HCM Lane V/C Ratio	0.005	-	0.004	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	9	47	55	24	47	56
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	74	74	57	57
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	47	74	32	82	98

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	107	0	-	0	156	91
Stage 1	-	-	-	-	91	-
Stage 2	-	-	-	-	65	-
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	1484	-	-	-	835	967
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	958	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1484	-	-	-	830	967
Mov Cap-2 Maneuver	-	-	-	-	830	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	952	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1484	-	-	-	899
HCM Lane V/C Ratio	0.006	-	-	-	0.201
HCM Control Delay (s)	7.4	0	-	-	10
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	94	0	1	72	3	1	0	3	10	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	74	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	102	0	1	97	3	1	0	3	11	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	101	0	0	102	0	0	211	210	102	209	208	99
Stage 1	-	-	-	-	-	-	107	107	-	101	101	-
Stage 2	-	-	-	-	-	-	104	103	-	108	107	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1491	-	-	1490	-	-	746	687	953	748	689	957
Stage 1	-	-	-	-	-	-	898	807	-	905	811	-
Stage 2	-	-	-	-	-	-	902	810	-	897	807	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1491	-	-	1490	-	-	741	686	953	744	688	957
Mov Cap-2 Maneuver	-	-	-	-	-	-	741	686	-	744	688	-
Stage 1	-	-	-	-	-	-	897	806	-	904	810	-
Stage 2	-	-	-	-	-	-	896	809	-	893	806	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	9.1	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	889	1491	-	-	1490	-	-	804
HCM Lane V/C Ratio	0.005	0.001	-	-	0.001	-	-	0.02
HCM Control Delay (s)	9.1	7.4	0	-	7.4	0	-	9.6
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	0	13	5	0	1	1	28	2	0	82	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	92	100	92	92	92	96	96	92	92	49	49
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	13	5	0	1	1	29	2	0	167	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	201	201	168	207	201	30	169	0	0	31	0	0
Stage 1	168	168	-	32	32	-	-	-	-	-	-	-
Stage 2	33	33	-	175	169	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	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	-	-	2.218	-	-
Pot Cap-1 Maneuver	757	695	876	751	695	1044	1409	-	-	1582	-	-
Stage 1	834	759	-	984	868	-	-	-	-	-	-	-
Stage 2	983	868	-	827	759	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	756	694	876	739	694	1044	1409	-	-	1582	-	-
Mov Cap-2 Maneuver	756	694	-	739	694	-	-	-	-	-	-	-
Stage 1	833	759	-	983	867	-	-	-	-	-	-	-
Stage 2	981	867	-	815	759	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	9.7	0.2	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1409	-	-	858	777	1582	-	-
HCM Lane V/C Ratio	0.001	-	-	0.017	0.008	-	-	-
HCM Control Delay (s)	7.6	0	-	9.3	9.7	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	28	29	37	35	24	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	80	80	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	36	38	46	44	34	25

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	90	0	-	0	178	68
Stage 1	-	-	-	-	68	-
Stage 2	-	-	-	-	110	-
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	1505	-	-	-	812	995
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1505	-	-	-	793	995
Mov Cap-2 Maneuver	-	-	-	-	793	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	893	-

Approach	EB	WB	SB
HCM Control Delay, s	3.7	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1505	-	-	-	869
HCM Lane V/C Ratio	0.024	-	-	-	0.068
HCM Control Delay (s)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	46	1	3	67	11	1	0	3	7	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	77	92	92	80	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	60	1	3	84	12	1	0	3	8	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	96	0	0	61	0	0	171	175	60	171	170	90
Stage 1	-	-	-	-	-	-	73	73	-	96	96	-
Stage 2	-	-	-	-	-	-	98	102	-	75	74	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1498	-	-	1542	-	-	792	718	1005	792	723	968
Stage 1	-	-	-	-	-	-	937	834	-	911	815	-
Stage 2	-	-	-	-	-	-	908	811	-	934	833	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1498	-	-	1542	-	-	784	713	1005	785	718	968
Mov Cap-2 Maneuver	-	-	-	-	-	-	784	713	-	785	718	-
Stage 1	-	-	-	-	-	-	932	830	-	906	813	-
Stage 2	-	-	-	-	-	-	902	809	-	926	829	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.2	8.9	9.3
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	939	1498	-	-	1542	-	-	843
HCM Lane V/C Ratio	0.005	0.004	-	-	0.002	-	-	0.014
HCM Control Delay (s)	8.9	7.4	0	-	7.3	0	-	9.3
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	3	4	0	0	7	47	5	1	33	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	92	75	92	92	92	88	88	92	92	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	4	0	0	8	53	5	1	47	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	121	124	47	123	121	56	47	0	0	59	0	0
Stage 1	49	49	-	72	72	-	-	-	-	-	-	-
Stage 2	72	75	-	51	49	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	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	-	-	2.218	-	-
Pot Cap-1 Maneuver	854	766	1022	852	769	1011	1560	-	-	1545	-	-
Stage 1	964	854	-	938	835	-	-	-	-	-	-	-
Stage 2	938	833	-	962	854	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	850	761	1022	845	764	1011	1560	-	-	1545	-	-
Mov Cap-2 Maneuver	850	761	-	845	764	-	-	-	-	-	-	-
Stage 1	959	853	-	933	831	-	-	-	-	-	-	-
Stage 2	933	829	-	957	853	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.5	9.3	0.9	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1560	-	-	1022	845	1545	-	-
HCM Lane V/C Ratio	0.005	-	-	0.004	0.005	0.001	-	-
HCM Control Delay (s)	7.3	0	-	8.5	9.3	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	10	90	100	31	67	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	225	-	-	225	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	74	74	57	57
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	90	135	42	118	151

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	135	0	-	0	245	135
Stage 1	-	-	-	-	135	-
Stage 2	-	-	-	-	110	-
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	1449	-	-	-	743	914
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1449	-	-	-	738	914
Mov Cap-2 Maneuver	-	-	-	-	738	-
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	909	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1449	-	-	-	828
HCM Lane V/C Ratio	0.007	-	-	-	0.324
HCM Control Delay (s)	7.5	-	-	-	11.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.4

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	158	0	1	130	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	92	92	80	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	205	0	1	162	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	205	0	370	205
Stage 1	-	-	-	-	205	-
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	-	-	1366	-	630	836
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1366	-	629	836
Mov Cap-2 Maneuver	-	-	-	-	629	-
Stage 1	-	-	-	-	829	-
Stage 2	-	-	-	-	863	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	772	-	-	1366	-
HCM Lane V/C Ratio	0.006	-	-	0.001	-
HCM Control Delay (s)	9.7	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	2	13	1	39	137	1
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	100	100	96	96	49	49
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	13	1	41	280	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	324	281	282	0	-	0
Stage 1	281	-	-	-	-	-
Stage 2	43	-	-	-	-	-
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	670	758	1280	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	669	758	1280	-	-	-
Mov Cap-2 Maneuver	669	-	-	-	-	-
Stage 1	767	-	-	-	-	-
Stage 2	978	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1280	-	745	-	-
HCM Lane V/C Ratio	0.001	-	0.02	-	-
HCM Control Delay (s)	7.8	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	41	50	70	43	31	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	225	-	-	225	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	80	80	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	65	88	54	44	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	259	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	171	-
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	1508	-	-	-	730	970
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1508	-	-	-	704	970
Mov Cap-2 Maneuver	-	-	-	-	704	-
Stage 1	-	-	-	-	935	-
Stage 2	-	-	-	-	829	-

Approach	EB	WB	SB
HCM Control Delay, s	3.4	0	10
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1508	-	-	-	805
HCM Lane V/C Ratio	0.035	-	-	-	0.1
HCM Control Delay (s)	7.5	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	81	1	3	112	1	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	92	92	80	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	1	3	140	1	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	106	0	253	106
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	147	-
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	-	-	1485	-	736	948
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1485	-	735	948
Mov Cap-2 Maneuver	-	-	-	-	735	-
Stage 1	-	-	-	-	918	-
Stage 2	-	-	-	-	878	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	884	-	-	1485	-
HCM Lane V/C Ratio	0.005	-	-	0.002	-
HCM Control Delay (s)	9.1	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	3	7	73	53	0
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	75	75	88	88	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	4	8	83	76	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	175	76	76	0	-	0
Stage 1	76	-	-	-	-	-
Stage 2	99	-	-	-	-	-
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	815	985	1523	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	810	985	1523	-	-	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	919	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1523	-	985	-	-
HCM Lane V/C Ratio	0.005	-	0.004	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	11	91	104	34	71	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	225	-	-	225	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	100	100	74	74	57	57
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	91	141	46	125	153

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	141	0	-	0	254	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	113	-
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	1442	-	-	-	735	907
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	912	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1442	-	-	-	729	907
Mov Cap-2 Maneuver	-	-	-	-	729	-
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	905	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1442	-	-	-	817
HCM Lane V/C Ratio	0.008	-	-	-	0.339
HCM Control Delay (s)	7.5	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	1.5

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	162	0	1	131	3	1	0	3	10	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	74	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	176	0	1	177	3	1	0	3	11	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	180	0	0	176	0	0	364	362	176	363	361	179
Stage 1	-	-	-	-	-	-	180	180	-	181	181	-
Stage 2	-	-	-	-	-	-	184	182	-	182	180	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1396	-	-	1400	-	-	592	565	867	593	566	864
Stage 1	-	-	-	-	-	-	822	750	-	821	750	-
Stage 2	-	-	-	-	-	-	818	749	-	820	750	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1396	-	-	1400	-	-	587	563	867	589	564	864
Mov Cap-2 Maneuver	-	-	-	-	-	-	587	563	-	589	564	-
Stage 1	-	-	-	-	-	-	820	749	-	819	749	-
Stage 2	-	-	-	-	-	-	812	748	-	815	749	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	9.7	10.6
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	775	1396	-	-	1400	-	-	659
HCM Lane V/C Ratio	0.006	0.002	-	-	0.001	-	-	0.025
HCM Control Delay (s)	9.7	7.6	0	-	7.6	0	-	10.6
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	2	0	13	5	0	1	1	41	2	0	138	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	92	100	92	92	92	96	96	92	92	49	49
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	13	5	0	1	1	43	2	0	282	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	329	330	283	335	330	44	284	0	0	45	0	0
Stage 1	283	283	-	46	46	-	-	-	-	-	-	-
Stage 2	46	47	-	289	284	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	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	-	-	2.218	-	-
Pot Cap-1 Maneuver	624	589	756	619	589	1026	1278	-	-	1563	-	-
Stage 1	724	677	-	968	857	-	-	-	-	-	-	-
Stage 2	968	856	-	719	676	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	623	588	756	608	588	1026	1278	-	-	1563	-	-
Mov Cap-2 Maneuver	623	588	-	608	588	-	-	-	-	-	-	-
Stage 1	723	677	-	967	856	-	-	-	-	-	-	-
Stage 2	966	855	-	707	676	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	10.6	0.2	0
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1278	-	-	735	652	1563	-	-
HCM Lane V/C Ratio	0.001	-	-	0.02	0.01	-	-	-
HCM Control Delay (s)	7.8	0	-	10	10.6	0	-	-
HCM Lane LOS	A	A	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	43	55	73	48	36	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	225	-	-	225	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	80	80	71	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	56	71	91	60	51	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	91	0	-	0	274	91
Stage 1	-	-	-	-	91	-
Stage 2	-	-	-	-	183	-
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	1504	-	-	-	716	967
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1504	-	-	-	689	967
Mov Cap-2 Maneuver	-	-	-	-	689	-
Stage 1	-	-	-	-	933	-
Stage 2	-	-	-	-	816	-

Approach	EB	WB	SB
HCM Control Delay, s	3.3	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1504	-	-	-	786
HCM Lane V/C Ratio	0.037	-	-	-	0.113
HCM Control Delay (s)	7.5	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	84	1	3	116	11	1	0	3	7	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	77	92	92	80	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	109	1	3	145	12	1	0	3	8	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	157	0	0	110	0	0	283	286	110	282	281	151
Stage 1	-	-	-	-	-	-	123	123	-	158	158	-
Stage 2	-	-	-	-	-	-	160	163	-	124	123	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
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	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1423	-	-	1480	-	-	669	623	943	670	627	895
Stage 1	-	-	-	-	-	-	881	794	-	844	767	-
Stage 2	-	-	-	-	-	-	842	763	-	880	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1423	-	-	1480	-	-	662	619	943	664	623	895
Mov Cap-2 Maneuver	-	-	-	-	-	-	662	619	-	664	623	-
Stage 1	-	-	-	-	-	-	877	790	-	840	765	-
Stage 2	-	-	-	-	-	-	836	761	-	873	790	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.2	9.2	10
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	853	1423	-	-	1480	-	-	733
HCM Lane V/C Ratio	0.005	0.005	-	-	0.002	-	-	0.016
HCM Control Delay (s)	9.2	7.5	0	-	7.4	0	-	10
HCM Lane LOS	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	3	4	0	0	7	74	5	1	54	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	92	75	92	92	92	88	88	92	92	70	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	4	0	0	8	84	5	1	77	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	182	184	77	184	182	87	77	0	0	90	0	0
Stage 1	79	79	-	103	103	-	-	-	-	-	-	-
Stage 2	103	105	-	81	79	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	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	-	-	2.218	-	-
Pot Cap-1 Maneuver	779	710	984	777	712	971	1522	-	-	1505	-	-
Stage 1	930	829	-	903	810	-	-	-	-	-	-	-
Stage 2	903	808	-	927	829	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	775	705	984	770	707	971	1522	-	-	1505	-	-
Mov Cap-2 Maneuver	775	705	-	770	707	-	-	-	-	-	-	-
Stage 1	924	828	-	898	805	-	-	-	-	-	-	-
Stage 2	898	803	-	922	828	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.7	9.7	0.6	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1522	-	-	984	770	1505	-	-
HCM Lane V/C Ratio	0.005	-	-	0.004	0.006	0.001	-	-
HCM Control Delay (s)	7.4	0	-	8.7	9.7	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Markup Summary

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Since there are no significant changes to Jackson Ranch Filings 2, 3, and 4 compared to the approved traffic study for the preliminary plan (from 27 lots to 25 lots). and the approved TIS dated May 9, 2016 is less than three years, the TIS is acceptable.

Replace the submitted TIS with the approved Transportation Memorandum Update by LSC dated May 9, 2016 for Jackson Ranch Filings 2-5.

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