Milano PUD Commercial

Traffic Impact Analysis

Prepared for:
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November 2023

Milano PUD Commercial
Traffic Impact Analysis

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Professional Engineer's Certification

I hereby certify that I am a Licensed Professional Engineer in the State of Florida practicing with Stantec Consulting Services Inc. and that I have supervised the preparation of and approve the evaluations, findings, opinions, conclusions, and technical advice hereby reported for:

PROJECT: Milano PUD Commercial
Traffic Impact Analysis
215811383

LOCATION: Southwest corner of the Laurel Road & Jacaranda Boulevard intersection, Venice, Florida

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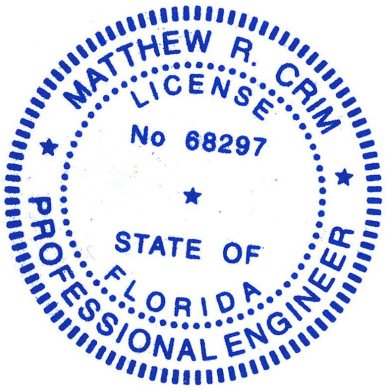

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Introduction

The purpose of this study is to determine the transportation impacts of the proposed Milano Planned Unit Development (PUD) Commercial project located at the southwest corner of the Laurel Road & Jacaranda Boulevard intersection. The project location is shown in **Figure 1** and the site plan is attached in **Appendix A**.

Figure 1: Project Location

The property is currently vacant. The petitioner proposes to construct 70,240 square feet of commercial land uses. The commercial development consists of a 50,325 square-foot grocery store, a 2,100 square-foot liquor store, 8,950 square feet of retail, and 8,865 square feet of restaurants. The development will have four access points, a right-in/right-out connection to Laurel Road, a full access connection to Laurel Road across from Veneto Boulevard, a right-in/right-out connection to Jacaranda Boulevard, and a full access connection to Jacaranda

Boulevard. The build-out year for the development is 2028. Prior to undertaking the study, a methodology statement was submitted to the City of Venice on October 2, 2023 and approved on October 9, 2023. A copy of the approved methodology is attached in **Appendix B**.

Trip Generation

Traffic volumes generated by the project were estimated using the Institute of Transportation Engineers (ITE), *Trip Generation Manual – the 11th Edition (2021)*. Land Use Code (LUC) 822 (Strip Retail Plaza (<40k)), LUC 850 (Supermarket), LUC 899 (Liquor Store), LUC 932 (High-Turnover (Sit-Down) Restaurant), and LUC 934 (Fast-Food Restaurant with Drive-Through Window) were used to estimate the trip generation potential. To account for the interaction between land uses, internal capture and pass-by capture were estimated. Internal capture percentages between mixed-use land uses were obtained from Table 6.1 and Table 6.2 on pages 57 and 58 of the ITE *Trip Generation Handbook, 3rd Edition*. Pass-by capture was estimated based on information contained in the ITE *Trip Generation Manual – the 11th Edition*.

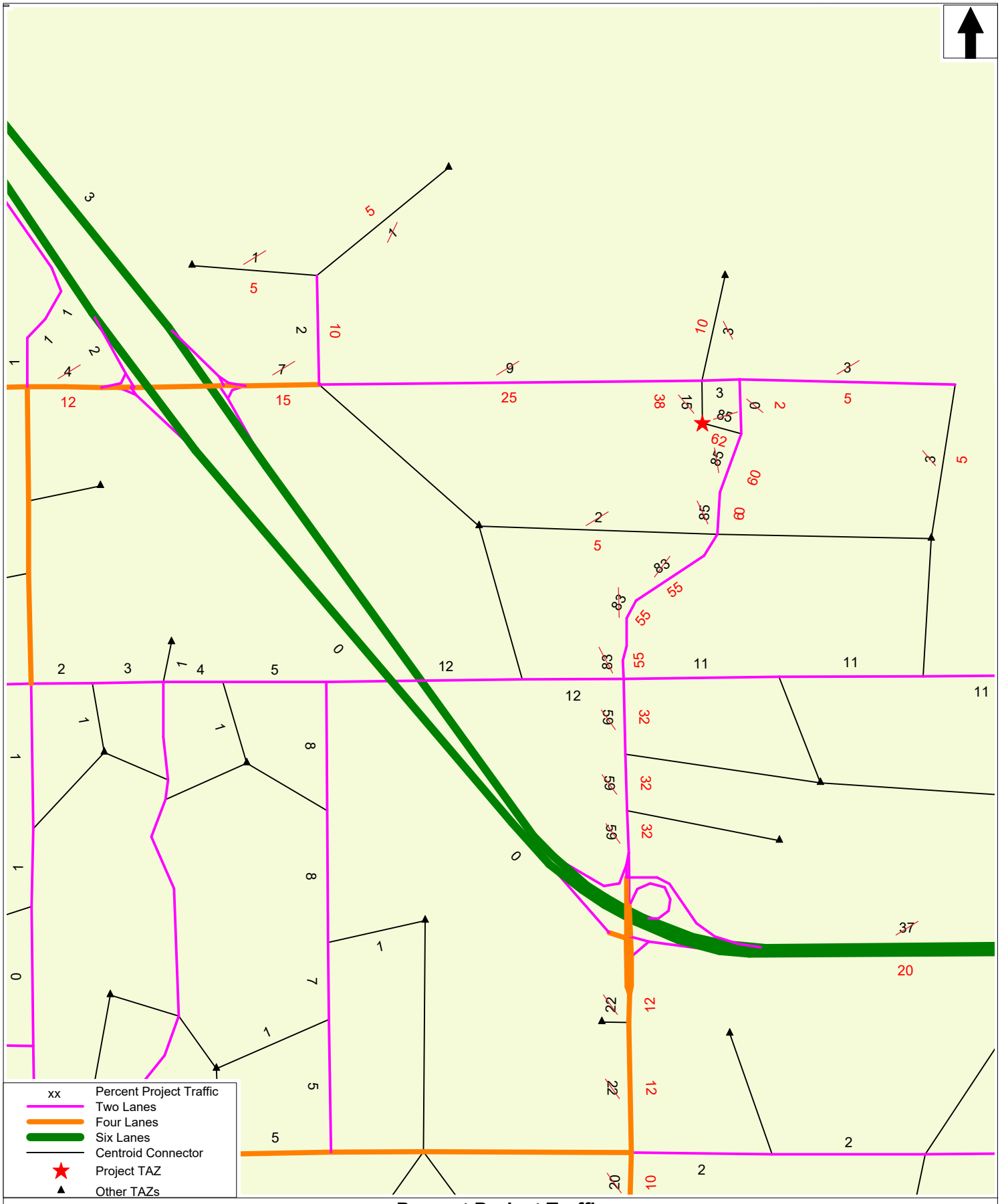
Because LUC 822 does not have any pass-by capture information contained in the ITE *Trip Generation Manual*, the pass-by capture was estimated using the pass-by capture rate for LUC 821. LUC 899 also does not have any pass-by capture information. Given that the liquor store is associated with the grocery store, pass-by capture would be expected to be similar to that of the grocery store, if not higher. Pass-by trips were checked to ensure that they do not exceed 10% of the future adjacent street traffic (background traffic conditions). Background traffic volumes approaching the site are estimated to be 1,853 vehicles per hour. To ensure that the pass-by capture did not exceed 10% of the future adjacent street traffic, the liquor store pass-by capture was limited to 5%. **Table 1** summarizes the PM peak-hour trip generation. The detailed trip generation and internal capture calculations are attached in **Appendix C**.

Table 1: PM Peak-Hour Trip Generation

ITE Land Use Category	Development Size	PM Peak Total Trips			Internal Capture %	Pass-by %	New External Trips		
		Total	Enter	Exit			Total	Enter	Exit
Strip Retail Plaza (<40k) - 822	8,950 sf	72	36	36	11%	40%	38	19	19
Supermarket - 850	50,325 sf	443	222	221	11%	24%	300	148	152
Liquor Store - 899	2,100 sf	71	35	36	11%	5%	60	30	30
High-Turnover (Sit-Down) Restaurant - 932	4,5253 sf	41	25	16	34%	43%	15	10	5
Fast-Food Restaurant with Drive-Through Window - 934	4,340 sf	143	74	69	35%	50%	46	25	21
	TOTALS	**770**	**392**	**378**	**17%**	**24%**	**459**	**232**	**227**

Project Traffic Distribution/Assignment

The traffic generated by the project was distributed and assigned to the adjacent roadway network using a combination of existing traffic volumes and the FDOT District 1 2023 Existing plus Committed Regional Planning Model with 2045 socioeconomic data. Based on the existing traffic volumes on Laurel Road and Jacaranda Boulevard (shown in **Table 3**), 54% of the traffic is on Laurel Road and 46% of traffic is on Jacaranda Boulevard. Using those existing traffic volumes, a portion of the D1RPM distribution of project traffic on Jacaranda Boulevard south of the project was shifted to Laurel Road west of the project. Additionally, greater weight was given to the interaction between the commercial development and the Venetian Golf and River Club residential development on the north side of Laurel Road as well as other surrounding residential developments that the commercial development is intended to support. The D1RPM distribution is shown in **Figure 2** and the project traffic assignment is shown in **Figure 3**.



Percent Project Traffic
2023 Existing Plus Committed Network

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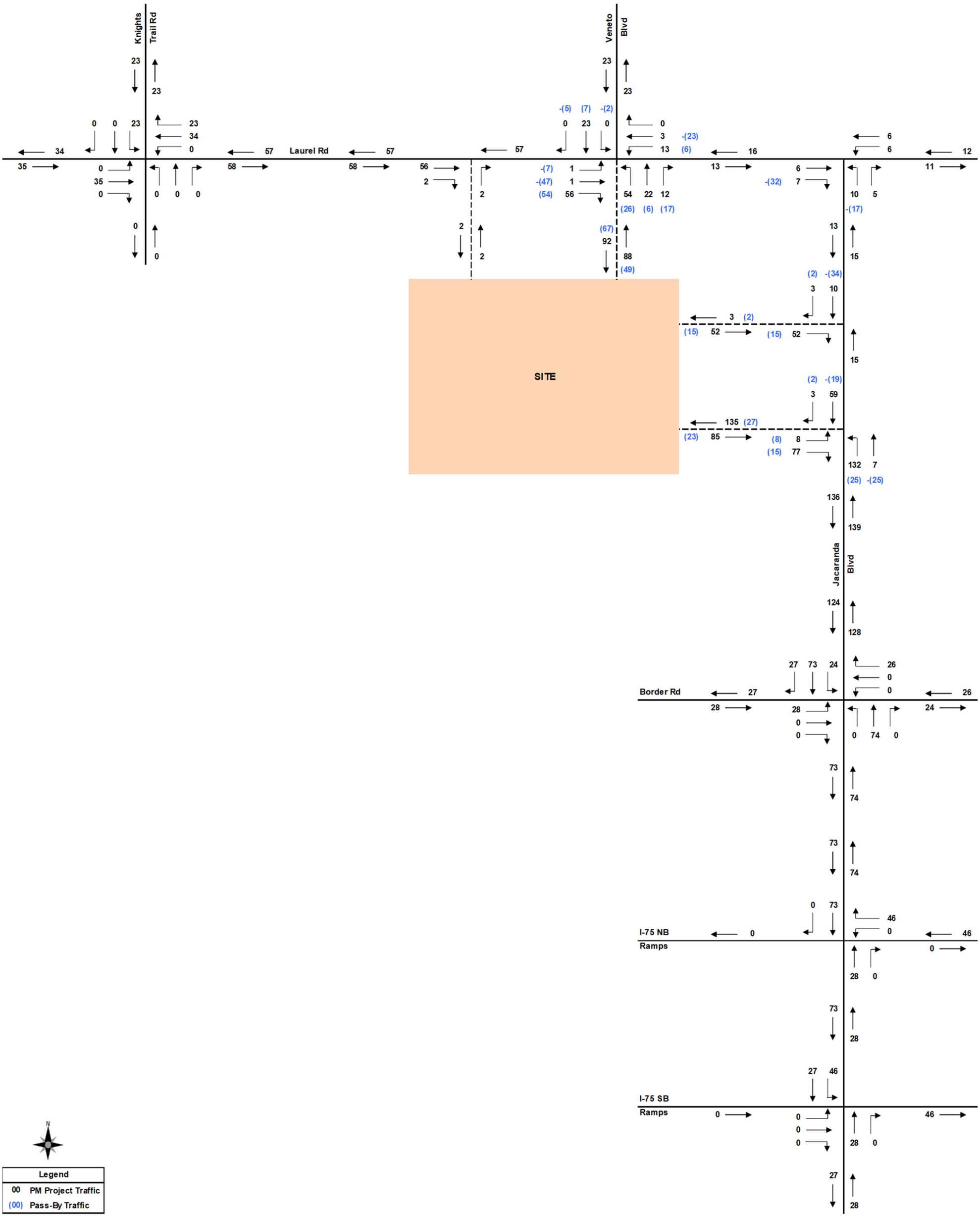


Figure 3: Project Traffic Assignment

Study Area

The study area consists of arterial and collector roads in which project traffic is expected to consume at least 4.5% of the peak-hour two-way level-of-service standard, any roadway segment to which the development has direct access, or which the development accesses via local and private roads. Maximum service volumes were obtained from Sarasota County's *Generalized Level of Service Analysis Tables*. The results of the study area determination are provided in **Table 2**. Per the City of Venice's criteria, three regulated roadway segments meet the significance threshold and were evaluated as part of this analysis.

Table 2: Study Area Determination

Road Name and Segment	Adopted LOS			Percent Project Traffic	New Project Traffic		Significant Impact? (>4.5%)	Direct Access?
	LOS Standard	Number of Lanes	Service Volume		Trips	% Impact		
Border Road								
Auburn Rd to Jacaranda Blvd	D	2	1,264	12%	55	4.35%	No	No
Jacaranda Blvd to Jackson Rd	D	2	1,120	11%	50	4.46%	No	No
I-75								
Laurel Rd to Jacaranda Blvd	D	6	10,060	0%	0	0.00%	No	No
Jacaranda Blvd to River Rd	D	6	10,060	20%	92	0.91%	No	No
Jacaranda Boulevard								
Laurel Rd to Border Rd	D	2	1,330	60%	275	20.68%	**Yes**	**Yes**
Border Rd to I-75	D	2	1,600	32%	147	9.19%	**Yes**	No
I-75 to Executive/Commercial	D	4	3,401	12%	55	1.62%	No	No
Knights Trail Road								
Laurel Rd to Rustic Rd	D	2	1,440	10%	46	3.19%	No	No
Laurel Road								
I-75 to Knights Trail Rd	D	4	3,401	15%	69	2.03%	No	No
Knights Trail Rd to Jacaranda Blvd	D	2	1,440	25%	115	7.99%	**Yes**	**Yes**
Jacaranda Blvd to Citadella Dr	D	2	1,440	5%	23	1.60%	No	No

Existing Traffic Conditions

Vehicle turning movement counts were conducted at the study area intersections on Thursday September 21, 2023. The turning movement counts were taken during the PM peak period (4:00 PM to 6:00 PM) to quantify existing PM peak-hour conditions. The turning movement counts were then adjusted by FDOT's peak-season conversion factor of 1.26. The existing PM peak-hour peak-season traffic volumes are shown in **Figure 4**. As part of the existing data collection, signal timing plans at the signalized intersections were obtained from Sarasota County. The peak-season factors, turning movement counts, and signal timing information are attached in **Appendix D**.

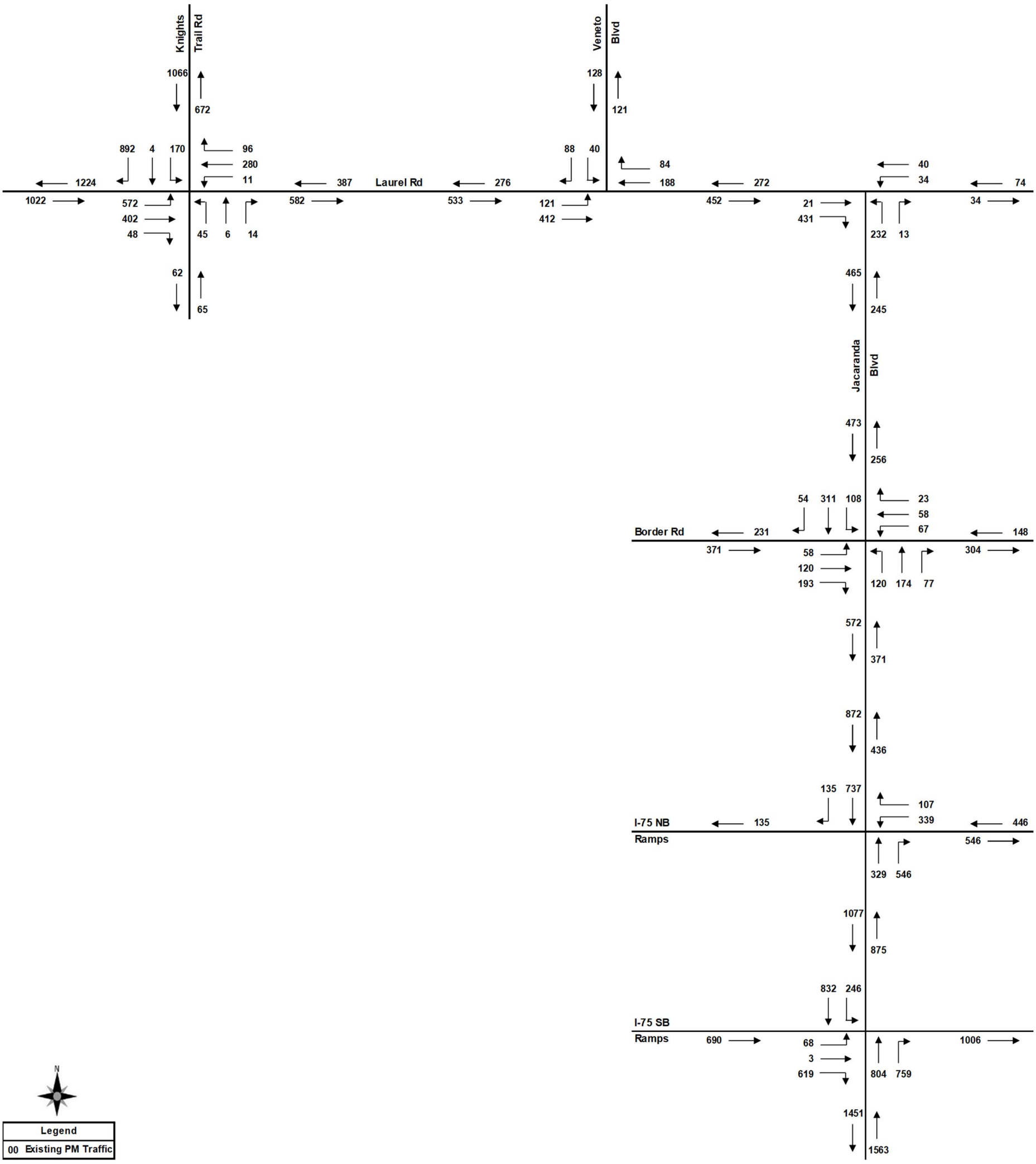


Figure 4: Existing PM Peak-Hour Peak-Season Traffic

ROADWAY ANALYSIS

Maximum service volumes were taken from Sarasota County's *Generalized Level of Service Analysis Tables*. Existing segment volumes were obtained from the peak-season traffic volumes entering/exiting the intersections during the peak-hour. The results of the 2023 existing level-of-service analysis are summarized in **Table 3** and indicate that all segments within the study area are operating within acceptable level-of-service standards.

Table 3: 2023 Existing Segment Conditions

Road Name and Segment	Adopted LOS			2023 Existing Traffic	Exceeds LOS?
	LOS Standard	Number of Lanes	Service Volume		
Jacaranda Boulevard					
Laurel Rd to Border Rd	D	2	1,330	720	No
Border Rd to I-75	D	2	1,600	1,126	No
Laurel Road					
Knights Trail Rd to Jacaranda Blvd	D	2	1,440	847	No

INTERSECTION ANALYSIS

The intersection analysis was performed using Trafficware's Synchro 11 Software (using HCM 6th Edition methodology). As part of the analysis, existing lane geometry was used at the study intersections. The City of Venice has an adopted level-of-service standard of D. Each movement was checked to ensure that the level-of-service D standard was met. In some cases, it is not realistic to improve an individual movement's level-of-service to D. In those cases, an explanation of why was provided. The results of the Synchro intersection analysis are summarized in **Table 4** and indicate that all the intersections are currently operating within acceptable level-of-service standards.

At the Knights Trail Road & Laurel Road intersection, the westbound left turn and northbound left turn movements are operating at level-of-service E; however, the maximum v/c ratio is only 0.30. The level-of-service E is to be expected for low volume movements at a signalized intersection that must allocate larger amounts of green time to serve higher volume movements. At the Jacaranda Boulevard & Border Road intersection, the southbound left turn/through movement is operating at level-of-service F. Converting the southbound shared left turn/through lane and exclusive right turn lane to an exclusive left turn lane and shared through/right turn lane would mitigate the level-of-service F conditions. At the Jacaranda Boulevard & I-75 NB Ramps intersection, the westbound left turn movement is operating at level-of-service E; however, the v/c ratio is only 0.79. Delays resulting in level-of-service E at unsignalized minor street approaches are not unexpected during peak periods. The intersection volume tables are provided in **Appendix E**. The 2023 existing Synchro intersection worksheets are provided in **Appendix F**.

Table 4: 2023 Existing Intersection Conditions

Intersection	Type	Overall Intersection LOS		Delay (sec/veh)	Max v/c Ratio	Approach LOS			
		Standard	Existing			EB	WB	NB	SB
Knights Trail Rd & Laurel Rd	Signalized	D	C	33.4	0.77	C	C	E	C
Veneto Blvd & Laurel Rd	TWSC	D	n/a	13.9[1]	0.17	A[2]	--[3]		B
Jacaranda Blvd & Laurel Rd	TWSC	D	n/a	14.9[1]	0.42	--[3]	A[2]	B	
Jacaranda Blvd & Border Rd	AWSC	D	D	33.7	0.94	D	C	C	F
Jacaranda Blvd & I-75 NB Ramps	TWSC	D	n/a	29.9[1]	0.79		D	--[3]	--[3]
Jacaranda Blvd & I-75 SB Ramps	Signalized	D	C	21.6	0.86	D		A	C

1. Delay shown for the worst approach.

2. Left-turn movement level-of-service.

3. No left-turn movement for approach.

Scheduled Improvements

The current Sarasota County and City of Venice Capital Improvement Programs (CIPs) and the FDOT Five Year Work Program were reviewed to identify any improvements scheduled in the first three years to be included in the background traffic analysis. One improvement was identified, the widening of Laurel Road from Knights Trail Road to Jacaranda Boulevard. As part of the widening, the Jacaranda Boulevard & Laurel Road intersection will be signalized. The relevant budget page from the City of Venice as well as the State funding application are provided in **Appendix G**. Please note that State funding for the Laurel Road widening project was not included in the Governor's veto list.

2028 Background Traffic Conditions

The background traffic conditions were analyzed for the build-out year of 2028. The background traffic conditions consist of the existing PM peak-hour peak-season traffic volumes, an annual background growth rate, and vested traffic volumes from approved projects. Consistent with previous studies, and agreed to during the methodology, a 2% annual growth rate was used.

Vested traffic was obtained from the City of Venice and includes traffic from the Generation at Venice, Hoskins Grove, Hotel 75, Rustic Road, Portofino, Toscana Isles, GCCF, Milano PUD, Nokomis Grove, SJMR, and Palencia developments. The vested traffic information is attached in **Appendix H**. The 2028 PM peak-hour background traffic volumes are shown in **Figure 5** as well as the intersection volume tables provided in **Appendix E**.

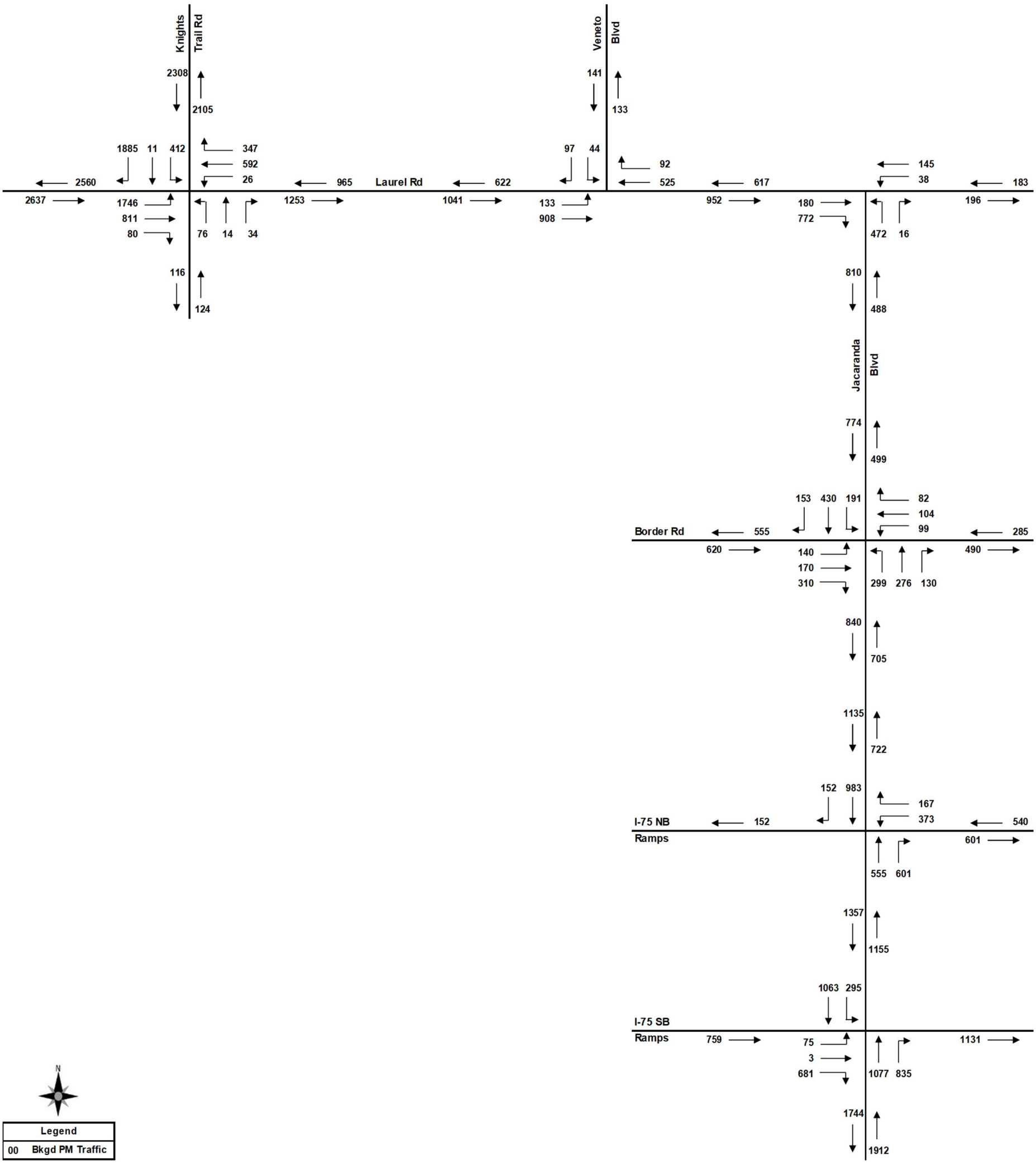


Figure 5: 2028 PM Peak-Hour Background Traffic

ROADWAY ANALYSIS

The results of the 2028 background traffic level-of-service analysis are summarized in **Table 5** and indicate that all segments within the study area are anticipated to continue to operate within acceptable level-of-service standards except for Jacaranda Boulevard from Border Road to I-75. The failure is due to the large amount of background growth, the majority of which is vested traffic.

Table 5: 2028 Background Traffic Segment Conditions

Road Name and Segment	Adopted LOS			2023 Existing Traffic	Bkgd Growth @2%	Vested Traffic[1]											2028 Bkgd Traffic	Exceeds LOS?
	LOS Standard	Number of Lanes	Service Volume			Gen. at Venice	Hoskins Grove	Hotel 75	Rustic Rd	Porto fino	Toscana Isles	GCCF	Milano PUD	Nokomis Grove	SJMR	Palencia		
Jacaranda Boulevard																		
Laurel Rd to Border Rd	D	2	1,330	720	72					346		4	101	31	3	9	1,286	No
Border Rd to I-75	D	2	1,600	1,126	113					109		191	58		69	35	1,701	**Yes**
Laurel Road[2]																		
Knights Trail Rd to Jacaranda Blvd	D	4	3,401	847	85	7	4	2	27	213	82	236	110	92	189		1,894	No

1. Volumes obtained from individual movements at the intersections; see Appendix E for additional detail.
2. Service volume obtained from adjacent 4-lane segment of Laurel Road in Sarasota County's Generalized Level of Service Analysis Tables.

INTERSECTION ANALYSIS

The intersection analysis was again performed using Trafficware's Synchro 11 Software. The 2028 background traffic analysis used the same geometry as the existing conditions, with the exception of the scheduled improvements identified previously. The results of the Synchro intersection analysis are summarized in **Table 6** and indicate that only the Veneto Boulevard & Laurel Road intersection and the Jacaranda Boulevard & Laurel Road intersection are the only two study area intersections anticipated to operate within acceptable level-of-service standards.

Table 6: 2028 Background Traffic Intersection Conditions

Intersection	Type	Overall Intersection LOS		Delay (sec/veh)	Max v/c Ratio	Approach LOS			
		Standard	Bkgd			EB	WB	NB	SB
Knights Trail Rd & Laurel Rd	Signalized	D	**F**	**123.1**	**1.49**	**F**	**F**	E	**F**
Veneto Blvd & Laurel Rd	TWSC	D	n/a	15.4[1]	0.20	A[2]	--[3]		C
Jacaranda Blvd & Laurel Rd	Signalized	D	A	8.1	0.80	A	A	B	
Jacaranda Blvd & Border Rd	AWSC	D	**F**	**208.2**	**1.92**	**F**	**F**	**F**	**F**
Jacaranda Blvd & I-75 NB Ramps	TWSC	D	n/a	**107.1**[1]	**1.20**		**F**	--[3]	--[3]
Jacaranda Blvd & I-75 SB Ramps	Signalized	D	D	53.9	**1.88**	D		B	**F**

1. Delay shown for the worst approach.
2. Left-turn movement level-of-service.
3. No left-turn movement for approach.

The intersection volume tables are provided in **Appendix E**. The 2028 background Synchro intersection worksheets are provided in **Appendix I**.

IMPROVED BACKGROUND TRAFFIC ANALYSIS

The large amount of background traffic creates generalized arterial deficiencies on Jacaranda Boulevard from Border Road to I-75 and intersection deficiencies at four of the six study area intersections, causing them to operate at an unacceptable level-of-service. The failures on Jacaranda Boulevard and at the four study area intersections are preexisting conditions and not caused by the addition of this project's traffic.

Chapter 2011-139, Laws of Florida; and Chapter 163.3180 of the Florida Statutes as amended by HB 319, exempt developers from contributing proportionate-share monies to correct preexisting transportation deficiencies. Because the identified failures are preexisting conditions and not caused by the addition of this project's traffic, improvements to correct the deficiencies can be

considered in place. The improvements needed to correct the preexisting background deficiencies are:

Knights Trail Road& Laurel Road Intersection

- Change cycle length from 120 seconds to 160 seconds.
- Construct a third eastbound left turn lane (as well as a receiving lane) to accommodate the projected 1,746 vehicles.
- Construct a second southbound left turn lane to accommodate the projected 412 vehicles.
- Convert the southbound through lane to a shared through/right turn lane (as well as a receiving lane) to accommodate the projected 1,885 vehicles.

Jacaranda Boulevard & Border Road Intersection

- Signalize.
- Construct an eastbound left turn lane to accommodate the projected 140 vehicles.
- Construct an eastbound right turn lane to accommodate the projected 310 vehicles.
- Construct a westbound left turn lane to accommodate the projected 99 vehicles.
- Convert the southbound shared left turn/through lane and right turn lane to a left turn lane and a shared through/right turn lane to allow for protected + permitted left turn phasing.

Jacaranda Boulevard & I-75 NB Ramps Intersection

- Signalize.

Jacaranda Boulevard & I-75 SB Ramps Intersection

- Add a southbound left turn protected + permitted phase to the signal to accommodate the projected 295 vehicles.

The improvements to the intersections are anticipated to allow the arterial segment of Jacaranda Boulevard to operate within acceptable level-of-service standards without widening from two to four lanes. **Table 7** shows results of the detailed Synchro arterial analysis by direction accounting for the improvements to the intersections and **Table 8** shows the results of the improved intersection analysis for the background traffic conditions. The 2028 improved background traffic Synchro arterial and intersection worksheets are provided in **Appendix J**.

Table 7: 2028 Background Traffic Jacaranda Boulevard Arterial Analysis

Arterial	Direction	Adopted LOS	Number of Lanes	Arterial Speed (mph)	Arterial LOS
Jacaranda Boulevard					
Border Rd to I-75	NB	D	1	32.9	B
	SB		1	36.4	A

Table 8: Improved 2028 Background Traffic Intersection Conditions

Intersection	Type	Overall Intersection LOS		Delay (sec/veh)	Max v/c Ratio	Approach LOS			
		Standard	Bkgd Imp			EB	WB	NB	SB
Knights Trail Rd & Laurel Rd	Signalized	D	D	46.5	0.95	D	E	E	D
Jacaranda Blvd & Border Rd	Signalized	D	C	29.8	0.88	C	D	C	C
Jacaranda Blvd & I-75 NB Ramps	Signalized	D	B	16.6	0.84		C	B	B
Jacaranda Blvd & I-75 SB Ramps	Signalized	D	C	29.2	0.84	D		C	C

The tables demonstrate that the identified improvements will correct the preexisting deficiencies and allow the arterial and intersections to operate within acceptable level-of-service standards. At the Knights Trail Road & Laurel Road intersection, there are movements that operate at level-of-service E or F; however, the v/c ratios are all less than 1.0. In order for all movements to have a level-of-service D or better, grade separation is required, which does not appear to be cost feasible. Please note that the Lorraine Road extension from Clark Road to Knights Trail Road is anticipated to be complete in 2028. This project will help to alleviate the traffic demand at the Knights Trail Road & Laurel Road intersection by allowing a second means of access for traffic on the Knights Trail Road corridor.

Please note that Sarasota County, the maintaining agency for the roadways and intersections where deficiencies are projected, has eliminated Traffic Concurrency. Mobility fees collected by the City of Venice, pursuant to Chapter 70, Article XII, Sarasota County Code, will be used to address capacity deficiencies on County operated and maintained facilities.

2028 Total Traffic Conditions

The total traffic conditions were analyzed for 2028. The total traffic conditions consist of the existing PM peak-hour peak-season traffic volumes, annual background growth, vested traffic from approved developments, and project traffic. The 2028 total traffic PM peak-hour peak-season total traffic volumes are shown in **Figure 6**.

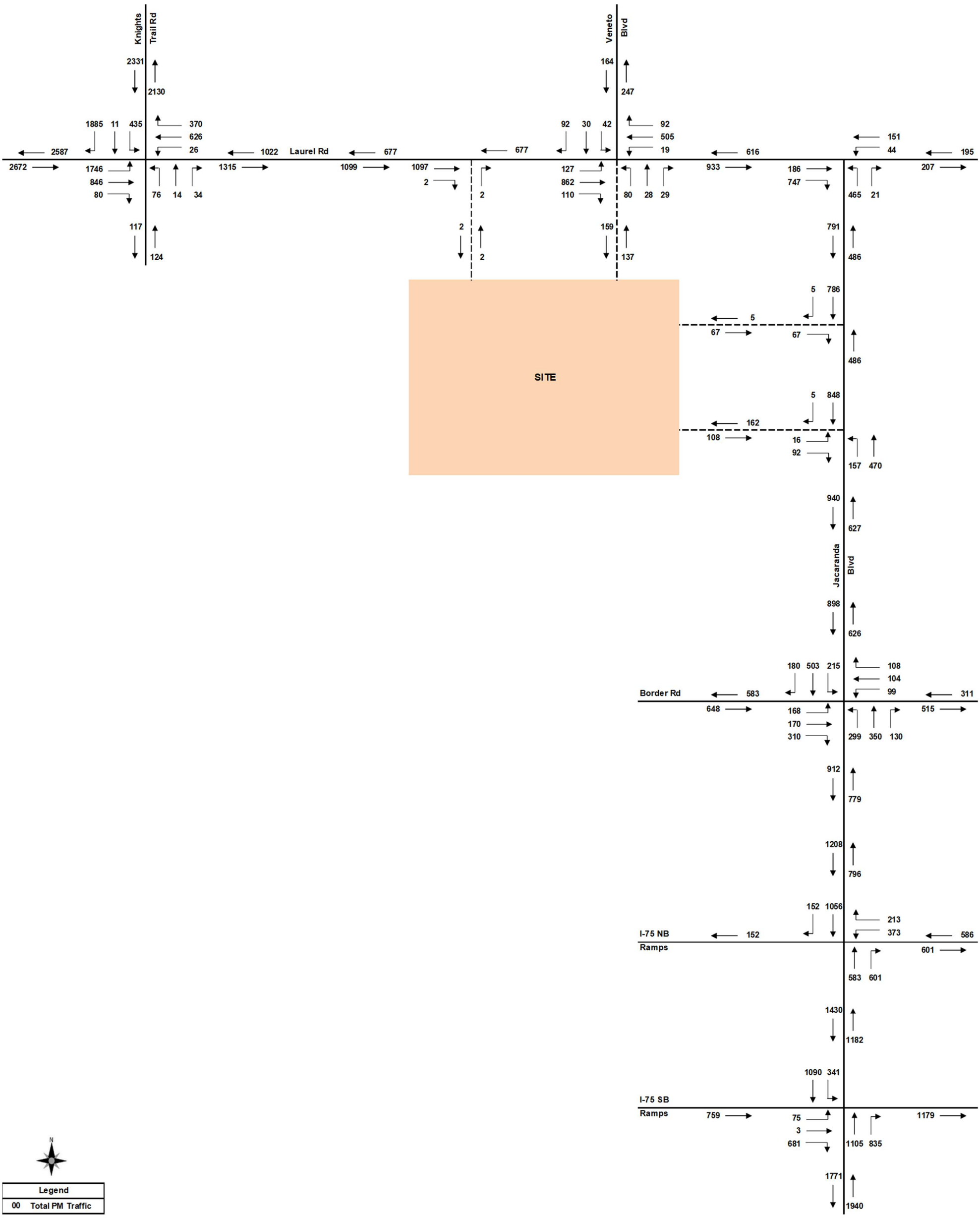


Figure 6: 2028 PM Peak-Hour Total Traffic

ROADWAY ANALYSIS

The results of the 2028 total traffic level-of-service analysis are summarized in **Table 9** and indicate that only Laurel Road within the study area is anticipated to operate within acceptable level-of-service standards. Because Jacaranda Boulevard from Laurel Road to I-75 exceeds its generalized adopted level-of-service standard, a detailed analysis of the arterial, similar to what was conducted for the background traffic conditions, was performed using the Synchro Software. The detailed Synchro analysis results by direction are summarized in **Table 10** and indicate that both segments will operate within acceptable level-of-service standards. The 2028 traffic conditions Synchro analysis is attached in **Appendix K**. No roadway improvements are required in conjunction with this project.

Table 9: 2028 Total Traffic Segment Conditions (Generalized)

Road Name and Segment	Adopted LOS			2028 Bkgd Traffic	Project Traffic	2028 Total Traffic	Exceeds LOS?
	LOS Standard	Number of Lanes	Service Volume				
Jacaranda Boulevard							
Laurel Rd to Border Rd	D	2	1,330	1,286	275	1,561	Yes
Border Rd to I-75	D	2	1,600	1,701	147	1,848	Yes
Laurel Road							
Knights Trail Rd to Jacaranda Blvd	D	4	3,401	1,894	115	2,009	No

Table 10: 2028 Total Traffic Jacaranda Boulevard Arterial Analysis

Arterial	Direction	Adopted LOS	Number of Lanes	Arterial Speed (mph)	Arterial LOS
Jacaranda Boulevard					
Laurel Rd to Border Rd	NB	D	1	31.4	B
	SB		1	24.4	C
Border Rd to I-75	NB	D	1	32.4	B
	SB		1	36.1	A

INTERSECTION ANALYSIS

The intersection analysis was again performed using Trafficware's Synchro 11 Software. The 2028 total traffic intersection analysis used the same geometry as the improved background traffic analysis. The results of the Synchro intersection analysis are summarized in **Table 11** and indicate all intersections are anticipated to continue to operate within acceptable level-of-service standards with the addition of project traffic. Like the improved background traffic conditions, there are movements that operate at level-of-service E or F at the Knights Trail Road & Laurel Road intersection; however, the v/c ratios are all less than 1.0. In order for all movements to have

a level-of-service D or better, grade separation is required, which does not appear to be cost feasible. Please note that the Lorraine Road extension from Clark Road to Knights Trail Road is anticipated to be complete in 2028. This project will help to alleviate the traffic demand at the Knights Trail Road & Laurel Road intersection by allowing a second means of access for traffic on the Knights Trail Road corridor.

At the Veneto Boulevard & Laurel Road intersection, the northbound left turn movement is operating at level-of-service F and the southbound left turn movement is operating at level-of-service E; however, the v/c ratios are both less than 1.0. Given the close proximity of the Veneto Boulevard intersection to the future signal at the Jacaranda Boulevard intersection, Sarasota County has denied a variance application to install a traffic signal at this location. While a traffic signal would improve the delay from the minor street left turn movements, delays resulting in level-of-service E or F at unsignalized minor street approaches are not unexpected during peak periods. At the Jacaranda Boulevard & I-75 SB Ramps, the southbound left turn movement is operating at level-of-service E; however, the v/c ratio is less than 1.0. Adding a second southbound left turn lane is not feasible because it would require the reconstruction of the I-75 overpass to allow a second lane to fit under the bridge. No intersection improvements are required in conjunction with this project.

Table 11: 2028 Total Traffic Intersection Conditions

Intersection	Type	Overall Intersection LOS		Delay (sec/veh)	Max v/c Ratio	Approach LOS			
		Standard	Total			EB	WB	NB	SB
Knights Trail Rd & Laurel Rd	Signalized	D	D	47.8	0.95	D	E	E	D
Project RI/RO & Laurel Rd	TWSC	D	n/a	13.1[1]	0.01	--[2]	--[2]	B	
Veneto Blvd & Laurel Rd	TWSC	D	n/a	62.9[1]	0.72	A[3]	B[3]	F	D
Jacaranda Blvd & Laurel Rd	Signalized	D	A	8.0	0.80	A	A	B	
Jacaranda Blvd & Project RI/RO	TWSC	D	n/a	17.7[1]	0.21	C		--[2]	--[2]
Jacaranda Blvd & Project Full Access	TWSC	D	n/a	25.2[1]	0.39	D		B[3]	--[2]
Jacaranda Blvd & Border Rd	Signalized	D	D	39.0	0.94	D	D	C	D
Jacaranda Blvd & I-75 NB Ramps	Signalized	D	B	16.8	0.84		C	B	B
Jacaranda Blvd & I-75 SB Ramps	Signalized	D	C	32.7	0.92	D		C	C

1. Delay shown for the worst approach.

2. No left-turn movement for approach.

3. Left-turn movement level-of-service.

The intersection volume tables are provided in **Appendix E**. The 2028 total traffic Synchro intersection worksheets are provided in **Appendix K**.

Site Access Analysis

An analysis of the four site access connections to Laurel Road and Jacaranda Boulevard was completed. Laurel Road will be a four-lane divided roadway with a posted speed of 40 mph and an Access Classification of 5. Jacaranda Boulevard is a two-lane divided roadway with a posted speed of 35 mph and an Access Classification of 5. Class 5 roadways require full access connections to be spaced at 1,320 feet. The full access connection to Laurel Road is located +/- 690 feet west of the Jacaranda Boulevard intersection at the current Veneto Boulevard intersection. The full access connection to Jacaranda Boulevard is located +/- 560 feet south of the Laurel Road intersection and +/- 750 feet north of the Corsano Drive intersection. While the two full access connections do not meet the spacing standards, the connections are needed for efficient site circulation due to the majority of traffic accessing the site to/from the west and to/from the south. Variances were obtained from Sarasota County on February 11, 2022 for both the full access connections.

Full Access Connection to Laurel Road

Left and right turn lane warrants were evaluated at the full access connection to Laurel Road. Laurel Road will be a divided roadway. Given that it will be a divided roadway, generally accepted good engineering practice dictates that left turn lanes should be provided. The left turn lane length is comprised of the queue length and deceleration length. The deceleration and taper length, based on FDOT *Design Manual Exhibit 212-1* for a design speed of 45 mph (posted + 5 mph), is 185 feet. The required unsignalized queue length for the left turn lane was calculated using procedures outlined in the AASHTO *Green Book (2018) Table* 9-22, and is shown in **Figure 7**. The AASHTO *Green Book* specifies that at a minimum, queue storage for at least two vehicles (50 feet) be provided. The 19 PM peak-hour westbound left turning vehicles and 1,099 opposing vehicles at the intersection (as shown in **Figure 6**) will require 50 feet of queue; therefore, a 235-foot (185 + 50) westbound left turn lane shall be constructed. If construction of the site commences before the four-lane widening project of Laurel Road, a 185-foot westbound left turn lane shall still be provided.

Left-Turn Volume (veh/h)	U.S. Customary				
	Storage Length (ft)				
	Opposing Volume (veh/h)				
	200	400	600	800	1000
40	50	50	50	50	50
60	50	50	50	50	50
80	50	50	50	50	75
100	50	50	50	75	75
120	50	50	75	75	100
140	50	50	75	100	125
160	50	75	75	100	150
180	50	75	75	125	150
200	50	75	100	125	200
220	75	75	100	150	225
240	75	75	125	150	275
260	75	100	125	175	325
280	75	100	125	200	400
300	75	100	150	225	525

Figure 7: AASHTO *Green Book* Storage Lengths

The right turn lane warrant was evaluated using the FDOT *Access Management Guidebook*. For posted speeds 45 mph or less, a minimum of 80 right turns per hour are required to warrant the installation of a right turn lane. Table 27 from the FDOT *Access Management Guidebook* is shown in **Figure 8**. The 110 eastbound right turning vehicles (as shown in **Figure 6**) meet the threshold required to warrant a right turn lane. Therefore, a 185-foot eastbound right turn lane shall be constructed. If construction of the site commences before the four-lane widening project of Laurel Road, a 185-foot eastbound right turn lane shall still be provided.

Roadway Posted Speed Limit	Number of Right Turns Per Hour
45 mph or less	80 – 125[1]
Over 45 mph	35 – 55[2]
Note: A posted speed limit of 45 mph may be used with these thresholds if the operating speeds are known to be over 45 mph during the time of peak right turn demand.	
Note on traffic projections: Projecting turning volumes is, at best, a knowledgeable estimate. Keep this in mind especially if the projections of right turns are close to meeting the guidelines. In that case, consider requiring the turn lane.	
[1] The lower threshold of 80 right-turn vehicles per hour would be most used for higher volume (greater than 600 vehicles per hour, per lane in one direction on the major roadway) or two-lane roads where lateral movement is restricted. The 125 right-turn vehicles per hour upper threshold would be most appropriate on lower volume roadways, multilane highways, or driveways with a large entry radius (50 feet or greater).	
[2] The lower threshold of 35 right-turn vehicles per hour would be most appropriately used on higher volume two-lane roadways where lateral movement is restricted. The 55 right-turn vehicles per hour upper threshold would be most appropriate on lower volume roadways, multilane highways, or driveways with large entry radius (50 feet or greater).	

Figure 8: FDOT *Access Management Guidebook* Right Turn Lane Guidance

Full Access Connection to Jacaranda Boulevard

Left and right turn lane warrants were evaluated at the full access connection to Jacaranda Boulevard. Jacaranda Boulevard is a two-lane divided roadway. Given that it is a divided roadway, generally accepted good engineering practice dictates that left turn lanes should be provided. The deceleration and taper length, based on FDOT *Design Manual Exhibit 212-1* for a design speed of 40 mph (posted + 5 mph), is 155 feet. The required unsignalized queue length for the left turn lane was calculated using procedures outlined in the AASHTO *Green Book (2018) Table* 9-22. The 157 PM peak-hour northbound left turning vehicles and 853 opposing vehicles at the intersection (as shown in **Figure 6**) will require 100 feet of queue; therefore, a 255-foot (155 + 100) northbound left turn lane shall be constructed.

The right turn lane warrant was evaluated using the FDOT *Access Management Guidebook*. For posted speeds 45 mph or less, a minimum of 80 right turns per hour are required to warrant the installation of a right turn lane. The five southbound right turning vehicles (as shown in **Figure 6**) do the not meet the threshold required to warrant a right turn lane. Therefore, a southbound right turn lane is not warranted.

Right-in/Right-out Connections

The need for right turn lanes at the two right-in/right-out connections was also evaluated. The right turn lane warrant was evaluated using the FDOT *Access Management Guidebook*. For posted speeds 45 mph or less, a minimum of 80 right turns per hour are required to warrant the installation of a right turn lane. The two eastbound right turning vehicles at the Laurel Road right-in/right-out and the five southbound right turning vehicles at the Jacaranda Boulevard right-in/right-out (as shown in **Figure 6**) do the not meet the threshold required to warrant right turn lanes. Therefore, right turn lanes are not warranted at either location.

Conclusion

The Milano PUD Commercial project consists of a 50,325 square-foot grocery store, a 2,100 square-foot liquor store, 8,950 square feet of retail, and 8,865 square feet of restaurants. The project is anticipated to generate 459 new external PM peak-hour two-way trip ends. The development will have four access points, a right-in/right-out connection to Laurel Road, a full access connection to Laurel Road across from Veneto Boulevard, a right-in/right-out connection to Jacaranda Boulevard, and a full access connection to Jacaranda Boulevard. The analysis evaluated a build-out year of 2028.

All study area roadway segments are currently operating within acceptable level-of-service standards and are anticipated to continue to operate within acceptable level-of-service standards with the funded improvements through buildout of the project. All study area intersections are currently operating within acceptable level-of-service standards. Four deficiencies were identified at study area intersections for the background traffic conditions in 2028. The deficient intersections and required improvements are listed below.

Knights Trail Road& Laurel Road Intersection

- Change cycle length from 120 seconds to 160 seconds.
- Construct a third eastbound left turn lane (as well as a receiving lane).
- Construct a second southbound left turn lane.
- Convert the southbound through lane to a shared through/right turn lane (as well as a receiving lane).

Jacaranda Boulevard & Border Road Intersection

- Signalize.
- Construct an eastbound left turn lane.
- Construct an eastbound right turn lane.
- Construct a westbound left turn lane.
- Convert the southbound shared left turn/through lane and right turn lane to a left turn lane and a shared through/right turn lane to allow for protected + permitted left turn phasing.

Jacaranda Boulevard & I-75 NB Ramps Intersection

- Signalize.

Jacaranda Boulevard & I-75 SB Ramps Intersection

- Add a southbound left turn protected + permitted phase to the signal.

Because the failures identified above are preexisting conditions and not caused by the addition of this project's traffic, improvements to correct the deficiencies can be considered in place. Once the aforementioned improvements are made, all intersections will operate at acceptable level-of-service standards. The addition of project traffic does not create any additional deficiencies in the study area.

Please note that Sarasota County, the maintaining agency for the roadways and intersections where deficiencies are projected, has eliminated Traffic Concurrency. Mobility fees collected by the City of Venice, pursuant to Chapter 70, Article XII, Sarasota County Code, will be used to address capacity deficiencies on County operated and maintained facilities.

The site access analysis evaluated the four proposed access connections to Laurel Road and Jacaranda Boulevard. The following site access improvements are required in conjunction with this project.

Full Access Connection to Laurel Road

- Construct a 235-foot westbound left turn lane.
- Construct a 185-foot eastbound right turn lane.

Full Access Connection to Jacaranda Boulevard

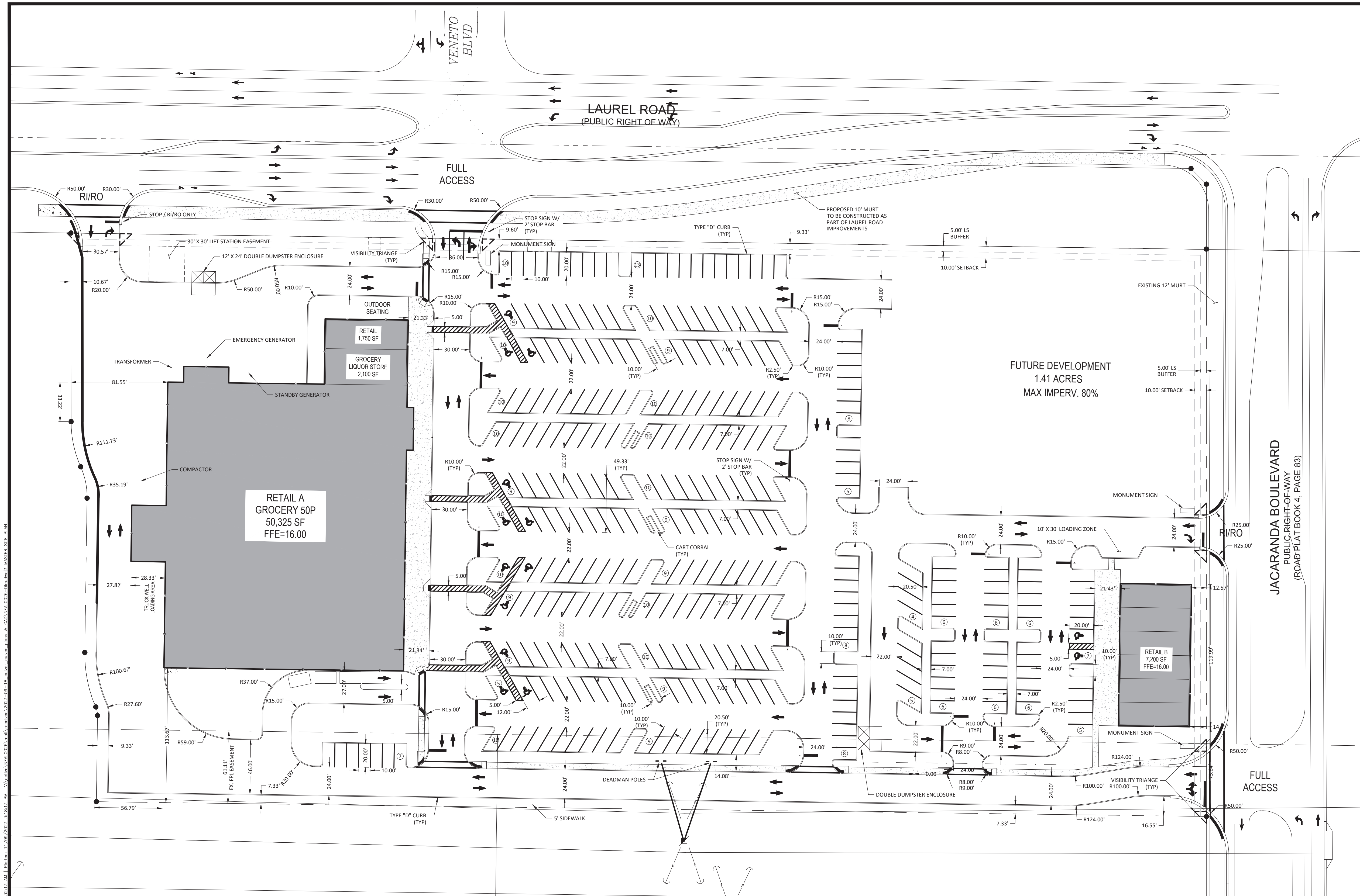
- Construct a 255-foot northbound left turn lane.
- Southbound right turn lane not warranted.

Right-in/Right-out Connections

- Right turn lanes not warranted.

APPENDIX A

SITE PLAN



LEGEND

PROJECT BOUNDARY

SETBACK

EASEMENT

STANDARD DUTY ASPHALT SEE SITE DETAILS

STANDARD DUTY CONCRETE SEE SITE DETAILS

HEAVY DUTY CONCRETE SEE SITE DETAILS

C.W. : ALL CROSSWALKS TO BE HEAVY DUTY CONCRETE. ALL CROSSWALK & RAMPS TO MEET ADA SPECIFICATIONS & FDOT INDEX 522-002.

D.W. : DETECTABLE WARNING TO MEET ADA SPECIFICATIONS

S.W.R. (CR-6, 8, 20, 21): SIDEWALK RAMP. ALL SIDEWALK RAMPS TO MEET ADA SPECIFICATION. SEE FDOT INDEX 522-002 FOR CURB RAMP DETAILS.

REV. No.	REV. DATE	REVISION DESCRIPTION	BY	REV. No.	REV. DATE	REVISION DESCRIPTION	BY

CALL BEFORE YOU DIG!
"SUNSHINE STATE ONE-CALL CENTER"
1-800-432-4770
THE CONTRACTOR SHALL NOTIFY "SUNSHINE STATE ONE-CALL CENTER" AND ALL OTHER UTILITIES FOR LOCATION OF EXISTING FACILITIES PRIOR TO BEGINNING CONSTRUCTION.

ISSUE DATE: 09/15/2023
ISSUED BY:
ISSUE DESCRIPTION: CONSTRUCTION PLANS

AM ENGINEERING, LLC.
Civil Engineering | Land Surveying
8340 Consumer Court Sarasota, FL 34240
Phone: (941) 377-9178 | www.amengfl.com
CA #33105 | LB #4334

0 20 40 80
SCALE IN FEET

CLIENT: NEAL COMMUNITIES, INC.
PROJECT: THE VILLAGE AT LAUREL AND JACARANDA
TITLE: MASTER SITE PLAN

HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: N/A
VERTICAL DATUM: NAVD 1988
PROJECT NUMBER: NEAL0026
SHEET NUMBER: 3

PROJECT ENGINEER:
D. SHAWN LEINS
DATE
FLORIDA P.E. No. 41078

APPENDIX B

METHODOLOGY STATEMENT

Crim, Matt

From: Rebecca Paul <RPaul@Venicefl.gov>
Sent: Monday, October 9, 2023 11:55 AM
To: Crim, Matt
Cc: annette.boone@boone-law.com; Jackson Boone; Jeffery A. Boone; jcollins@boone-law.com; Lee Fosco
Subject: FW: updated Milano PUD Commercial methodology letter

Good afternoon, Matt,

Please see below.

Rebecca Paul
Planning Coordinator
Planning and Zoning
City of Venice
401 W. Venice Avenue
Venice, FL 34285
Tel: 941-882-7434
Email: RPaul@Venicefl.gov
Web: www.venicegov.com

Need to Report an Issue? SeeClickFix Venice Connect is available as an app for Android and iPhone. Select SeeClickFix from your app store on your device and choose Venice, Florida. There is also a link to the program on the city's website, www.venicegov.com, or go directly to SeeClickFix at https://venice.seeclickfix.com/venice

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From: Giacherio, Aimee <AGiacherio@WadeTrim.com>
Sent: Monday, October 9, 2023 11:48 AM
To: Rebecca Paul <RPaul@Venicefl.gov>
Subject: RE: updated Milano PUD Commercial methodology letter

Good morning Rebecca,

I have reviewed the updated methodology from Stantec regarding the Milano PUD Commercial project. The revised methodology is good to go. It addressed our comment from the methodology meeting.

We also provided the vested traffic information to Stantec. Generation at Venice and Palencia have been modified/added from the Leo at Venice vested project information.

Please let me know if you have any questions or need anything further.

Thanks,
Aimée

WADE TRIM

Aimée L. Giacherio, PE, Senior Project Manager, Vice President
2851 Charlevoix Drive SE, Suite 108, Grand Rapids, MI 49546
616.900.9132 office
616.304.6942 cell

From: Rebecca Paul <RPaul@Venicefl.gov>
Sent: Monday, October 2, 2023 2:00 PM
To: Giacherio, Aimee <AGiacherio@WadeTrim.com>; Paula Wiggins <pwiggins@scgov.net>; Marquis Bing <mbing@scgov.net>
Subject: updated Milano PUD Commercial methodology letter

This message originated from outside of Wade Trim

Good afternoon,

Please review attached updated methodology letter from Stantec regarding Milano PUD Commercial project. Please email comments to me at your earliest convenience.

Have a great day!
Rebecca

Rebecca Paul
Planning Coordinator
Planning and Zoning
City of Venice
Tel: 941-882-7434
Email: RPaul@Venicefl.gov
Web: www.venicegov.com

Need to Report an Issue? SeeClickFix Venice Connect is available as an app for Android and iPhone. Select SeeClickFix from your app store on your device and choose Venice, Florida. There is also a link to the program on the city's website, www.venicegov.com, or go directly to SeeClickFix at https://venice.seeclickfix.com/venice

Stantec Consulting Services Inc.
6920 Professional Parkway East
Sarasota FL 34240-8414
Tel: (941) 907-6900
Fax: (941) 907-6910

October 2, 2023

Roger Clark, AICP
Planning Manager
City of Venice
401 W. Venice Avenue
Venice, FL 34285

Via email: rclark@venicefl.gov

Reference: Milano PUD Commercial
Transportation Methodology Statement - Revised

Dear Mr. Clark,

This letter serves to summarize the Transportation Methodology for the subject project for your approval. The proposed development is located on a +/-10 acre parcel at the southwest corner of the Jacaranda Boulevard & Laurel Road intersection in Venice, Florida. The petitioner proposes construct 70,240 square feet of commercial. The commercial development will consist of a 48,387 square-foot grocery store, a 2,100 square-foot liquor store, 8,950 square feet of retail, and 10,803 square feet of restaurants. A build-out year of 2028 will be evaluated for the project. The following is a summary of the methodology. The project location is shown in **Figure 1** and the site plan is attached.

Figure 1: Project Location

Reference: Milano PUD Commercial
Transportation Methodology Statement

Trip Generation

The transportation analysis will be based on the PM peak-hour. Traffic volumes generated by the proposed development will be estimated using the Institute of Transportation Engineers (ITE), *Trip Generation – the 11th Edition (2021)*. Land Use Code (LUC) 822 (Strip Retail Plaza (<40k)), LUC 850 (Supermarket), LUC 899 (Liquor Store), LUC 932 (High-Turnover (Sit-Down) Restaurant), and LUC 934 (Fast-Food Restaurant with Drive-Through Window) will be used to estimate the trip generation potential.

Pass-by capture will be estimated based on information contained in the ITE *Trip Generation – the 11th Edition*. Because LUC 822 does not have any pass-by capture information contained in the ITE *Trip Generation Manual*, the pass-by capture will be estimated using the pass-by capture rate for LUC 821. Pass-by trips will be checked to ensure that they do not exceed 10% of the future adjacent street traffic (background traffic conditions). Once the pass-by trips are calculated, to ensure that they do not exceed 10% of the future adjacent street traffic, the study area determination will be updated to reflect any changes to the new external trips as necessary. **Table 1** summarizes the PM peak-hour trip generation. The detailed trip generation and internal capture calculations are attached.

Table 1: PM Peak-Hour Trip Generation

ITE Land Use Category	Development Size	PM Peak Total Trips			Internal Capture %	Pass-by %	New External Trips		
		Total	Enter	Exit			Total	Enter	Exit
Strip Retail Plaza (<40k) - 822	8,950 sf	72	36	36	13%	40%	38	19	19
Supermarket - 850	48,387 sf	429	215	214	13%	24%	283	140	143
Liquor Store - 899	2,100 sf	71	35	36	13%	0%	62	30	32
High-Turnover (Sit-Down) Restaurant - 932	5,803 sf	53	32	21	34%	43%	20	14	6
Fast-Food Restaurant with Drive-Through Window - 934	5,000 sf	165	86	79	35%	50%	54	30	24
	TOTALS	**790**	**404**	**386**	**19%**	**23%**	**457**	**233**	**224**

Reference: Milano PUD Commercial
Transportation Methodology Statement

Trip Distribution

Project traffic will be distributed and assigned to the adjacent roadway network using a combination of existing traffic volumes and the FDOT District 1 2023 Existing plus Committed Regional Planning Model with 2045 socioeconomic data. The proposed distribution and assignment is consistent with the approved Milano PUD Amendment Traffic Impact Statement and is attached.

Study Area

The study area will consist of arterial and collector roads that:

- The project traffic equals or exceeds 4.5 percent of the adopted two-way peak-hour service volume (LOS D), as specified by Sarasota County's 2021 Generalized Level of Service Table, for all applicable county and state roads.
- Any road segment to which the development has a direct access or which the development accesses via local and private roads.

It is anticipated that three (3) regulated roadway segments will exceed 4.5 percent of the adopted two-way peak-hour service volume. A preliminary study area determination is shown in **Table 2**.

Reference: Milano PUD Commercial
Transportation Methodology Statement

Table 2: Study Area Determination

Road Name and Segment	Adopted LOS			Percent Project Traffic	New Project Traffic		Significant Impact? (>4.5%)	Direct Access?
	LOS Standard	Number of Lanes	Service Volume		Trips	% Impact		
Border Road								
Auburn Rd to Jacaranda Blvd	D	2	1,264	12%	55	4.35%	No	No
Jacaranda Blvd to Jackson Rd	D	2	1,120	11%	50	4.46%	No	No
I-75								
Laurel Rd to Jacaranda Blvd	D	6	10,060	0%	0	0.00%	No	No
Jacaranda Blvd to River Rd	D	6	10,060	20%	91	0.90%	No	No
Jacaranda Boulevard								
Laurel Rd to Border Rd	D	2	1,330	60%	274	20.60%	**Yes**	**Yes**
Border Rd to I-75	D	2	1,600	32%	146	9.13%	**Yes**	No
I-75 to Executive/Commercial	D	4	3,401	12%	55	1.62%	No	No
Knights Trail Road								
Laurel Rd to Rustic Rd	D	2	1,440	10%	46	3.19%	No	No
Laurel Road								
I-75 to Knights Trail Rd	D	4	3,401	15%	69	2.03%	No	No
Knights Trail Rd to Jacaranda Blvd	D	2	1,440	25%	114	7.92%	**Yes**	**Yes**
Jacaranda Blvd to Citadella Dr	D	2	1,440	5%	23	1.60%	No	No

In addition, intersections at the termini of study area roadway segments as well as the four project access points will be evaluated. The five off-site intersections that will be studied are listed below.

1. Jacaranda Boulevard & Laurel Road
2. Jacaranda Boulevard & Border Road
3. Jacaranda Boulevard & I-75 NB Ramps
4. Jacaranda Boulevard & I-75 SB Ramps
5. Knights Trail Road & Laurel Road

Scheduled/Planned Improvements

Improvements scheduled for construction in the current Sarasota County and City of Venice Capital Improvement Programs (CIPs) or the FDOT Five Year Work Program will be included in the analysis. Improvements scheduled in the first three years will be assumed to be in place for the future traffic conditions. In addition, any improvements that will be completed with the vested projects will be included for the future traffic conditions.

Reference: Milano PUD Commercial
Transportation Methodology Statement

Existing and Future Traffic

1. Existing Traffic:

   Will be based on PM peak-hour turning movement counts collected at the study area intersections. The intersection counts will be adjusted to peak-season conditions based upon FDOT's peak-season correction factors.

2. Future Traffic (Non Project):

   Consistent with previous studies, as well as the approved Milano PUD Amendment Traffic Impact Statement, a 2% annual growth rate will be used. In addition to the background growth, vested traffic within the study area will be included. Vested traffic will be provided by the City of Venice.

Analysis Scenarios

The analysis will be undertaken for the PM peak-hour, and will include the following scenarios:

1. Existing traffic will be evaluated within the established study area (2023 conditions).
2. Existing traffic plus Future traffic will be evaluated for 2028.
3. Existing traffic plus Future traffic plus improvements will be evaluated for 2028 (if necessary), consistent with Chapter 2011-139, Laws of Florida and Chapter 163.3180 of the Florida Statutes.
4. Existing traffic plus Future traffic plus Project traffic will be evaluated for 2028.
5. Existing traffic plus Future traffic plus Project traffic plus improvements will be evaluated for 2028 (if necessary).

Site Access Analysis

A site access analysis will be performed to evaluate the operations of the site access connections to Jacaranda Boulevard and Laurel Road. The analysis will determine if right or left turn lanes are warranted. Right turn lane warrants will be based on the FDOT *Access Management Guidebook*. The left turn lane warrants will be based on the M.D. Harmelink Study and the National Cooperative Highway Research Program (NCHRP) Report 279. If turn lanes are required, design requirements in the FDOT *Design Manual and Standard Plans* will be used to size the turn lanes.

Reference: Milano PUD Commercial
Transportation Methodology Statement

Analysis Procedures

All analyses will be conducted in a manner consistent with the procedures and assumptions utilized by the City of Venice. Intersection capacity analysis for the study area intersections will be conducted using Synchro Version 11. The Synchro output will utilize the HCM 6th Edition reports. Roadway segment capacity analysis will be conducted using the Sarasota County adopted level of service volumes, the FDOT's Generalized Level of Service Volume Tables, and/or Synchro. The findings of the study will be summarized in a signed and sealed report.

If the above methodology is acceptable, please send written confirmation so we can proceed with the study. Should you have any questions, please feel free to contact me.

Sincerely,

Stantec Consulting Services Inc.

Matthew R. Crim, P.E., PTOE
Transportation Engineer
Ph: 832-523-9111
matt.crim@stantec.com

Attachments: Site Plan
Detailed Trip Generation and Internal Capture Calculations
Project Traffic Distribution

VENETO BLVD

EXISTING MULTI-USE PATH

LAUREL ROAD
(PUBLIC RIGHT OF WAY)

S89°10'25"E 2707.97'

(BEARING BASIS)
S89°10'25"E 2067.76'(P)
S89°10'39"E 2067.53'(M)

FULL ACCESS

NORTH LINE OF CIELO SUBDIVISION (PLAT BOOK 53, PAGE 288)

NORTH LINE OF THE NORTHWEST 1/4 OF SECTION 35

1155.63'(P)
1155.79'(M)

12'

68.00'

RI/RO

N89°10'25"W 957.24'

S44°35'12"E 18.47'(P)
S43°55'38"E 18.61'(M)

S00°00'06"W
54.48'(M)
55.04'(P)(C)

FOUND 5/8" IRON ROD STAMPED "P.R.M. LB #7384" (2019)

POINT OF COMMENCEMENT

FOUND 5/8" IRON ROD STAMPED "P.R.M. LB #7384" 0.28' SOUTH OF TRUE POSITION

POINT OF BEGINNING
SOUTHEAST CORNER
TRACT 700

OUTDOOR SEATING

RETAIL
1,750 SF

GROCERY
LIQUOR STORE
2,100 SF

GROCERY 48.17P
48,387 SF

ENTRY

EXIT

FUTURE DEVELOPMENT
1.41 ACRES

N00°03'45"W 159.00'

N00°03'45"W 130.16'

TRACT 600
(PLAT BOOK 53, PAGE 288)

72.60'

POND

RI/RO

S00°00'06"W 875.84'(P)

JACARANDA BOULEVARD
PUBLIC RIGHT OF WAY
(ROAD PLAT BOOK 4, PAGE 83)

RETAIL
7,200 SF

FULL ACCESS

N89°14'10"W 935.70'

330'

PM Peak-Hour Trip Generation

ITE Land Use Category	Variable	Size	PM Peak Trip Rate/ Equation	PM Enter Split	PM Exit Split	PM Peak Total Trips			Internal Capture %	Internal Capture Trips			Pass-by %	Pass-by Capture Trips			New External Trips		
						Total	Enter	Exit		Total	Enter	Exit		Total	Enter	Exit	Total	Enter	Exit
Strip Retail Plaza (<40k) - 822	Per ksf	8,950	ln(T) = 0.71ln(x) + 2.72	50%	50%	72	36	36	13%	9	5	4	40%	25	12	13	38	19	19
Supermarket - 850	Per ksf	48,387	ln(T) = 0.81ln(x) + 2.92	50%	50%	429	215	214	13%	57	31	26	24%	89	44	45	283	140	143
Liquor Store - 899	Per ksf	2,100	ln(T) = 0.47ln(x) + 3.91	50%	50%	71	35	36	13%	9	5	4	0%	0	0	0	62	30	32
High-Turnover (Sit-Down) Restaurant - 932	Per ksf	5,803	T = 9.05(x)	61%	39%	53	32	21	34%	18	8	10	43%	15	10	5	20	14	6
Fast-Food Restaurant with Drive-Through Window - 934	Per ksf	5,000	T = 33.03(x)	52%	48%	165	86	79	35%	57	26	31	50%	54	30	24	54	30	24
				TOTAL		**790**	**404**	**386**	**19%**	**150**	**75**	**75**	**23%**	**183**	**96**	**87**	**457**	**233**	**224**

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Milano PUD Commercial	**Organization:**	
Project Location:	Venice, FL	**Performed By:**	
Scenario Description:	Buildout	**Date:**	
Analysis Year:	2028	**Checked By:**	
Analysis Period:	**PM Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822/850/899	59,437	sf	572	286	286
Restaurant	930/934	10,803	sf	218	118	100
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]						
				790	404	386

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		34	0	0	0
Restaurant	0	41		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	790	404	386
Internal Capture Percentage	19%	19%	19%
External Vehicle-Trips[5]	640	329	311
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	14%	12%
Restaurant	29%	41%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

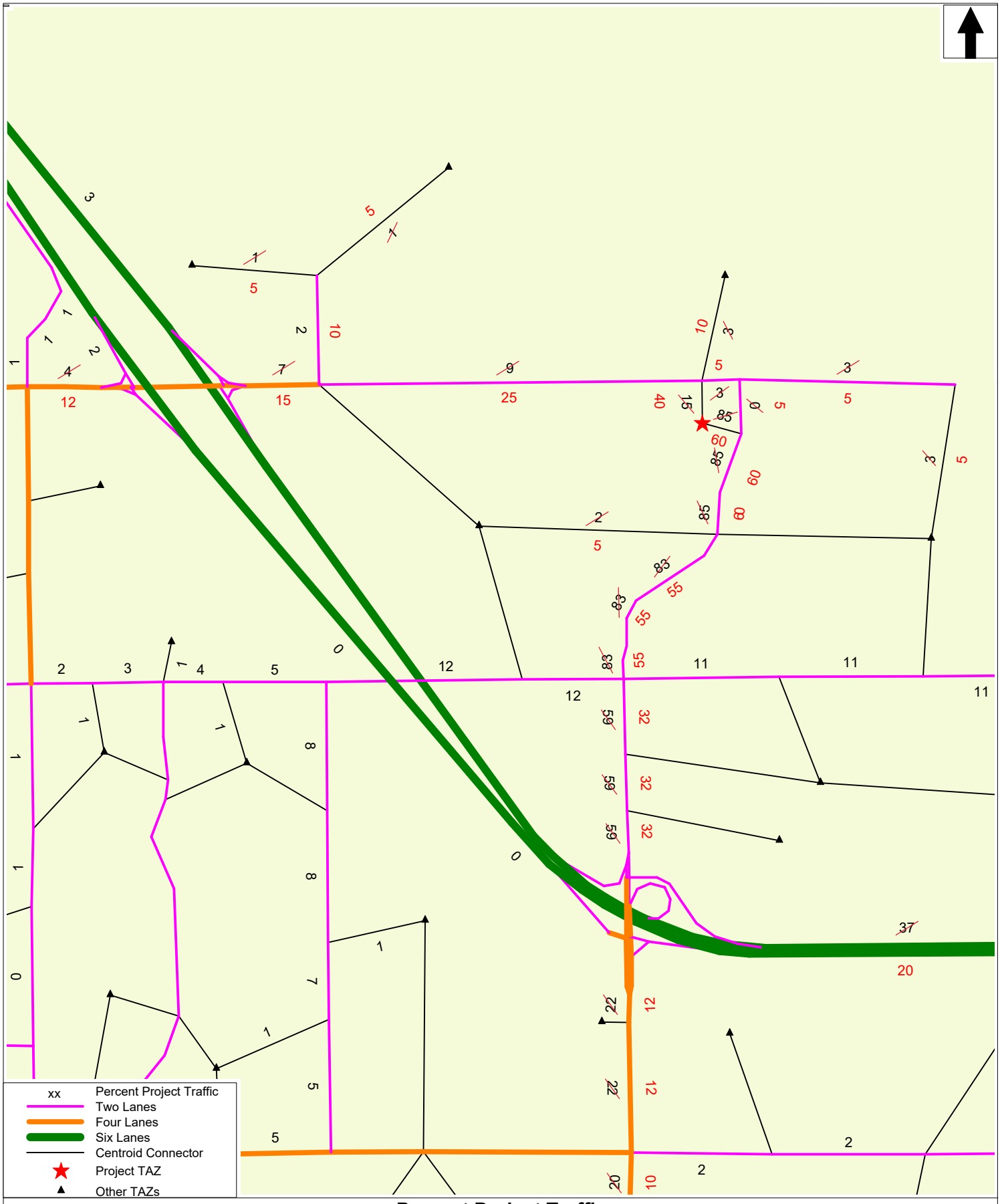
[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1



Percent Project Traffic
2023 Existing Plus Committed Network

cube (Licensed to Stantec Consulting Ltd)

APPENDIX C

DETAILED TRIP GENERATION CALCULATIONS

INTERNAL CAPTURE CALCULATIONS

PM Peak-Hour Trip Generation

ITE Land Use Category	Variable	Size	PM Peak Trip Rate/ Equation	PM Enter Split	PM Exit Split	PM Peak Total Trips			Internal Capture %	Internal Capture Trips			Pass-by %	Pass-by Capture Trips			New External Trips		
						Total	Enter	Exit		Total	Enter	Exit		Total	Enter	Exit	Total	Enter	Exit
Strip Retail Plaza (<40k) - 822	Per ksf	8,950	ln(T) = 0.71ln(x) + 2.72	50%	50%	72	36	36	11%	8	4	4	40%	26	13	13	38	19	19
Supermarket - 850	Per ksf	50,325	ln(T) = 0.81ln(x) + 2.92	50%	50%	443	222	221	11%	48	27	21	24%	95	47	48	300	148	152
Liquor Store - 899	Per ksf	2,100	ln(T) = 0.47ln(x) + 3.91	50%	50%	71	35	36	11%	8	4	4	5%	3	1	2	60	30	30
High-Turnover (Sit-Down) Restaurant - 932	Per ksf	4,525	T = 9.05(x)	61%	39%	41	25	16	34%	14	6	8	43%	12	9	3	15	10	5
Fast-Food Restaurant with Drive-Through Window - 934	Per ksf	4,340	T = 33.03(x)	52%	48%	143	74	69	35%	50	23	27	50%	47	26	21	46	25	21
				TOTAL		**770**	**392**	**378**	**17%**	**128**	**64**	**64**	**24%**	**183**	**96**	**87**	**459**	**232**	**227**

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Milano PUD Commercial	**Organization:**	
Project Location:	Venice, FL	**Performed By:**	
Scenario Description:	Buildout	**Date:**	
Analysis Year:	2028	**Checked By:**	
Analysis Period:	**PM Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	822/850/899	61,375	sf	586	293	293
Restaurant	930/934	8,865	sf	184	99	85
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses[2]						
				770	392	378

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		29	0	0	0
Restaurant	0	35		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	770	392	378
Internal Capture Percentage	17%	16%	17%
External Vehicle-Trips[5]	642	328	314
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	12%	10%
Restaurant	29%	41%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

APPENDIX D

FDOT PEAK-SEASON CONVERSION FACTORS

TURNING MOVEMENT COUNTS

EXISTING SIGNAL TIMING

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 1700 SARASOTA COUNTYWIDE

MOCF: 0.90

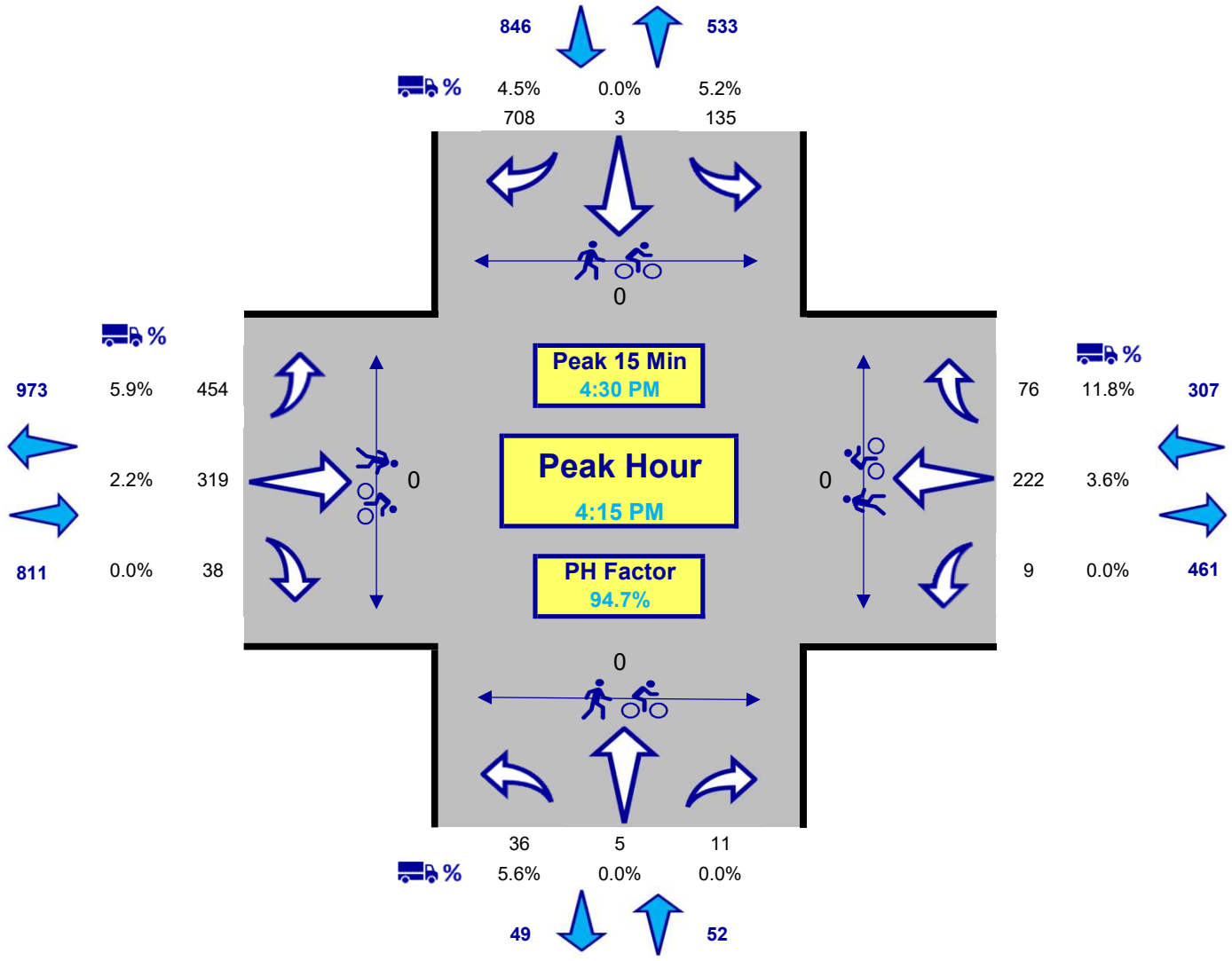
WEEK	DATES	SF	PSCF
1	01/01/2022 - 01/01/2022	1.13	1.26
2	01/02/2022 - 01/08/2022	1.06	1.18
3	01/09/2022 - 01/15/2022	0.98	1.09
4	01/16/2022 - 01/22/2022	0.96	1.07
* 5	01/23/2022 - 01/29/2022	0.94	1.04
* 6	01/30/2022 - 02/05/2022	0.92	1.02
* 7	02/06/2022 - 02/12/2022	0.90	1.00
* 8	02/13/2022 - 02/19/2022	0.88	0.98
* 9	02/20/2022 - 02/26/2022	0.88	0.98
*10	02/27/2022 - 03/05/2022	0.88	0.98
*11	03/06/2022 - 03/12/2022	0.87	0.97
*12	03/13/2022 - 03/19/2022	0.87	0.97
*13	03/20/2022 - 03/26/2022	0.88	0.98
*14	03/27/2022 - 04/02/2022	0.89	0.99
*15	04/03/2022 - 04/09/2022	0.91	1.01
*16	04/10/2022 - 04/16/2022	0.92	1.02
*17	04/17/2022 - 04/23/2022	0.93	1.03
18	04/24/2022 - 04/30/2022	0.95	1.06
19	05/01/2022 - 05/07/2022	0.97	1.08
20	05/08/2022 - 05/14/2022	0.98	1.09
21	05/15/2022 - 05/21/2022	1.00	1.11
22	05/22/2022 - 05/28/2022	1.01	1.12
23	05/29/2022 - 06/04/2022	1.03	1.14
24	06/05/2022 - 06/11/2022	1.04	1.16
25	06/12/2022 - 06/18/2022	1.06	1.18
26	06/19/2022 - 06/25/2022	1.06	1.18
27	06/26/2022 - 07/02/2022	1.06	1.18
28	07/03/2022 - 07/09/2022	1.06	1.18
29	07/10/2022 - 07/16/2022	1.07	1.19
30	07/17/2022 - 07/23/2022	1.07	1.19
31	07/24/2022 - 07/30/2022	1.07	1.19
32	07/31/2022 - 08/06/2022	1.08	1.20
33	08/07/2022 - 08/13/2022	1.08	1.20
34	08/14/2022 - 08/20/2022	1.09	1.21
35	08/21/2022 - 08/27/2022	1.11	1.23
36	08/28/2022 - 09/03/2022	1.12	1.24
37	09/04/2022 - 09/10/2022	1.14	1.27
38	09/11/2022 - 09/17/2022	1.16	1.29
39	09/18/2022 - 09/24/2022	1.13	1.26
40	09/25/2022 - 10/01/2022	1.10	1.22
41	10/02/2022 - 10/08/2022	1.07	1.19
42	10/09/2022 - 10/15/2022	1.04	1.16
43	10/16/2022 - 10/22/2022	1.05	1.17
44	10/23/2022 - 10/29/2022	1.05	1.17
45	10/30/2022 - 11/05/2022	1.06	1.18
46	11/06/2022 - 11/12/2022	1.07	1.19
47	11/13/2022 - 11/19/2022	1.08	1.20
48	11/20/2022 - 11/26/2022	1.09	1.21
49	11/27/2022 - 12/03/2022	1.11	1.23
50	12/04/2022 - 12/10/2022	1.12	1.24
51	12/11/2022 - 12/17/2022	1.13	1.26
52	12/18/2022 - 12/24/2022	1.06	1.18
53	12/25/2022 - 12/31/2022	0.98	1.09

* PEAK SEASON

Turning Movement Count Summary

Location: Knights Trail Rd & Laurel Rd
Date: 9/21/2023
Count Period: 4:00 PM - 6:00 PM

BES INC
TRANSPORTATION ENGINEERS
ENGINEERING • QUALITY • SOLUTIONS



Time Period	Laurel Rd Eastbound				Laurel Rd Westbound				Knights Trail Rd Northbound				Knights Trail Rd Southbound				Totals :15	Totals Hour
4:00 PM	0	108	50	8	0	3	54	11	0	7	1	11	0	28	2	184	467	
4:15 PM	2	133	66	8	0	1	51	25	0	13	1	3	2	32	1	168	506	
4:30 PM	**1**	**115**	**85**	**11**	**0**	**2**	**65**	**21**	**0**	**12**	**0**	**1**	**2**	**27**	**1**	**189**	**532**	
4:45 PM	3	116	89	11	1	3	52	22	0	10	2	3	0	35	0	141	488	1993
5:00 PM	1	83	79	8	0	2	54	8	0	1	2	4	1	36	1	210	490	2016
5:15 PM	4	77	92	10	0	1	48	7	0	12	0	3	0	30	0	142	426	1936
5:30 PM	2	85	68	5	0	4	53	9	0	3	0	0	2	24	0	104	359	1763
5:45 PM	0	70	58	4	0	1	43	10	0	2	1	3	2	13	0	83	290	1565
Total	**13**	**787**	**587**	**65**	**1**	**17**	**420**	**113**	**0**	**60**	**7**	**28**	**9**	**225**	**5**	**1221**	**3558**	

Turning Movement Count Summary

Location: Veneto Blvd & Laurel Rd
Date: 9/21/2023
Count Period: 4:00 PM - 6:00 PM

BES INC
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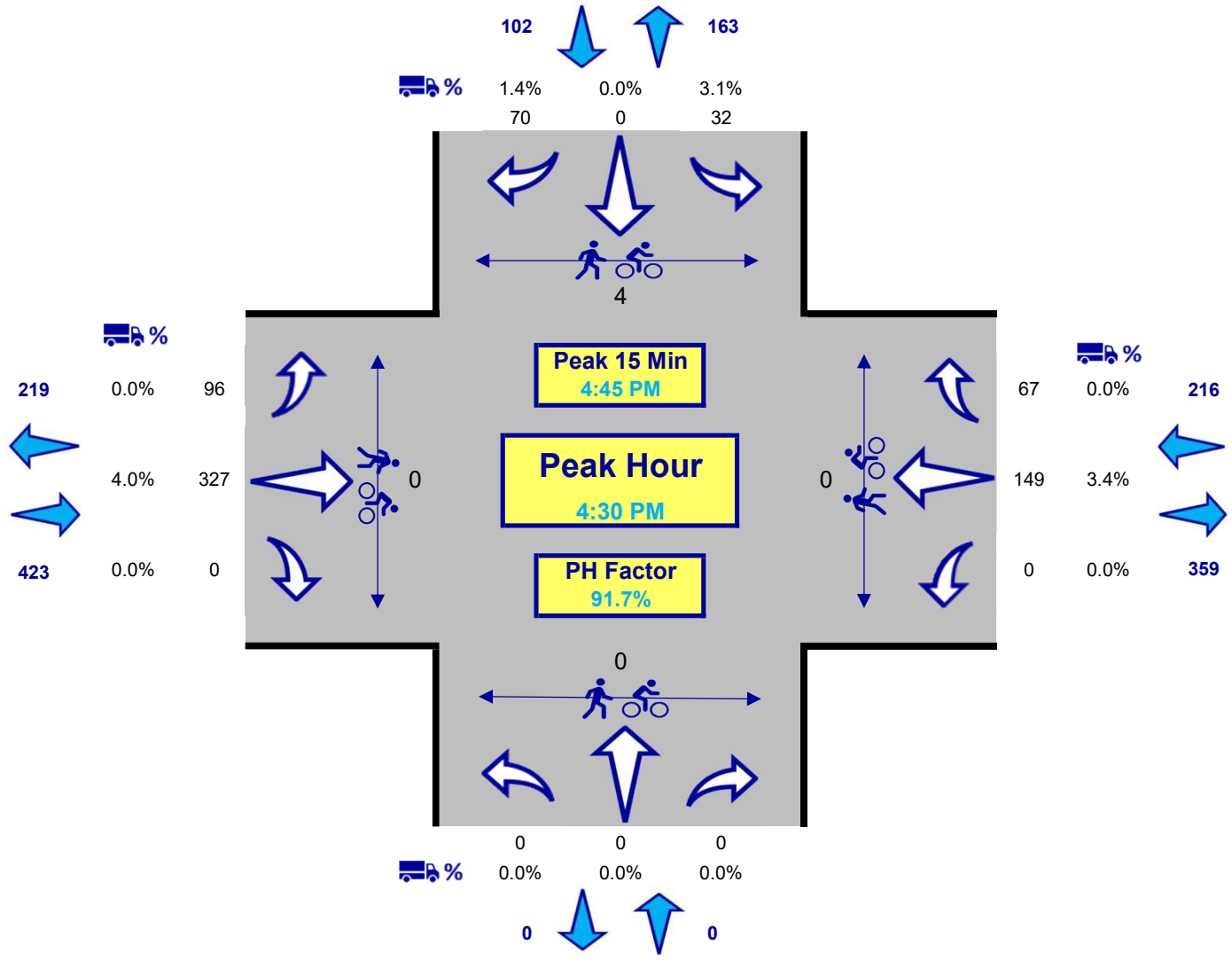

Time Period	Laurel Rd Eastbound				Laurel Rd Westbound				Veneto Blvd Northbound				Veneto Blvd Southbound				Totals :15	Totals Hour
4:00 PM	0	28	45	0	0	0	21	19	0	0	0	0	0	10	0	13	136	
4:15 PM	0	24	54	0	0	0	47	14	0	0	0	0	0	5	0	19	163	
4:30 PM	0	17	69	0	0	0	56	12	0	0	0	0	0	8	0	16	178	
4:45 PM	**0**	**31**	**91**	**0**	**0**	**0**	**41**	**18**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**15**	**202**	679
5:00 PM	0	25	78	0	0	0	33	19	0	0	0	0	0	11	0	18	184	727
5:15 PM	0	23	89	0	0	0	19	18	0	0	0	0	0	7	0	21	177	741
5:30 PM	0	21	59	0	0	0	38	14	0	0	0	0	0	3	0	23	158	721
5:45 PM	0	16	34	0	0	0	15	14	0	0	0	0	0	9	0	16	104	623
Total	**0**	**185**	**519**	**0**	**0**	**0**	**270**	**128**	**0**	**0**	**0**	**0**	**0**	**59**	**0**	**141**	**1302**	

Turning Movement Count Summary

Location: Jacaranda Blvd & Laurel Rd
Date: 9/21/2023
Count Period: 4:00 PM - 6:00 PM

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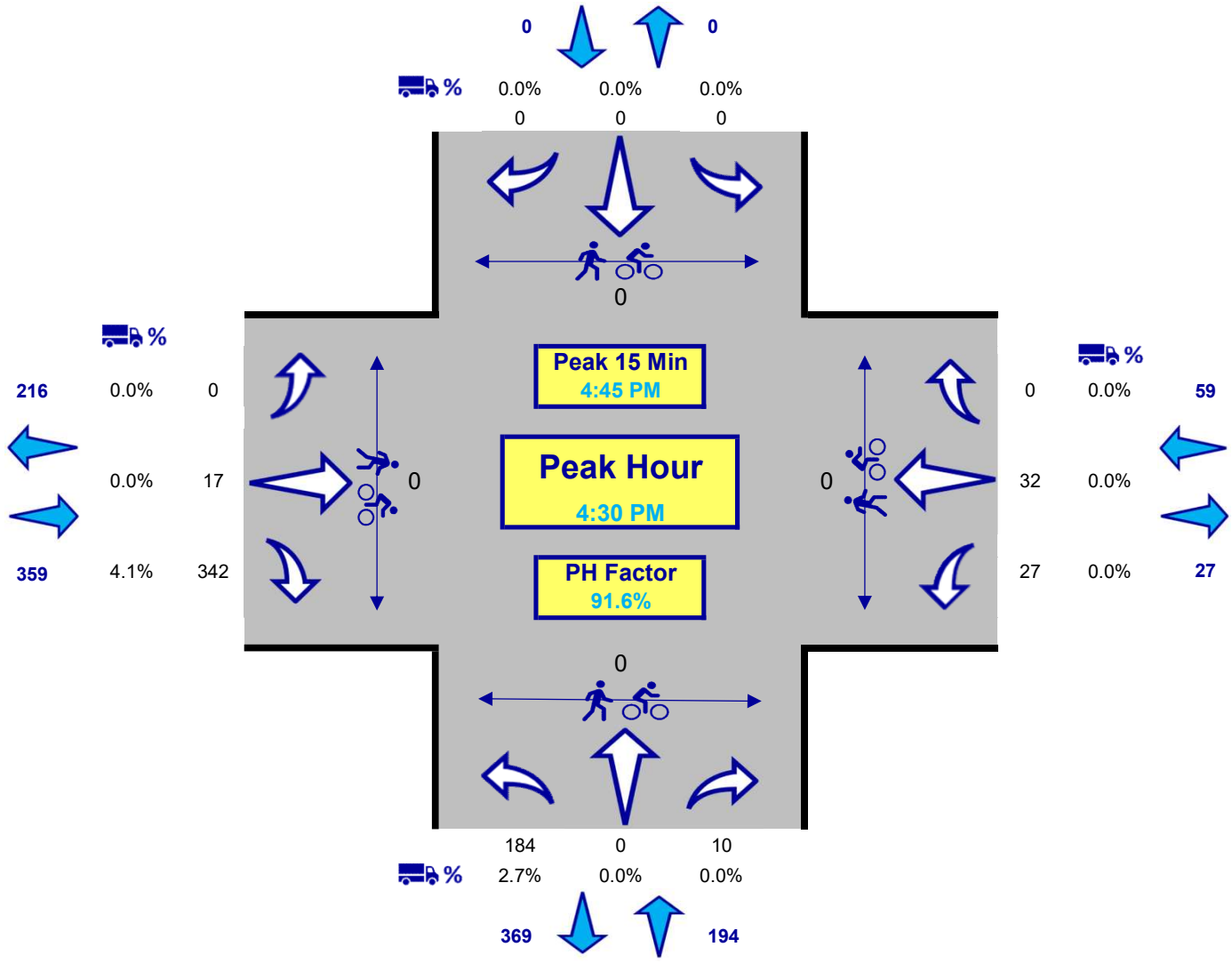

Time Period	Laurel Rd Eastbound				Laurel Rd Westbound				Jacaranda Blvd Northbound				Jacaranda Blvd Southbound				Totals :15	Totals Hour
4:00 PM	0	0	3	52	0	5	7	0	0	33	0	0	0	0	0	0	100	
4:15 PM	0	0	4	55	0	6	12	0	0	49	0	0	0	0	0	0	126	
4:30 PM	0	0	3	74	0	5	8	0	0	60	0	4	0	0	0	0	154	
4:45 PM	**0**	**0**	**6**	**91**	**0**	**9**	**12**	**0**	**0**	**47**	**0**	**2**	**0**	**0**	**0**	**0**	**167**	547
5:00 PM	0	0	2	87	0	7	6	0	0	46	0	2	0	0	0	0	150	597
5:15 PM	0	0	6	90	0	6	6	0	0	31	0	2	0	0	0	0	141	612
5:30 PM	0	0	9	53	0	4	9	0	0	43	0	0	0	0	0	0	118	576
5:45 PM	0	0	2	41	0	6	2	0	0	27	0	1	0	0	0	0	79	488
Total	**0**	**0**	**35**	**543**	**0**	**48**	**62**	**0**	**0**	**336**	**0**	**11**	**0**	**0**	**0**	**0**	**1035**	

Turning Movement Count Summary

Location: Jacaranda Blvd & Border Rd
Date: 9/21/2023
Count Period: 4:00 PM - 6:00 PM

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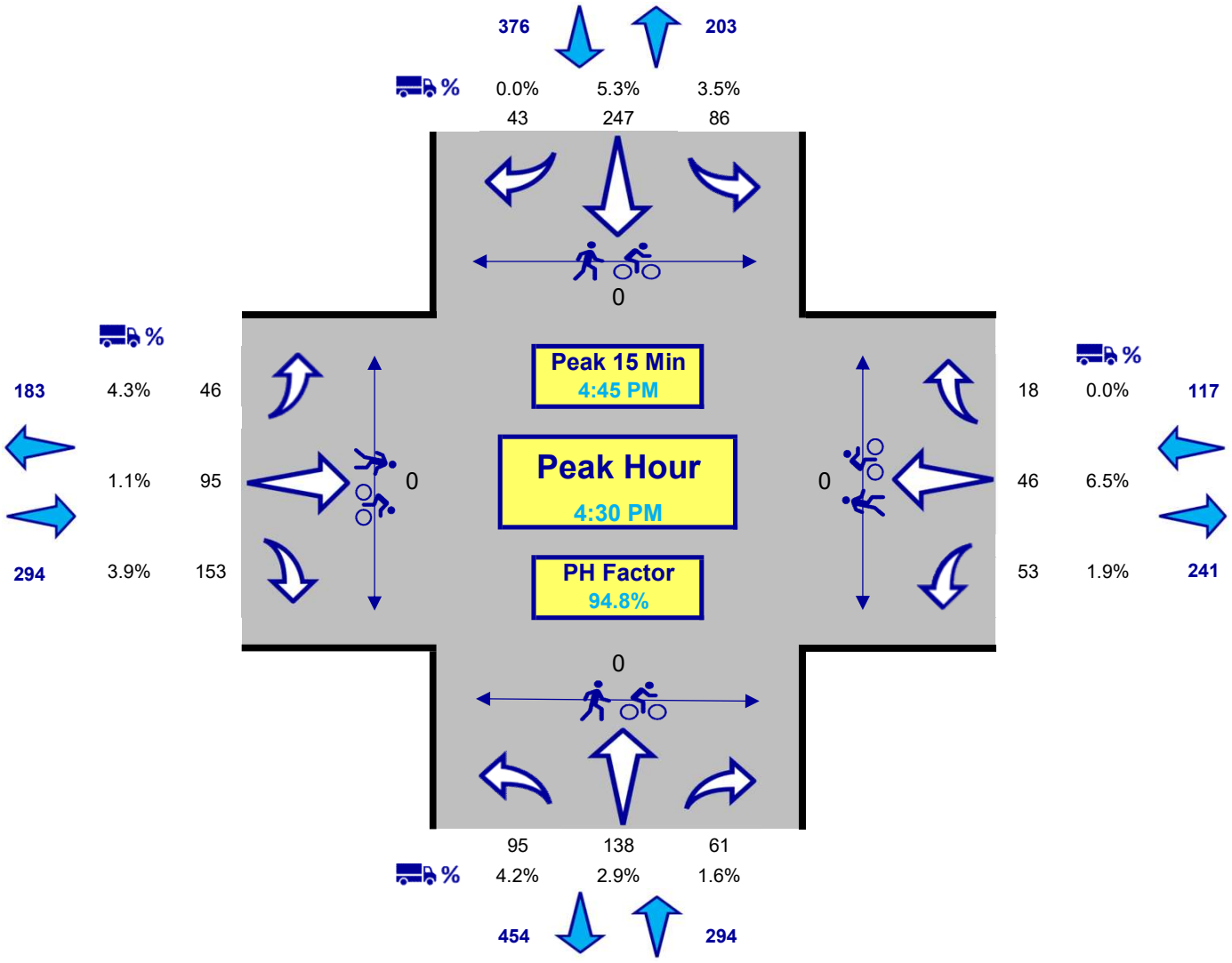

Time Period	Border Rd Eastbound				Border Rd Westbound				Jacaranda Blvd Northbound				Jacaranda Blvd Southbound				Totals :15	Totals Hour
4:00 PM	0	12	25	30	0	16	10	5	0	23	26	6	0	11	32	12	208	
4:15 PM	0	14	21	28	0	9	13	7	0	22	43	18	0	11	47	5	238	
4:30 PM	0	19	18	27	0	11	14	4	0	21	40	18	0	17	53	6	248	
4:45 PM	**0**	**9**	**25**	**41**	**0**	**18**	**12**	**4**	**0**	**24**	**36**	**17**	**1**	**24**	**63**	**11**	**285**	979
5:00 PM	0	6	24	38	0	18	12	4	0	32	33	14	0	19	67	16	283	1054
5:15 PM	0	12	28	47	0	6	8	6	1	17	29	12	0	25	64	10	265	1081
5:30 PM	0	14	19	46	0	10	9	4	1	21	26	21	0	14	41	6	232	1065
5:45 PM	0	9	20	24	0	15	8	5	0	22	19	20	0	9	42	6	199	979
Total	**0**	**95**	**180**	**281**	**0**	**103**	**86**	**39**	**2**	**182**	**252**	**126**	**1**	**130**	**409**	**72**	**1958**	

Turning Movement Count Summary

Location: Jacaranda Blvd & I-75 NB
Date: 9/21/2023
Count Period: 4:00 PM - 6:00 PM

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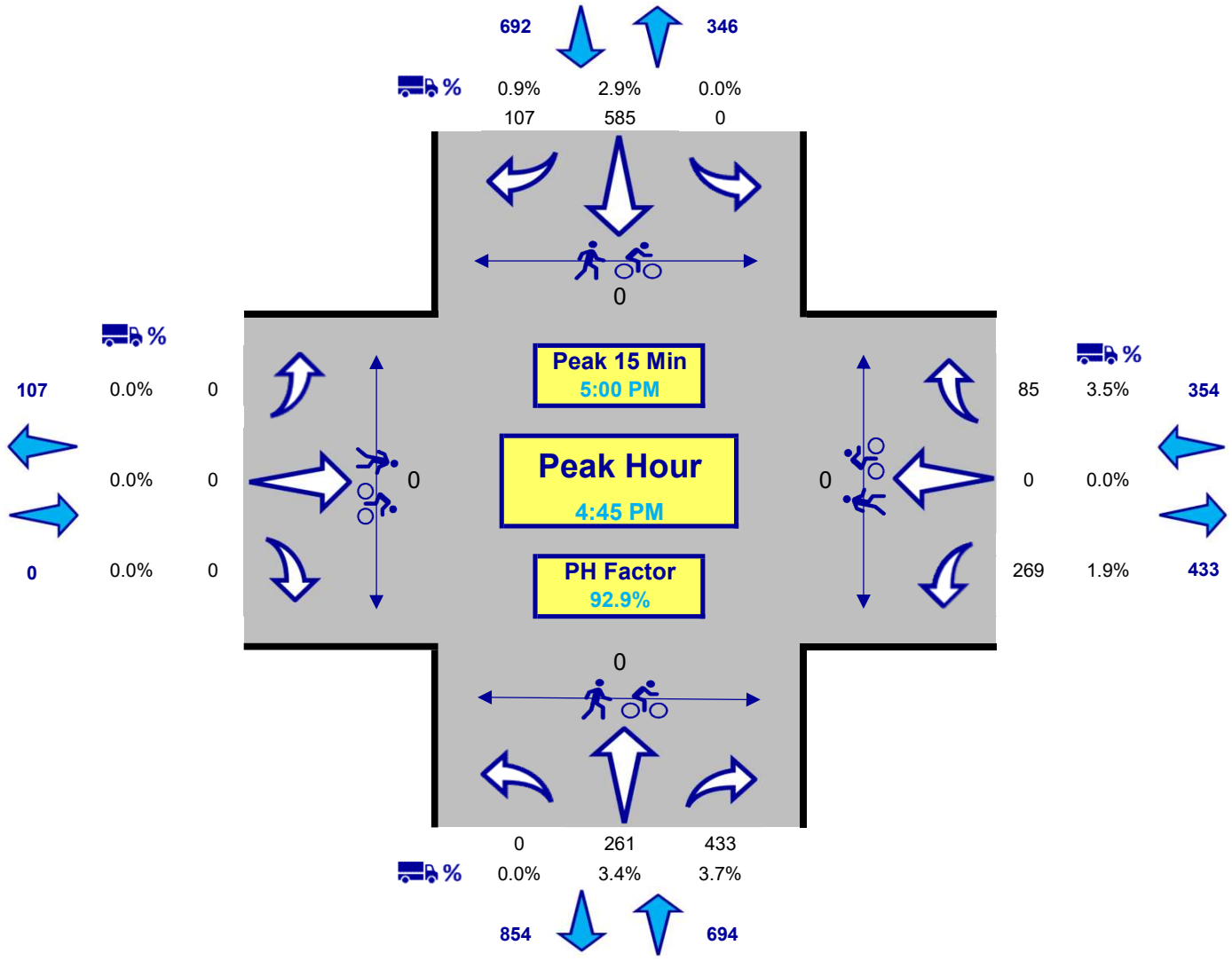

Time Period	I-75 NB Eastbound				I-75 NB Westbound				Jacaranda Blvd Northbound				Jacaranda Blvd Southbound				Totals :15	Totals Hour
4:00 PM	0	0	0	0	0	67	0	16	0	0	65	109	0	0	100	24	381	
4:15 PM	0	0	0	0	0	68	0	14	2	0	80	111	0	0	101	23	399	
4:30 PM	0	0	0	0	0	65	0	31	0	0	65	124	0	0	113	17	415	
4:45 PM	0	0	0	0	0	61	0	19	0	0	79	94	0	0	141	22	416	1611
5:00 PM	**0**	**0**	**0**	**0**	**0**	**68**	**0**	**24**	**0**	**0**	**56**	**122**	**0**	**0**	**169**	**29**	**468**	1698
5:15 PM	0	0	0	0	0	67	0	18	0	0	52	112	0	0	147	27	423	1722
5:30 PM	0	0	0	0	0	73	0	24	0	0	74	105	0	0	128	29	433	1740
5:45 PM	0	0	0	0	0	53	0	27	1	0	48	118	0	0	91	20	358	1682
Total	**0**	**0**	**0**	**0**	**0**	**522**	**0**	**173**	**3**	**0**	**519**	**895**	**0**	**0**	**990**	**191**	**3293**	

Turning Movement Count Summary

Location: Jacaranda Blvd & I-75 SB
Date: 9/21/2023
Count Period: 4:00 PM - 6:00 PM

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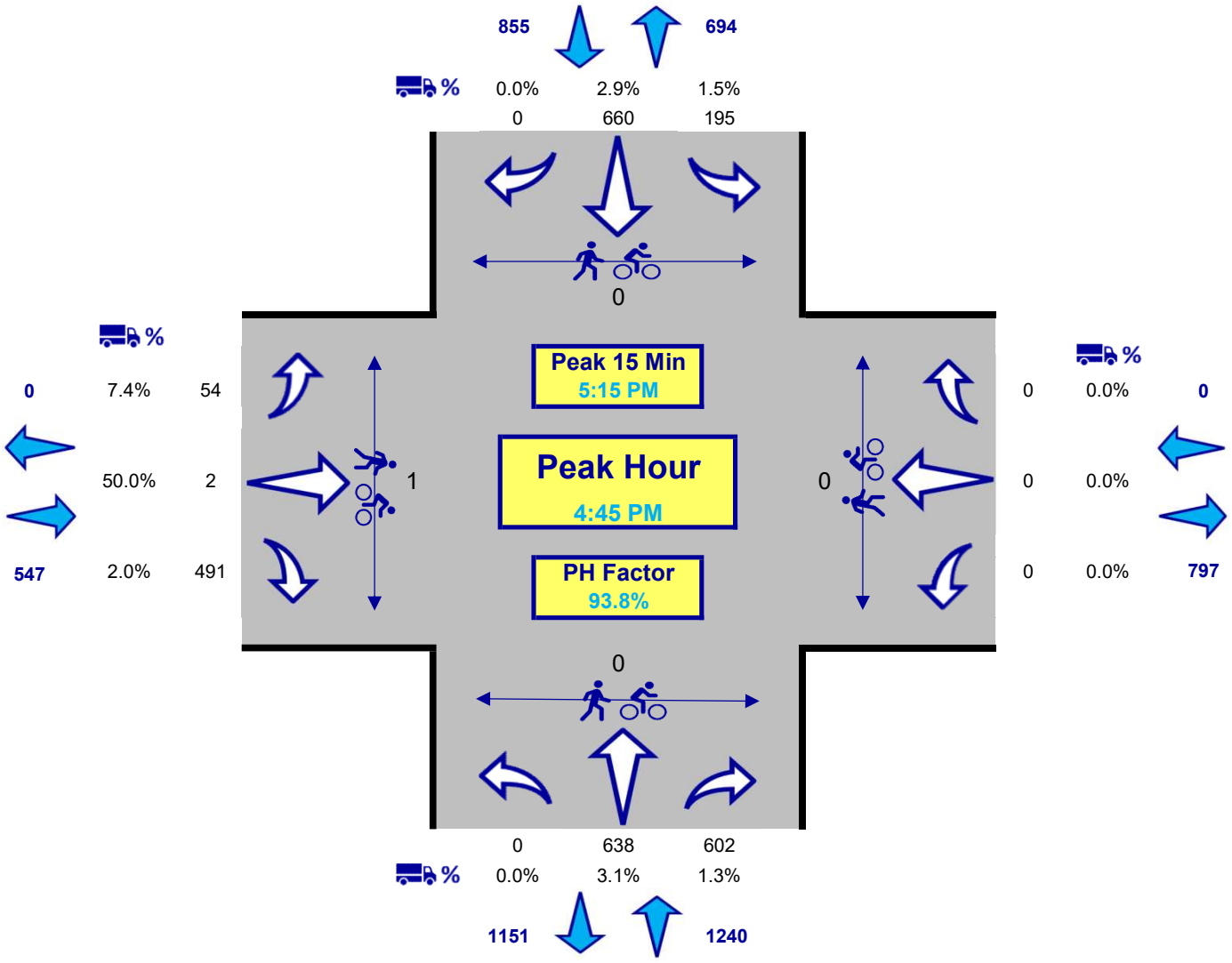

Time Period	I-75 SB Eastbound				I-75 SB Westbound				Jacaranda Blvd Northbound				Jacaranda Blvd Southbound				Totals :15	Totals Hour
4:00 PM	0	11	0	96	0	0	0	0	0	0	163	141	0	37	126	0	574	
4:15 PM	0	15	0	147	0	0	0	0	0	0	177	139	1	39	131	0	649	
4:30 PM	0	7	0	104	0	0	0	0	0	0	182	129	0	32	140	0	594	
4:45 PM	0	15	0	123	0	0	0	0	0	0	158	111	0	44	161	0	612	2429
5:00 PM	0	12	1	101	0	0	0	0	0	0	165	146	1	48	169	0	643	2498
5:15 PM	**0**	**12**	**0**	**115**	**0**	**0**	**0**	**0**	**0**	**0**	**151**	**192**	**1**	**56**	**177**	**0**	**704**	2553
5:30 PM	0	15	1	152	0	0	0	0	0	0	164	153	0	45	153	0	683	2642
5:45 PM	0	9	0	139	0	0	0	0	0	0	158	138	0	27	121	0	592	2622
Total	**0**	**96**	**2**	**977**	**0**	**0**	**0**	**0**	**0**	**0**	**1318**	**1149**	**3**	**328**	**1178**	**0**	**5051**	

Station : 1464 - Laurel Rd @ Knights Trail Rd (Standard File)

Phase	1 (EL)	2 (WT)	3 (NT)	4 (ST)	5 (WL)	6 (ET)	7	8	9	10	11	12	13	14	15	16
Walk		7	8													
Ped Clearance		28	27													
Min Green	5	15	7	7	5	15										
Passage	5	5	3	3	3	5										
Max1	40	40	15	35	10	40										
Max2	50	25	15	30	15	50										
Yellow	4.9	4.9	3.7	4.9	4.9	4.9	9	9	9	9	9	9	9	9	9	9
Red	2.5	2	2	2	3.5	2										
Red Revert	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON										
Auto Entry	ON				ON											
Auto Exit		ON				ON										
Non Act1																
Non Act2																
Lock Call																
Min Recall				ON												
Max Recall																
Ped Recall																
Soft Recall		ON				ON										
Dual Entry		ON				ON										
Sim Gap Enable	ON	ON			ON	ON										
Guar Passage																
Rest In Walk																
Cond Service																
Add Init Calc																
Bike Clear																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash	ON	ON				
Override Higher						
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	5	5	20	20	20	20
Min Walk						
Ped Clear			29	29	29	29
Track Green						
Min Dwell	5	5	7	10	10	10
Max Presence						
Track R1						
Track R2						
Track R3						
Track R4						
Dwell Ped1						
Exit R1			4	2	1	2
Exit R2				6	6	6
Exit R3						
Exit R4						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Type				
Platoon Rx				
Cond Lockout				
Coord in Preempt				
Platoon Tx				
Lock				
Begin Mode	SKIP	SKIP	SKIP	SKIP
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Max Lockout				
Ext Dwell				
Ant Arrival				
Max Grn 1				
Max Grn 2				
Max Grn 3				
Max Grn 4				
Max Grn 5				
Max Grn 6				
Max Grn 7				
Max Grn 8				
Max Grn 9				
Max Grn 10				
Max Grn 11				
Max Grn 12				
Max Grn 13				
Max Grn 14				
Max Grn 15				
Max Grn 16				
Headway Group				
Queue Jump				
Headway Time				

TX Time				
PP Hold Time				
PP Tx Phase 1				
PP Tx Phase 2				
PP Tx Phase 3				
PP Tx Phase 4				

Station : 1464 - Laurel Rd @ Knights Trail Rd (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		99	254																							
6	30	1	1	120	92	1	3	10	22		54	33	16	17	16	71										
10		2	2	120	87	2	3	10	22		49	30	16	25	16	63										
14	30	3	3	120	86	3	3	10	22		54	24	16	26	16	62										
18	15	5	5	90	14	5	2	10	22		30	27	16	17	16	41										
19	15	99	254																							
Day Plan 2											**Easy**															
		99	254																							
8		5	5	90	14	5	2	10	22		30	27	16	17	16	41										
9	30	4	4	100	20	4	2	10	22		29	34	16	21	16	47										
17	30	5	5	90	14	5	2	10	22		30	27	16	17	16	41										
19		99	254																							
Day Plan 3											**Easy**															
		99	254																							
9	30	5	5	90	14	5	2	10	22		30	27	16	17	16	41										
11	30	4	4	100	20	4	2	10	22		29	34	16	21	16	47										
14		5	5	90	14	5	2	10	22		30	27	16	17	16	41										
18	15	99	254																							

Station : 1464 - Laurel Rd @ Knights Trail Rd (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											**Easy**															
		99	254																							

Scheduler

	Month											Day of Weekk							Day of Month									1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4																																																			1
5																																																				1
6																																																			1
7																																																			1
8																																																			1
9																																																			1
10																																																			1
11																																																			1
12																																																			1
13																																																			1
14																																																			1
15																																																			1
16																																																			1
17																																																			1
18																																																			1
19																																																			1
20																																																			1
21																																																			1
22																																																			1
23																																																			1
24																																																			1
25																																																			1
26																																																			1
27																																																			1
28																																																			1
29																																																			1
30																																																			1
31																																																			1
32																																																			1

User Comments:

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

Phase [1.1.1]

	1	2 (NT)	3 (WT)	4	5	6 (ST)	7	8	9	10	11	12	13	14	15	16
Walk	0	7	0	7	0	7	0	0	0	0	0	0	0	0	0	0
Ped Clearance	0	12	0	26	0	26	0	0	0	0	0	0	0	0	0	0
Min Green	0	15	7	10	0	15	0	0	0	0	0	0	0	0	0	0
Passage	0	5	3	0	0	5	0	0	0	0	0	0	0	0	0	0
Max1	0	50	25	40	0	50	0	0	0	0	0	0	0	0	0	0
Max2	0	110	55	33	0	110	0	0	0	0	0	0	0	0	0	0
Yellow	3	4.9	4.1	4.1	3	4.9	3	3	9	9	9	9	9	9	9	9
Red	0	3	2	2	0	3	0	0	0	0	0	0	0	0	0	0
Red Revert	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	90	48	0	0	90	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	10	5	0	0	10	0	0	0	0	0	0	0	0	0	0
Auto Exit		ON				ON										
Rest In Walk																

Phase Option [1.1.2]

	1	2 (NT)	3 (WT)	4	5	6 (ST)	7	8	9	10	11	12	13	14	15	16
Enable		ON	ON	ON		ON										
Auto Entry			ON													
Non Act1																
Non Act2																
Lock Call																
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable		ON				ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

ENTRY	Call Phases				From	to	From	to	From	to	From	to	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

ENTRY	Call Phases				From	to	From	to	From	to	From	to	Assigned Ph
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 1, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	10	3	35	35	4	2	3	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Alternate Phase Program 2, Interval Times [1.1.6.1]

Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0

Agency Name Timing Sheet 10/26/2023 8:55:02 AM

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Backup Time	Red Revert	Console Timeout	Tone Disable	Feature Profile	Phase Mode	Diamond Mode	SDLC Retry Time	TS2 Det Faults	Cycle Fault Action	Max Cycle Time	Max Seek Track Time	Max Seek Dwell Time	Enable Run	Local Flash Start	Start Red Time	Disable Init Ped	Yellow 3 Second Disable	Omit Yellow Enable	Free Ring Sequence
	ON		3	30	OFF		QSEQ	4PH		OFF	ALARM				ON	OFF		OFF	OFF	OFF	1

COMM, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	PORT	System-Up	Sys-Down	PC/Print	Aux 232
1470		900	OFF					

Port Parameters [6.2]

COMM	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ON	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases								Modifer Phases								Type	Green	Yellow	Red
Overlap 1	3	4															NORMAL		4.1	2
Overlap 2																	NORMAL		3.5	1.5
Overlap 3																	NORMAL		3.5	1.5
Overlap 4																	NORMAL		3.5	1.5
Overlap 5																	NORMAL		3.5	1.5
Overlap 6																	NORMAL		3.5	1.5
Overlap 7																	NORMAL		3.5	1.5
Overlap 8																	NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases								Conflicting Overlaps								Conflicting Peds										
Overlap 1																									OFF	OFF	OFF
Overlap 2																									OFF	OFF	OFF
Overlap 3																									OFF	OFF	OFF
Overlap 4																									OFF	OFF	OFF
Overlap 5																									OFF	OFF	OFF
Overlap 6																									OFF	OFF	OFF
Overlap 7																									OFF	OFF	OFF
Overlap 8																									OFF	OFF	OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	0	2	3	0	0	6	0	3	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Call Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Switch Phase	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Channels/SDLC, Assign to Phases [1.3.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #		2	3			6			1				2	4	6									
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED								
Flash	RED	YEL	RED	RED	RED	YEL	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Alt Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT		ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2		1		1							1				
3								1							
4			1					1							
5															
6		1		1											
7															
8															
9			1												
10															
11															
12															
13		1													
14															
15															

Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac								Detector								MMU	DIAG
BIU#	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
Present	ON	ON							ON								ON	
Peer to Peer																		

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2		3	4	7	8	
Ring 2	5	6						
Ring 3								
Ring 4								

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON				ON
Override Flash	ON	ON				
Override Higher						
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	5	5	10	10	10	5
Min Walk						
Ped Clear			99	99	99	
Track Green						
Min Dwell	5	5	10	10	10	10
Max Presence			120	120	120	
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1			2	3	2	
Dwell P2			6		6	
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1			2	2	2	
Exit R2			6	6	6	
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
		VOT_MON	TEST A

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

Preempt	1	2	3	4	5	6
Enable			ON	ON	ON	
Type	RAIL	RAIL	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt			ON	ON	ON	
Max2						
Return Max/Min	MAX	MAX	MIN	MIN	MIN	MIN
Extend Dwell	1	1				
Pattern						
Output Mode						
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
Dwell Over 1						
Dwell Over 2						
Dwell Over 3						
Dwell Over 4						
Dwell Over 5						
Dwell Over 6						
Dwell Over 7						
Dwell Over 8						
Dwell Over 9						
Dwell Over 10						
Dwell Over 11						
Dwell Over 12						
Ped Clear						
Yellow						
Red						
Return Min/Max						
Delay Inh						
Exit Time			180	180	180	
All Red B4						

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FIXED

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active	
FRC	TIMED	TIMED	P3478_INH	ON	OFF	ON	OFF	OFF	0	+	ON	ON

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	140	150	150	120	100			90								
Offset Time	16	33	25	14	96			18								
Split Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time									140	140	140	140	150			
Offset Time									1	1	31	54	28			
Split Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

Coordination, Splits [2.7.1]

Split Table1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		70	50	20		70										
Mode	NON	MAX	MAX	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		80	50	20		80										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		75	55	20		75										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		60	40	20		60										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		40	40	20		40										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		33	36	21		33										
Mode	NON	MAX	MAX	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

Split Table13	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table14	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table15	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table17	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table18	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table19	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table20	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table22	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table23	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table25	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		77	42	21		77										
Mode	NON	MAX	NON	NON	NON	MIN	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table26	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		77	42	21		77										
Mode	NON	MAX	NON	NON	NON	MIN	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table27	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		77	42	21		77										
Mode	NON	MAX	NON	NON	NON	MIN	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		59	60	21		59										
Mode	NON	MAX	NON	NON	NON	MIN	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		69	60	21		69										
Mode	NON	MAX	MAX	NON	NON	MIN	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

TB Coor, Advanced Scheduler [4.3]

	Month												Day of Week							Day of Month										1										2										3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4																																																	1
5																																																		1
6																																																		1
7																																																		1
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29																																																		1
30																																																		1
31																																																		1
32																																																		1

TB Coor, Day Plan [4.4]

Day Plan Table1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		5	6	7	9	15	17	19	20							
Minute		45	30	30	30		30		30							
Action	99	5	4	1	2	3	4	5	99							

Day Plan Table2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		7	8	18	20											
Minute				30	30											
Action	99	5	4	5	99											

Day Plan Table3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		8	9	17	20											
Minute			30	30												
Action	99	5	4	5	99											

Day Plan Table4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Agency Name | Timing Sheet | 10/26/2023 8:55:02 AM

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

Day Plan Table7	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action	99															

Day Plan Table8	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action	99															

Day Plan Table9	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action	99															

Day Plan Table10	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action	99															

Day Plan Table11	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action	99															

Day Plan Table12	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Hour																
Minute																
Action	99															

Station : 1470 - Jacaranda Blvd @ I-75 SB Ramps (West) (Upload File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	25											
26	26											
27	27											
28	28											
29	29											
30	30											
31	31											
32	32											
33	33											
34	34											
35	35											
36	36											
37	37											
38	38											
39	39											
40	40											
41	41											
42	42											
43	43											
44	44											
45	45											
46	46											
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57												
58												
59												
60												
61												
62												
63												
64												
99	254											
100	255											

APPENDIX E

EXISTING AND FUTURE INTERSECTION VOLUMES

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Knights Trail Road & Laurel Road
Count Date: 09/21/23
P.M. Peak Time Period: 4:15 - 5:15 PM
Peak Hour Factor: 0.95

	Laurel Rd			Laurel Rd			Knights Trail Rd			Knights Trail Rd		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Counts	454	319	38	9	222	76	36	5	11	135	3	708
Peak Season Factor	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
2023 Existing Traffic	**572**	**402**	**48**	**11**	**280**	**96**	**45**	**6**	**14**	**170**	**4**	**892**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Existing Conditions	572	402	48	11	280	96	45	6	14	170	4	892
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Background Traffic Growth	57	40	5	1	28	10	5	1	1	17	0	89
Generation at Venice	90					9		2		5	1	53
Hoskins Grove	37					5				3		21
Hotel 75			27	2			26	1	2		1	
Rustic Road	172					34				21		103
Portofino	267	-37		5	51			4	4	27	5	325
Toscana Isles	242					104				61		142
GCCF		252		2	147	23			2	39		
Milano PUD		60		2	34	6			4	10		
Nokomis Grove	309					50				42		260
SJMR (VICENZA)		94		3	52	10			7	17		
Palencia												
2028 Background Traffic	**1746**	**811**	**80**	**26**	**592**	**347**	**76**	**14**	**34**	**412**	**11**	**1885**

Project Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Project Trips		35			34	23				23		
Total Project Traffic	**0**	**35**	**0**	**0**	**34**	**23**	**0**	**0**	**0**	**23**	**0**	**0**

Total Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	1746	811	80	26	592	347	76	14	34	412	11	1885
Project Traffic	0	35	0	0	34	23	0	0	0	23	0	0
2028 Total Conditions	**1746**	**846**	**80**	**26**	**626**	**370**	**76**	**14**	**34**	**435**	**11**	**1885**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Veneto Boulevard & Laurel Road
Count Date: 09/21/23
P.M. Peak Time Period: 4:30 - 5:30 PM
Peak Hour Factor: 0.92

	Laurel Rd			Laurel Rd						Veneto Blvd		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Counts	96	327			149	67				32		70
Peak Season Factor	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
2023 Existing Traffic	**121**	**412**	**0**	**0**	**188**	**84**	**0**	**0**	**0**	**40**	**0**	**88**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Existing Conditions	121	412	0	0	188	84	0	0	0	40	0	88
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Background Traffic Growth	12	41	0	0	19	8	0	0	0	4	0	9
Generation at Venice												
Hoskins Grove												
Hotel 75												
Rustic Road												
Portofino		219			156							
Toscana Isles												
GCCF		3			5							
Milano PUD		66			37							
Nokomis Grove		42			49							
SJMR (VICENZA)		125			71							
Palencia												
2028 Background Traffic	**133**	**908**	**0**	**0**	**525**	**92**	**0**	**0**	**0**	**44**	**0**	**97**

Project Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Project Trips	1	1	56	13	3		54	22	12		23	
Pass-By Trips	-7	-47	54	6	-23		26	6	17	-2	7	-5
Total Project Traffic	**-6**	**-46**	**110**	**19**	**-20**	**0**	**80**	**28**	**29**	**-2**	**30**	**-5**

Total Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	133	908	0	0	525	92	0	0	0	44	0	97
Project Traffic	-6	-46	110	19	-20	0	80	28	29	-2	30	-5
2028 Total Conditions	**127**	**862**	**110**	**19**	**505**	**92**	**80**	**28**	**29**	**42**	**30**	**92**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Jacaranda Boulevard & Laurel Road
Count Date: 09/21/23
P.M. Peak Time Period: 4:30 - 5:30 PM
Peak Hour Factor: 0.92

	Laurel Rd			Laurel Rd			Jacaranda Blvd					
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Counts		17	342	27	32		184		10			
Peak Season Factor	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
2023 Existing Traffic	**0**	**21**	**431**	**34**	**40**	**0**	**232**	**0**	**13**	**0**	**0**	**0**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Existing Conditions	0	21	431	34	40	0	232	0	13	0	0	0
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Background Traffic Growth	0	2	43	3	4	0	23	0	1	0	0	0
Generation at Venice												
Hoskins Grove												
Hotel 75												
Rustic Road												
Portofino		17	202		12		144					
Toscana Isles												
GCCF		2	1		3		2					
Milano PUD			66				37					
Nokomis Grove		13	29		15		34					
SJMR (VICENZA)		125		1	71				2			
Palencia												
2028 Background Traffic	**0**	**180**	**772**	**38**	**145**	**0**	**472**	**0**	**16**	**0**	**0**	**0**
		0.02	**0.03**	**0.00**	**0.04**		**0.03**					

Project Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Project Trips		6	7	6	6		10		5			
Pass-By Trips			-32				-17					
Total Project Traffic	**0**	**6**	**-25**	**6**	**6**	**0**	**-7**	**0**	**5**	**0**	**0**	**0**

Total Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	0	180	772	38	145	0	472	0	16	0	0	0
Project Traffic	0	6	-25	6	6	0	-7	0	5	0	0	0
2028 Total Conditions	**0**	**186**	**747**	**44**	**151**	**0**	**465**	**0**	**21**	**0**	**0**	**0**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Jacaranda Boulevard & Border Road
Count Date: 09/21/23
P.M. Peak Time Period: 4:30 - 5:30 PM
Peak Hour Factor: 0.95

	Border Rd			Border Rd			Jacaranda Blvd			Jacaranda Blvd		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Counts	46	95	153	53	46	18	95	138	61	86	247	43
Peak Season Factor	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
2023 Existing Traffic	**58**	**120**	**193**	**67**	**58**	**23**	**120**	**174**	**77**	**108**	**311**	**54**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Existing Conditions	58	120	193	67	58	23	120	174	77	108	311	54
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Background Traffic Growth	6	12	19	7	6	2	12	17	8	11	31	5
Generation at Venice												
Hoskins Grove												
Hotel 75												
Rustic Road												
Portofino	48					48		48		67	67	68
Toscana Isles												
GCCF	2	14	72		25		122					3
Milano PUD	19					8		37		4	21	11
Nokomis Grove												
SJMR (VICENZA)		22		25	12	1			45	1		
Palencia	7	2	26		3		45					12
2028 Background Traffic	**140**	**170**	**310**	**99**	**104**	**82**	**299**	**276**	**130**	**191**	**430**	**153**

Project Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Project Trips	28					26		74		24	73	27
Total Project Traffic	**28**	**0**	**0**	**0**	**0**	**26**	**0**	**74**	**0**	**24**	**73**	**27**

Total Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	140	170	310	99	104	82	299	276	130	191	430	153
Project Traffic	28	0	0	0	0	26	0	74	0	24	73	27
2028 Total Conditions	**168**	**170**	**310**	**99**	**104**	**108**	**299**	**350**	**130**	**215**	**503**	**180**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Jacaranda Boulevard & I-75 NB Ramps
Count Date: 09/21/23
P.M. Peak Time Period: 4:45 - 5:45 PM
Peak Hour Factor: 0.93

				I-75 NB Ramp			Jacaranda Blvd			Jacaranda Blvd		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Counts				269		85		261	433	0	585	107
Peak Season Factor	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
2023 Existing Traffic	**0**	**0**	**0**	**339**	**0**	**107**	**0**	**329**	**546**	**0**	**737**	**135**

Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Existing Conditions	0	0	0	339	0	107	0	329	546	0	737	135
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Background Traffic Growth	0	0	0	34	0	11	0	33	55	0	74	14
Generation at Venice												
Hoskins Grove												
Hotel 75												
Rustic Road												
Portofino								43			61	
Toscana Isles												
GCCF						32		87			69	
Milano PUD						11		26			18	3
Nokomis Grove												
SJMR (VICENZA)						6		37			24	
Palencia												
2028 Background Traffic	**0**	**0**	**0**	**373**	**0**	**167**	**0**	**555**	**601**	**0**	**983**	**152**

Project Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Project Trips						46		28			73	
Total Project Traffic	**0**	**0**	**0**	**0**	**0**	**46**	**0**	**28**	**0**	**0**	**73**	**0**

Total Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	0	0	0	373	0	167	0	555	601	0	983	152
Project Traffic	0	0	0	0	0	46	0	28	0	0	73	0
2028 Total Conditions	**0**	**0**	**0**	**373**	**0**	**213**	**0**	**583**	**601**	**0**	**1056**	**152**

TRAFFIC VOLUME AT STUDY INTERSECTIONS

Intersection: Jacaranda Boulevard & I-75 SB Ramps
Count Date: 09/21/23
P.M. Peak Time Period: 4:45 - 5:45 PM
Peak Hour Factor: 0.94

	I-75 SB Ramp						Jacaranda Blvd			Jacaranda Blvd		
Existing Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Raw Counts	54	2	491					638	602	195	660	
Peak Season Factor	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26	1.26
2023 Existing Traffic	**68**	**3**	**619**	**0**	**0**	**0**	**0**	**804**	**759**	**246**	**832**	**0**

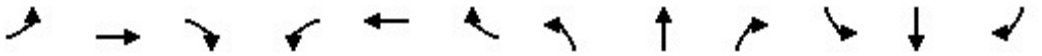
Background Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Existing Conditions	68	3	619	0	0	0	0	804	759	246	832	0
Years to Build-out	5	5	5	5	5	5	5	5	5	5	5	5
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Background Traffic Growth	7	0	62	0	0	0	0	80	76	25	83	0
Generation at Venice												
Hoskins Grove												
Hotel 75												
Rustic Road												
Portofino								43			61	
Toscana Isles												
GCCF								87		18	51	
Milano PUD	0							26		3	15	
Nokomis Grove												
SJMR (VICENZA)								37		3	21	
Palencia												
2028 Background Traffic	**75**	**3**	**681**	**0**	**0**	**0**	**0**	**1077**	**835**	**295**	**1063**	**0**

Project Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Project Trips								28		46	27	
Total Project Traffic	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**28**	**0**	**46**	**27**	**0**

Total Traffic	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**
Background Traffic	75	3	681	0	0	0	0	1077	835	295	1063	0
Project Traffic	0	0	0	0	0	0	0	28	0	46	27	0
2028 Total Conditions	**75**	**3**	**681**	**0**	**0**	**0**	**0**	**1105**	**835**	**341**	**1090**	**0**

APPENDIX F

2023 EXISTING TRAFFIC
SYNCHRO SUMMARY WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	572	402	48	11	280	96	45	6	14	170	4	892
Future Volume (veh/h)	572	402	48	11	280	96	45	6	14	170	4	892
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1900	1900	1841	1722	1811	1900	1900	1826	1900	1826
Adj Flow Rate, veh/h	602	423	35	12	295	85	47	6	11	179	4	677
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	2	0	0	4	12	6	0	0	5	0	5
Cap, veh/h	787	1047	901	40	1213	506	103	36	66	291	318	1096
Arrive On Green	0.24	0.56	0.56	0.02	0.35	0.35	0.06	0.06	0.06	0.17	0.17	0.17
Sat Flow, veh/h	3346	1870	1610	1810	3497	1459	1725	601	1101	1739	1900	2723
Grp Volume(v), veh/h	602	423	35	12	295	85	47	0	17	179	4	677
Grp Sat Flow(s),veh/h/ln	1673	1870	1610	1810	1749	1459	1725	0	1702	1739	1900	1362
Q Serve(g_s), s	20.1	15.4	1.2	0.8	7.2	4.8	3.2	0.0	1.1	11.5	0.2	20.1
Cycle Q Clear(g_c), s	20.1	15.4	1.2	0.8	7.2	4.8	3.2	0.0	1.1	11.5	0.2	20.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.65	1.00		1.00
Lane Grp Cap(c), veh/h	787	1047	901	40	1213	506	103	0	102	291	318	1096
V/C Ratio(X)	0.77	0.40	0.04	0.30	0.24	0.17	0.46	0.00	0.17	0.61	0.01	0.62
Avail Cap(c_a), veh/h	1327	1047	901	145	1213	506	162	0	160	291	318	1096
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	15.0	11.9	57.8	28.0	27.2	54.5	0.0	53.6	46.4	41.7	28.5
Incr Delay (d2), s/veh	3.3	1.2	0.1	4.1	0.5	0.7	3.1	0.0	0.8	3.8	0.0	1.1
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(95%),veh/ln	13.2	10.6	0.8	0.7	5.4	3.1	2.6	0.0	0.9	9.0	0.2	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.2	16.2	12.0	61.9	28.4	27.9	57.7	0.0	54.3	50.2	41.7	29.6
LnGrp LOS	D	B	B	E	C	C	E	A	D	D	D	C
Approach Vol, veh/h		1060			392			64			860	
Approach Delay, s/veh		33.1			29.3			56.8			33.9	
Approach LOS		C			C			E			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	34.6	47.5		11.9	9.0	73.1		26.0				
Change Period (Y+Rc), s	7.4	6.9		* 5.7	7.4	6.9		6.9				
Max Green Setting (Gmax), s	46.6	17.1		* 10	8.6	55.1		19.1				
Max Q Clear Time (g_c+I1), s	22.1	9.2		5.2	2.8	17.4		22.1				
Green Ext Time (p_c), s	5.1	2.0		0.1	0.0	5.6		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		33.4
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	121	412	188	84	40	88
Future Vol, veh/h	121	412	188	84	40	88
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	235	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	4	3	0	3	1
Mvmt Flow	132	448	204	91	43	96

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	295	0	-	0	962	250
Stage 1	-	-	-	-	250	-
Stage 2	-	-	-	-	712	-
Critical Hdwy	4.1	-	-	-	6.43	6.21
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.2	-	-	-	3.527	3.309
Pot Cap-1 Maneuver	1278	-	-	-	283	791
Stage 1	-	-	-	-	789	-
Stage 2	-	-	-	-	484	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1278	-	-	-	254	791
Mov Cap-2 Maneuver	-	-	-	-	254	-
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	484	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1278	-	-	-	254	791
HCM Lane V/C Ratio	0.103	-	-	-	0.171	0.121
HCM Control Delay (s)	8.1	-	-	-	22.1	10.2
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6	0.4

Intersection	
Int Delay, s/veh	5.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	21	431	34	40	232	13
Future Vol, veh/h	21	431	34	40	232	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	300	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	4	0	0	3	0
Mvmt Flow	23	468	37	43	252	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	491	0	374	257
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	117	-
Critical Hdwy	-	-	4.1	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.2	-	3.527	3.3
Pot Cap-1 Maneuver	-	-	1083	-	625	787
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	906	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1083	-	603	787
Mov Cap-2 Maneuver	-	-	-	-	603	-
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	874	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.9	14.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	603	787	-	-	1083	-
HCM Lane V/C Ratio	0.418	0.018	-	-	0.034	-
HCM Control Delay (s)	15.2	9.7	-	-	8.4	0
HCM Lane LOS	C	A	-	-	A	A
HCM 95th %tile Q(veh)	2.1	0.1	-	-	0.1	-

Intersection	
Intersection Delay, s/veh	33.7
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	120	193	67	58	23	120	174	77	108	311	54
Future Vol, veh/h	58	120	193	67	58	23	120	174	77	108	311	54
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	4	1	4	2	7	0	4	3	2	4	5	0
Mvmt Flow	61	126	203	71	61	24	126	183	81	114	327	57
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	31.3	16.1	18.5	52.9
HCM LOS	D	C	C	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	16%	45%	26%	0%
Vol Thru, %	0%	69%	32%	39%	74%	0%
Vol Right, %	0%	31%	52%	16%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	251	371	148	419	54
LT Vol	120	0	58	67	108	0
Through Vol	0	174	120	58	311	0
RT Vol	0	77	193	23	0	54
Lane Flow Rate	126	264	391	156	441	57
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.298	0.567	0.779	0.361	0.951	0.109
Departure Headway (Hd)	8.49	7.731	7.179	8.338	7.759	6.921
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	423	465	504	430	468	517
Service Time	6.254	5.495	5.235	6.416	5.514	4.675
HCM Lane V/C Ratio	0.298	0.568	0.776	0.363	0.942	0.11
HCM Control Delay	14.8	20.2	31.3	16.1	58.4	10.5
HCM Lane LOS	B	C	D	C	F	B
HCM 95th-tile Q	1.2	3.5	7	1.6	11.5	0.4

Intersection	
Int Delay, s/veh	8.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	339	0	107	0	329	546	0	737	135
Future Vol, veh/h	0	0	0	339	0	107	0	329	546	0	737	135
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	-	-	Free	-	-	Free
Storage Length	-	-	-	0	-	800	-	-	800	-	-	300
Veh in Median Storage, #	-	2	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	2	0	4	0	3	4	0	3	1
Mvmt Flow	0	0	0	365	0	115	0	354	587	0	792	145

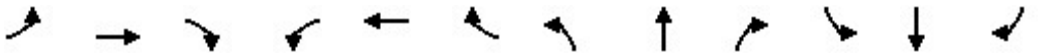
Major/Minor	Minor1			Major1			Major2		
Conflicting Flow All	750	-	177	-	0	-	-	-	0
Stage 1	354	-	-	-	-	-	-	-	-
Stage 2	396	-	-	-	-	-	-	-	-
Critical Hdwy	6.84	-	6.98	-	-	-	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.34	-	-	-	-	-	-
Pot Cap-1 Maneuver	~ 347	0	829	0	-	0	0	-	0
Stage 1	681	0	-	0	-	0	0	-	0
Stage 2	649	0	-	0	-	0	0	-	0
Platoon blocked, %					-			-	
Mov Cap-1 Maneuver	~ 347	0	829	-	-	-	-	-	-
Mov Cap-2 Maneuver	462	0	-	-	-	-	-	-	-
Stage 1	681	0	-	-	-	-	-	-	-
Stage 2	649	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.9	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	462	829	-
HCM Lane V/C Ratio	-	0.789	0.139	-
HCM Control Delay (s)	-	36.2	10	-
HCM Lane LOS	-	E	B	-
HCM 95th %tile Q(veh)	-	7.1	0.5	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Edition methodology does not support custom phasing.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	3	619	0	0	0	0	804	759	246	832	0
Future Volume (vph)	68	3	619	0	0	0	0	804	759	246	832	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					6.9	3.0	6.9	6.9	
Lane Util. Factor	0.95	0.95	0.88					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.96	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1603	1582	2787					3505	1599	1770	3505	
Flt Permitted	0.95	0.96	1.00					1.00	1.00	0.28	1.00	
Satd. Flow (perm)	1603	1582	2787					3505	1599	521	3505	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	72	3	659	0	0	0	0	855	807	262	885	0
RTOR Reduction (vph)	0	0	96	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	37	38	563	0	0	0	0	855	807	262	885	0
Heavy Vehicles (%)	7%	33%	2%	0%	0%	0%	0%	3%	1%	2%	3%	0%
Turn Type	Split	NA	custom					NA	Free	Perm	NA	
Protected Phases	3	3	3 4					2			6	
Permitted Phases									Free	6		
Actuated Green, G (s)	32.6	32.6	48.7					87.3	150.0	87.3	87.3	
Effective Green, g (s)	33.6	33.6	49.7					88.3	150.0	88.3	88.3	
Actuated g/C Ratio	0.22	0.22	0.33					0.59	1.00	0.59	0.59	
Clearance Time (s)	6.1	6.1						7.9		7.9	7.9	
Vehicle Extension (s)	3.0	3.0						5.0		5.0	5.0	
Lane Grp Cap (vph)	359	354	923					2063	1599	306	2063	
v/s Ratio Prot	0.02	0.02	c0.20					0.24			0.25	
v/s Ratio Perm									0.50	c0.50		
v/c Ratio	0.10	0.11	0.61					0.41	0.50	0.86	0.43	
Uniform Delay, d1	46.2	46.3	42.0					16.8	0.0	25.6	17.0	
Progression Factor	1.00	1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.1	1.2					0.6	1.1	25.2	0.7	
Delay (s)	46.4	46.4	43.2					17.4	1.1	50.8	17.6	
Level of Service	D	D	D					B	A	D	B	
Approach Delay (s)		43.6			0.0			9.5			25.2	
Approach LOS		D			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX G

SCHEDULED IMPROVEMENTS INFORMATION

CITY OF VENICE
STREETS CAPITAL PROJECTS #302
REVENUES & EXPENDITURES

STREETS CAPITAL PROJECTS #302	FY2021 Actuals	FY2022 Actuals	Amended Budget FY2023	Expected FY 2023	Adopted Budget FY 2024
Revenues:					
Grand Total - Revenues	**787,786**	**1,414,195**	**1,283,831**	**1,406,831**	**18,766,419**
Rev - Intergovernmental	**-**	**3,850**	**818,231**	**818,231**	**17,377,919**
331.00-00 - FEDERAL GRANTS	**-**	**3,850**	**818,231**	**818,231**	**1,377,919**
STR018 - Cockrill St. Sidewalk	-	3,850	621,150	621,150	-
STR019 - Tarpon Center Upgrades	-	-	197,081	197,081	1,377,919
334.01-00 - STATE GRANTS/STATE APPRNS	**-**	**-**	**-**	**-**	**8,000,000**
RIF002 - Laurel Road	-	-	-	-	8,000,000
337.71-00 - SARASOTA COUNTY	**398,472**	**1,000,000**	**-**	**-**	**8,000,000**
RIF002 - Laurel Road	398,472	1,000,000	-	-	8,000,000
Rev - Interest	**4,514**	**11,845**	**12,000**	**135,000**	**84,000**
361.10-00 - INTEREST ON INVESTMENTS	4,514	11,845	12,000	135,000	84,000
Other sources - Transfers in	**384,800**	**398,500**	**453,600**	**453,600**	**1,304,500**
381.05-00 - TSF FM MTR FUEL TAX FD	384,800	398,500	453,600	453,600	1,304,500

STREETS CAPITAL PROJECTS #302	FY2021 Actuals	FY2022 Actuals	Amended Budget FY2023	Expected FY 2023	Adopted Budget FY 2024
Expenditures:					
Grand Total - Expenditures	**804,965**	**978,642**	**2,304,223**	**2,304,223**	**19,729,000**
Exp - Capital outlay (0960)	**406,493**	**978,642**	**1,304,223**	**1,304,223**	**3,729,000**
541.63-00 - IMPROV OTHER THAN BLDGS	**406,493**	**978,642**	**1,304,223**	**1,304,223**	**3,729,000**
Road Bond Projects:					
Road Project, Triple Diamond etc.	(96,138)	-	-	-	-
Grants or Gas Taxes:					
UT2023 - Venetian Sister Streets	-	132,000	-	-	-
STR016 - Pavement Sealing and Rest.	502,631	614,468	-	-	-
STR017 - Road Recon - City Hall Surrounding	-	228,324	12,124	12,124	-
STR018 - Cockrill St. Sidewalk	-	3,850	621,150	621,150	-
STR019 - Tarpon Center Upgrades	-	-	670,949	670,949	2,829,000
TBD - Park Blvd South Pathway	-	-	-	-	450,000
TBD -Bay Shore Drive Sidewalk	-	-	-	-	450,000

The Florida Senate
Local Funding Initiative Request
Fiscal Year 2023-2024

LFIR # 2188

1. Project Title Sarasota County Laurel Road Capacity and Mobility Improvement Project

2. Senate Sponsor Joe Gruters

3. Date of Request 02/15/2023

4. Project/Program Description

Multi-modal roadway improvements to provide increased resiliency, safety and capacity for vehicular, pedestrian and bicycle traffic on approximately 1.4 miles of Laurel Road from Knights Trail Road to Jacaranda Boulevard, a hurricane evacuation route and main route to the nearby hospital and fire station . The project will also provide increased capacity for alternative routes to Interstate 75.

5. State Agency to receive requested funds Department of Transportation

State Agency contacted? No

6. Amount of the Nonrecurring Request for Fiscal Year 2023-2024

Type of Funding	Amount
Operations	0
Fixed Capital Outlay	8,000,000
Total State Funds Requested	**8,000,000**

7. Total Project Cost for Fiscal Year 2023-2024 (including matching funds available for this project)

Type of Funding	Amount	Percentage
Total State Funds Requested (from question #6)	8,000,000	50%
Matching Funds		
Federal	0	0%
State (excluding the amount of this request)	0	0%
Local	8,000,000	50%
Other	0	0%
Total Project Costs for Fiscal Year 2023-2024	**16,000,000**	**100%**

8. Has this project previously received state funding? No

Fiscal Year (yyyy-yy)	Amount		Specific Appropriation #	Vetoed
	Recurring	Nonrecurring		

9. Is future funding likely to be requested? No

a. If yes, indicate nonrecurring amount per year.

b. Describe the source of funding that can be used in lieu of state funding.

10. Has the entity requesting this project received any federal assistance related to the COVID-19 pandemic?

Yes

If yes, indicate the amount of funds received and what the funds were used for.

Sarasota County has received approximately $222.8 million dollars of COVID-19 relief funding through the CARES Act, CRRSA, and ARPA. Funding was and is currently being used to respond to short/long term impacts including financially supporting impacted local businesses, individuals, non-profits, and municipal partners through the completed Sarasota CARES program; providing emergency rental assistance to landlords and tenants through the Sarasota ERA program and advancing affordable housing.

Complete questions 11 and 12 for Fixed Capital Outlay Projects

11. Status of Construction

a. What is the current phase of the project?

○ Planning ◉ Design ○ Construction

b. Is the project "shovel ready" (i.e permitted)? No

c. What is the estimated start date of construction? October 2023

d. What is the estimated completion date of construction? March 2025

12. List the owners of the facility to receive, directly or indirectly, any fixed capital outlay funding. Include the relationship between the owners of the facility and the entity.

Sarasota County Government

13. Details on how the requested state funds will be expended

Spending Category	Description	Amount
Administrative Costs:		
Executive Director/Project Head Salary and Benefits		0
Other Salary and Benefits		0
Expense/Equipment/Travel/Supplies/ Other		0
Consultants/Contracted Services/Study		0
Operational Costs: Other		
Salary and Benefits		0
Expense/Equipment/Travel/Supplies/ Other		0
Consultants/Contracted Services/Study		0
Fixed Capital Construction/Major Renovation:		
Construction/Renovation/Land/ Planning Engineering	Engineering, permitting, construction costs, right-of-way acquisition, environmental planning, and supervision of construction to ensure project stays on time and within the budget.	8,000,000
Total State Funds Requested (must equal total from question #6)		**8,000,000**

14. Program Performance

a. What specific purpose or goal will be achieved by the funds requested?

Multi-modal roadway improvements to provide increased resiliency, safety and capacity for vehicular, pedestrian and bicycle traffic on approximately 1.4 miles of Laurel Road from Knights Trail Road to Jacaranda Boulevard, a hurricane evacuation route and main route to the nearby hospital and fire station . The project will also provide increased capacity for alternative routes to Interstate 75.

b. What activities and services will be provided to meet the intended purpose of these funds?

In addition to relieving congestion and making the roadways safer as a hurricane evacuation route, it would enhance the quality of life of local citizens making the adjacent emergency facilities like the fire station and hospital easier to access. The road will be designed as a Complete Street, which is a concept that aims to integrate people, place and mobility for all roadway users into the planning, design, engineering, operating and maintenance of the transportation network. A multi-use recreational trail is also incorporated to enhance mobility for pedestrian and bicyclists.

c. What direct services will be provided to citizens by the appropriation project?

Relief in traffic congestion and enhanced safety in the event of a hurricane or emergency situations will be the result of the funds appropriated. Laurel Road provides access to I-75 for hurricane evacuation but it also would serve as alternative connection east of the interstate alleviating traffic on I-75 on a daily basis. Major employers, like the PGT Custom Window + Doors, Tervis Tumbler, Sarasota Memorial Hospital, among others are also located along the corridor and the expansion of Laurel Road would relieve congestion for the thousands of employees and citizens in their commute.

d. Who is the target population served by this project? How many individuals are expected to be served?

All of Sarasota County residents and visitors in addition to travelers from adjacent counties and state travelers seeking alternative routes to the interstate system.

e. What is the expected benefit or outcome of this project? What is the methodology by which this outcome will be measured?

Increased safety, improved multi-modal access and capacity, upgraded stormwater facilities, enhanced aesthetics and reduced travel times to businesses and residential areas. These benefits and outcomes will be measured by responses to Sarasota County's annual citizen survey and traffic modeling to document capacity improvements.

f. What are the suggested penalties that the contracting agency may consider in addition to its standard penalties for failing to meet deliverables or performance measures provided for the contract?

Performance bond, contract retainage and liquidated damages. In severe cases of failure, vendors may be placed on a no-bid prohibition for related contracting.

15. Requester Contact Information

a. First Name	Spencer	**Last Name**	Anderson
b. Organization	Sarasota County		
c. E-mail Address	sanderso@scgov.net		
d. Phone Number	(941)861-0852	**Ext.**	

16. Recipient Contact Information

a. Organization	Sarasota County Government
b. Municipality and County	Sarasota

c. Organization Type

❑For Profit Entity

❑Non Profit 501(c)(3)

❑Non Profit 501(c)(4)

☑Local Entity

❑University or College

❑Other (please specify)

d. First Name	Rob	**Last Name**	Lewis
e. E-mail Address	rlewis@scgov.net		
f. Phone Number	(941)444-9532		

17. Lobbyist Contact Information

a. Name	Laura E. Boehmer
b. Firm Name	The Southern Group
c. E-mail Address	boehmer@thesoutherngroup.com
d. Phone Number	(850)671-4401

APPENDIX H

VESTED TRAFFIC INFORMATION

Vested Traffic Summary

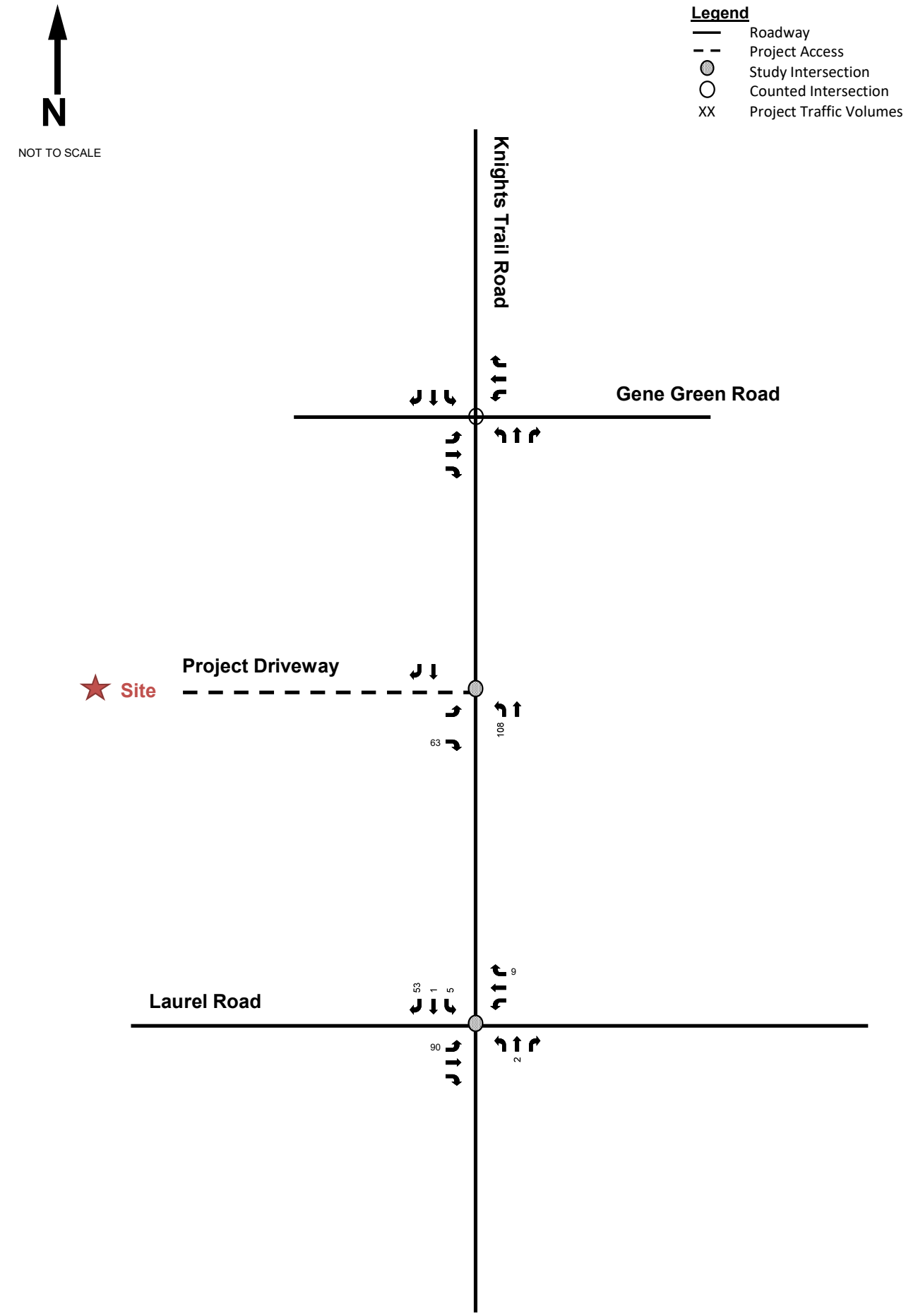
Laurel Road & Knights Trail Road

	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Portofino		47%	9%								1%	1%				
						1%	9%							4%	1%	36%
Portofino Previous Total Traffic		318	-27			6	56				5	5		29	6	346
Portofino Trips to Subtract		51	10			1	5				1	1		2	1	21
Portofino - Reduced		**267**	**-37**			**5**	**51**				**4**	**4**		**27**	**5**	**325**
Toscana Isles		404						173						101		237
Toscana Isles - Reduced by ~~30%~~ 40%		~~283~~ **242**						~~121~~ **104**						~~71~~ **61**		~~166~~ **142**
Rustic Road		**172**						**34**						**21**		**103**
GCCF			**252**			**2**	**147**	**23**				**2**		**39**		
Milano PUD			181			7	102	17				11		31		
Milano PUD - Reduced by 38%			**112**			**4**	**63**	**11**				**7**		**19**		
SJMR (VICENZA)			113			4	63	12				8		21		
SJMR (VICENZA) - Reduced by 17%			**94**			**3**	**52**	**10**				**7**		**17**		
Generation at Venice		**71**						**7**			**2**			**4**	**1**	**41**
	0	~~793~~ 752	421	0	0	14	313	~~206~~ 189	0	0	6	20	0	~~198~~ 188	6	~~635~~ 611

in	109	Reduced to account for 272 apartment units that
out	58	currently exist.

Knights Trail Road & Driveway

	EASTBOUND				WESTBOUND				NORTHBOUND				SOUTHBOUND				
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Portofino																	
Toscana Isles - Reduced by 30%																	
Rustic Road											**206**				**124**		From Laurel Rd & Knights Trail Rd intersection
GCCF																	
Milano PUD - Reduced by 38%																	
SJMR (VICENZA) - Reduced by 17%																	
Generation at Venice											**80**				**46**		From Laurel Rd & Knights Trail Rd intersection
	0	0	0	0	0	0	0	0	0	0	286	0	0	0	170	0	



Kimley»Horn

Figure 3
P.M. Peak-Hour Project Traffic Volumes
Generation Apartments at Venice Site
City of Venice, Florida

PROJECT DEVELOPMENT

Project traffic used in this analysis is defined as the vehicle trips anticipated to be generated by the proposed development. These trips were distributed and assigned throughout the study roadway network.

Site Access

Access to the site is proposed via one left-in/right-in/right-out driveway on Knights Trail Road, as shown in the site plan provided in **Appendix B**.

Trip Generation

Trip generation for the proposed development was calculated based on rates provided in the Institute of Transportation Engineers (ITE) *Trip Generation Manual,* 10th Edition. No pass-by or internal capture trips were included in the trip generation determination. As shown in **Table 6**, the site is anticipated to generate 69 p.m. peak-hour trips (44 entering and 25 exiting) at build-out.

Table 6: Trip Generation

ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS TRIPS		
					Percent				
Land Use	ITE Edition	ITE Code	Scale	ITE Units	In	Out	In	Out	Total
Multifamily Housing Low-Rise	10	220	98	DU	63%	37%	37	21	58
Multifamily Housing Mid-Rise	10	221	24	DU	61%	39%	7	4	11
						Total	**44**	**25**	**69**

Trip Distribution and Assignment

The project traffic was assigned to the roadway network using FDOT's District 1 Regional Planning Model (D1RPM), version 1.0.2. The D1RPM project distribution model plot is provided in **Appendix F**.

The project distribution from the model was used to develop project distribution along Knights Trail Road and at the future project driveway. Project trip assignment at the project driveway is shown in terms of percentages in **Figure 4** and the p.m. peak-hour project trips are shown in **Figure 5**. The total future traffic conditions (background + project traffic) are shown in **Figure 6**.

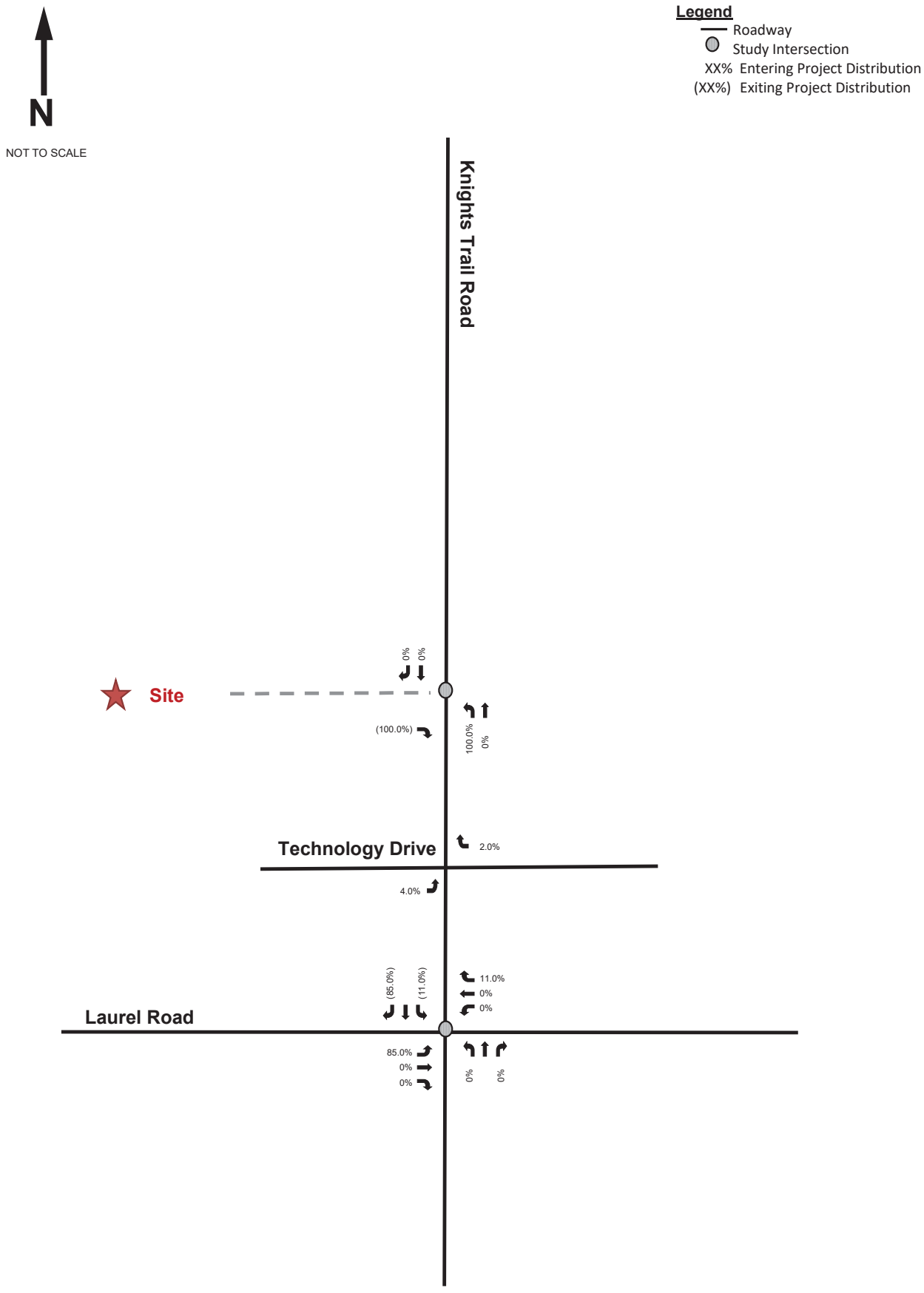


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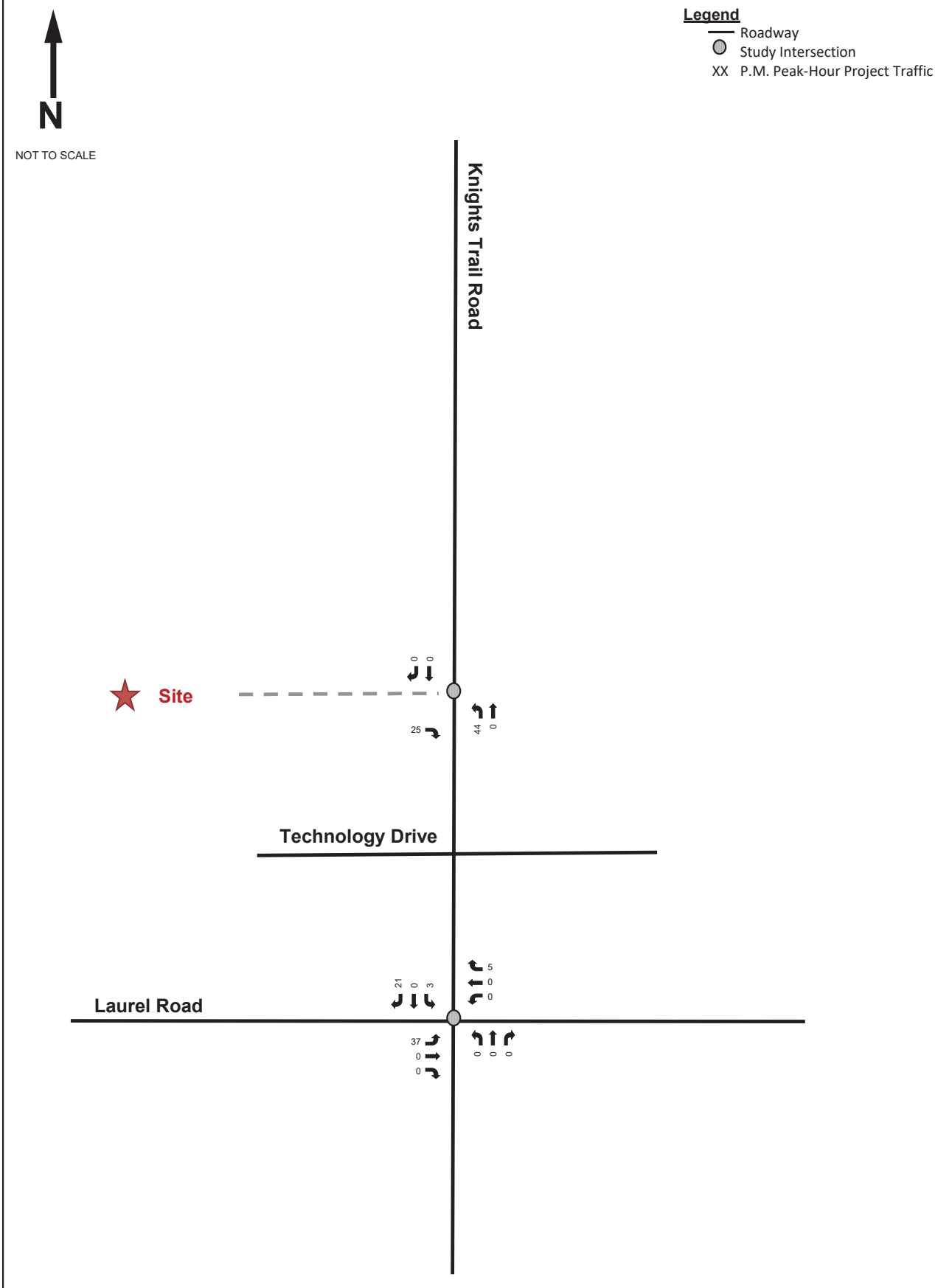
Figure 4
Project Traffic Assignment
City of Venice, Florida



Kimley»Horn

Figure 5
P.M. Peak-Hour Project Traffic
City of Venice, Florida

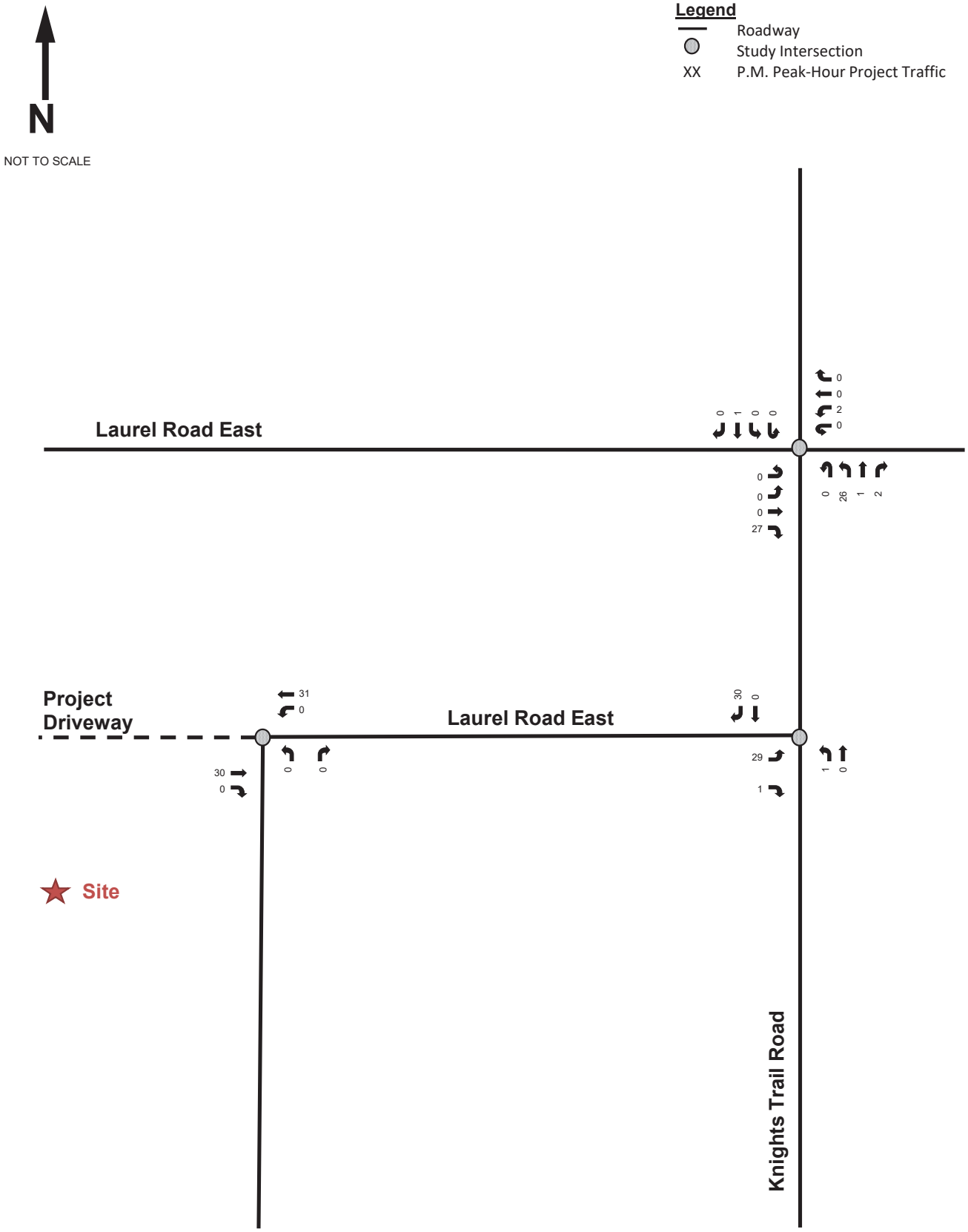


Figure 3
P.M. Peak-Hour ProjectTraffic
Hotel 75
City of Venice, Florida

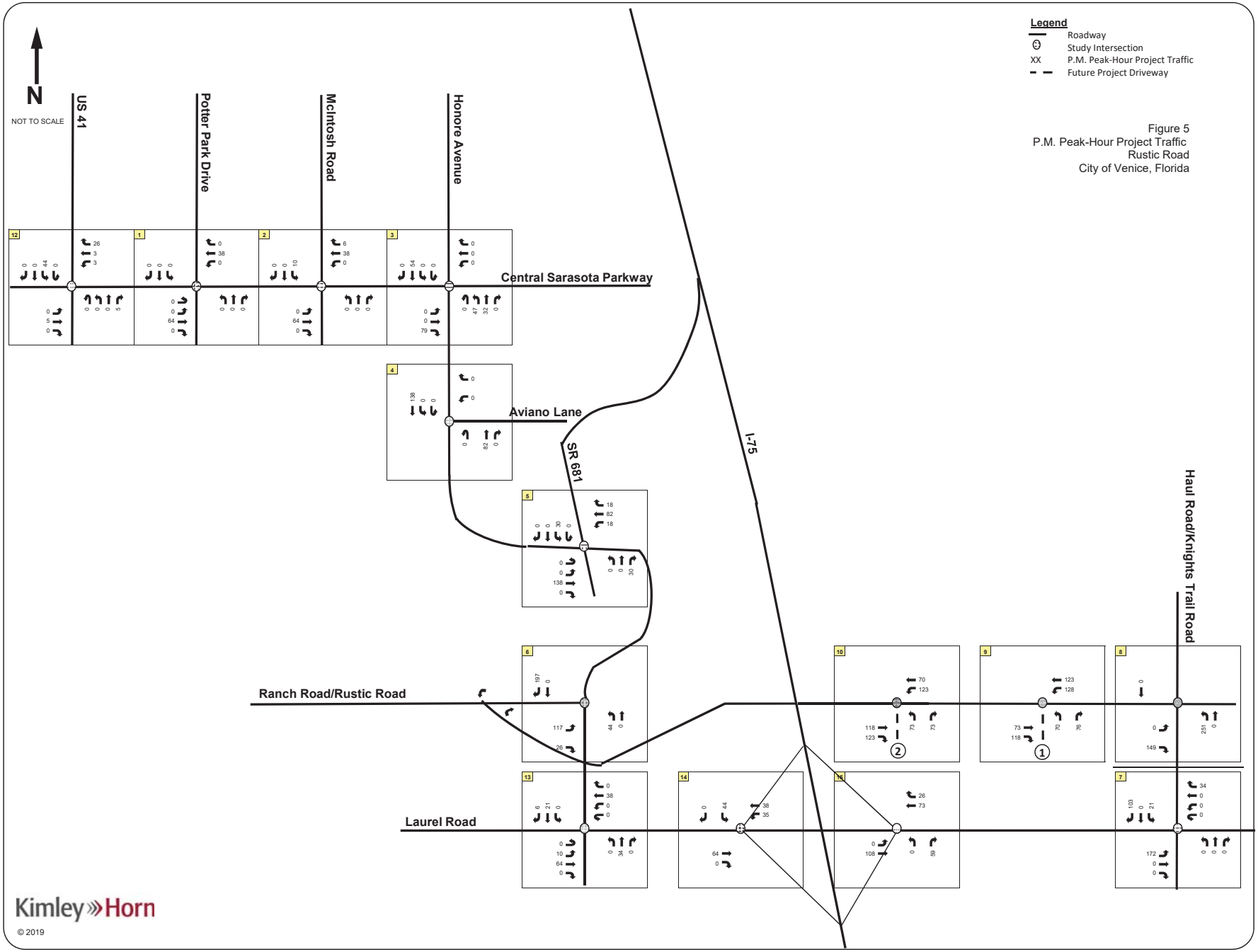


Figure 5
P.M. Peak-Hour Project Traffic
Rustic Road
City of Venice, Florida

Kimley»Horn

Portofino

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Laurel Road & Jacaranda Boulevard Extension
COUNT DATE: June 20, 2013
TIME PERIOD:
PEAK HOUR FACTOR: 0.95

"EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Raw Turning Movements		113			112							
Peak Season Correction Factor	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100
EXISTING CONDITIONS		**124**			**123**							

"BACKGROUND DIVERTED TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Diverted Traffic from North-South Connector		**-6**	**48**	**14**	**-14**		**23**		**9**			

"VESTED TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Plaza Venezia												
Toscana Isles		0			98							
The Bridges		15			16							
TOTAL "VESTED" TRAFFIC		15			114							

-or-

"BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	7	7	7	7	7	7	7	7	7	7	7	7
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		17			17							

GROWTH METHOD USED: "VESTED TRAFFIC"		**15**			**114**							

TOTAL NON-PROJECT TRAFFIC		**133**	**48**	**14**	**223**		**23**		**9**			

"PROJECT DISTRIBUTION"

LAND USE	TYPE	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pass-By Distribution	Entering												
	Exiting												
Net New Distribution	Entering					3.0%		36.0%					
	Exiting		3.0%	36.0%									

"PROJECT TRAFFIC"

LAND USE	TYPE	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Project Trips	Pass - By												
	Net New		19	228		16		186					
TOTAL PROJECT TRAFFIC			~~19~~ 17	~~228~~ 202	0	~~16~~ 12		~~186~~ 144		0			
TOTAL TRAFFIC			**152**	**276**	**14**	**239**		**209**		**9**			

Reduced to account for 272 apartment units that currently exist. Based on the trip generation estimate provided at the Laurel/Knights Trail intersection, 63 of the 109 entering trips and 30 of the 58 exiting trips were reduced at that intersection. The remaining 46 entering and 28 exiting were reduced at the Laurel/Jacaranda intersection.

Portofino

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Jacaranda Boulevard & Border Road
COUNT DATE: June 20, 2013
TIME PERIOD: 4:30 p.m. - 5:30 p.m.
PEAK HOUR FACTOR: 0.97

"EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Raw Turning Movements		37	54	21	27		66		25		5	
Peak Season Correction Factor	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100	1.100
EXISTING CONDITIONS		41	59	23	30		73		28		6	

"BACKGROUND DIVERTED TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Diverted Traffic from North-South Connector	3	-6	-15		-5	5	-16	24		11	39	12

"VESTED TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Plaza Venezia												
Toscana Isles			17				10					
The Bridges		15	74		16		78					
TOTAL "VESTED" TRAFFIC		15	91	0	16		88		0		0	

-or-

"BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	7	7	7	7	7	7	7	7	7	7	7	7
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH		6	8	3	4		10		4		1	

GROWTH METHOD USED: "VESTED TRAFFIC"		15	91	0	16		88		0		0	

TOTAL NON-PROJECT TRAFFIC	3	50	135	23	41	5	145	24	28	11	45	12

"PROJECT DISTRIBUTION"

LAND USE	TYPE	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pass-By Distribution	Entering												
	Exiting												
Net New Distribution	Entering	12.0%					12.0%		12.0%				
	Exiting										12.0%	12.0%	12.0%

"PROJECT TRAFFIC"

LAND USE	TYPE	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Project Trips	Pass - By												
	Net New	62					62		62		76	76	76
TOTAL PROJECT TRAFFIC		~~62~~	0	0	0	0	~~62~~	0	~~62~~	0	~~76~~	~~76~~	~~76~~
		48					48		48		67	67	68
TOTAL TRAFFIC		65	50	135	23	41	67	145	86	28	87	121	88

Portofino

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Jacaranda Boulevard & I-75 Northbound Ramps
COUNT DATE: January 18, 2013
TIME PERIOD: 4:45 p.m. - 5:45 p.m.
PEAK HOUR FACTOR: 0.91

"EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Raw Turning Movements				208		21		102	479		222	66
Peak Season Correction Factor	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
EXISTING CONDITIONS				**198**		**20**		**97**	**455**		**211**	**63**

"BACKGROUND DIVERTED TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Diverted Traffic from North-South Connector						11		-2			35	

"VESTED TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Plaza Venezia												
Toscana Isles												
The Bridges						16		53			65	
TOTAL "VESTED" TRAFFIC				0		16		53	0		65	0

-or-

"BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	7	7	7	7	7	7	7	7	7	7	7	7
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH				28		3		14	64		30	9

GROWTH METHOD USED: "BACKGROUND TRAFFIC"												
				28		**3**		**14**	**64**		**30**	**9**

TOTAL NON-PROJECT TRAFFIC												
				226		**34**		**109**	**519**		**276**	**72**

"PROJECT DISTRIBUTION"

LAND USE	TYPE	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pass-By Distribution	Entering												
	Exiting												
Net New Distribution	Entering								11.0%				
	Exiting											11.0%	

"PROJECT TRAFFIC"

LAND USE	TYPE	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Project Trips	Pass - By												
	Net New								57			70	
TOTAL PROJECT TRAFFIC					**0**		**0**		~~57~~ **43**	**0**		~~70~~ **61**	**0**

TOTAL TRAFFIC												
				226		**34**		**166**	**519**		**346**	**72**

Portofino

TRAFFIC VOLUMES
AT STUDY INTERSECTION

INTERSECTION: Jacaranda Boulevard & I-75 Southbound Ramps
COUNT DATE: January 18, 2013
TIME PERIOD: 4:45 p.m. - 5:45 p.m.
PEAK HOUR FACTOR: 0.91

"EXISTING TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Raw Turning Movements	38	1	782					542	406	81	345	
Peak Season Correction Factor	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
EXISTING CONDITIONS	**36**	**1**	**743**					**515**	**386**	**77**	**328**	

"BACKGROUND DIVERTED TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Diverted Traffic from North-South Connector	-2		-35								35	

"VESTED TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Plaza Venezia												
Toscana Isles	10											
The Bridges								53		15	50	
TOTAL "VESTED" TRAFFIC	10	0	0					53	0	15	50	

-or-

"BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Years To Buildout	7	7	7	7	7	7	7	7	7	7	7	7
Yearly Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
BACKGROUND TRAFFIC GROWTH	5	0	104					72	54	11	46	

GROWTH METHOD USED: "BACKGROUND TRAFFIC"	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	5	**0**	**104**					**72**	**54**	**11**	**46**	

TOTAL NON-PROJECT TRAFFIC	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
	39	**1**	**812**					**587**	**440**	**88**	**409**	

"PROJECT DISTRIBUTION"

LAND USE	TYPE	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Pass-By Distribution	Entering												
	Exiting												
Net New Distribution	Entering								11.0%				
	Exiting											11.0%	

"PROJECT TRAFFIC"

LAND USE	TYPE	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Project Trips	Pass - By												
	Net New								57			70	
TOTAL PROJECT TRAFFIC		0	0	0					~~57~~ 43	0	0	~~70~~ 61	
TOTAL TRAFFIC		39	1	812					644	440	88	479	

TABLE F-2

Toscana Isles

Phase 2 Scenario: 1,000 Single Family Dwelling Unit, 638 Multi-Family Dwelling Units, Retail = 110,000 Square Feet

April 11, 2011

PROPOSED PM PEAK HOUR TRIP GENERATION

ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			INTERNAL CAPTURE		PASS-BY CAPTURE		NET NEW EXTERNAL TRIPS		
					Percent											
Land Use	ITE Edition	ITE Code	Scale	ITE Units	In	Out	In	Out	Total	Percent	IC Trips	Percent	PB Trips	In	Out	Total
Single-Family Detached Housing	8	210	1,000	du	63%	37%	526	309	835	3.5%	29	0.0%	0	511	294	805
Residential Condominium / Townhouse	8	230	628	du	67%	33%	182	89	271	11.1%	30	0.0%	0	163	78	241
Specialty Retail Center	8	814	110	ksf	44%	56%	125	160	285	21.1%	60	29.0%	66	70	89	159
						Total:	833	558	1,391		119		66	744	461	1,205
						602 Single-Famliy C.O. =	333	196	529							
						56 Townhome C.O. =	25	12	37							
						TOTAL =	358	208	566							

A-36

566/1,391 = 40.6%; reduced Toscana Isles traffic by 40%

TABLE 1

TOSCANA ISLES
Phase 1, Add 342 Renaissance Trips, including Bridges Project, Add New N/S Roadway
1,107 Single Family Dwelling Units

PM Peak Roadway Link Analysis

Revised July 18, 2011

Roadway	Number of Lanes	LOS Standard	Service Volume[1]	2009 Traffic Volumes [1]	Reserved Traffic From Other Projects: Laurel Med. Center	Bridges	CVS	Renaissance: 892 Trips	Venice Hotel	2020 Total Background Traffic	Project Traffic %	Project Traffic	2020 Total Traffic	2020 Total % Service Vol.	Project Traffic % Service Vol.	Is Project Traffic Signif.?	Roadway LOS OK?
Laurel Road																	
US 41 to Mission Valley	4LD	C	3,000	1,564	63	0	0	36	0	1,749	11.5%	105	1,854	61.8%	3.5%	No	N/A
Mission Valley to Albee Farm Road	4LD	C	3,180	1,492	90	0	0	80	0	1,744	12.8%	117	1,861	58.5%	3.7%	No	N/A
Albee Farm Road to Pinebrook Road	4LD	C	3,180	1,787	106	79	0	138	0	2,208	34.3%	314	2,522	79.3%	9.9%	Yes	Yes
Pinebrook Road to I-75	*4LD*	*C*	*2,540*	*1,515*	*212*	*109*	*48*	*241*	*0*	2,208	*36.3%*	*332*	*2,540*	*100.0%*	*13.1%*	*Yes*	*Yes*
I-75 to Knights Trail Road	4LD	C	2,540	718	53	231	64	321	38	1,442	70.0%	641	2,083	82.0%	25.2%	Yes	Yes
East of Knights Trail Road	4LD	C	2,540	218	26	243	67	36	21	822	30.0%	275	897	35.3%	10.8%	Yes	Yes
I-75																	
Jacaranda Road to Laurel Road	6LF	B	5,870	5,852	79	30	0	45	0	6,328	4.7%	43	6,371	108.5%	0.7%	No	N/A
Laurel Road to SR 681	6LF	B	5,970	5,852	79	91	0	71	0	6,416	29.0%	265	6,680	111.9%	4.4%	No	N/A
Albee Farm Road																	
Laurel Road to Edmonson Road	4LD	C	3,180	899	26	0	0	27	0	1,001	23.3%	213	1,214	38.2%	6.7%	Yes	Yes
Pinebrook Road																	
Laurel Road to Edmonson Road	4LD	C	2,420	788	186	30	25	49	0	1,120	3.1%	28	1,148	47.4%	1.2%	No	N/A
Knights Trail Road																	
Laurel Road north to Technology Drive/South Project Dwy	2LU	C	1,720	629	16	12	0	89	4	781	100.0%	915	1,696	98.6%	53.2%	Yes	Yes
Technology Drive/South Project Dwy to North Project Dwy	2LU	C	1,720	629	16	12	0	89	4	781	33.3%	305	1,086	63.1%	17.7%	Yes	Yes

NOTES:

1 :Source: Fruitville Initiative Comprehensive Plan, Amended Traffic Analysis, October 2010, Post Buckley Schuh & Jernigan, pages I-26 through I-29. Knight's Trail Road and Laurel Road west and east of Knight's Trail Road based on actual 2010 traffic counts.

File Name = C:\Users\Public\Venice, Swanson, 102210\Final_041811\Scenario B\Add 342 Trips to Renaissance, Final_071111\[FINAL TABLE 1_Add 342 to Renaissance, SF = 1,107, Roadway Networ
Print Date = July 18, 2011
Print Time = 7:10 PM

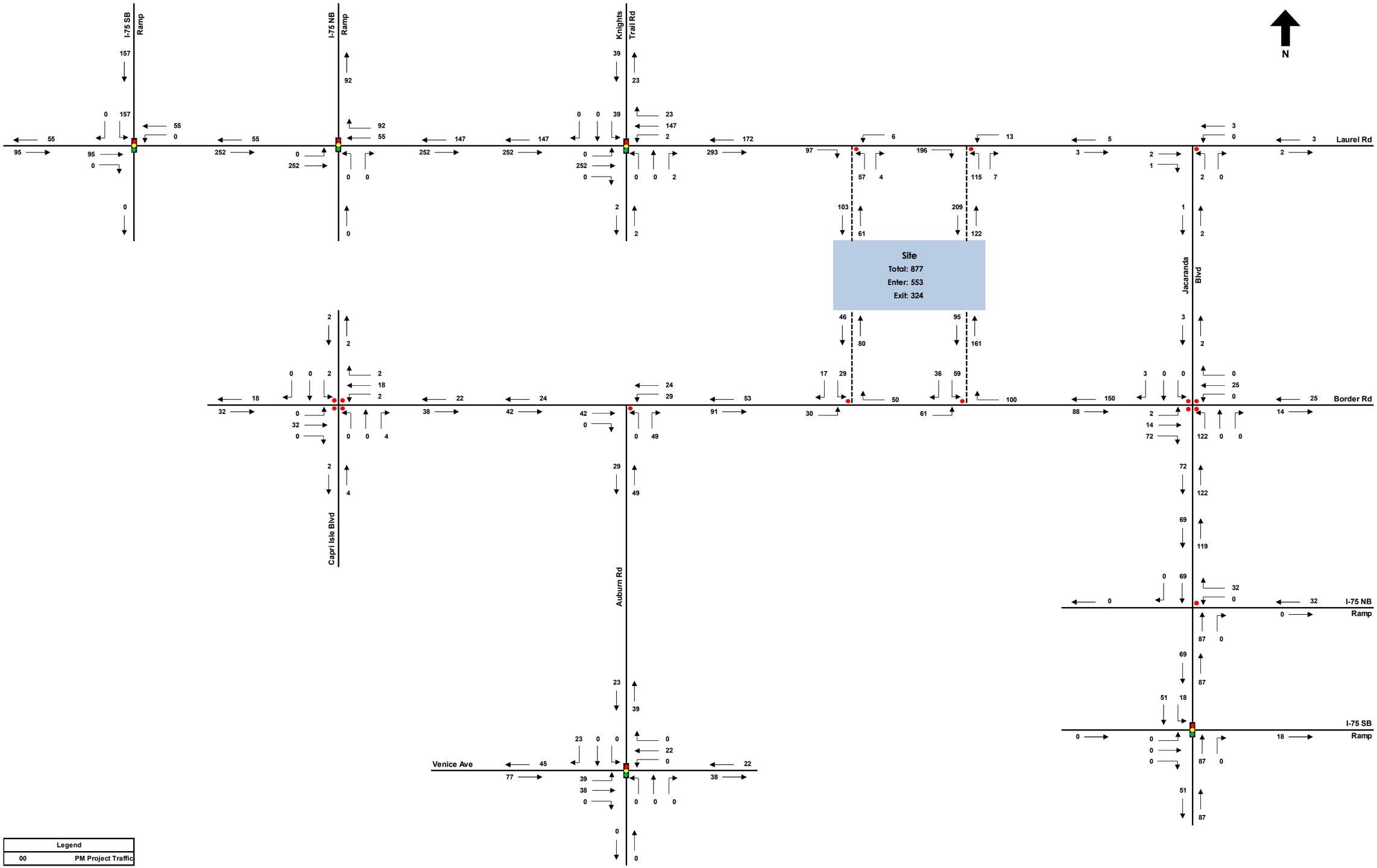
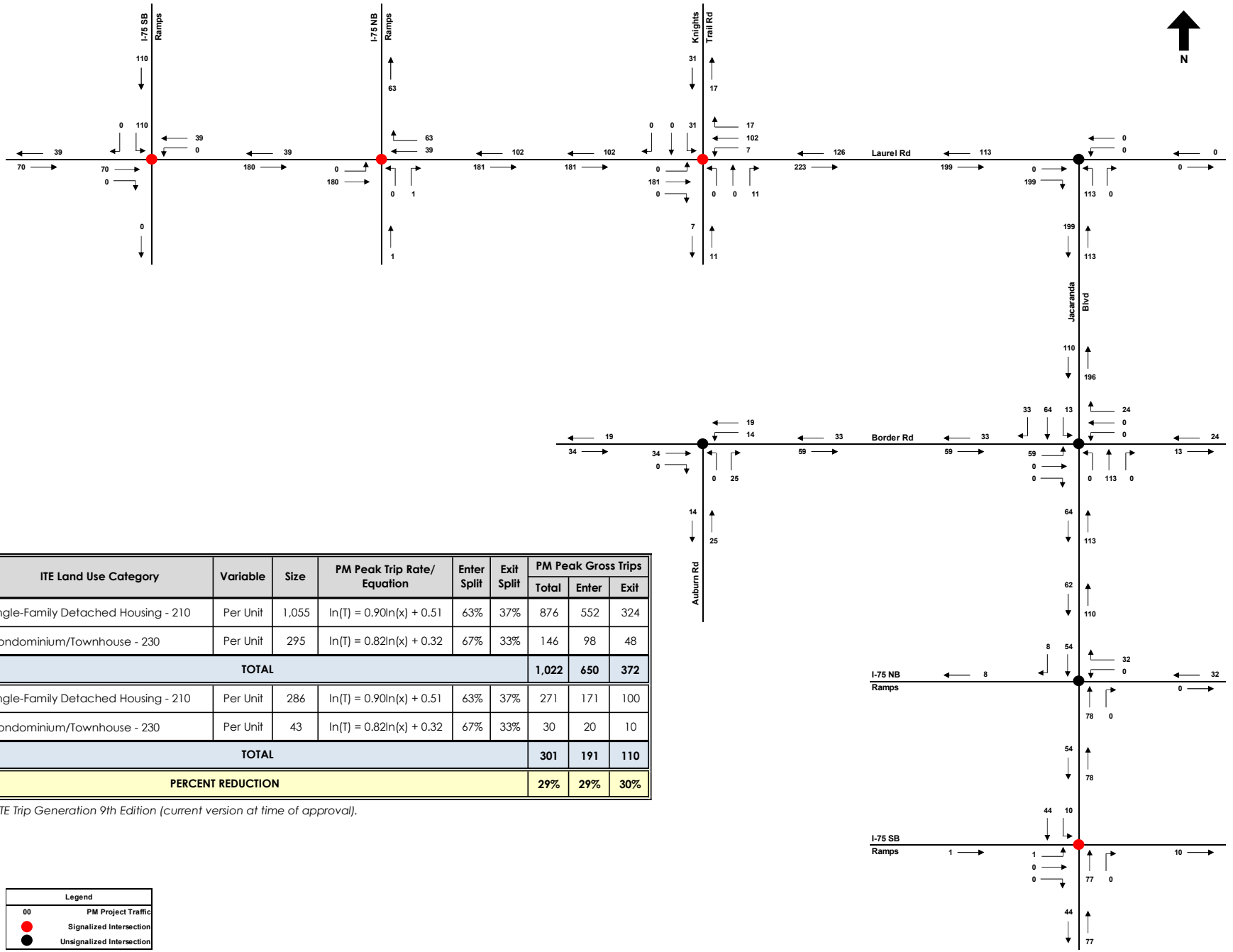


Figure 3: Project Traffic Assignment

VOLUMES SHOWN REDUCED BY 67% (38% + 29%)

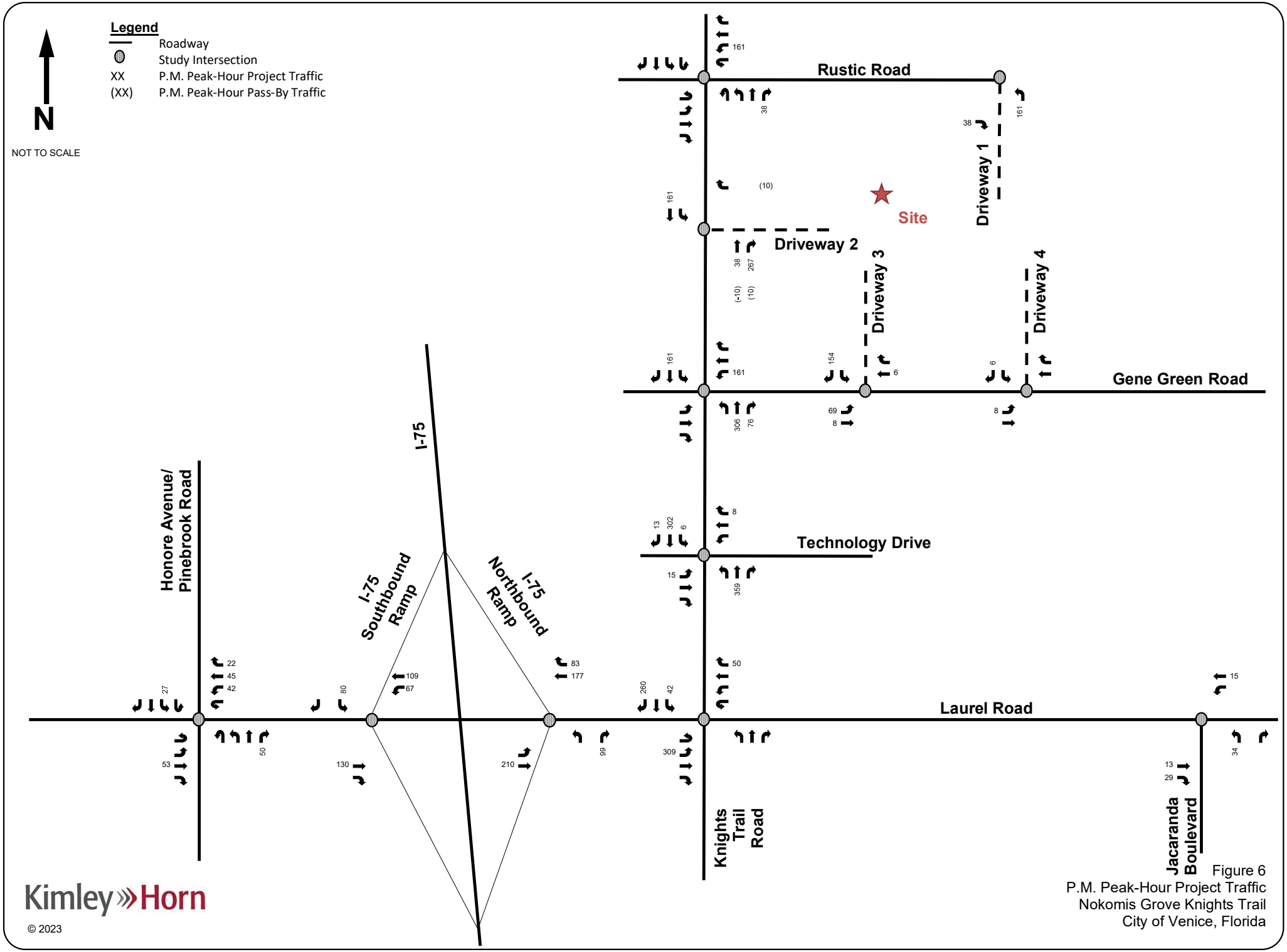


Scenario	ITE Land Use Category	Variable	Size	PM Peak Trip Rate/ Equation	Enter Split	Exit Split	PM Peak Gross Trips		
							Total	Enter	Exit
Approved Units	Single-Family Detached Housing - 210	Per Unit	1,055	ln(T) = 0.90ln(x) + 0.51	63%	37%	876	552	324
	Condominium/Townhouse - 230	Per Unit	295	ln(T) = 0.82ln(x) + 0.32	67%	33%	146	98	48
	TOTAL						**1,022**	**650**	**372**
Removed Units	Single-Family Detached Housing - 210	Per Unit	286	ln(T) = 0.90ln(x) + 0.51	63%	37%	271	171	100
	Condominium/Townhouse - 230	Per Unit	43	ln(T) = 0.82ln(x) + 0.32	67%	33%	30	20	10
	TOTAL						**301**	**191**	**110**
PERCENT REDUCTION							**29%**	**29%**	**30%**

Based on the ITE Trip Generation 9th Edition (current version at time of approval).

Legend	
00	PM Project Traffic
	Signalized Intersection
	Unsignalized Intersection

Figure 3: Project Traffic Assignment



Kimley»Horn

Figure 6
P.M. Peak-Hour Project Traffic
Nokomis Grove Knights Trail
City of Venice, Florida

VOLUMES SHOWN REDUCED BY 17%

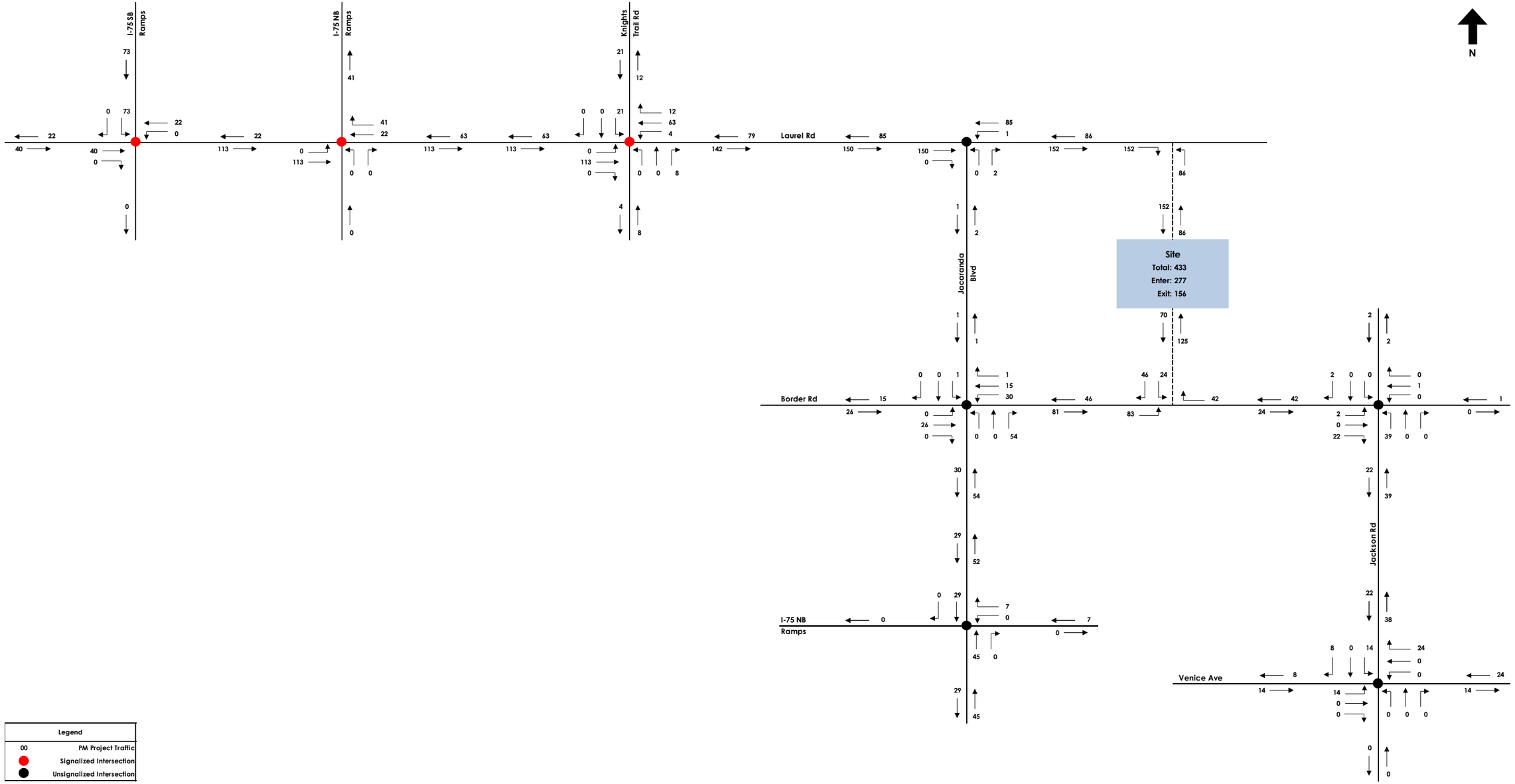


Figure 3: Project Traffic Assignment

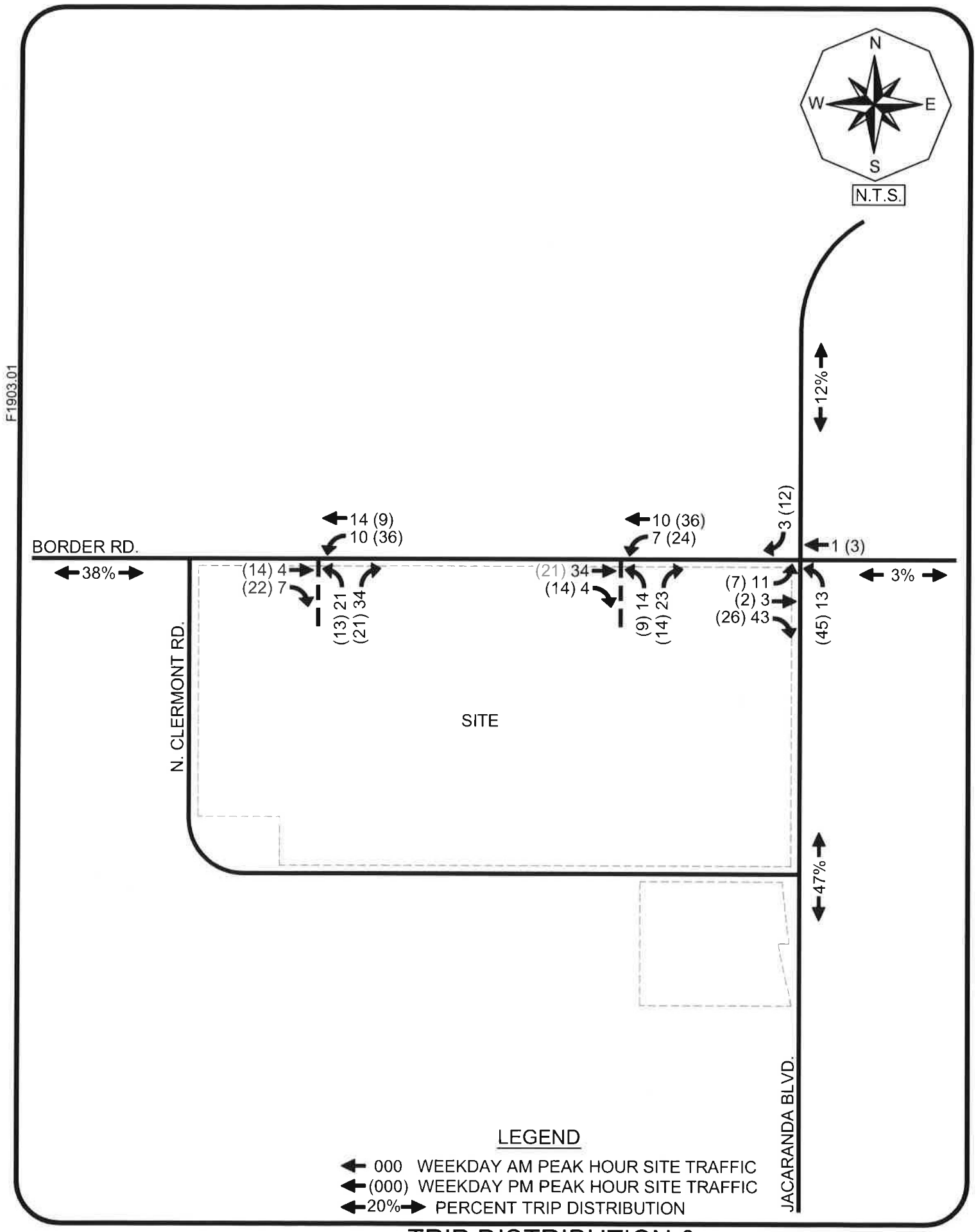
Table 2
Trip Generation
Palencia

Land Use	Weekday A.M. Peak Hour			Weekday P.M. Peak Hour			Daily (2-way)
	In	Out	Total	In	Out	Total	
Single Family Homes (81 Units)	15	47	62	52	31	83	857
Multifamily Housing Low-Rise (122 Units)	13	45	58	44	26	70	881
Total Trips	**28**	**92**	**120**	**96**	**57**	**153**	**1,738**

V. TRIP DISTRIBUTION

The volumes shown in Table 2 were then assigned to the proposed site access drives on Border Road and to the intersection of Jacaranda Boulevard with Border Road based on the anticipated routes the drivers will utilize to approach the site. Based on current and projected population in the area and other existing or planned complementary uses in the area, a distribution of the site traffic was formulated. The anticipated trip distribution of the development traffic as agreed upon in the methodology meeting notes with the City of Venice staff, is illustrated on **Figure 2**. In addition, Figure 2 also indicates the site traffic assignment to the site access drives and adjacent intersection.

The study area includes the roadway links directly accessed and any other roadway links where the project traffic will impact the adopted Level of Service standard volume by greater than 4.5%. **Table 1A** in the Appendix (p. 13) indicates the study area determination. The Level of Service standard threshold volumes were obtained from the 2017 ***Sarasota County Generalized Level of Service Analysis*** spreadsheet, dated 10/1/2018. **Table 3** on page 6 of this report summarizes the impacts to the roadways in the immediate area of the site.



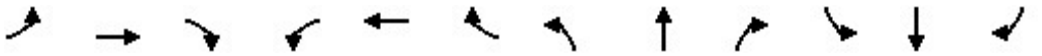
TRANSPORTATION CONSULTANTS, INC

TRIP DISTRIBUTION & SITE TRAFFIC ASSIGNMENT PALENCIA

Figure 2

APPENDIX I

2028 BACKGROUND TRAFFIC
SYNCHRO SUMMARY WORKSHEETS



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1746	811	80	26	592	347	76	14	34	412	11	1885
Future Volume (veh/h)	1746	811	80	26	592	347	76	14	34	412	11	1885
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1900	1900	1841	1722	1811	1900	1900	1826	1900	1826
Adj Flow Rate, veh/h	1838	854	58	27	623	308	80	15	32	434	12	1430
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	2	0	0	4	12	6	0	0	5	0	5
Cap, veh/h	1327	1914	867	60	612	255	121	38	81	291	318	1536
Arrive On Green	0.40	0.54	0.54	0.03	0.17	0.17	0.07	0.07	0.07	0.17	0.17	0.17
Sat Flow, veh/h	3346	3554	1610	1810	3497	1459	1725	540	1152	1739	1900	2723
Grp Volume(v), veh/h	1838	854	58	27	623	308	80	0	47	434	12	1430
Grp Sat Flow(s),veh/h/ln	1673	1777	1610	1810	1749	1459	1725	0	1693	1739	1900	1362
Q Serve(g_s), s	47.6	17.5	2.1	1.8	21.0	21.0	5.4	0.0	3.2	20.1	0.6	20.1
Cycle Q Clear(g_c), s	47.6	17.5	2.1	1.8	21.0	21.0	5.4	0.0	3.2	20.1	0.6	20.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	1.00		1.00
Lane Grp Cap(c), veh/h	1327	1914	867	60	612	255	121	0	119	291	318	1536
V/C Ratio(X)	1.38	0.45	0.07	0.45	1.02	1.21	0.66	0.00	0.40	1.49	0.04	0.93
Avail Cap(c_a), veh/h	1327	1914	867	145	612	255	162	0	159	291	318	1536
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	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.2	16.8	13.3	56.9	49.5	49.5	54.4	0.0	53.4	50.0	41.8	24.0
Incr Delay (d2), s/veh	177.9	0.8	0.1	5.2	41.2	124.0	6.0	0.0	2.1	237.9	0.0	10.5
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(95%),veh/ln	76.3	11.1	1.3	1.6	18.3	24.9	4.6	0.0	2.6	43.2	0.5	27.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	214.1	17.6	13.4	62.2	90.7	173.5	60.4	0.0	55.5	287.9	41.9	34.5
LnGrp LOS	F	B	B	E	F	F	E	A	E	F	D	C
Approach Vol, veh/h		2750			958			127			1876	
Approach Delay, s/veh		148.8			116.5			58.6			93.2	
Approach LOS		F			F			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	54.0	26.9		13.1	10.4	70.5		26.0				
Change Period (Y+Rc), s	7.4	6.9		* 5.7	7.4	6.9		6.9				
Max Green Setting (Gmax), s	46.6	17.1		* 10	8.6	55.1		19.1				
Max Q Clear Time (g_c+I1), s	49.6	23.0		7.4	3.8	19.5		22.1				
Green Ext Time (p_c), s	0.0	0.0		0.1	0.0	13.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	123.1	
HCM 6th LOS	F	

Notes

User approved pedestrian interval to be less than phase max green.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	133	908	525	92	44	97
Future Vol, veh/h	133	908	525	92	44	97
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	235	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	4	3	0	3	1
Mvmt Flow	145	987	571	100	48	105

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	671	0	-	0	1405	336
Stage 1	-	-	-	-	621	-
Stage 2	-	-	-	-	784	-
Critical Hdwy	4.1	-	-	-	6.86	6.92
Critical Hdwy Stg 1	-	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	-	5.86	-
Follow-up Hdwy	2.2	-	-	-	3.53	3.31
Pot Cap-1 Maneuver	929	-	-	-	129	663
Stage 1	-	-	-	-	496	-
Stage 2	-	-	-	-	408	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	929	-	-	-	109	663
Mov Cap-2 Maneuver	-	-	-	-	238	-
Stage 1	-	-	-	-	419	-
Stage 2	-	-	-	-	408	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	929	-	-	-	238	663
HCM Lane V/C Ratio	0.156	-	-	-	0.201	0.159
HCM Control Delay (s)	9.6	-	-	-	23.9	11.5
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.6	-	-	-	0.7	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	180	772	38	145	472	16
Future Volume (veh/h)	180	772	38	145	472	16
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1841	1900	1900	1856	1900
Adj Flow Rate, veh/h	196	839	41	158	513	15
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	0	0	3	0
Cap, veh/h	807	1226	353	807	638	581
Arrive On Green	0.42	0.42	0.42	0.42	0.36	0.36
Sat Flow, veh/h	1900	1560	554	1900	1767	1610
Grp Volume(v), veh/h	196	839	41	158	513	15
Grp Sat Flow(s),veh/h/ln	1900	1560	554	1900	1767	1610
Q Serve(g_s), s	3.1	11.6	2.4	2.4	12.2	0.3
Cycle Q Clear(g_c), s	3.1	11.6	5.5	2.4	12.2	0.3
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	807	1226	353	807	638	581
V/C Ratio(X)	0.24	0.68	0.12	0.20	0.80	0.03
Avail Cap(c_a), veh/h	2239	2401	770	2239	1325	1208
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	8.6	2.3	10.4	8.4	13.4	9.6
Incr Delay (d2), s/veh	0.2	0.7	0.1	0.1	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	11.8	0.4	1.3	7.5	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.8	3.0	10.5	8.5	15.9	9.6
LnGrp LOS	A	A	B	A	B	A
Approach Vol, veh/h	1035			199	528	
Approach Delay, s/veh	4.1			8.9	15.7	
Approach LOS	A			A	B	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		24.8		21.8		24.8
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		54.0		34.0		54.0
Max Q Clear Time (g_c+I1), s		7.5		14.2		13.6
Green Ext Time (p_c), s		1.3		1.7		5.2

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Intersection	
Intersection Delay, s/veh	208.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	140	170	310	99	104	82	299	276	130	191	430	153
Future Vol, veh/h	140	170	310	99	104	82	299	276	130	191	430	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	4	1	4	2	7	0	4	3	2	4	5	0
Mvmt Flow	147	179	326	104	109	86	315	291	137	201	453	161
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	307.9	51.8	88.1	295.3
HCM LOS	F	F	F	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	23%	35%	31%	0%
Vol Thru, %	0%	68%	27%	36%	69%	0%
Vol Right, %	0%	32%	50%	29%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	299	406	620	285	621	153
LT Vol	299	0	140	99	191	0
Through Vol	0	276	170	104	430	0
RT Vol	0	130	310	82	0	153
Lane Flow Rate	315	427	653	300	654	161
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.858	1.077	1.6	0.793	1.723	0.387
Departure Headway (Hd)	12.508	11.712	10.146	12.959	10.993	10.103
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	293	312	365	282	340	359
Service Time	10.208	9.412	8.146	10.959	8.693	7.803
HCM Lane V/C Ratio	1.075	1.369	1.789	1.064	1.924	0.448
HCM Control Delay	59.7	109	307.9	51.8	363.4	19
HCM Lane LOS	F	F	F	F	F	C
HCM 95th-tile Q	7.4	12.7	33.1	6.2	35.5	1.8

Intersection	
Int Delay, s/veh	27.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	373	0	167	0	555	601	0	983	152
Future Vol, veh/h	0	0	0	373	0	167	0	555	601	0	983	152
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	-	-	Free	-	-	Free
Storage Length	-	-	-	0	-	800	-	-	800	-	-	300
Veh in Median Storage, #	-	2	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	2	0	4	0	3	4	0	3	1
Mvmt Flow	0	0	0	401	0	180	0	597	646	0	1057	163

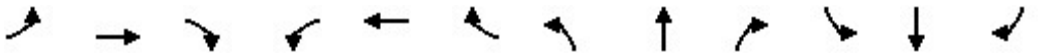
Major/Minor	Minor1			Major1			Major2			
Conflicting Flow All	1126	-	299	-	0	-	-	-	0	
Stage 1	597	-	-	-	-	-	-	-	-	
Stage 2	529	-	-	-	-	-	-	-	-	
Critical Hdwy	6.84	-	6.98	-	-	-	-	-	-	
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-	-	-	
Follow-up Hdwy	3.52	-	3.34	-	-	-	-	-	-	
Pot Cap-1 Maneuver	~ 199	0	691	0	-	0	0	-	0	
Stage 1	513	0	-	0	-	0	0	-	0	
Stage 2	555	0	-	0	-	0	0	-	0	
Platoon blocked, %					-			-		
Mov Cap-1 Maneuver	~ 199	0	691	-	-	-	-	-	-	
Mov Cap-2 Maneuver	~ 334	0	-	-	-	-	-	-	-	
Stage 1	513	0	-	-	-	-	-	-	-	
Stage 2	555	0	-	-	-	-	-	-	-	

Approach	WB	NB	SB
HCM Control Delay, s	107.1	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	334	691	-
HCM Lane V/C Ratio	-	1.201	0.26	-
HCM Control Delay (s)	-	149.7	12	-
HCM Lane LOS	-	F	B	-
HCM 95th %tile Q(veh)	-	17.2	1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Edition methodology does not support custom phasing.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	3	681	0	0	0	0	1077	835	295	1063	0
Future Volume (vph)	75	3	681	0	0	0	0	1077	835	295	1063	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					6.9	3.0	6.9	6.9	
Lane Util. Factor	0.95	0.95	0.88					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.96	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1603	1584	2787					3505	1599	1770	3505	
Flt Permitted	0.95	0.96	1.00					1.00	1.00	0.16	1.00	
Satd. Flow (perm)	1603	1584	2787					3505	1599	307	3505	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	80	3	724	0	0	0	0	1146	888	314	1131	0
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	42	41	682	0	0	0	0	1146	888	314	1131	0
Heavy Vehicles (%)	7%	33%	2%	0%	0%	0%	0%	3%	1%	2%	3%	0%
Turn Type	Split	NA	custom					NA	Free	Perm	NA	
Protected Phases	3	3	3 4					2			6	
Permitted Phases									Free	6		
Actuated Green, G (s)	39.0	39.0	55.1					80.9	150.0	80.9	80.9	
Effective Green, g (s)	40.0	40.0	56.1					81.9	150.0	81.9	81.9	
Actuated g/C Ratio	0.27	0.27	0.37					0.55	1.00	0.55	0.55	
Clearance Time (s)	6.1	6.1						7.9		7.9	7.9	
Vehicle Extension (s)	3.0	3.0						5.0		5.0	5.0	
Lane Grp Cap (vph)	427	422	1042					1913	1599	167	1913	
v/s Ratio Prot	0.03	0.03	c0.24					0.33			0.32	
v/s Ratio Perm									c0.56	c1.02		
v/c Ratio	0.10	0.10	0.65					0.60	0.56	1.88	0.59	
Uniform Delay, d1	41.4	41.4	38.9					23.0	0.0	34.0	22.8	
Progression Factor	1.00	1.00	1.00					1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.1	0.1	1.5					1.4	1.4	417.9	1.4	
Delay (s)	41.5	41.5	40.4					24.4	1.4	452.0	24.2	
Level of Service	D	D	D					C	A	F	C	
Approach Delay (s)		40.5			0.0			14.3			117.1	
Approach LOS		D			A			B			F	

Intersection Summary			
HCM 2000 Control Delay	53.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.1
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX J

2028 IMPROVED BACKGROUND TRAFFIC SYNCHRO SUMMARY WORKSHEETS

Arterial Level of Service: NB Jacaranda Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-75 SB Ramp	II	45	39.7	45.6	85.3	0.44	18.4	D
I-75 NB Ramp	II	45	21.9	7.3	29.2	0.20	24.8	C
Border Rd	II	45	54.4	20.0	74.4	0.68	32.9	B
Laurel Rd	II	35	119.8	13.4	133.2	1.16	31.4	B
Total	II		235.8	86.3	322.1	2.48	27.7	C

Arterial Level of Service: SB Jacaranda Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Border Rd	II	35	119.8	43.6	163.4	1.16	25.6	C
I-75 NB Ramp	II	45	54.4	12.8	67.2	0.68	36.4	A
I-75 SB Ramp	II	45	21.9	13.5	35.4	0.20	20.4	D
Total	II		196.1	69.9	266.0	2.04	27.7	C

HCM 6th Signalized Intersection Summary
1: Knights Trail Rd & Laurel Rd

10/27/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1746	811	80	26	592	347	76	14	34	412	11	1885
Future Volume (veh/h)	1746	811	80	26	592	347	76	14	34	412	11	1885
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1900	1900	1841	1722	1811	1900	1900	1826	1900	1826
Adj Flow Rate, veh/h	1838	854	58	27	623	308	80	15	32	434	0	1992
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	2	0	0	4	12	6	0	0	5	0	5
Cap, veh/h	1928	2179	987	51	856	357	112	35	75	524	0	2540
Arrive On Green	0.40	0.61	0.61	0.03	0.24	0.24	0.07	0.07	0.07	0.15	0.00	0.15
Sat Flow, veh/h	4864	3554	1610	1810	3497	1459	1725	540	1152	3478	0	4642
Grp Volume(v), veh/h	1838	854	58	27	623	308	80	0	47	434	0	1992
Grp Sat Flow(s),veh/h/ln	1621	1777	1610	1810	1749	1459	1725	0	1693	1739	0	1547
Q Serve(g_s), s	58.7	19.6	2.3	2.4	26.2	32.3	7.3	0.0	4.3	19.4	0.0	24.1
Cycle Q Clear(g_c), s	58.7	19.6	2.3	2.4	26.2	32.3	7.3	0.0	4.3	19.4	0.0	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	1.00		1.00
Lane Grp Cap(c), veh/h	1928	2179	987	51	856	357	112	0	110	524	0	2540
V/C Ratio(X)	0.95	0.39	0.06	0.53	0.73	0.86	0.71	0.00	0.43	0.83	0.00	0.78
Avail Cap(c_a), veh/h	1933	2179	987	75	856	357	165	0	162	524	0	2540
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.8	15.8	12.4	76.7	55.5	57.8	73.3	0.0	71.9	65.9	0.0	28.7
Incr Delay (d2), s/veh	11.6	0.5	0.1	8.3	5.4	23.0	8.1	0.0	2.6	10.7	0.0	1.7
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(95%),veh/ln	33.2	12.4	1.5	2.2	17.7	20.1	6.3	0.0	3.5	14.4	0.0	27.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.4	16.3	12.5	85.1	60.9	80.8	81.5	0.0	74.5	76.6	0.0	30.4
LnGrp LOS	E	B	B	F	E	F	F	A	E	E	A	C
Approach Vol, veh/h		2750			958			127			2426	
Approach Delay, s/veh		44.4			68.0			78.9			38.7	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	69.8	45.1		15.1	10.9	104.0		30.0				
Change Period (Y+Rc), s	7.4	6.9		* 5.7	7.4	6.9		6.9				
Max Green Setting (Gmax), s	62.6	33.1		* 14	5.6	90.1		23.1				
Max Q Clear Time (g_c+I1), s	60.7	34.3		9.3	4.4	21.6		26.1				
Green Ext Time (p_c), s	1.8	0.0		0.2	0.0	15.3		0.0				

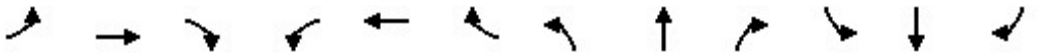
Intersection Summary		
HCM 6th Ctrl Delay		46.5
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

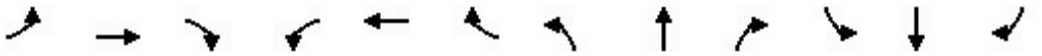
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	170	310	99	104	82	299	276	130	191	430	153
Future Volume (veh/h)	140	170	310	99	104	82	299	276	130	191	430	153
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1885	1841	1870	1796	1900	1841	1856	1870	1841	1826	1900
Adj Flow Rate, veh/h	147	179	326	104	109	78	315	291	123	201	453	145
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	1	4	2	7	0	4	3	2	4	5	0
Cap, veh/h	320	396	542	296	185	132	370	529	224	485	513	164
Arrive On Green	0.08	0.21	0.21	0.06	0.19	0.19	0.14	0.43	0.43	0.10	0.39	0.39
Sat Flow, veh/h	1753	1885	1560	1781	974	697	1753	1238	523	1753	1325	424
Grp Volume(v), veh/h	147	179	326	104	0	187	315	0	414	201	0	598
Grp Sat Flow(s),veh/h/ln	1753	1885	1560	1781	0	1671	1753	0	1761	1753	0	1750
Q Serve(g_s), s	6.5	8.1	16.9	4.6	0.0	10.0	10.0	0.0	17.2	6.5	0.0	31.2
Cycle Q Clear(g_c), s	6.5	8.1	16.9	4.6	0.0	10.0	10.0	0.0	17.2	6.5	0.0	31.2
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.30	1.00		0.24
Lane Grp Cap(c), veh/h	320	396	542	296	0	317	370	0	753	485	0	678
V/C Ratio(X)	0.46	0.45	0.60	0.35	0.00	0.59	0.85	0.00	0.55	0.41	0.00	0.88
Avail Cap(c_a), veh/h	320	442	580	296	0	358	469	0	1096	493	0	928
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	33.8	26.4	29.4	0.0	36.2	20.1	0.0	21.0	15.9	0.0	28.0
Incr Delay (d2), s/veh	1.0	0.8	1.6	0.7	0.0	2.0	11.5	0.0	0.6	0.6	0.0	7.7
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(95%),veh/ln	5.0	6.7	10.4	3.5	0.0	7.5	8.2	0.0	10.9	4.6	0.0	19.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.0	34.6	27.9	30.1	0.0	38.3	31.6	0.0	21.6	16.4	0.0	35.7
LnGrp LOS	C	C	C	C	A	D	C	A	C	B	A	D
Approach Vol, veh/h		652			291			729			799	
Approach Delay, s/veh		30.2			35.4			25.9			30.8	
Approach LOS		C			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	46.9	11.0	25.6	18.5	43.0	13.0	23.6
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	60.0	5.0	22.0	18.0	51.0	7.0	20.0
Max Q Clear Time (g_c+I1), s	8.5	19.2	6.6	18.9	12.0	33.2	8.5	12.0
Green Ext Time (p_c), s	0.0	2.6	0.0	0.7	0.5	3.8	0.0	0.6

Intersection Summary	
HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	373	0	167	0	555	601	0	983	152
Future Volume (veh/h)	0	0	0	373	0	167	0	555	601	0	983	152
Initial Q (Qb), veh				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
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	0	1841	0	1856	1841	0	1856	1885
Adj Flow Rate, veh/h				401	0	162	0	597	0	0	1057	0
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	0	4	0	3	4	0	3	1
Cap, veh/h				475	0	416	0	2022		0	2022	
Arrive On Green				0.27	0.00	0.27	0.00	0.38	0.00	0.00	0.57	0.00
Sat Flow, veh/h				1781	0	1560	0	3618	1560	0	3618	1598
Grp Volume(v), veh/h				401	0	162	0	597	0	0	1057	0
Grp Sat Flow(s),veh/h/ln				1781	0	1560	0	1763	1560	0	1763	1598
Q Serve(g_s), s				16.0	0.0	6.4	0.0	8.8	0.0	0.0	13.7	0.0
Cycle Q Clear(g_c), s				16.0	0.0	6.4	0.0	8.8	0.0	0.0	13.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				475	0	416	0	2022		0	2022	
V/C Ratio(X)				0.84	0.00	0.39	0.00	0.30		0.00	0.52	
Avail Cap(c_a), veh/h				591	0	518	0	2022		0	2022	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.53	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				26.0	0.0	22.5	0.0	12.6	0.0	0.0	9.7	0.0
Incr Delay (d2), s/veh				9.0	0.0	0.6	0.0	0.2	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				11.7	0.0	3.9	0.0	5.2	0.0	0.0	7.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				35.1	0.0	23.1	0.0	12.8	0.0	0.0	10.7	0.0
LnGrp LOS				D	A	C	A	B		A	B	
Approach Vol, veh/h					563			597			1057	
Approach Delay, s/veh					31.6			12.8			10.7	
Approach LOS					C			B			B	

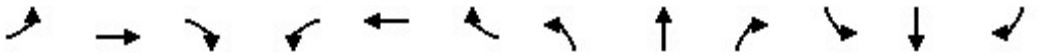
Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	49.9		49.9		25.1			
Change Period (Y+Rc), s	7.9		7.9		6.1			
Max Green Setting (Gmax), s	37.1		37.1		23.9			
Max Q Clear Time (g_c+I1), s	10.8		15.7		18.0			
Green Ext Time (p_c), s	7.2		12.1		1.0			

Intersection Summary		
HCM 6th Ctrl Delay	16.6	
HCM 6th LOS	B	

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Edition methodology does not support custom phasing.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	3	681	0	0	0	0	1077	835	295	1063	0
Future Volume (vph)	75	3	681	0	0	0	0	1077	835	295	1063	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					6.9	3.0	6.9	6.9	
Lane Util. Factor	0.95	0.95	0.88					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.96	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1603	1584	2787					3505	1599	1770	3505	
Flt Permitted	0.95	0.96	1.00					1.00	1.00	0.08	1.00	
Satd. Flow (perm)	1603	1584	2787					3505	1599	155	3505	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	80	3	724	0	0	0	0	1146	888	314	1131	0
RTOR Reduction (vph)	0	0	114	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	42	41	610	0	0	0	0	1146	888	314	1131	0
Heavy Vehicles (%)	7%	33%	2%	0%	0%	0%	0%	3%	1%	2%	3%	0%
Turn Type	Split	NA	custom					NA	Free	pm+pt	NA	
Protected Phases	3	3	3 4					2		1	6	
Permitted Phases									Free	6		
Actuated Green, G (s)	25.8	25.8	43.5					59.8	150.0	92.5	92.5	
Effective Green, g (s)	26.8	26.8	44.5					60.8	150.0	93.5	93.5	
Actuated g/C Ratio	0.18	0.18	0.30					0.41	1.00	0.62	0.62	
Clearance Time (s)	6.1	6.1						7.9		7.9	7.9	
Vehicle Extension (s)	3.0	3.0						5.0		3.0	5.0	
Lane Grp Cap (vph)	286	283	826					1420	1599	374	2184	
v/s Ratio Prot	0.03	0.03	c0.22					0.33		c0.14	0.32	
v/s Ratio Perm									0.56	c0.38		
v/c Ratio	0.15	0.14	0.74					0.81	0.56	0.84	0.52	
Uniform Delay, d1	52.0	51.9	47.5					39.4	0.0	42.2	15.7	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.95	0.80	
Incremental Delay, d2	0.2	0.2	3.5					5.0	1.4	12.7	0.7	
Delay (s)	52.2	52.2	51.0					44.4	1.4	52.8	13.2	
Level of Service	D	D	D					D	A	D	B	
Approach Delay (s)		51.1			0.0			25.6			21.8	
Approach LOS		D			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX K

2028 TOTAL TRAFFIC
SYNCHRO SUMMARY WORKSHEETS

Arterial Level of Service: NB Jacaranda Blvd

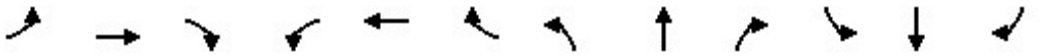
Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
I-75 SB Ramp	II	45	39.6	52.4	92.0	0.44	17.0	D
I-75 NB Ramp	II	45	21.9	8.2	30.1	0.20	24.0	C
Border Rd	II	45	54.4	21.1	75.5	0.68	32.4	B
Laurel Rd	II	35	119.8	13.5	133.3	1.16	31.4	B
Total	II		235.7	95.2	330.9	2.48	27.0	C

Arterial Level of Service: SB Jacaranda Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Border Rd	II	35	119.8	51.8	171.6	1.16	24.4	C
I-75 NB Ramp	II	45	54.4	13.4	67.8	0.68	36.1	A
I-75 SB Ramp	II	45	21.9	13.8	35.7	0.20	20.3	D
Total	II		196.1	79.0	275.1	2.04	26.8	C

HCM 6th Signalized Intersection Summary
1: Knights Trail Rd & Laurel Rd

11/10/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1746	846	80	26	626	370	76	14	34	435	11	1885
Future Volume (veh/h)	1746	846	80	26	626	370	76	14	34	435	11	1885
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1870	1900	1900	1841	1722	1811	1900	1900	1826	1900	1826
Adj Flow Rate, veh/h	1838	891	58	27	659	332	80	15	32	458	0	1992
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	6	2	0	0	4	12	6	0	0	5	0	5
Cap, veh/h	1928	2179	987	51	856	357	112	35	75	524	0	2540
Arrive On Green	0.40	0.61	0.61	0.03	0.24	0.24	0.07	0.07	0.07	0.15	0.00	0.15
Sat Flow, veh/h	4864	3554	1610	1810	3497	1459	1725	540	1152	3478	0	4642
Grp Volume(v), veh/h	1838	891	58	27	659	332	80	0	47	458	0	1992
Grp Sat Flow(s),veh/h/ln	1621	1777	1610	1810	1749	1459	1725	0	1693	1739	0	1547
Q Serve(g_s), s	58.7	20.7	2.3	2.4	28.1	35.6	7.3	0.0	4.3	20.6	0.0	24.1
Cycle Q Clear(g_c), s	58.7	20.7	2.3	2.4	28.1	35.6	7.3	0.0	4.3	20.6	0.0	24.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.68	1.00		1.00
Lane Grp Cap(c), veh/h	1928	2179	987	51	856	357	112	0	110	524	0	2540
V/C Ratio(X)	0.95	0.41	0.06	0.53	0.77	0.93	0.71	0.00	0.43	0.87	0.00	0.78
Avail Cap(c_a), veh/h	1933	2179	987	75	856	357	165	0	162	524	0	2540
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	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.8	16.0	12.4	76.7	56.2	59.1	73.3	0.0	71.9	66.5	0.0	28.7
Incr Delay (d2), s/veh	11.6	0.6	0.1	8.3	6.6	32.7	8.1	0.0	2.6	15.1	0.0	1.7
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(95%),veh/ln	33.2	13.0	1.5	2.2	18.9	22.7	6.3	0.0	3.5	15.6	0.0	27.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.4	16.5	12.5	85.1	62.8	91.7	81.5	0.0	74.5	81.6	0.0	30.4
LnGrp LOS	E	B	B	F	E	F	F	A	E	F	A	C
Approach Vol, veh/h		2787			1018			127			2450	
Approach Delay, s/veh		44.1			72.9			78.9			40.0	
Approach LOS		D			E			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	69.8	45.1		15.1	10.9	104.0		30.0				
Change Period (Y+Rc), s	7.4	6.9		* 5.7	7.4	6.9		6.9				
Max Green Setting (Gmax), s	62.6	33.1		* 14	5.6	90.1		23.1				
Max Q Clear Time (g_c+I1), s	60.7	37.6		9.3	4.4	22.7		26.1				
Green Ext Time (p_c), s	1.8	0.0		0.2	0.0	16.3		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	47.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1097	2	0	677	0	2
Future Vol, veh/h	1097	2	0	677	0	2
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	92	92	92	92	92	92
Heavy Vehicles, %	4	2	2	3	2	2
Mvmt Flow	1192	2	0	736	0	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	597
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	446
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	446
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	446	-	-	-
HCM Lane V/C Ratio	0.005	-	-	-
HCM Control Delay (s)	13.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	127	862	110	19	505	92	80	28	29	42	30	92
Future Vol, veh/h	127	862	110	19	505	92	80	28	29	42	30	92
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	235	-	135	185	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	4	2	2	3	0	2	2	2	3	2	1
Mvmt Flow	138	937	120	21	549	100	87	30	32	46	33	100

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	649	0	0	1057	0	0	1546	1904	469	1401	1974	325
Stage 1	-	-	-	-	-	-	1213	1213	-	641	641	-
Stage 2	-	-	-	-	-	-	333	691	-	760	1333	-
Critical Hdwy	4.1	-	-	4.14	-	-	7.54	6.54	6.94	7.56	6.54	6.92
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.56	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.56	5.54	-
Follow-up Hdwy	2.2	-	-	2.22	-	-	3.52	4.02	3.32	3.53	4.02	3.31
Pot Cap-1 Maneuver	947	-	-	655	-	-	~ 78	68	541	99	61	674
Stage 1	-	-	-	-	-	-	193	253	-	427	468	-
Stage 2	-	-	-	-	-	-	654	444	-	362	221	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	947	-	-	655	-	-	~ 47	56	541	68	50	674
Mov Cap-2 Maneuver	-	-	-	-	-	-	121	138	-	157	129	-
Stage 1	-	-	-	-	-	-	165	216	-	365	453	-
Stage 2	-	-	-	-	-	-	500	430	-	250	189	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.3	62.9	26.6
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	121	222	947	-	-	655	-	-	157	331
HCM Lane V/C Ratio	0.719	0.279	0.146	-	-	0.032	-	-	0.291	0.401
HCM Control Delay (s)	88.2	27.4	9.4	-	-	10.7	-	-	37.1	23
HCM Lane LOS	F	D	A	-	-	B	-	-	E	C
HCM 95th %tile Q(veh)	4	1.1	0.5	-	-	0.1	-	-	1.1	1.9

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	186	747	44	151	465	21
Future Volume (veh/h)	186	747	44	151	465	21
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1900	1841	1900	1900	1856	1900
Adj Flow Rate, veh/h	202	812	48	164	505	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	0	0	3	0
Cap, veh/h	796	1214	357	796	635	578
Arrive On Green	0.42	0.42	0.42	0.42	0.36	0.36
Sat Flow, veh/h	1900	1560	565	1900	1767	1610
Grp Volume(v), veh/h	202	812	48	164	505	21
Grp Sat Flow(s),veh/h/ln	1900	1560	565	1900	1767	1610
Q Serve(g_s), s	3.1	10.9	2.7	2.5	11.6	0.4
Cycle Q Clear(g_c), s	3.1	10.9	5.8	2.5	11.6	0.4
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	796	1214	357	796	635	578
V/C Ratio(X)	0.25	0.67	0.13	0.21	0.80	0.04
Avail Cap(c_a), veh/h	2319	2464	810	2319	1373	1251
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	8.5	2.3	10.4	8.3	13.0	9.4
Incr Delay (d2), s/veh	0.2	0.6	0.2	0.1	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	10.7	0.5	1.2	7.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.7	3.0	10.6	8.5	15.3	9.4
LnGrp LOS	A	A	B	A	B	A
Approach Vol, veh/h	1014			212	526	
Approach Delay, s/veh	4.1			8.9	15.0	
Approach LOS	A			A	B	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	23.9	21.2	23.9
Change Period (Y+Rc), s	6.0	6.0	6.0
Max Green Setting (Gmax), s	54.0	34.0	54.0
Max Q Clear Time (g_c+I1), s	7.8	13.6	12.9
Green Ext Time (p_c), s	1.4	1.7	5.0

Intersection Summary	
HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	67	0	486	786	5
Future Vol, veh/h	0	67	0	486	786	5
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	25	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	3	4	2
Mvmt Flow	0	73	0	528	854	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	857	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.319	-	-	-	-
Pot Cap-1 Maneuver	0	356	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	356	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.7	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	356	-	-
HCM Lane V/C Ratio	-	0.205	-	-
HCM Control Delay (s)	-	17.7	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.8	-	-

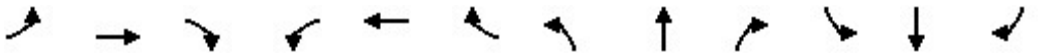
Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	92	157	470	848	5
Future Vol, veh/h	16	92	157	470	848	5
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	-	145	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	3	4	2
Mvmt Flow	17	100	171	511	922	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1778	925	927	0	-	0
Stage 1	925	-	-	-	-	-
Stage 2	853	-	-	-	-	-
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	91	326	737	-	-	-
Stage 1	386	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	70	326	737	-	-	-
Mov Cap-2 Maneuver	189	-	-	-	-	-
Stage 1	296	-	-	-	-	-
Stage 2	418	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.2	2.8	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	737	-	294	-	-
HCM Lane V/C Ratio	0.232	-	0.399	-	-
HCM Control Delay (s)	11.3	-	25.2	-	-
HCM Lane LOS	B	-	D	-	-
HCM 95th %tile Q(veh)	0.9	-	1.8	-	-



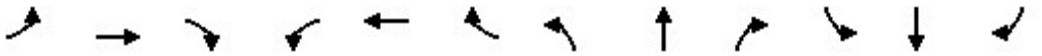
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	170	310	99	104	108	299	350	130	215	503	180
Future Volume (veh/h)	168	170	310	99	104	108	299	350	130	215	503	180
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1841	1885	1841	1870	1796	1900	1841	1856	1870	1841	1826	1900
Adj Flow Rate, veh/h	177	179	326	104	109	103	315	368	123	226	529	170
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	1	4	2	7	0	4	3	2	4	5	0
Cap, veh/h	255	375	542	259	154	146	355	649	217	475	564	181
Arrive On Green	0.07	0.20	0.20	0.05	0.18	0.18	0.15	0.49	0.49	0.09	0.43	0.43
Sat Flow, veh/h	1753	1885	1560	1781	849	803	1753	1331	445	1753	1324	425
Grp Volume(v), veh/h	177	179	326	104	0	212	315	0	491	226	0	699
Grp Sat Flow(s),veh/h/ln	1753	1885	1560	1781	0	1652	1753	0	1775	1753	0	1749
Q Serve(g_s), s	8.0	9.7	19.8	5.5	0.0	13.8	13.8	0.0	22.5	8.3	0.0	43.8
Cycle Q Clear(g_c), s	8.0	9.7	19.8	5.5	0.0	13.8	13.8	0.0	22.5	8.3	0.0	43.8
Prop In Lane	1.00		1.00	1.00		0.49	1.00		0.25	1.00		0.24
Lane Grp Cap(c), veh/h	255	375	542	259	0	300	355	0	866	475	0	746
V/C Ratio(X)	0.69	0.48	0.60	0.40	0.00	0.71	0.89	0.00	0.57	0.48	0.00	0.94
Avail Cap(c_a), veh/h	255	378	544	259	0	302	386	0	943	475	0	792
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.0	40.7	30.9	36.1	0.0	44.1	31.0	0.0	20.8	17.0	0.0	31.5
Incr Delay (d2), s/veh	7.9	0.9	1.9	1.0	0.0	7.3	20.2	0.0	0.7	0.7	0.0	18.0
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(95%),veh/ln	2.8	8.0	12.1	4.4	0.0	10.3	15.7	0.0	13.7	6.0	0.0	29.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	41.6	32.8	37.1	0.0	51.4	51.2	0.0	21.5	17.7	0.0	49.4
LnGrp LOS	D	D	C	D	A	D	D	A	C	B	A	D
Approach Vol, veh/h		682			316			806			925	
Approach Delay, s/veh		38.8			46.7			33.1			41.7	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	61.0	11.0	27.9	22.0	54.0	13.0	25.9
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	60.0	5.0	22.0	18.0	51.0	7.0	20.0
Max Q Clear Time (g_c+I1), s	10.3	24.5	7.5	21.8	15.8	45.8	10.0	15.8
Green Ext Time (p_c), s	0.0	3.1	0.0	0.1	0.2	2.1	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	39.0
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
5: Jacaranda Blvd & I-75 NB Ramp

11/10/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	373	0	213	0	583	601	0	1056	152
Future Volume (veh/h)	0	0	0	373	0	213	0	583	601	0	1056	152
Initial Q (Qb), veh				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
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	0	1841	0	1856	1841	0	1856	1885
Adj Flow Rate, veh/h				401	0	206	0	627	0	0	1135	0
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				2	0	4	0	3	4	0	3	1
Cap, veh/h				477	0	417	0	2018		0	2018	
Arrive On Green				0.27	0.00	0.27	0.00	0.38	0.00	0.00	0.57	0.00
Sat Flow, veh/h				1781	0	1560	0	3618	1560	0	3618	1598
Grp Volume(v), veh/h				401	0	206	0	627	0	0	1135	0
Grp Sat Flow(s),veh/h/ln				1781	0	1560	0	1763	1560	0	1763	1598
Q Serve(g_s), s				16.0	0.0	8.4	0.0	9.3	0.0	0.0	15.2	0.0
Cycle Q Clear(g_c), s				16.0	0.0	8.4	0.0	9.3	0.0	0.0	15.2	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				477	0	417	0	2018		0	2018	
V/C Ratio(X)				0.84	0.00	0.49	0.00	0.31		0.00	0.56	
Avail Cap(c_a), veh/h				591	0	518	0	2018		0	2018	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.40	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				26.0	0.0	23.2	0.0	12.8	0.0	0.0	10.1	0.0
Incr Delay (d2), s/veh				8.8	0.0	0.9	0.0	0.2	0.0	0.0	1.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				11.6	0.0	5.2	0.0	5.2	0.0	0.0	8.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				34.8	0.0	24.1	0.0	12.9	0.0	0.0	11.2	0.0
LnGrp LOS				C	A	C	A	B		A	B	
Approach Vol, veh/h					607			627			1135	
Approach Delay, s/veh					31.2			12.9			11.2	
Approach LOS					C			B			B	

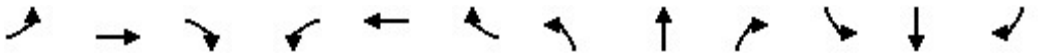
Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	49.8		49.8		25.2			
Change Period (Y+Rc), s	7.9		7.9		6.1			
Max Green Setting (Gmax), s	37.1		37.1		23.9			
Max Q Clear Time (g_c+I1), s	11.3		17.2		18.0			
Green Ext Time (p_c), s	7.6		12.4		1.1			

Intersection Summary		
HCM 6th Ctrl Delay	16.8	
HCM 6th LOS	B	

Notes

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Edition methodology does not support custom phasing.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	3	681	0	0	0	0	1105	835	341	1090	0
Future Volume (vph)	75	3	681	0	0	0	0	1105	835	341	1090	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.1	5.1	5.1					6.9	3.0	6.9	6.9	
Lane Util. Factor	0.95	0.95	0.88					0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected	0.95	0.96	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1603	1584	2787					3505	1599	1770	3505	
Flt Permitted	0.95	0.96	1.00					1.00	1.00	0.06	1.00	
Satd. Flow (perm)	1603	1584	2787					3505	1599	116	3505	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	80	3	724	0	0	0	0	1176	888	363	1160	0
RTOR Reduction (vph)	0	0	106	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	42	41	618	0	0	0	0	1176	888	363	1160	0
Heavy Vehicles (%)	7%	33%	2%	0%	0%	0%	0%	3%	1%	2%	3%	0%
Turn Type	Split	NA	custom					NA	Free	pm+pt	NA	
Protected Phases	3	3	3 4					2		1	6	
Permitted Phases									Free	6		
Actuated Green, G (s)	25.9	25.9	43.7					56.1	150.0	92.3	92.3	
Effective Green, g (s)	26.9	26.9	44.7					57.1	150.0	93.3	93.3	
Actuated g/C Ratio	0.18	0.18	0.30					0.38	1.00	0.62	0.62	
Clearance Time (s)	6.1	6.1						7.9		7.9	7.9	
Vehicle Extension (s)	3.0	3.0						5.0		3.0	5.0	
Lane Grp Cap (vph)	287	284	830					1334	1599	395	2180	
v/s Ratio Prot	0.03	0.03	c0.22					0.34		c0.18	0.33	
v/s Ratio Perm									0.56	c0.39		
v/c Ratio	0.15	0.14	0.74					0.88	0.56	0.92	0.53	
Uniform Delay, d1	51.9	51.9	47.5					43.3	0.0	48.4	16.0	
Progression Factor	1.00	1.00	1.00					1.00	1.00	0.94	0.80	
Incremental Delay, d2	0.2	0.2	3.7					8.6	1.4	21.9	0.7	
Delay (s)	52.1	52.1	51.2					51.9	1.4	67.2	13.5	
Level of Service	D	D	D					D	A	E	B	
Approach Delay (s)		51.2			0.0			30.2			26.3	
Approach LOS		D			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			