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Traffic Impact Study

North Bay Village II Mixed-Used Development



1555 North Bay Causeway
North Bay Village, Florida

Richard Garcia & Associates, Inc.

January 16th, 2014

ENGINEER'S CERTIFICATION

I, Richard Garcia, P.E. # 54886, certify that I currently hold an active Professional Engineers License in the State of Florida and am competent through education and experience to provide engineering services in the civil and traffic engineering disciplines contained in this report. In addition, the firm Richard Garcia & Associates, Inc. holds a Certificate of Authorization # 9592 in the State of Florida. I further certify that this report was prepared by me or under my responsible charge as defined in Chapter 61G15-18.001 F.A.C. and that all statements, conclusions and recommendations made herein are true and correct to the best of my knowledge and ability.

Project Description: North Bay Village II - Traffic Impact Study

Project Location: 1555 North Bay Causeway
North Bay Village, Florida

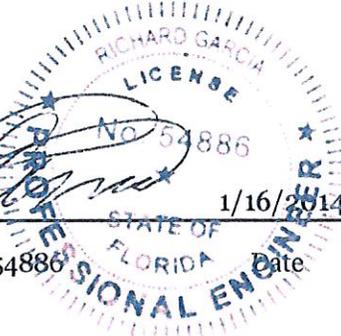


Florida Registration No, 54886

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Executive Summary

This report was prepared to document the traffic impacts associated with the proposed mixed-use development. The subject site is located at 1555 North Bay Causeway in the City of North Bay Village, Florida. This site is currently vacant whereas the proposed mixed-use project consists of a high-rise residential condominium, office and retail space which includes bank, restaurant and coffee shop.

The vehicle trips generated by the mixed-use project were estimated utilizing published data from the **ITE's Trip Generation Manual, 9th Edition**. The trip generation calculations for the **AM peak hour** yielded a total of **155 external net new vehicle trips** while the **PM peak hour** resulted in **161 external net new vehicle trips**. As you may notice, these vehicle trips are likely to be reduced based on the rate and extent of transit and pedestrian usage, since neither of these reductions were utilized in the analysis as a conservative approach.

The subject project is located within the Traffic Analysis Zone (TAZ) 607 as assigned by the Metropolitan Planning Organization's (MPO) on the Miami-Dade Transportation Plan (to the Year 2035) Directional Trips Distribution Report, October 2009. The corresponding traffic distribution percentages were determined by interpolating between the 2005 TAZ and 2035 TAZ data for the design year of 2017. As such, the net vehicle trips for the AM and PM peak hour were distributed consistent with the resulting distribution percentages of TAZ 607.

In order to evaluate the traffic impacts related to the subject project, a Level of Service (LOS) analysis was performed for the existing condition and proposed future condition with project traffic at the most impacted intersection of 79th Street (SR 934/J.F. Kennedy Causeway/North Bay Causeway) and Adventure Avenue. The LOS analysis was performed consistent with the 2010 Highway Capacity Manual methodology by utilizing the latest build of the Synchro 8 software. In addition, the proposed vehicular access points (i.e. driveways) were also evaluated for LOS. Based on our **existing condition analysis**, the intersection of **79th Street and Adventure Avenue**, which is controlled by a traffic signal is currently operating at **LOS B** during the AM and PM peak hour. The **proposed condition analysis** for this intersection, which includes a traffic background growth rate and project traffic, resulted in **LOS C** for both the future AM and PM peak hour condition. More importantly, the intersection of 79th Street and Adventure Avenue is expected to operate well with the addition of the southbound approach which becomes a driveway for the proposed development as shown in the site plan. Lastly, the driveway analysis for the access point to the east yielded LOS A for both the AM and PM peak hour condition. The table below summarizes the LOS results.

Existing AM Peak Hour Condition		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound		LOS	Delay (s)
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)		
79 Street (N Bay Cswy) & Adventure Avenue	Signalized	B	19.8	A	7.0	C	21.0	N/A	N/A	B	14.1
Proposed AM Peak Hour Condition with Project Traffic		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound		LOS	Delay (s)
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)		
79 Street (N Bay Cswy) & Adventure Avenue	Signalized	C	30.2	C	25.2	C	24.1	C	29.9	C	27.6
79 Street (N Bay Cswy) & Driveway 2	Two-Way Stop	A	0.0	A	0.0	N/A	N/A	C	24.3	A	0.5
Existing PM Peak Hour Condition		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound		LOS	Delay (s)
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)		
79 Street (N Bay Cswy) & Adventure Avenue	Signalized	B	19.7	A	6.5	B	18.9	N/A	N/A	B	13.7
Proposed PM Peak Hour Condition with Project Traffic		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound		LOS	Delay (s)
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)		
79 Street (N Bay Cswy) & Adventure Avenue	Signalized	C	29.1	C	23.8	C	24.5	C	27.8	C	26.5
79 Street (N Bay Cswy) & Driveway 2	Two-Way Stop	A	0.0	A	0.0	N/A	N/A	C	22.6	A	0.4

Additionally, an arterial roadway analysis was performed for the AM and PM peak hour to evaluate 79th Street (SR 934/J.F. Kennedy Causeway/North Bay Causeway) within the project’s vicinity. 79th Street is a six (6) lane divided state roadway and has a posted speed limit of 30 miles per hour (mph) which falls under Class II as per the 2013 FDOT Quality/Level of Service Handbook.

The roadway traffic data was obtained from the FDOT Count Station 0533. This count station is located to the east of the subject project and therefore, the available 72-hour bi-directional counts were utilized in the roadway analysis. These bi-directional counts were averaged and adjusted for seasonal variations by utilizing the FDOT Seasonal Factor and Axle Correction Factor as documented in the Project Traffic Forecasting Handbook.

Subsequently, the adjusted traffic volumes were evaluated utilizing the generalized table (i.e. Table 4) of the 2013 FDOT Quality/Level of Service Handbook. Based on our analysis, **79th Street (SR 934)** is currently operating at **LOS D** and is expected to maintain the existing LOS during the proposed future AM and PM peak hour condition with and without project traffic in 2017. The table below summarizes the roadway volumes and LOS results obtained from our analysis.

Arterial LOS Summary				AM Peak Hour			PM Peak Hour		
FDOT STATION	ROAD	LOCATION	DIR	Existing Condition	Proposed Condition		Existing Condition	Proposed Condition	
					without Project	with Project		without Project	with Project
0533	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway	200' E E Treasure Dr.	EB	1,410	1,448	1,488	1,245	1,279	1,334
			WB	1,433	1,472	1,529	1,281	1,472	1,517
			2-WAY	2,843	2,919	3,016	2,526	2,760	2,860
			LOS	D	D	D	D	D	D

Based on the analyses documented herewith, the most impacted intersection by the subject project is operating adequately and will continue to have an acceptable Level of Service during the proposed AM and PM peak hour condition with project traffic in 2017. Moreover, 79th Street (SR 924) has sufficient capacity to support this project. Therefore, it is fair to conclude that the subject project will not pose a negative traffic impact.

Introduction

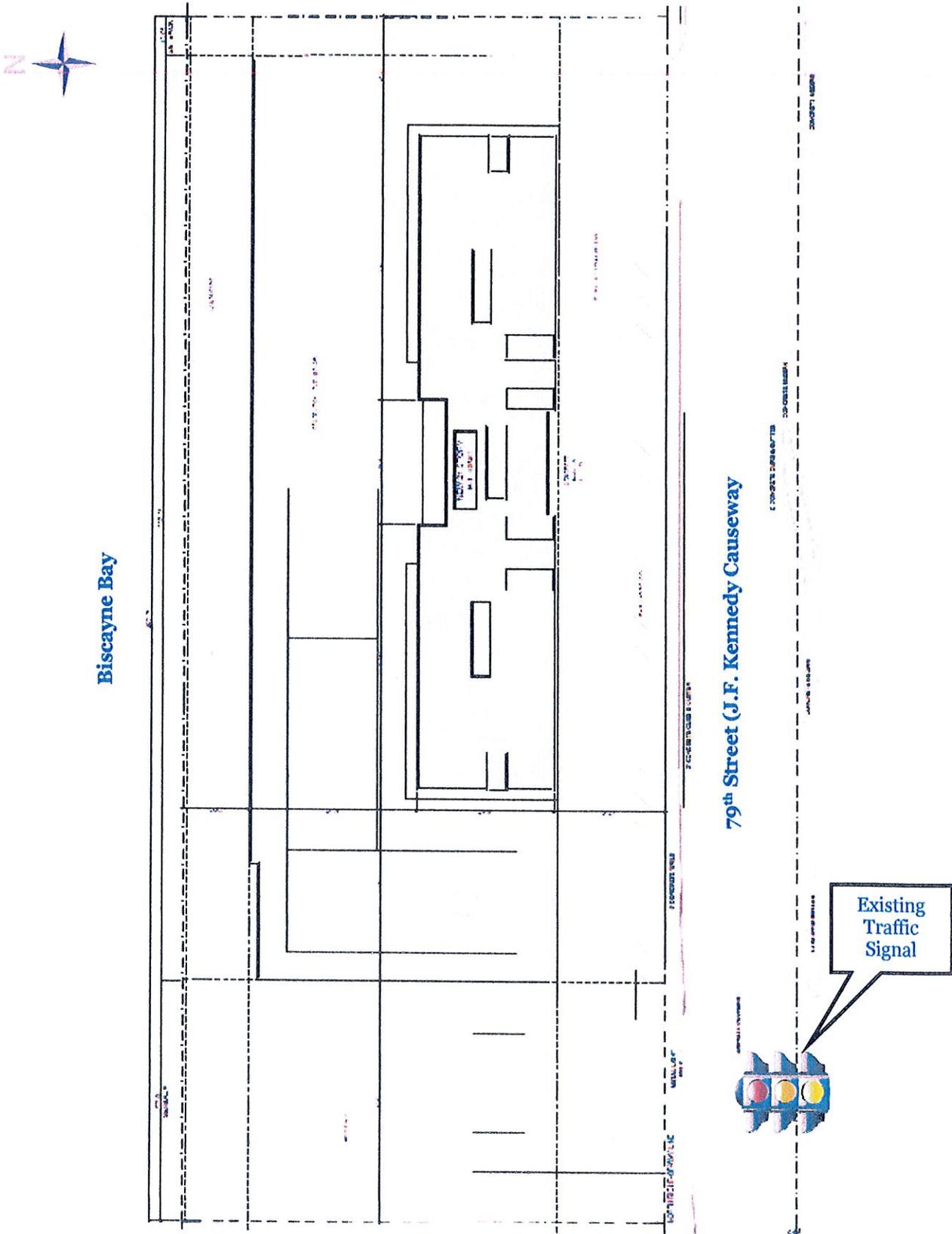
The objective of this study is to evaluate the associated traffic impacts for the proposed mixed-use project. The subject site is located at 1555 North Bay Causeway in the City of North Bay Village, Florida. This site is currently vacant whereas the proposed mixed-use project consists of a high-rise residential condominium, office and retail space which includes bank, restaurant and coffee shop.

In order to evaluate the traffic impacts associated with the subject project, Level of Service (LOS) analyses were performed for the existing condition and proposed future condition with project traffic at the most impacted intersection and arterial within the study area. In addition, the proposed site driveways were also evaluated for LOS. The intersection LOS analyses were performed consistent with the 2010 Highway Capacity Manual methodology by utilizing the Synchro 8 software and arterial LOS was evaluated utilizing the generalized tables from the FDOT 2013 Quality/LOS Handbook..

Lastly, this report follows the procedure adopted by the Institute of Transportation Engineer's (ITE) Trip Generation, and Traffic Impact Studies Manual. In summary, this report includes the following:

- Trip Generation
- Trip Distribution
- Trip Assignment
- Traffic Counts
- Existing Condition LOS
 - Intersection
 - Arterial
- Proposed Condition LOS
 - Intersection
 - Arterial
 - Driveways
- Conclusion/Recommendation

Figure 2: Site Plan



Existing Condition (2014)

This section of the report identifies operational and geometric characteristics of the intersections within the study area. The purpose of this section is to provide a basis of comparison to future conditions.

Data Collection

Manual Turning Movement Counts (TMC's) were taken at the intersection of **79th Street (SR 934/J.F. Kennedy Causeway/N Bay Causeway) and Adventure Avenue**. This intersection is the most impacted by the subject project and is currently controlled by a traffic signal.

The turning movement counts were taken on Thursday, January 9th, 2014 during the roadway's AM peak period (i.e. 7:00 AM to 9:00 AM) and Wednesday, January 8th, 2014 during the PM peak period (i.e. 4:00 PM to 6:00 PM). Subsequently, the AM and PM peak hour volumes were determined and adjusted for seasonal variations by utilizing the 2012 Florida Department of Transportation (FDOT) Seasonal Factor of 1.02.

Figures 3 and 4 are graphical representations of the existing seasonally adjusted AM and PM peak hour turning movement counts (TMC's), respectively.

Figure 3: Existing Seasonally Adjusted AM Peak Hour TMC's (2014)

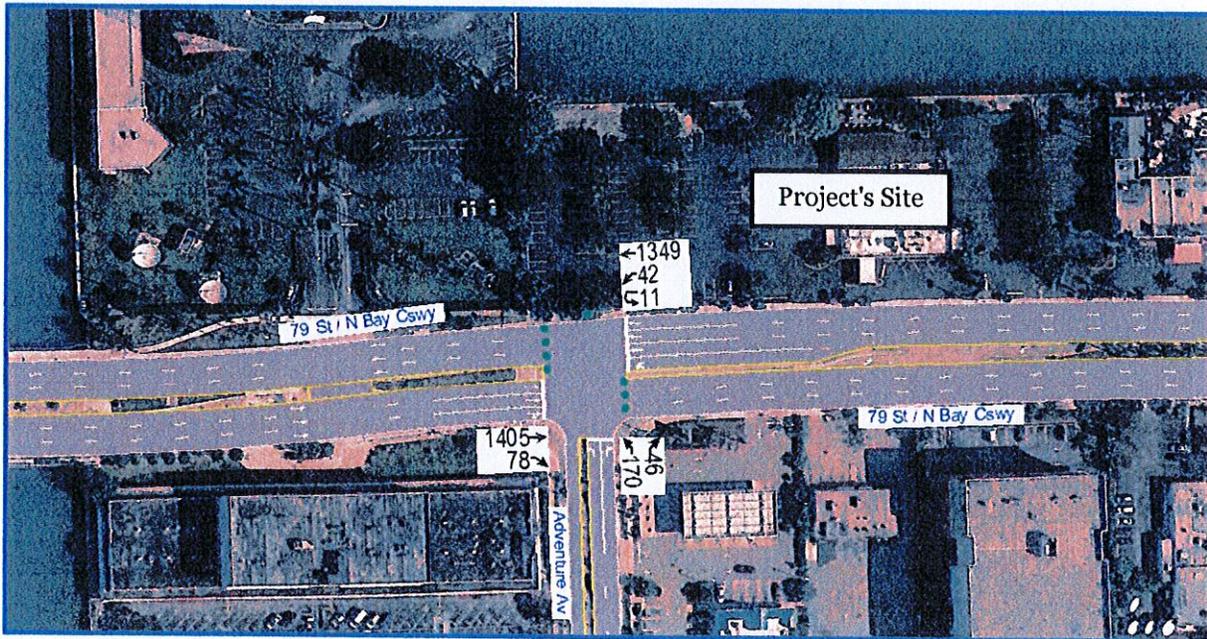
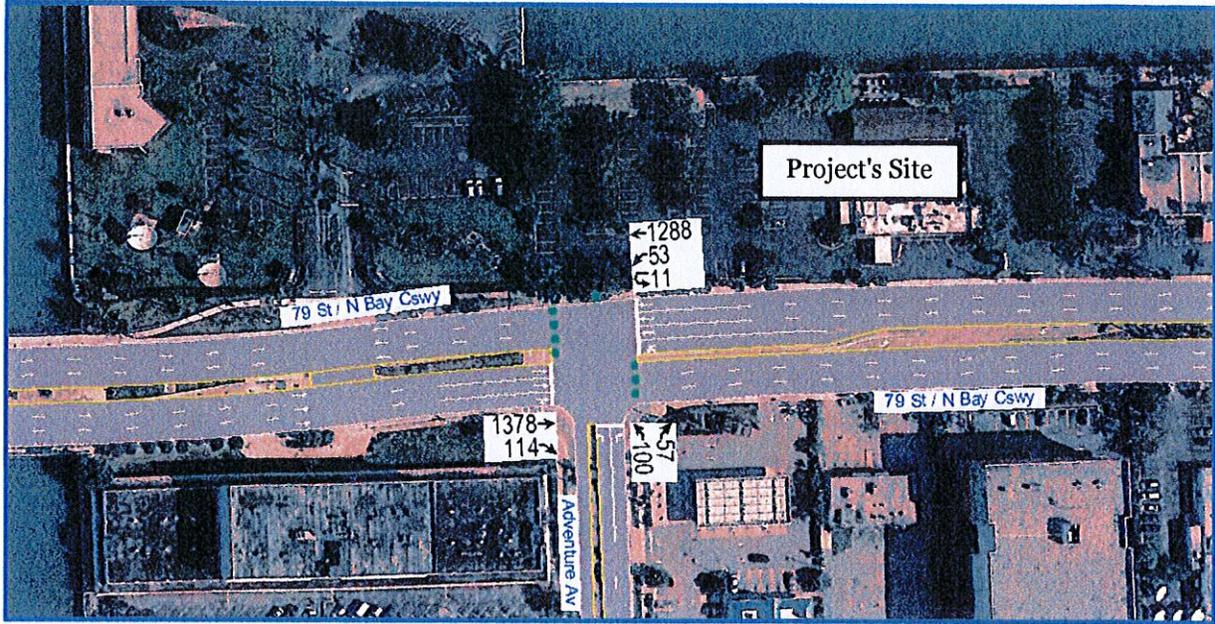


Figure 4: Existing Seasonally Adjusted PM Peak Hour TMC's (2014)



Level of Service (LOS)

Intersection Analysis

Using the existing seasonally adjusted traffic volumes, an intersection Level of Service (LOS) analysis was performed for the existing condition during the AM and PM peak hour. This analysis was performed consistent with the current operational traffic characteristics (i.e. lane geometry, traffic control, etc.) and following the 2010 Highway Capacity Manual (HCM) methodology. Based on our analysis, the intersection of 79th Street and Adventure Avenue is operating at LOS B during the AM peak hour and PM peak hour. Moreover, all the approaches at the intersection yielded acceptable LOS. Table 1 summarizes the LOS results while Appendix E contains the supporting documentation.

Table 1: Existing AM & PM Peak Hour Condition LOS (Intersection)

Existing AM Peak Hour Condition		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound		LOS	Delay (s)
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)		
79 Street (N Bay Cswy) & Adventure Avenue	Signalized	B	19.8	A	7.0	C	21.0	N/A	N/A	B	14.1
Existing PM Peak Hour Condition		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound		LOS	Delay (s)
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)		
79 Street (N Bay Cswy) & Adventure Avenue	Signalized	B	19.7	A	6.5	B	18.9	N/A	N/A	B	13.7

Arterial Roadway Analysis

An arterial roadway analysis was performed for the AM and PM peak hour to evaluate 79th Street (SR 934/J.F. Kennedy Causeway/North Bay Causeway) within the project’s vicinity. 79th Street is a six (6) lane divided state roadway and has a posted speed limit of 30 miles per hour (mph) which falls under Class II as per the 2013 FDOT Quality/Level of Service Handbook.

The roadway traffic data was obtained from the FDOT Count Station 0533. This count station is located to the east of the subject project and therefore, the available 72-hour bi-directional counts were utilized in the roadway analysis. These bi-directional counts were averaged and adjusted for seasonal variations by utilizing the FDOT Seasonal Factor and Axle Correction Factor as documented in the Project Traffic Forecasting Handbook.

Subsequently, the adjusted traffic volumes were evaluated utilizing the generalized table (i.e. Table 4) of the 2013 FDOT Quality/Level of Service Handbook. Based on our analysis, 79th Street is currently operating at LOS D during the AM and PM peak hour. Table 2 summarizes the results for the existing AM and PM peak hour condition while Appendix E contains the supporting documentation.

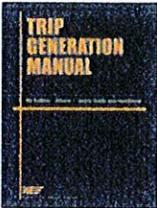
Table 2: Existing AM & PM Peak Hour Condition - LOS (Arterial Roadway)

Existing Condition					
FDOT STATION	ROAD	LOCATION	DIR	AM Peak	PM Peak
0533	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway	200' E E Treasure Dr.	EB	1,410	1,245
			WB	1,433	1,281
			2-WAY	2,843	2,526
			LOS	D	D
Source: 2013 FDOT Quality/Level of Service Handbook Table 4					
Class II 6LD	C	D	E		
	2,090	4,500	4,590		

Project Traffic

This section of the report describes the analysis for estimating the traffic associated with the subject project. The trip generation analysis summarized below was performed consistent with the methodology described in the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 2nd Edition.

Trip Generation



The trip generation characteristics for the proposed mixed-use project were obtained from ITE's Trip Generation Manual, 9th Edition. The trip generation analysis was performed for the AM and PM peak hour utilizing the ITE's land uses that most closely resemble the subject project. As you may notice, the total square feet for the proposed retail was analyzed as specialty retail and a combination of other land uses such as bank, restaurant and coffee shop. Please note the most conservative approach (i.e. highest trip generator between specialty retail and other land uses) was utilized in the analysis.

The trip generation calculations for the **AM peak hour** yielded a total of **155 external net new vehicle trips** while the **PM peak hour** resulted in **161 external net new vehicle trips**. Although our analysis includes project internalization and pass-by trips, these vehicle trips are likely to be reduced based on the rate and extent of transit and pedestrian usage, since neither of these modes were utilized in the analysis as a conservative approach. Table 3 below summarizes the AM and PM peak hour trip generation results for the subject project and Appendix A includes the supporting documentation.

Table 3: AM& PM Peak Hour Trip Generation Summary

LAND USE (LU)	UNITS	AM / PM PEAK HOUR					
		ITE LU CODE	PEAK HOUR	ITE TRIP GENERATION RATE / EQN	TRIPS		
					IN	OUT	TOTAL
# Proposed							
1 High-Rise Residential Condominium *	128 D.U.	232	AM PM	$T=0.29(X)+28.86$ $T=0.34(X)+15.47$	13 37	53 22	66 59
2 General Office **	7,262 Th.Sq.Ft.	710	AM PM	1.56 1.49	11 2	1 9	12 11
3 Specialty Retail ***	17,290 Th.Sq.Ft.	826	AM PM	$\ln(T)=0.61\ln(X)+2.24$ $T=2.40(X)+21.48$	33 28	21 35	54 63
OR							
Bank (Walk-in)	2,520 Th.Sq.Ft.	911	AM PM	6.03 12.13	9 14	6 17	15 31
3a Quality Restaurant	12,250 Th.Sq.Ft.	931	AM PM	0.81 7.49	7 62	3 30	10 92
Bread/Donut/Bagel/Coffee Shop	2,520 Th.Sq.Ft.	940	AM PM	38.60 18.99	49 24	49 24	98 48
Total Gross Vehicle Trips					89 139	112 102	201 241
Internalization Trips				10% of Gross Vehicle Trips (AM) 10% of Gross Vehicle Trips (PM)	9 14	11 10	20 24
External Vehicle Trips					80 125	101 92	181 217
Total Pass-By Trips				AM Peak Hour PM Peak Hour	13 34	13 22	26 56
External Net New Vehicle Trips (External - Pass-By Trips)					67 91	88 70	155 161

NOTES:

Sources: ITE Trip Generation, 9th Edition & ITE Trip Generation Handbook, 2nd Edition.

* ITE Fitted Curve Equation was utilized to calculate the trips since it is reasonable and for a conservative approach.

** ITE rate was utilized to calculate the trips since this use square feet is out of scale to use the fitted curve equation.

*** Since ITE does not provide AM data for Specialty Retail (LU 826), the ITE data from LU 820 (Shopping Center) was used to estimate AM peak hour trips.

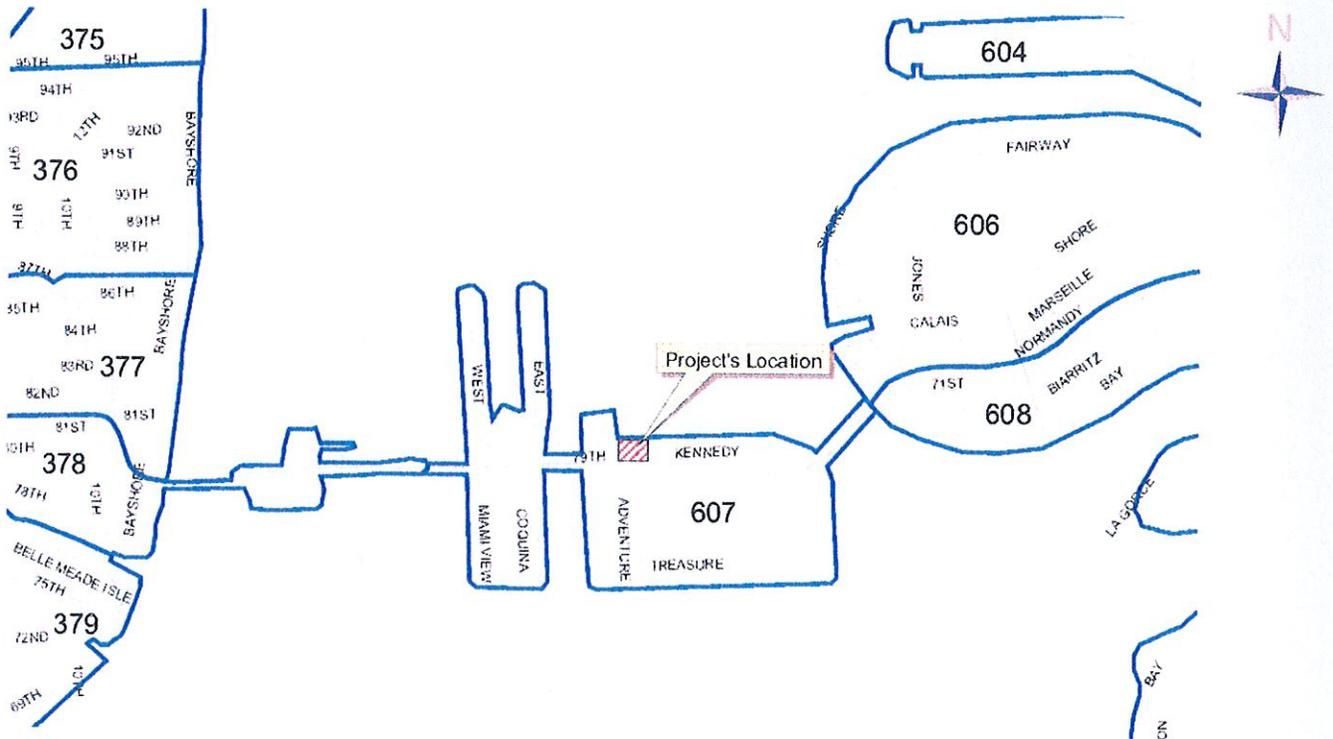
Pass-by data obtained from ITE Trip Generation Handbook, 2nd Edition.

AM PM Numbers utilized in the analysis

Trip Distribution

The subject project is located within the Traffic Analysis Zone (TAZ) 607 as assigned by the Metropolitan Planning Organization’s (MPO) on the Miami-Dade Transportation Plan (to the Year 2035) Directional Trips Distribution Report, October 2009. The corresponding traffic distribution percentages were determined by interpolating between the 2005 TAZ and 2035 TAZ data for the design year of 2017. As such, the AM and PM peak hour net vehicle trips were distributed consistent with the resulting distribution percentages of TAZ 607. Figure 5 below depicts the TAZ map for the study area.

Figure 5: Traffic Analysis Zone Map



The traffic distribution percentages being assigned to the eight (8) cardinal directions are outlined in Table 4 below. As previously mentioned, this TAZ distribution was based on interpolation of the 2005 and 2035 Directional Trip Distribution Report from the Miami-Dade 2035 Long Range Transportation Plan for the design year of 2017. Appendix B includes the supporting documentation.

Table 4: Directional Traffic Distribution Percentages

DIRECTION	DISTRIBUTION PERCENTAGES (%)		
	MIAMI-DADE LRTP MODEL YEAR		DESIGN YEAR
	2005	2035	2017
NNE	9.61	7.10	8.61
ENE	8.71	2.50	6.23
ESE	2.13	0.00	1.28
SSE	10.50	11.32	10.83
SSW	13.60	12.67	13.23
WSW	20.08	29.33	23.78
WNW	17.65	17.57	17.62
NNW	17.73	19.51	18.44
TOTAL	100.00	100.00	100.00

Project Traffic Assignments

The AM and PM peak hour trips have been further distributed into the four quadrants. Table 5 includes the traffic distribution with the corresponding assignments to the North, South, East and West while Figure 6 depicts the ingress and egress net traffic. Lastly, Figures 7 and 8 depict the site traffic assigned to the most impacted intersection and project driveways for the AM and PM peak hour, respectively.

Table 5: Directional Trip Assignments

DIRECTION	DISTRIBUTION	AM PEAK HOUR			PM PEAK HOUR		
		IN	OUT	TOTAL	IN	OUT	TOTAL
NORTH	27.05%	18	24	42	25	19	44
EAST	7.50%	5	6	11	7	5	12
SOUTH	24.06%	16	22	38	22	17	39
WEST	41.40%	28	36	64	37	29	66
	100.00%	67	88	155	91	70	161

Figure 6: AM & PM Peak Hour Ingress & Egress Net Vehicle Trips

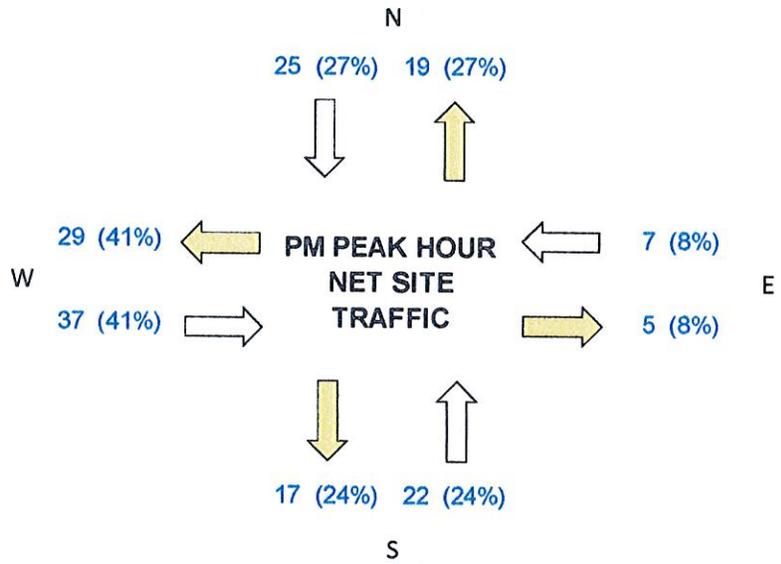
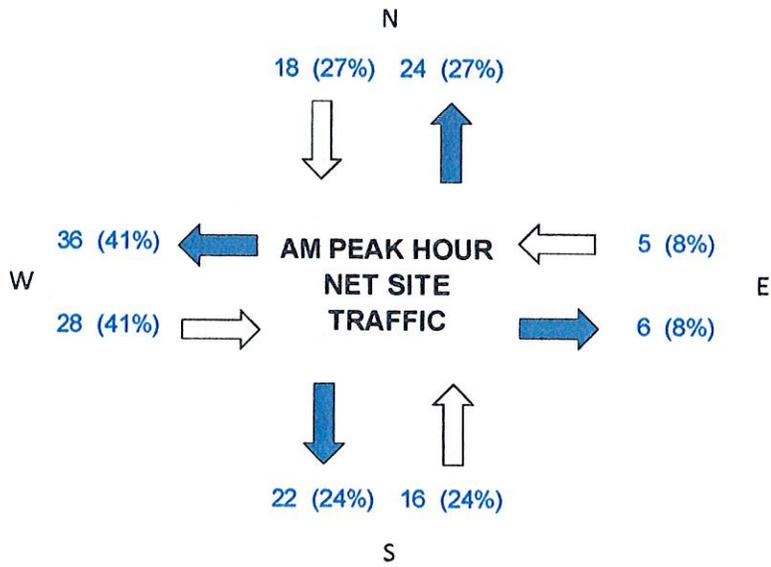


Figure 7: AM Peak Hour Site Traffic

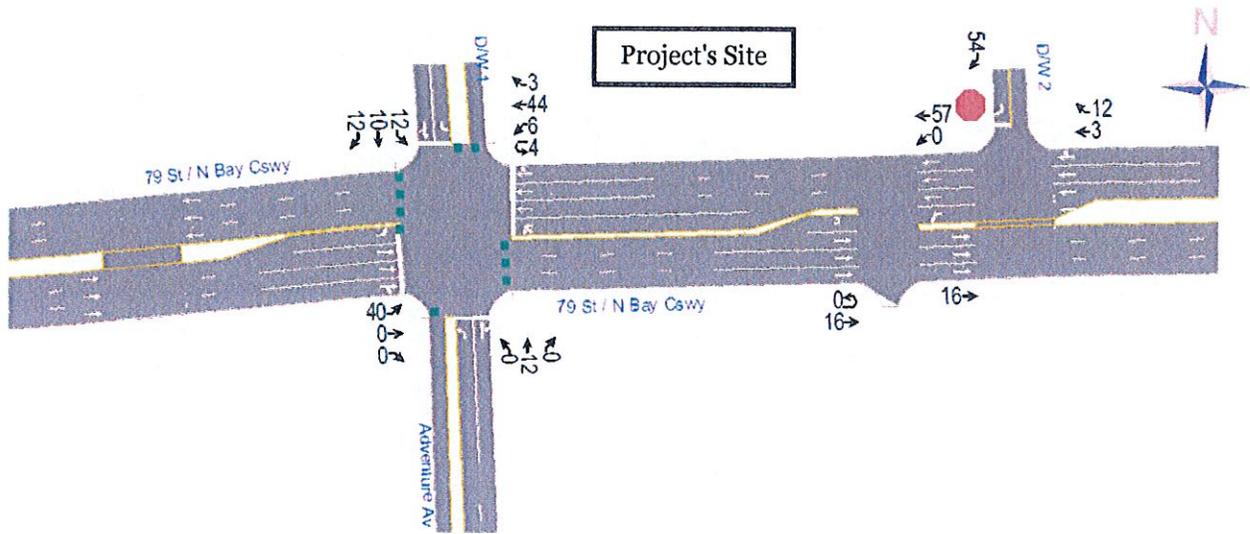
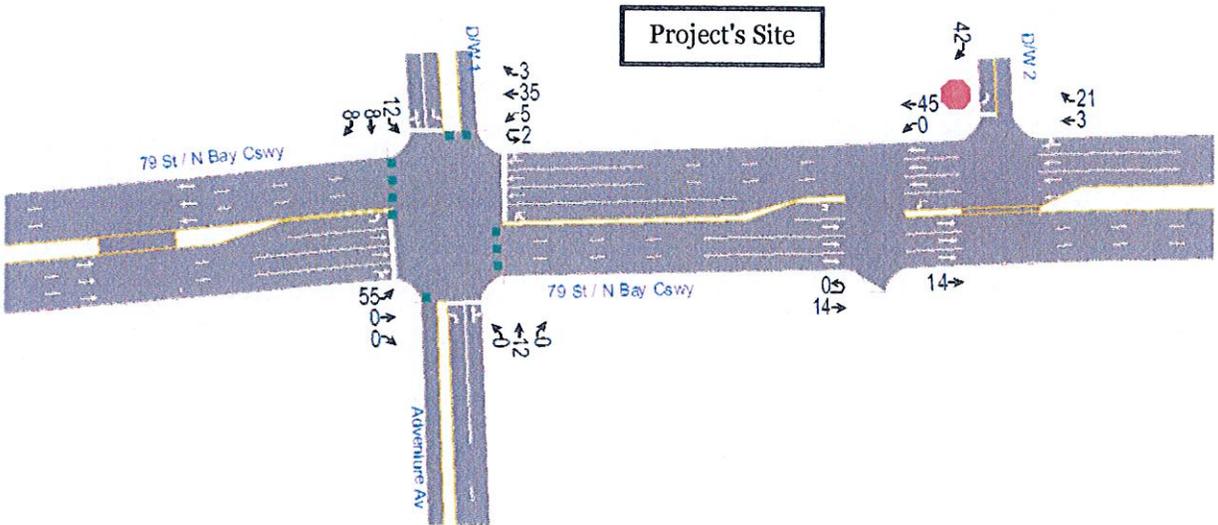


Figure 8: PM Peak Hour Site Traffic



Proposed Condition (2017)

The proposed condition includes traffic growth trends and project traffic. The following sections describe the parameters utilized to calculate and evaluate the proposed peak hour volumes.

Traffic Background Growth

In order to address future background growth within the project's vicinity, a growth rate analysis was performed using the 2012 Historical AADT Report data from the Florida Department of Transportation's Count Station 0533 (SR 934/79th Street) and based on documentation from the Miami-Dade County SERPM travel demand traffic model for the subject project TAZ 607. As such, the **most conservative growth rate of 0.89 percent** was applied to the existing traffic counts to estimate the future traffic volumes. Appendix C contains the supporting documentation.

Future AM & PM Peak Hour Volumes

The existing traffic counts for the most impacted intersection and roadway previously identified were augmented with a background growth of 0.89 percent per year and project traffic to develop the volumes for the proposed condition with project in 2017. Figures 9 and 10 depict the future volumes at the intersection of **79th Street and Adventure Avenue** for the AM and PM peak hour, respectively. In addition, these figures illustrate the proposed future geometry and project's driveways with their respective traffic volumes. Lastly, Table 7 summarizes the future volumes in 2017 for the most impacted roadway.

Figure 9: Proposed Future AM Peak Hour Volumes

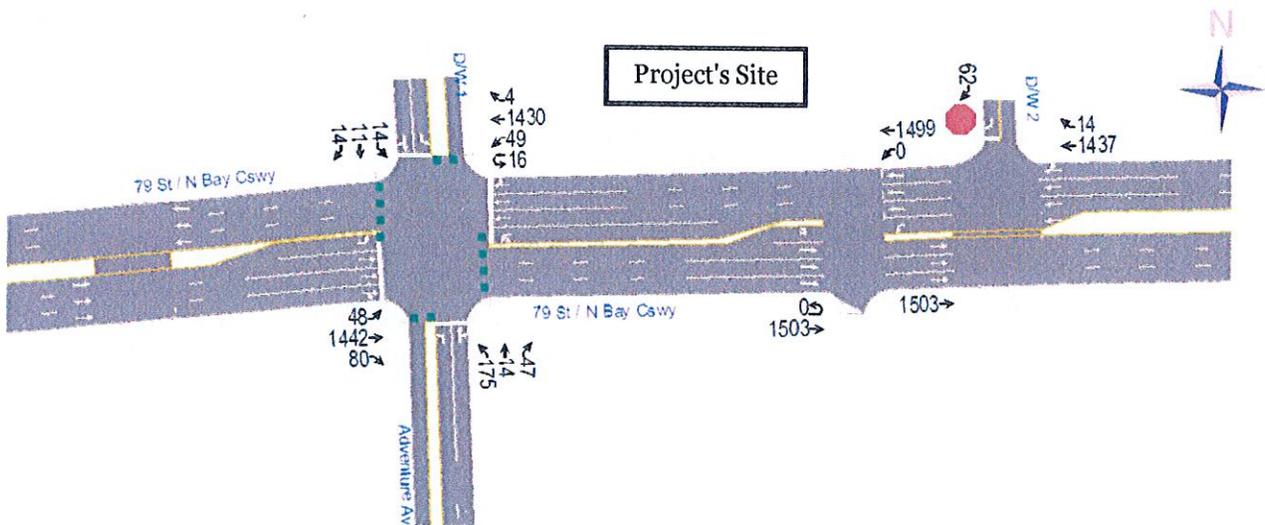
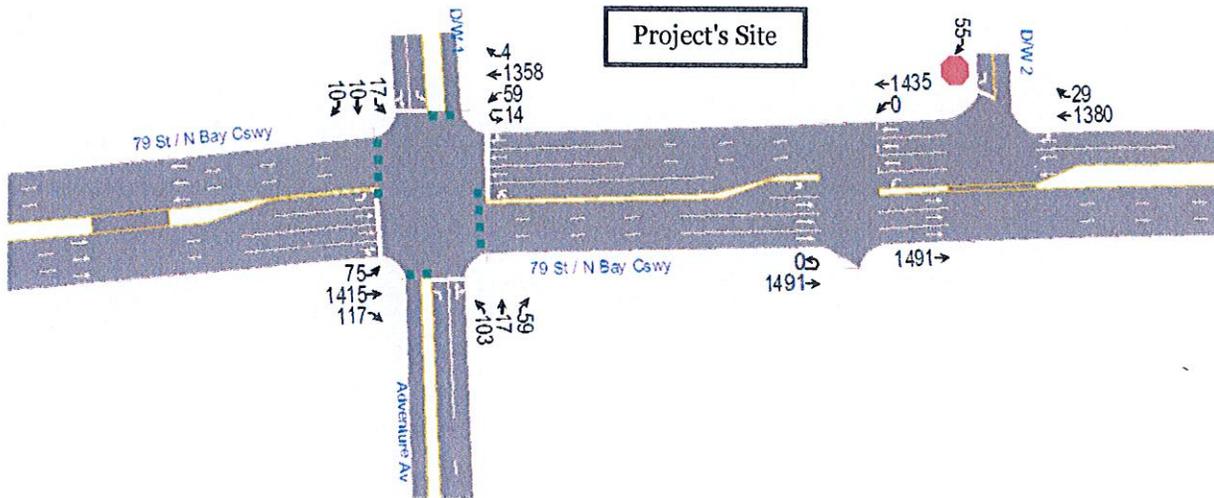


Figure 10: Proposed Future PM Peak Hour Volumes



Level of Service (LOS)

Intersection Analysis

Using the proposed AM and PM peak hour volumes, Level of Service (LOS) analyses were performed to evaluate the future LOS and operation at the most impacted intersection and project's driveways. Based on our analysis, the most impacted intersection will operate at LOS C for the proposed AM and PM peak hour condition with project traffic in 2017. More importantly, the intersection of 79th Street and Adventure Avenue is expected to operate well with the addition of the southbound approach which becomes a driveway for the proposed development as shown in the site plan. Lastly, the driveway analysis for the access point to the east yielded LOS A for both the AM and PM peak hour condition. Table 6 summarizes the LOS results while Appendix E includes the Synchro software sheets.

Table 6: Proposed AM & PM Peak Hour LOS (Intersection)

Existing AM Peak Hour Condition		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound		LOS	Delay (s)
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)		
79 Street (N Bay Cswy) & Adventure Avenue	Signalized	B	19.8	A	7.0	C	21.0	N/A	N/A	B	14.1
Proposed AM Peak Hour Condition with Project Traffic		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound		LOS	Delay (s)
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)		
79 Street (N Bay Cswy) & Adventure Avenue	Signalized	C	30.2	C	25.2	C	24.1	C	29.9	C	27.6
79 Street (N Bay Cswy) & Driveway 2	Two-Way Stop	A	0.0	A	0.0	N/A	N/A	C	24.3	A	0.5
Proposed PM Peak Hour Condition with Project Traffic		Intersection Approach								Overall	
Location	Intersection Control	Eastbound		Westbound		Northbound		Southbound		LOS	Delay (s)
		LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)		
79 Street (N Bay Cswy) & Adventure Avenue	Signalized	C	29.1	C	23.8	C	24.5	C	27.8	C	26.5
79 Street (N Bay Cswy) & Driveway 2	Two-Way Stop	A	0.0	A	0.0	N/A	N/A	C	22.6	A	0.4

Arterial Roadway Analysis

The proposed future volumes for 79th Street (SR 934) were evaluated with and without project traffic. As a result, the roadway link analyses yielded LOS D for the AM and PM peak hour. In fact, 79th Street (SR 934) will maintain the existing LOS for the future AM and PM peak hour condition in 2017. Table 7 summarizes the results obtained for the proposed condition arterial analysis. Appendix E contains the supporting documentation.

Table 7: Proposed Future AM & PM Peak Hour Condition - LOS (Arterial Roadway)

FDOT STATION	ROAD	LOCATION	DIR	AM Peak Hour		PM Peak Hour	
				Proposed Condition		Proposed Condition	
				without Project	with Project	without Project	with Project
0533	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway	200' E E Treasure Dr.	EB	1,448	1,488	1,279	1,334
			WB	1,472	1,529	1,472	1,517
			2-WAY	2,919	3,016	2,750	2,850
			LOS	D	D	D	D
Source: 2013 FDOT Quality/Level of Service Handbook Table 4							
Class II 6LD		C	D	E			
		2,090	4,500	4,590			

Conclusion

The results documented in this report indicated that the most impacted intersection by the subject project is operating adequately and will continue to have an acceptable Level of Service during the proposed AM and PM peak hour condition with project traffic in 2017. Moreover, our analysis indicated that 79th Street (SR 924) has sufficient capacity to support this project. Therefore, it is fair to conclude that the subject project will not pose a negative traffic impact.

Appendix A: Trip Generation

North Bay Village II

TRIP GENERATION ANALYSIS - AM & PM PEAK HOUR

#	LAND USE (LU)	UNITS	ITE LU CODE	PEAK HOUR	ITE TRIP GENERATION RATE / EQN	AM / PM PEAK HOUR			TRIPS								
						%	IN	%	IN	%	OUT	TOTAL					
1	Proposed																
1	High-Rise Residential Condominiums *	128 D.U.	230	AM PM	$T=0.29(X)+26.86$ $T=0.34(X)+15.47$	19%	13	81%	53	62%	37	38%	22	59			
2	General Office **	7,262 Th-Sa Ft	710	AM PM	1.56 1.49	86%	11	12%	1	17%	2	63%	9	11			
3	Specialty Retail ***	17,290 Th-Sa Ft	826	AM PM	$1.0(T)=0.61(Ln(X))+2.24$ $T=2.43(X)+21.48$	62%	35	36%	21	44%	28	56%	35	63			
OR																	
	Bank/Waiting	2,520 Th-Sa Ft	511	AM PM	6.03 12.13	62%	9	36%	6	44%	14	56%	17	31			
3a	Quality Restaurant	12,250 Th-Sa Ft	591	AM PM	0.81 7.49	67%	7	33%	3	67%	52	33%	30	92			
	Bread-Donut/Bagel/Coffee Shop	2,520 Th-Sa Ft	940	AM PM	38.60 18.99	50%	49	50%	49	49%	24	51%	24	48			
Total Gross Vehicle Trips						44%	89	56%	112	44%	139	42%	102	201			
Internalization Trips						44%	9	56%	11	44%	9	56%	11	20			
External Vehicle Trips						44%	80	56%	101	44%	125	42%	92	181			
Pass-By Trips - Bank						0%	0	0%	0	0%	0	0%	0	0			
Pass-By Trips - Quality Restaurant						0%	0	0%	0	0%	3	57%	4	7			
Pass-By Trips - Bread-Donut/Bagel/Coffee Shop						0%	0	0%	0	0%	0	0%	0	0			
Total Pass-By Trips						50%	13	50%	13	50%	24	33%	13	36			
Total Gross Vehicle Trips						50%	13	80%	13	50%	13	80%	13	26			
External Net New Vehicle Trips						61%	24	39%	22	61%	24	39%	22	56			
Total Gross Vehicle Trips						43%	67	57%	88	43%	91	43%	70	161			

NOTES:
 * ITE Trip Generation, 8th Edition & ITE Trip Generation Handbook, 2nd Edition
 ** ITE Trip Generation, 8th Edition & ITE Trip Generation Handbook, 2nd Edition
 *** ITE Trip Generation, 8th Edition & ITE Trip Generation Handbook, 2nd Edition

High-Rise Residential Condominium/Townhouse (232)

Average Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.

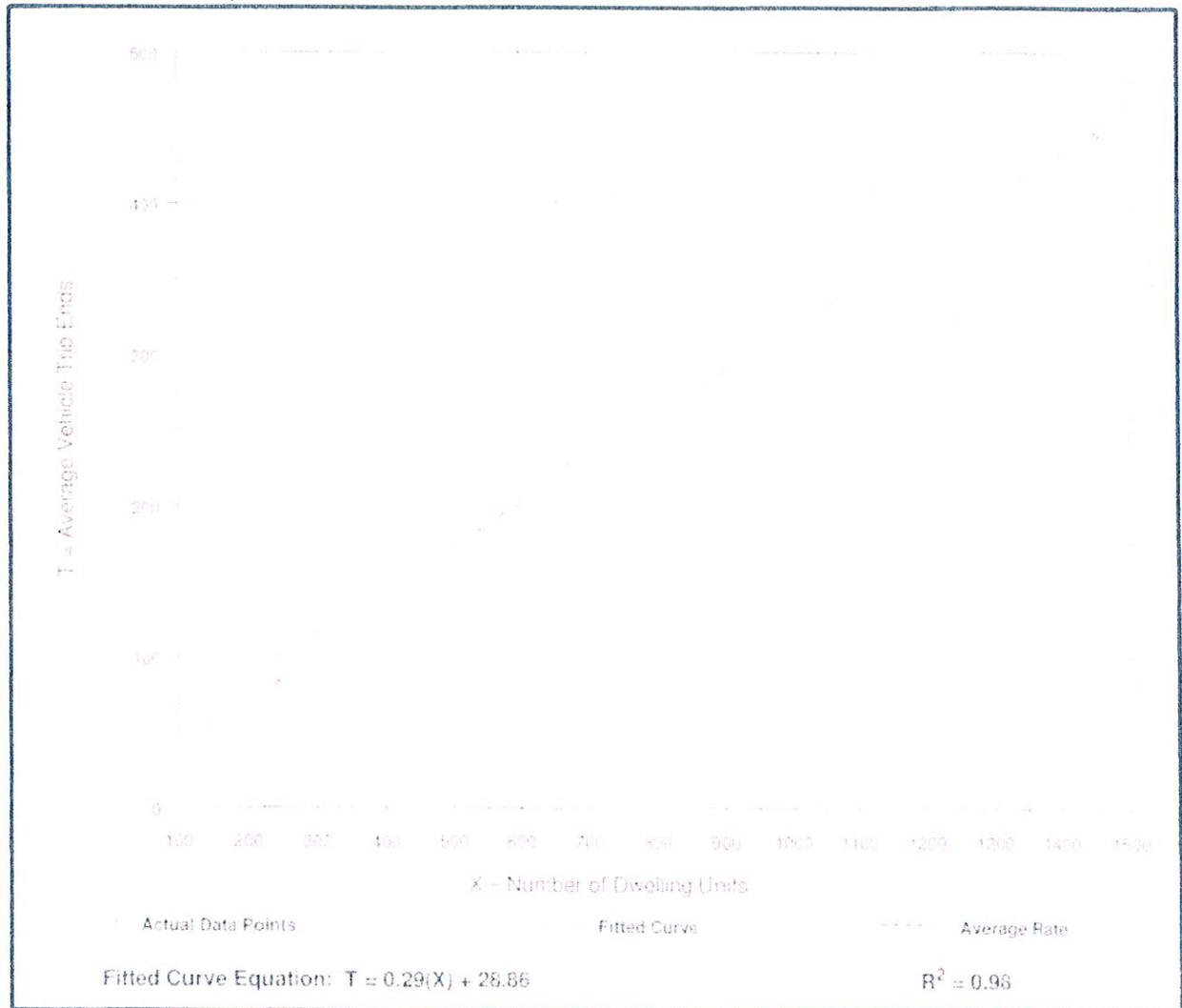
Number of Studies: 4
 Avg. Number of Dwelling Units: 543
 Directional Distribution: 19% entering, 81% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.34	0.31 - 0.48	0.59

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



High-Rise Residential Condominium/Townhouse (232)

Average Vehicle Trip Ends vs: Dwelling Units
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.

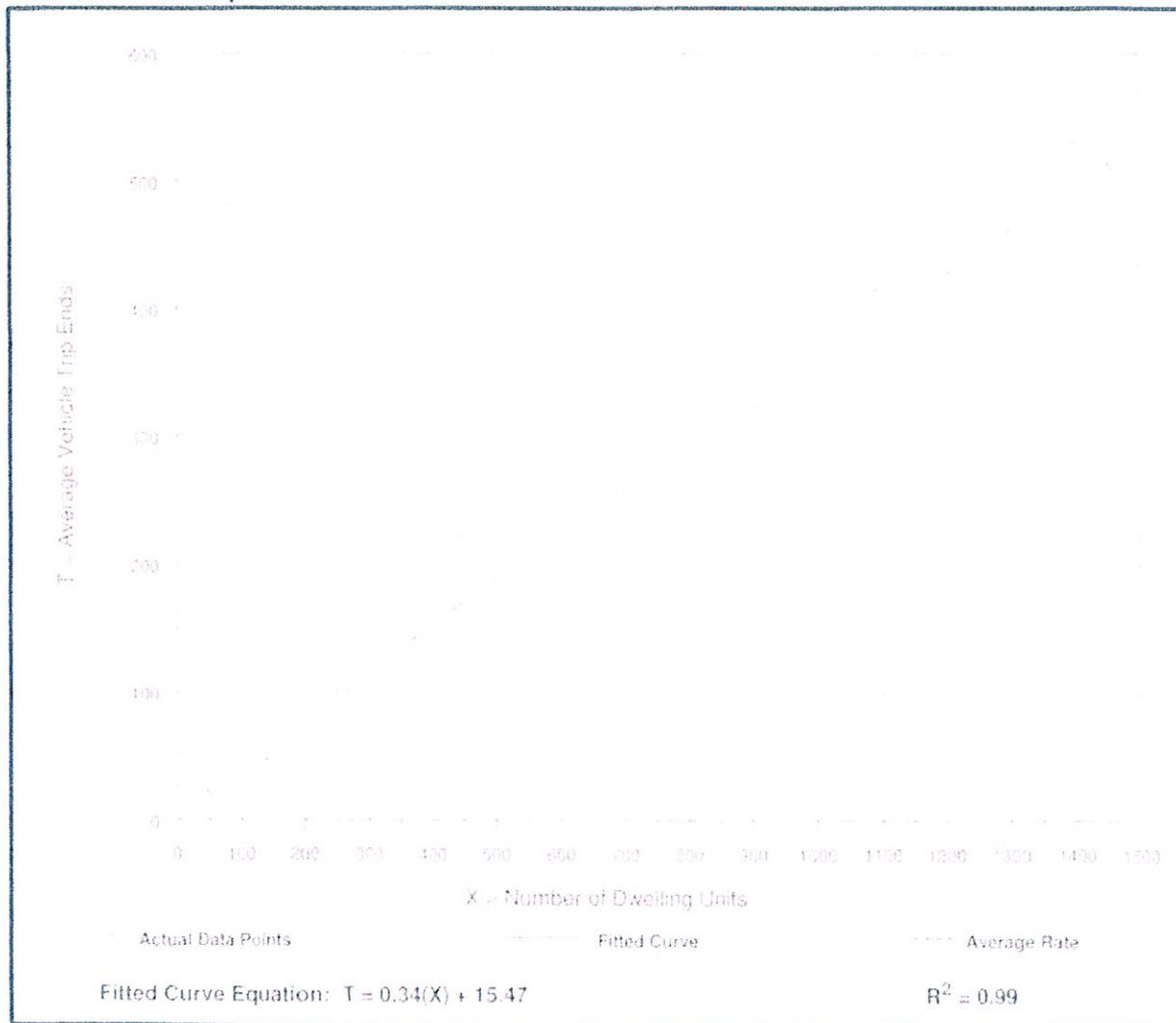
Number of Studies: 5
 Avg. Number of Dwelling Units: 444
 Directional Distribution: 62% entering, 38% exiting

Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.38	0.34 - 0.49	0.62

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



General Office Building (710)

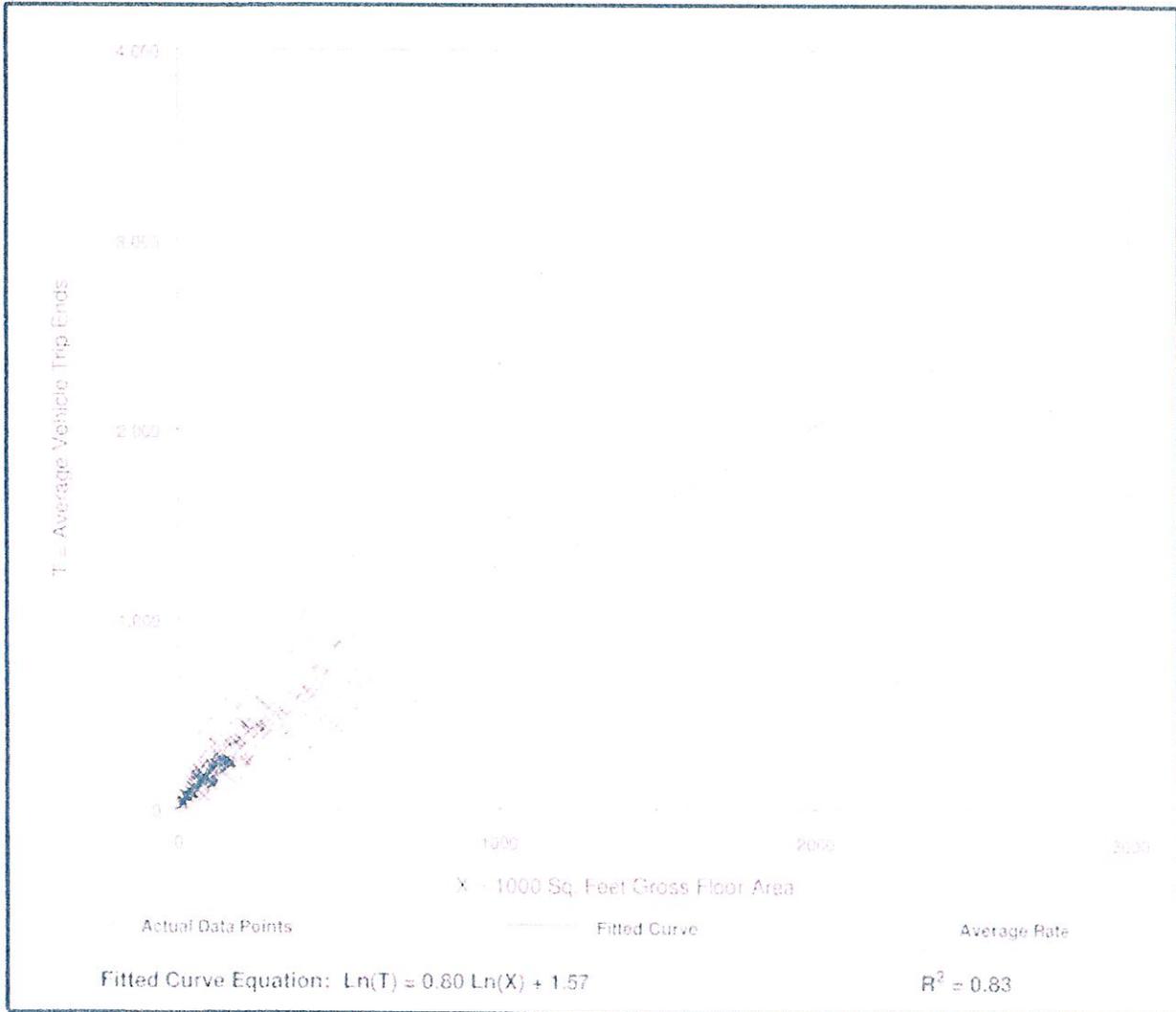
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
A.M. Peak Hour

Number of Studies: 218
Average 1000 Sq. Feet GFA: 222
Directional Distribution: 88% entering, 12% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.56	0.60 - 5.98	1.40

Data Plot and Equation



General Office Building (710)

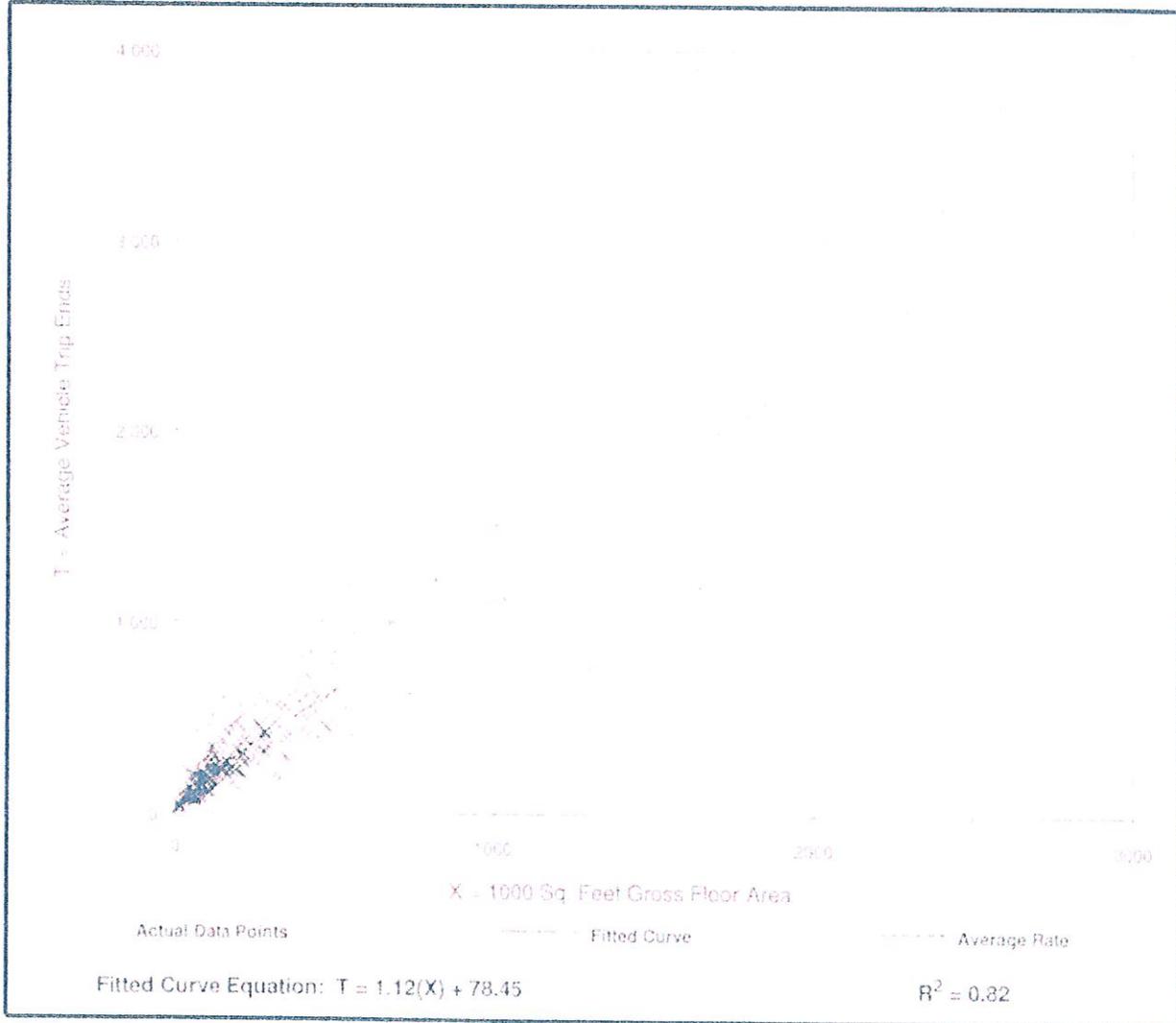
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
On a: Weekday,
P.M. Peak Hour

Number of Studies: 236
Average 1000 Sq. Feet GFA: 215
Directional Distribution: 17% entering, 83% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.49	0.49 - 6.39	1.37

Data Plot and Equation



Shopping Center (820)

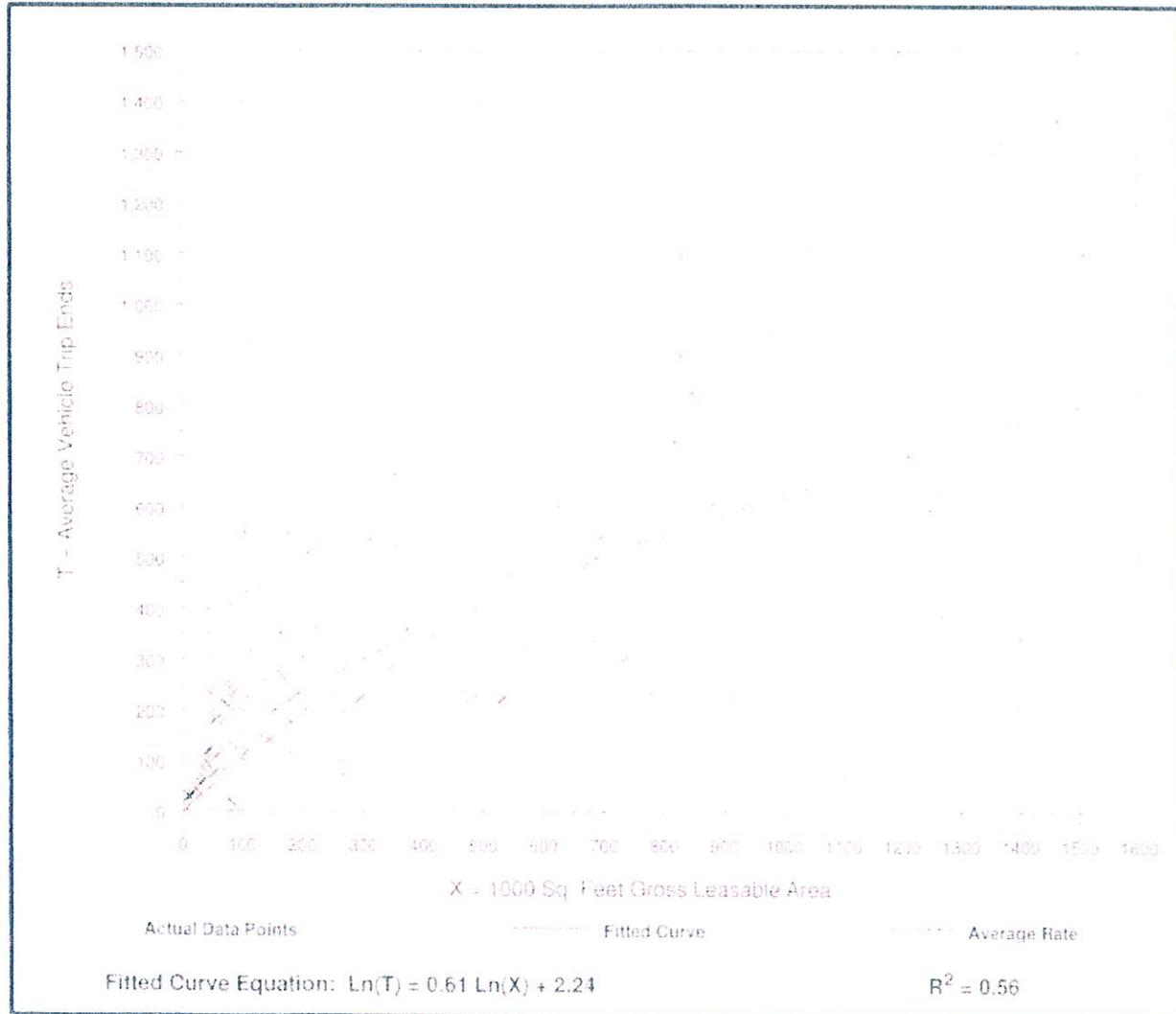
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Number of Studies: 104
Average 1000 Sq. Feet GLA: 310
Directional Distribution: 62% entering, 38% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
0.96	0.10 - 9.05	1.31

Data Plot and Equation



Specialty Retail Center (826)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

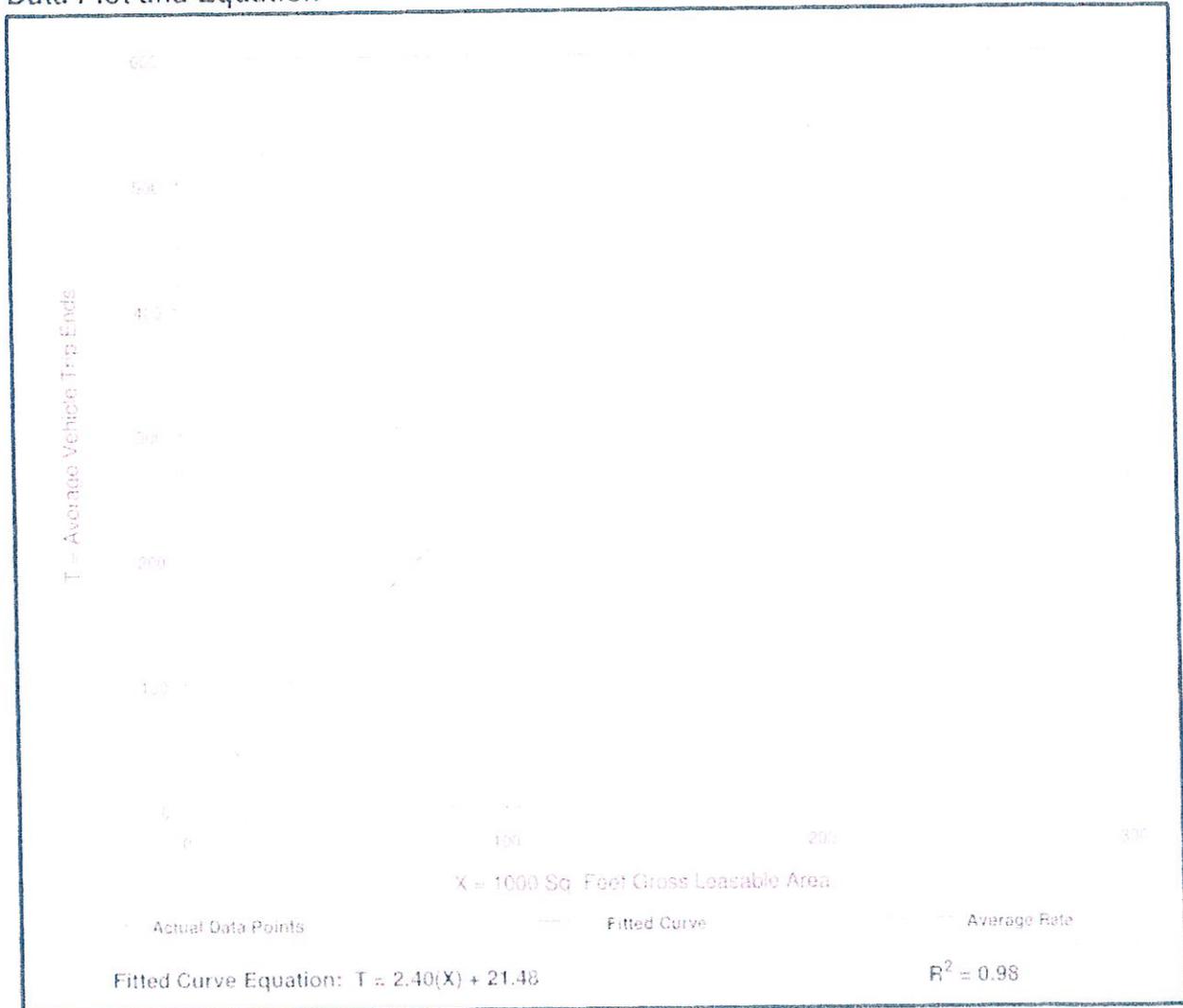
Number of Studies: 5
Average 1000 Sq. Feet GLA: 69
Directional Distribution: 44% entering, 56% exiting

Trip Generation per 1000 Sq. Feet Gross Leasable Area

Average Rate	Range of Rates	Standard Deviation
2.71	2.03 - 5.16	1.83

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Walk-in Bank (911)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.

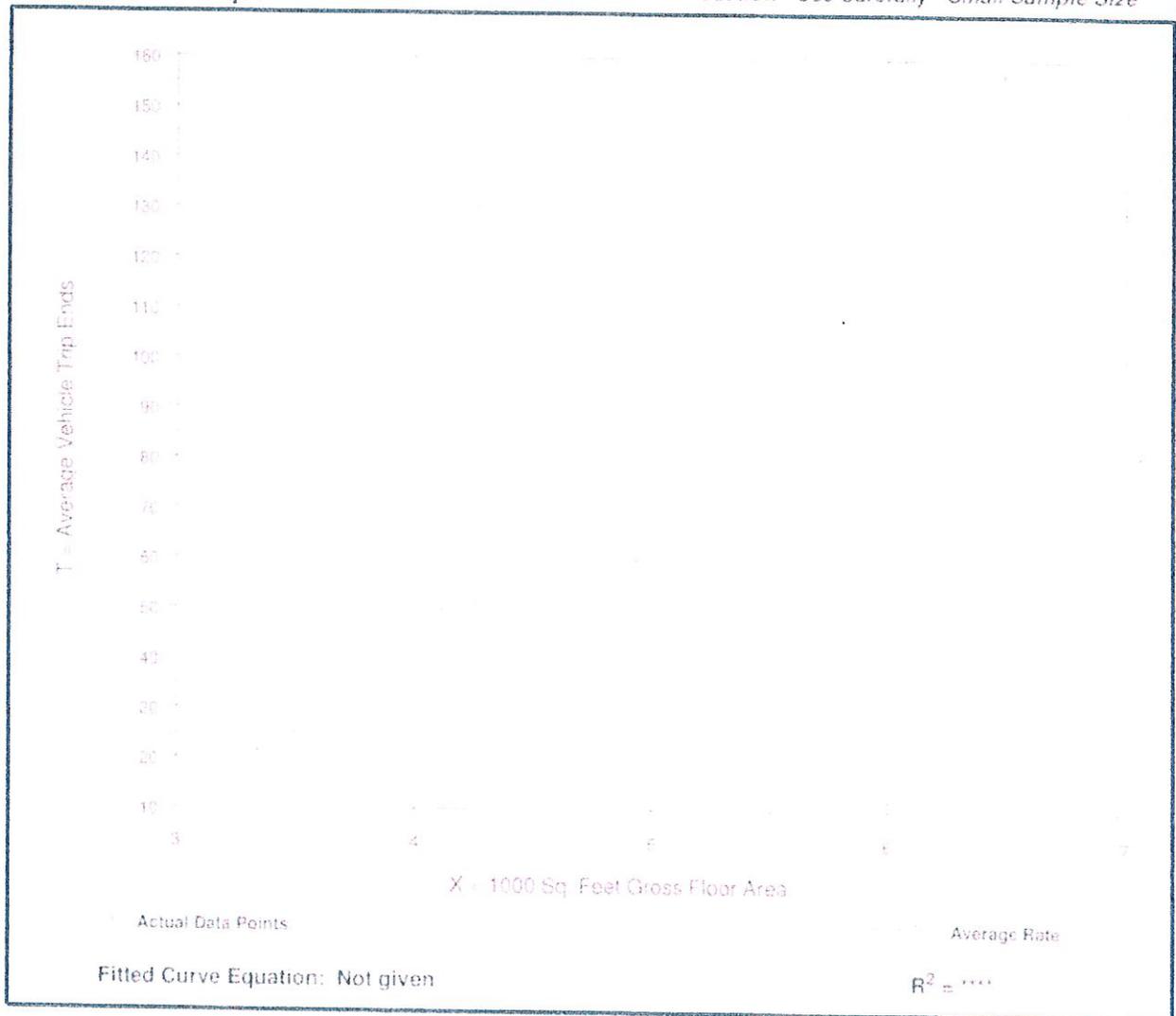
Number of Studies: 3
 Average 1000 Sq. Feet GFA: 5
 Directional Distribution: 44% entering, 56% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
12.13	2.00 - 24.15	10.96

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Drive-in Bank (912)

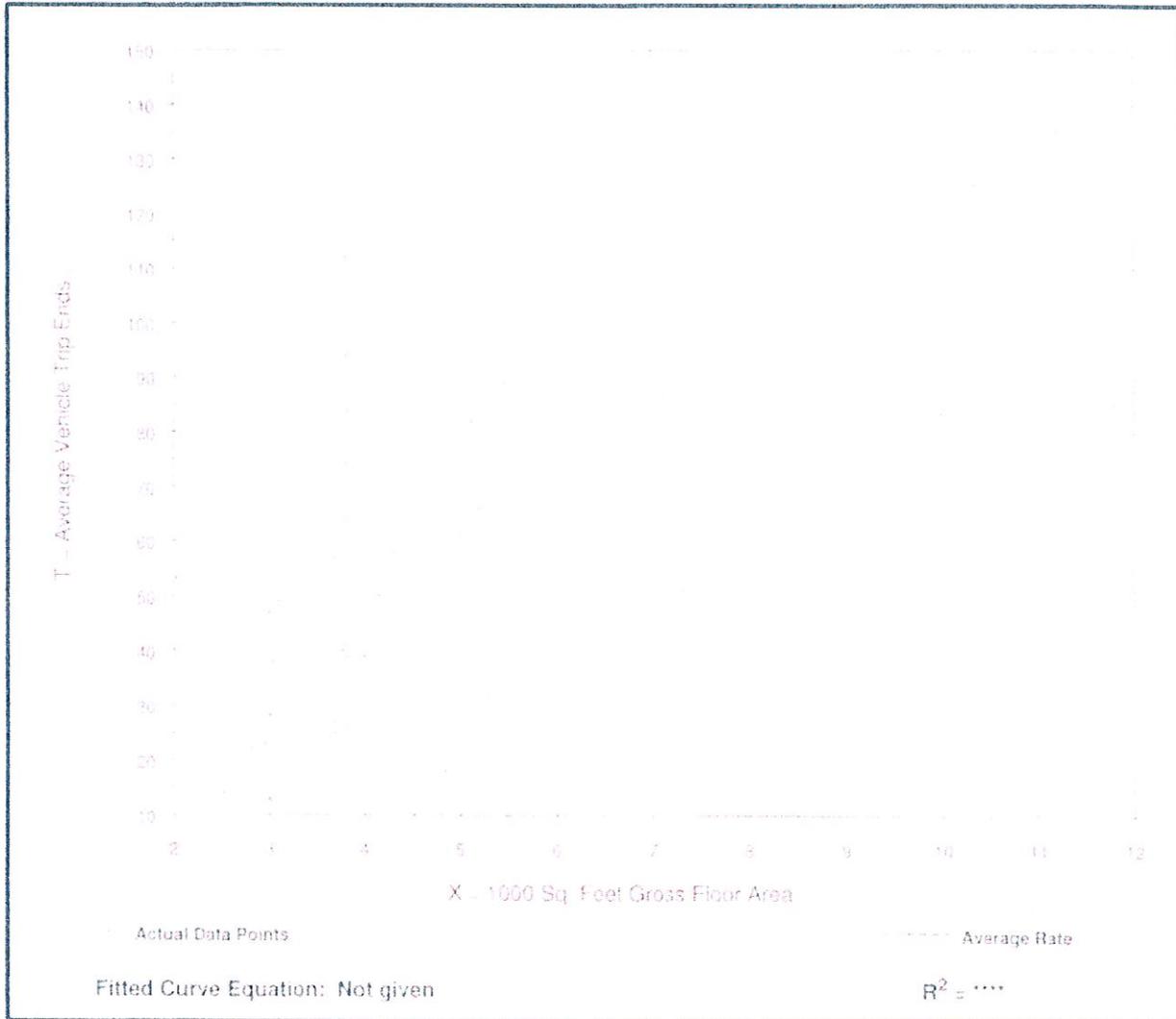
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.

Number of Studies: 31
 Average 1000 Sq. Feet GFA: 4
 Directional Distribution: 57% entering, 43% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
12.08	3.71 - 29.40	6.88

Data Plot and Equation



Drive-in Bank (912)

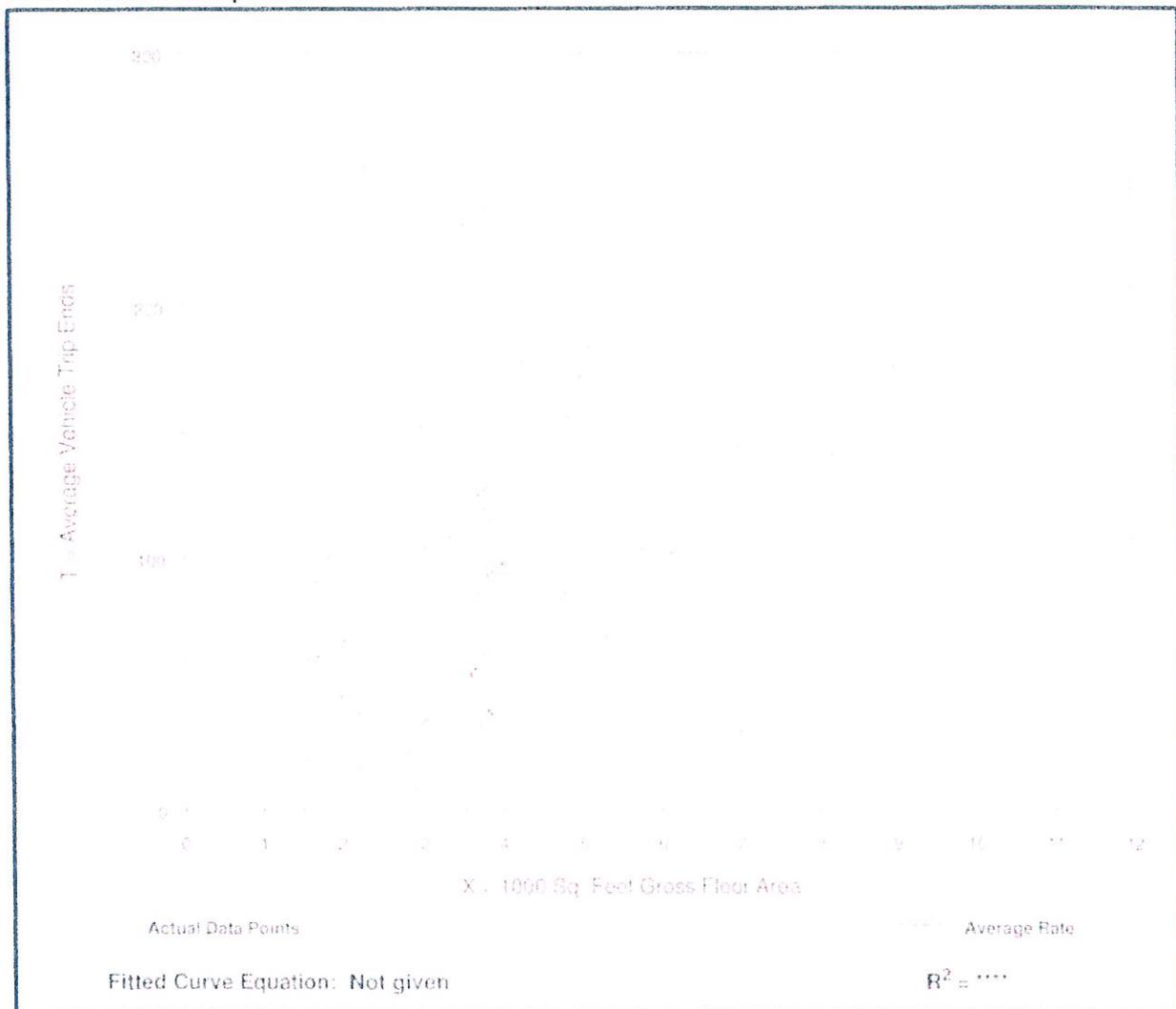
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.

Number of Studies: 102
 Average 1000 Sq. Feet GFA: 4
 Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
24.30	3.09 - 109.68	16.24

Data Plot and Equation



Quality Restaurant (931)

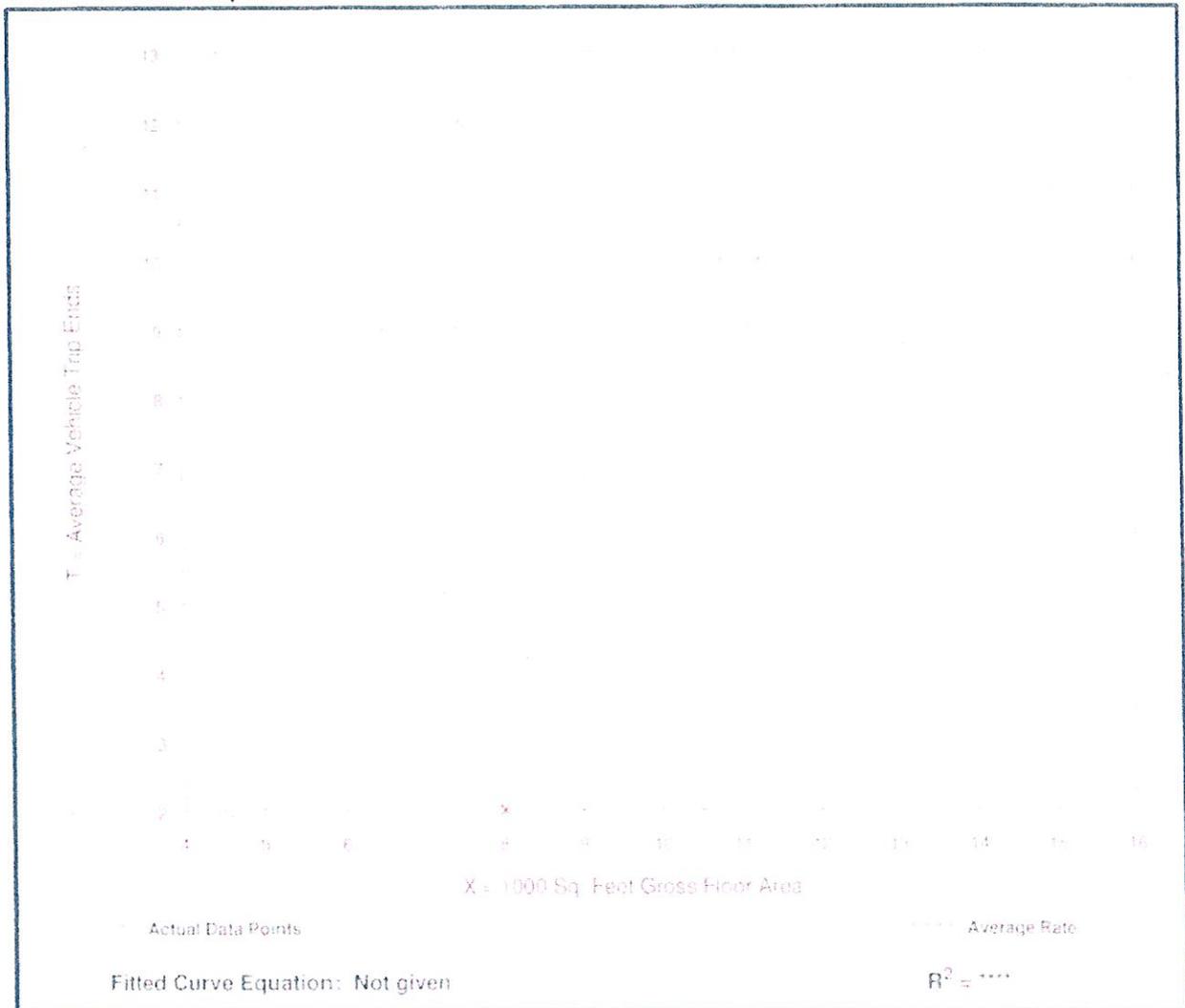
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.

Number of Studies: 11
 Average 1000 Sq. Feet GFA: 9
 Directional Distribution: Not available

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
0.81	0.25 - 1.60	0.93

Data Plot and Equation



Quality Restaurant (931)

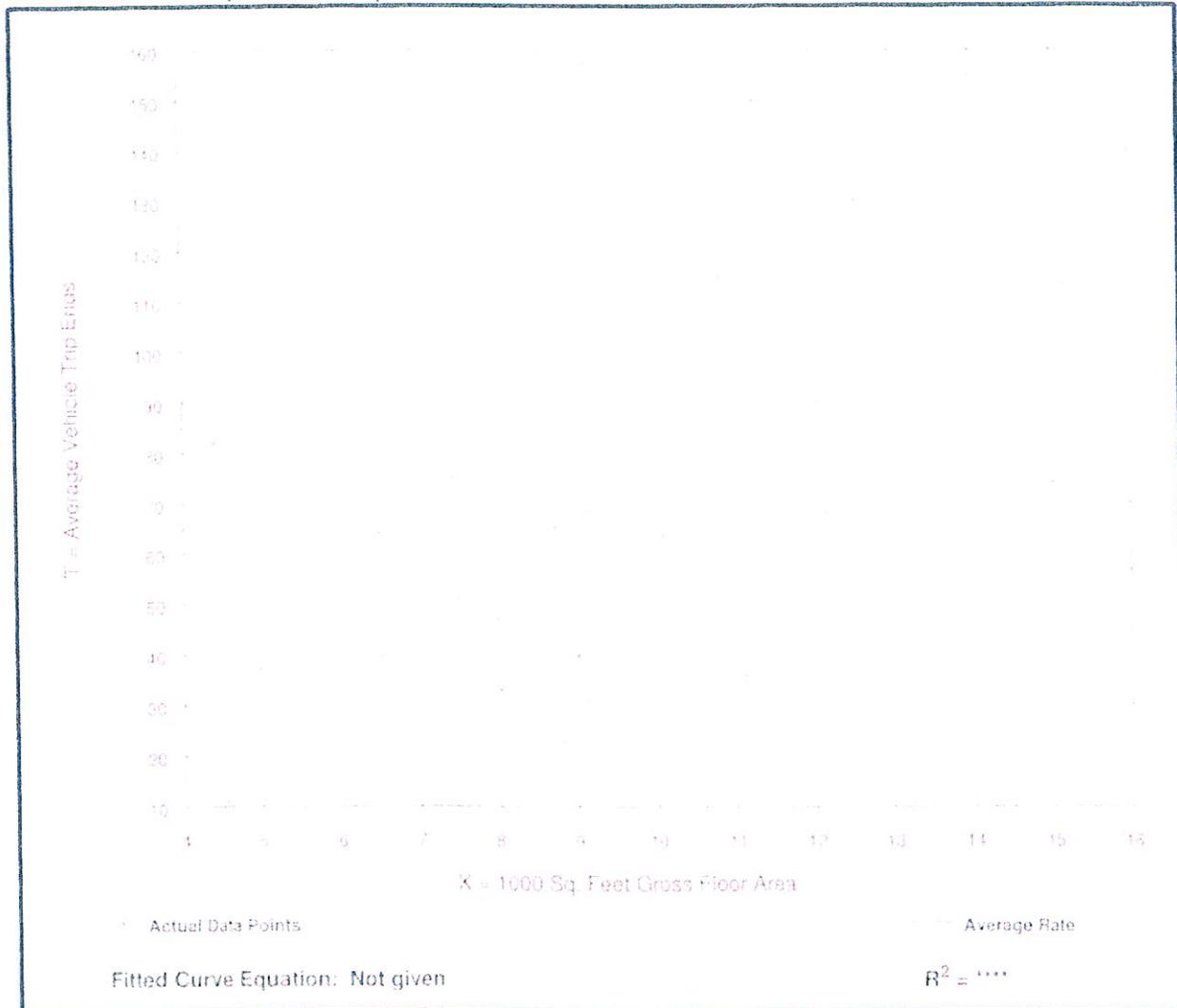
Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.

Number of Studies: 24
 Average 1000 Sq. Feet GFA: 9
 Directional Distribution: 67% entering, 33% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
7.49	2.42 - 18.64	4.89

Data Plot and Equation



Bread/Donut/Bagel Shop with Drive-Through Window (940)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.

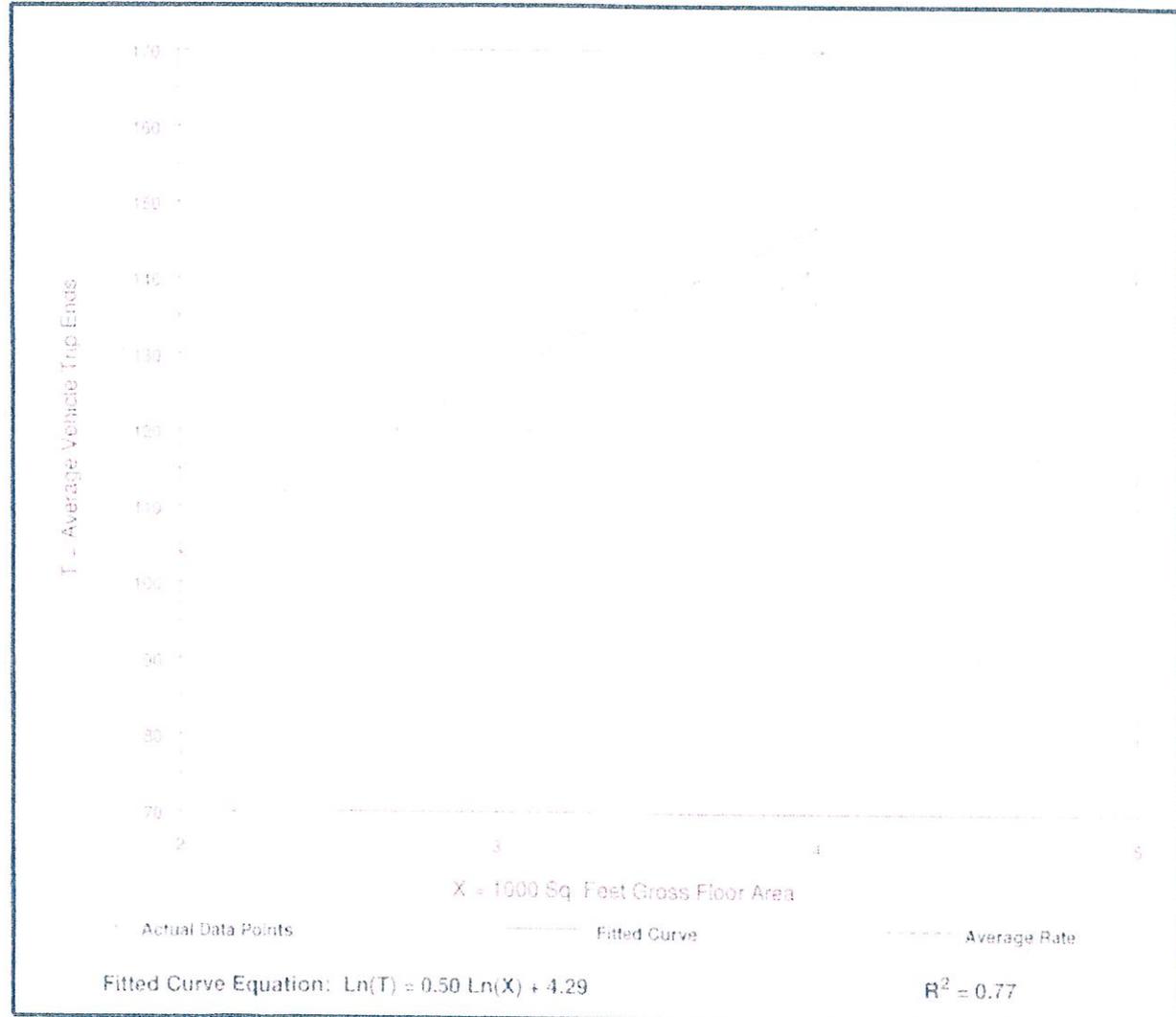
Number of Studies: 5
 Average 1000 Sq. Feet GFA: 4
 Directional Distribution: 50% entering, 50% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
38.60	34.25 - 52.00	7.89

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Bread/Donut/Bagel Shop with Drive-Through Window (940)

Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 4 and 6 p.m.

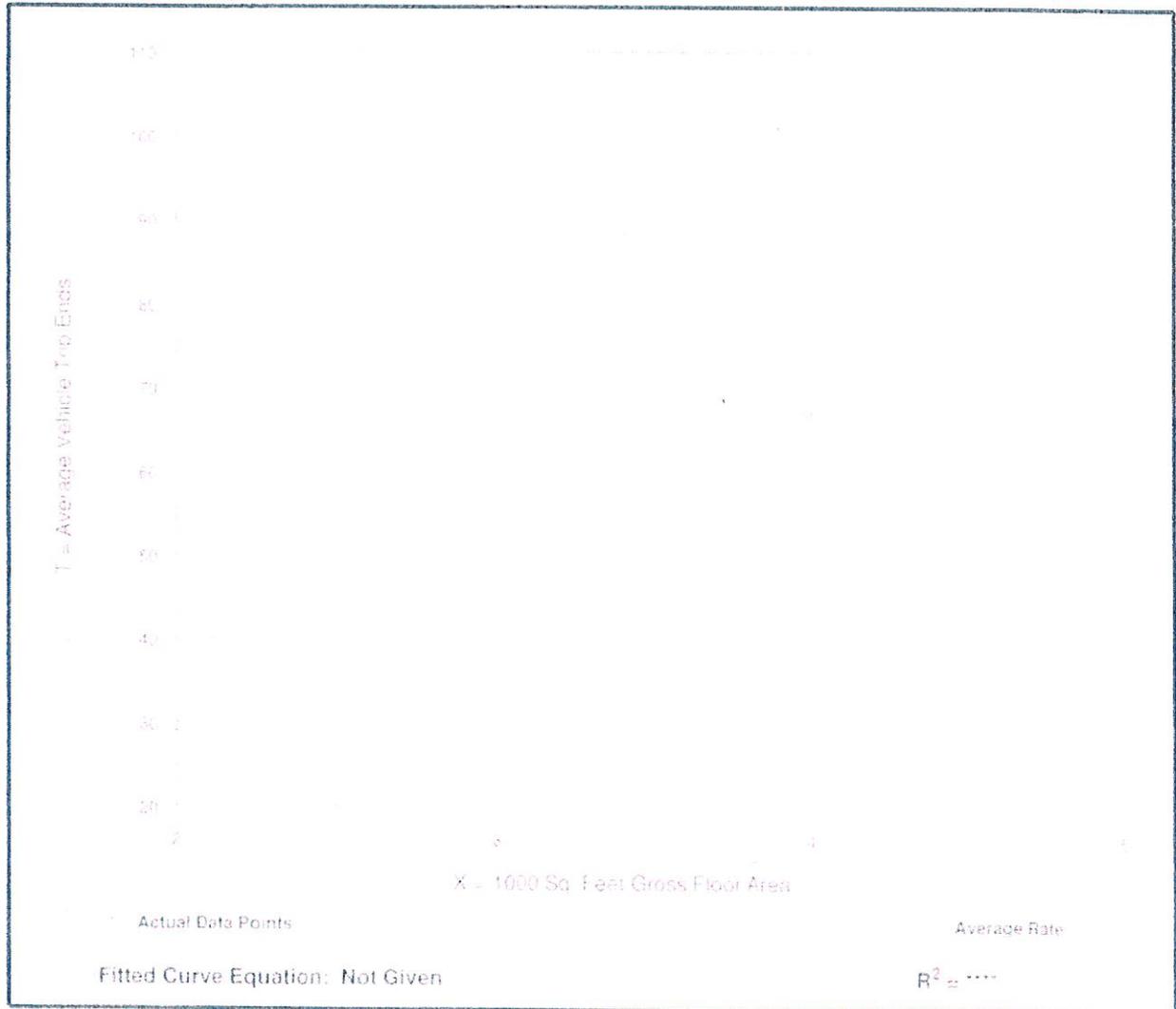
Number of Studies: 5
 Average 1000 Sq. Feet GFA: 4
 Directional Distribution: 49% entering, 51% exiting

Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
18.99	14.50 - 25.90	5.50

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Appendix B: Trip Distribution / Assignment

TABLE A2.1

North Bay Village II
Project Cardinal Distribution (AM Peak Hour)
(TAZ 607)

DIRECTION	DISTRIBUTION PERCENTAGES (%)			AM PEAK HOUR		
	MIAMI-DADE LRTP MODEL YEAR		DESIGN YEAR	IN	OUT	TOTAL
	2005	2035	2017			
NNE	9.61	7.10	8.61	6	8	14
ENE	8.71	2.50	6.23	4	5	9
ESE	2.13	0.00	1.23	1	1	2
SSE	10.50	11.32	10.83	7	10	17
SSW	13.60	12.67	13.23	9	12	21
WSW	20.08	29.33	23.78	16	21	37
WNW	17.65	17.57	17.62	12	15	27
NNW	17.73	19.51	18.44	12	16	28
TOTAL	100.00	100.00	100.00	67	89	155

Note:

Based on Miami-Dade Transportation Plan to the Year 2035: Directional Trip Distribution Report (October 2009). Since the current data is only available for the model years 2005 and 2035, the eight (8) cardinal directions were interpolated to the design year of 2017.

TABLE A2.2

AM PEAK HOUR	IN	OUT	TOTAL
VOLUME:	67	89	155
PERCENT:	43.29%	56.91%	(Calculated)

DIRECTION	DISTRIBUTION %	INGRESS		EGRESS		TOTAL
		CALCULATED	USED	CALCULATED	USED	
NNE	9.61	5,774,427	6	7,744,460	8	14
ENE	8.71	5,377,444	4	2,492,094	5	9
ESE	2.13	85,774	1	12,774	1	2
SSE	10.50	2,422,088	7	4,884,774	10	17
SSW	13.60	3,673,944	9	4,884,774	12	21
WSW	20.08	6,574,444	16	2,492,094	21	37
WNW	17.65	3,421,474	12	1,541,024	14	27
NNW	17.73	3,174,444	12	1,541,024	16	28
TOTAL	100.00	27,774,444	67	28,274,460	89	155

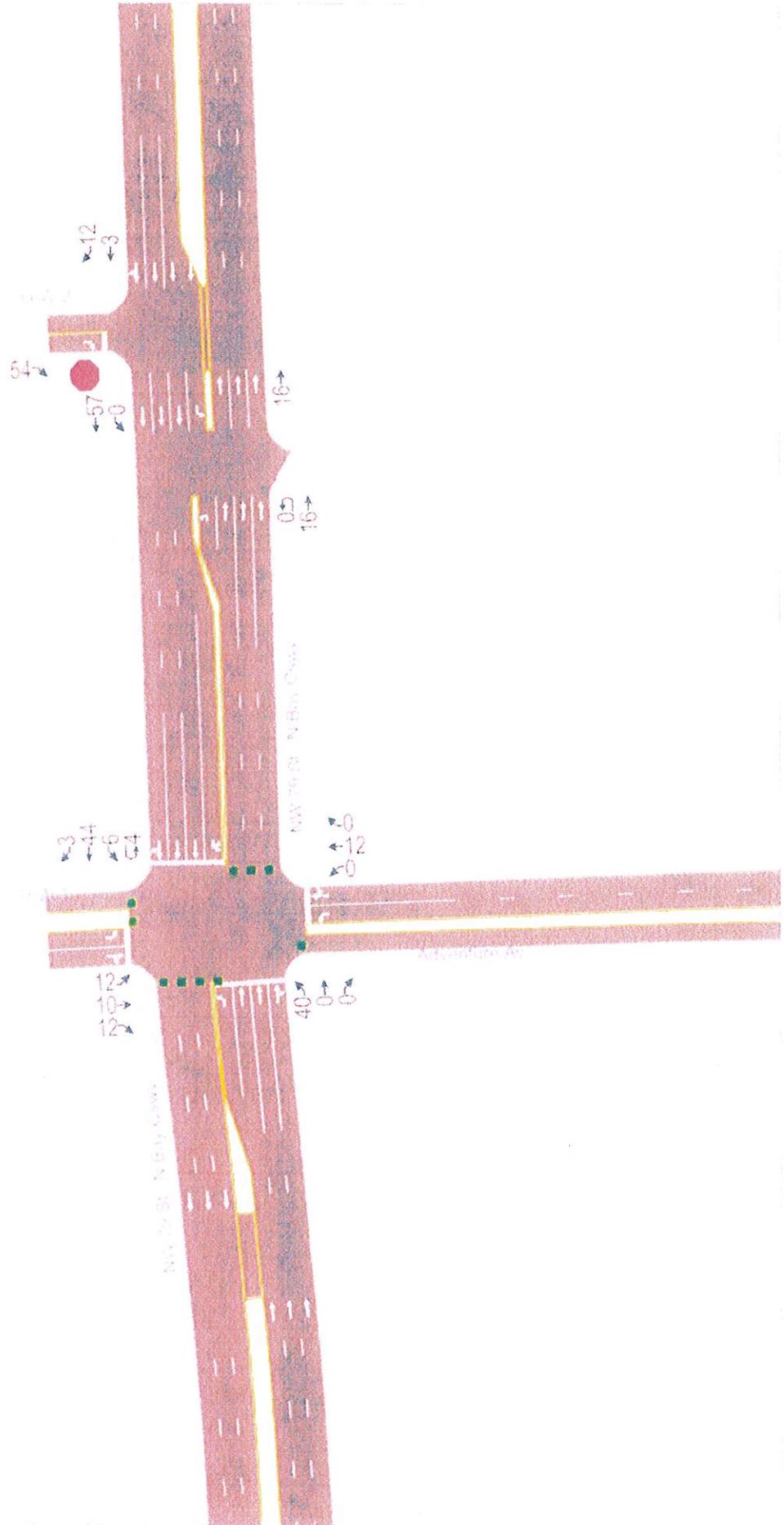


TABLE A1.1

North Bay Village II
 Project Cardinal Distribution (PM Peak Hour)
 (TAZ 607)

DIRECTION	DISTRIBUTION PERCENTAGES (%)			PM PEAK HOUR		
	MIAMI-DADE LRTD MODEL YEAR		DESIGN YEAR	IN	OUT	TOTAL
	2005	2035	2017			
NNE	9.61	7.10	8.61	8	6	14
ENE	8.71	2.50	6.20	6	4	10
ESE	2.13	0.00	1.28	1	1	2
SSE	10.50	11.32	10.83	10	6	16
SSW	13.60	12.67	13.23	12	9	21
WSW	20.08	29.33	23.78	21	17	38
WNW	17.65	17.57	17.62	16	12	28
NNW	17.73	19.51	18.44	17	13	30
TOTAL	100.00	100.00	100.00	91	70	161

Note:

Based on Miami-Dade Transportation Plan to the Year 2035, Directional Trip Distribution Report, October 2005. Since the current data is only available for the model years 2005 and 2035, the eight (8) cardinal directions were interpolated to the design year of 2017.

TABLE A1.2

PM PEAK HOUR	IN	OUT	TOTAL
VOLUME:	91	70	160
PERCENT:	56.88%	43.61%	(Calculated)

DIRECTION	DISTRIBUTION %	INGRESS		EGRESS		TOTAL
		CALCULATED	USED	CALCULATED	USED	
NNE	9.61	1,614,769.4	8	4,735,442.4	6	14
ENE	8.71	1,469,422.4	6	4,744,442.4	4	10
ESE	2.13	361,253.5	1	1,841,766.4	1	2
SSE	10.50	1,819,766.5	10	3,115,107.4	6	16
SSW	13.60	2,352,071.5	12	4,261,567.4	9	21
WSW	20.08	3,469,071.5	21	5,844,771.5	17	38
WNW	17.65	3,017,962.4	16	5,234,666.5	12	28
NNW	17.73	3,071,542.4	17	5,239,166.5	13	30
TOTAL	100.00	17,146,969.5	91	44,744,666.5	70	161



Miami-Dade 2035 Long Range Transportation Plan

Directional Trip Distribution Report

October 29, 2009

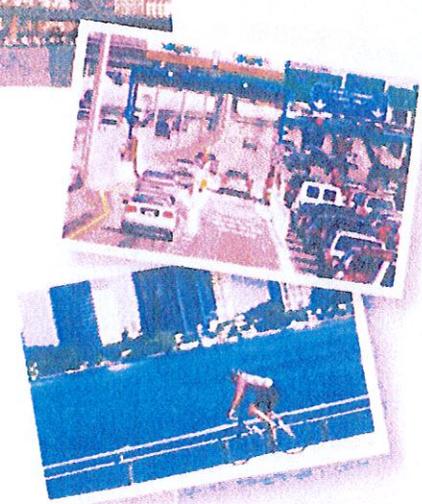
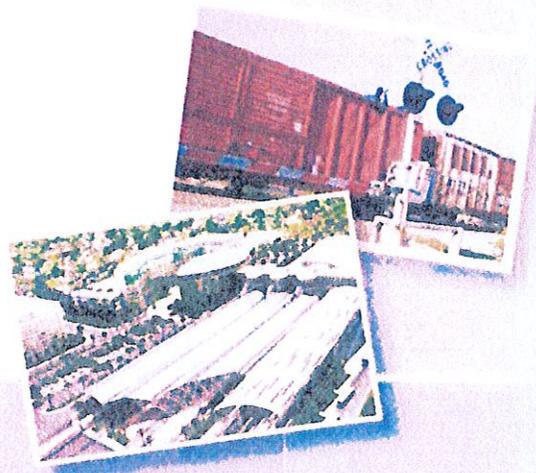
2035



Miami-Dade



Transportation Plan



Prepared by:



In association with:

Advanced Transportation Engineering Consultants

AECOM Consult

Charesse Chester and Associates

CitiLab

Metropolitan Center at Florida International University

Strategy Solutions

Appendix C: Signal Timing, Growth Rate & Adjustment Factors

MIAMI-DADE ATMS SIGNAL DATA SHEET

Signal Asset ID: 3014
 Signal Location: Adventure Av & S.F. Kennedy Blvd.
 Analysis Period: AM / PM (Circle One)
 Local Time of Day Schedule: 2 Plan
 Local Time of Day Function: Setting (Blank or Number#)

Signal Settings: _____
 (i.e. Blank, Plan #1 - Phase Bank 1, Max 1)

Cycle Length: 109.8 seconds
 Offset: 8.9 seconds

PHASE:	Φ1	Φ2	Φ3
	← ↙	← →	↑
WALK	0	0	5
DONTWALK	0	0	34
MIN INITIAL	5	16	7
VEH EXT	2	1	25
GREEN	7	34	49
YELLOW	3.4	4	4
RED	2.7	2.7	3
SPLIT	13.1	40.7	56

TOD Schedule Report

for 3014: Adventure Av&J. F. Kennedy Blvd

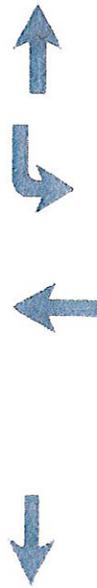
Print Date:
1/13/2014

Print Time:
1:17 PM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
3014	Adventure Av&J. F. Kennedy Blvd	DOW-2	TOD	[01] EARLY MORNING	100	43	N/A	1	Max 2

Splits

PH1	PH2	PH3	PH4	PH5	PH6	PH7	PH8
-	-	-	NBT	WBL	EBT	-	-
0	37	0	49	7	24	0	0



Active Phase Bank: Phase Bank 1

Phase	Walk	Don't Walk	Min Initial	Veh Ext	Max Limit	Max 2	Yellow	Red
1	0	0	0	0	0	0	0	0
2	WBT	0	16-16	1-1	30-40	40	4	27
3	-	0	0	0	0	0	0	0
4	NBT	5-5	34-34	7-7	25-25	25	7	38-9-7
5	WBL	0	0	5-5	7-10	10	3.4	2.7
6	EBT	0	0	16-16	1-1	30-40	4	27
7	-	0	0	0	0	0	0	0
8	-	0	0	0	0	0	0	0

Last In Service Date: unknown

Permitted Phases

Default	12345678
External Permit 0	-2-456--
External Permit 1	-2-4-6--
External Permit 2	-2-4-6--

Green Time

TOD Schedule	Plan	Cycle	1	2	3	4	5	6	7	8	Ring Offset	Offset
0600	5	100	0	37	0	49	7	24	0	0	0	70
0700	1	100	0	37	0	49	7	24	0	0	0	43
0830	1	110	0	47	0	49	7	34	0	0	0	84
1330	11	100	0	37	0	49	7	24	0	0	0	43
1530	3	110	0	47	0	49	7	34	0	0	0	87
1800	6	100	0	37	0	49	7	24	0	0	0	102
	4	120	0	57	0	49	7	44	0	0	0	64
	8	150	0	87	0	49	7	74	0	0	0	108
	9	150	0	87	0	49	7	74	0	0	0	142
	12	110	0	47	0	49	7	34	0	0	0	94
	15	130	0	67	0	49	7	54	0	0	0	101
												71

Local TOD Schedule

Time	Plan	DOW
0000	5	SuMTWThFS
0600	1	MTWThF
0700	5	Su
0700	2	MTWThF
0930	1	MTWThF
1330	11	MTWThF
1530	3	MTWThF
1800	6	MTWThF

Current Time of Day Function

Time	Function	Settings *	Day of Week
0600	TOD OUTPUTS	---4---	SuMTWThFS
0600	TOD OUTPUTS	---	MTWThF
1800	TOD OUTPUTS	---2-	SuMTWThFS

Local Time of Day Function

Time	Function	Settings *	Day of Week
0600	TOD OUTPUTS	---4---	SuMTWThFS
0600	TOD OUTPUTS	---	MTWThF
0700	TOD OUTPUTS	Su	S
1800	TOD OUTPUTS	---2-	SuMTWThFS

* Settings

- Blank - FREE - Phase Bank 1, Max 1
- Blank - Plan - Phase Bank 1, Max 2
- 1 - Phase Bank 2, Max 1
- 2 - Phase Bank 2, Max 2
- 3 - Phase Bank 3, Max 1
- 4 - Phase Bank 3, Max 2
- 5 - EXTERNAL PERMIT 1
- 6 - EXTERNAL PERMIT 2
- 7 - X-PED OMIT
- 8 - TBA

No Calendar Defined/Enabled

TABLE A4

North Bay Village II

Growth Rate Calculation - Based on MPO Trips for Project's TAZ 607

Year	Total Trips	Total Growth	Number of Years	Growth / Year	Growth Rate
MPO Model 2005	11,643				
MPO Model 2035	14,893	1,300	12	108.3	0.89%
Design Year 2017	12,943				

Notes

Design year trips were estimated by interpolation and utilizing the MPO trips for 2005 & 2035
 Growth rate was calculated utilizing the 2005 MPO trips and Design year trips

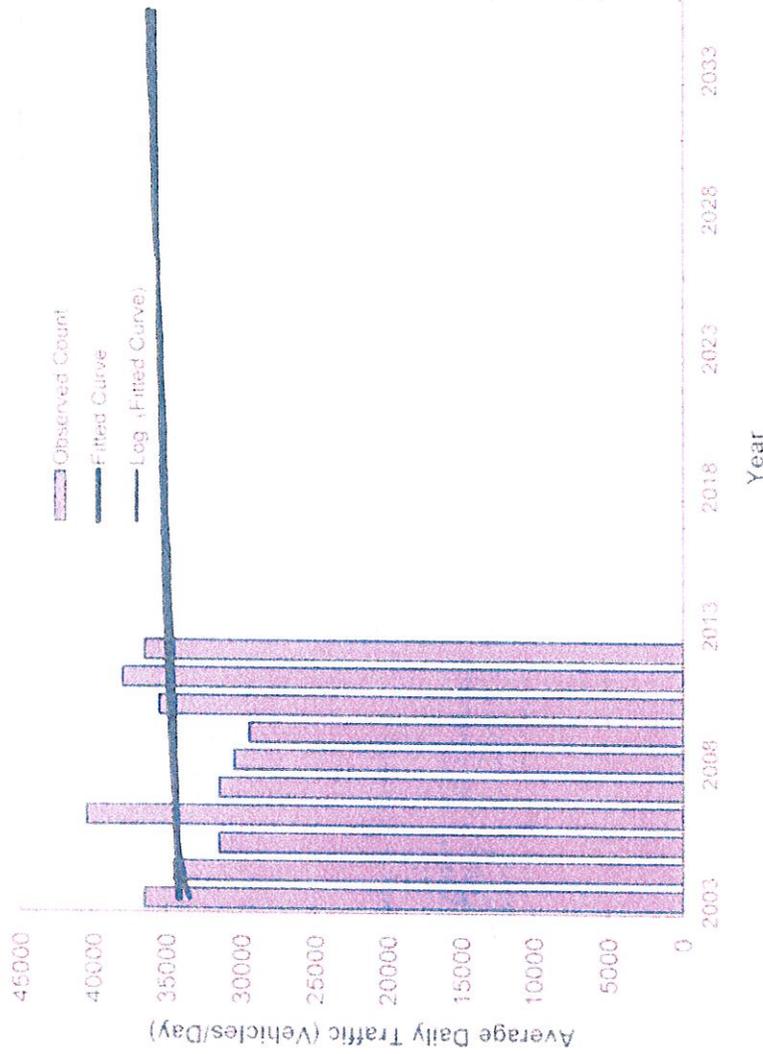
Input Values

Traffic Trends - V2.0

SR 934/N BAY CSWY -- 200' E E TREASURE DR

County:	Miami (87)
Station #:	0533
Highway:	SR 934 N BAY CSWY

PIN#	973215-1
Location	1



Year	Count*	Trend**
2003	36500	34200
2004	34500	34200
2005	31500	34300
2006	40500	34400
2007	31500	34400
2008	30500	34500
2009	29500	34500
2010	35500	34500
2011	38000	34700
2012	36500	34700
2014 Opening Year Trend		
2014	N/A	34900
2015 Mid-Year Trend		
2015	N/A	34900
2017 Design Year Trend		
2017	N/A	35100
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	64
Trend R-squared:	0.29%
Trend Annual Historic Growth Rate:	0.16%
Trend Growth Rate (2012 to Design Year):	0.23%
Printed:	9-Jan-14

Straight Line Growth Option

*Axle-Adjusted

2012 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 6700 MIAMI DADE NORTH

N	DAYS	SF	KCCF: 0.98	
			PSCF	
1	01/01/2012 - 01/07/2012	1.03	1.05	1.05
2	01/08/2012 - 01/14/2012	1.02	SF	1.04
3	01/15/2012 - 01/21/2012	1.01		1.01
4	01/22/2012 - 01/28/2012	0.99		1.01
5	01/29/2012 - 02/04/2012	0.98		1.00
6	02/05/2012 - 02/11/2012	0.97		0.99
7	02/12/2012 - 02/18/2012	0.96		0.97
8	02/19/2012 - 02/25/2012	0.96		0.98
9	02/26/2012 - 03/03/2012	0.96		0.98
10	03/04/2012 - 03/10/2012	0.97		0.99
11	03/11/2012 - 03/17/2012	0.97		0.99
12	03/18/2012 - 03/24/2012	0.98		1.00
13	03/25/2012 - 03/31/2012	0.99		1.01
14	04/01/2012 - 04/07/2012	0.99		1.01
15	04/08/2012 - 04/14/2012	1.00		1.02
16	04/15/2012 - 04/21/2012	1.01		1.03
17	04/22/2012 - 04/28/2012	1.01		1.03
18	04/29/2012 - 05/05/2012	1.00		1.02
19	05/06/2012 - 05/12/2012	1.00		1.02
20	05/13/2012 - 05/19/2012	1.00		1.02
21	05/20/2012 - 05/26/2012	1.00		1.02
22	05/27/2012 - 06/02/2012	1.00		1.02
23	06/03/2012 - 06/09/2012	1.00		1.02
24	06/10/2012 - 06/16/2012	1.00		1.02
25	06/17/2012 - 06/23/2012	1.01		1.03
26	06/24/2012 - 06/30/2012	1.02		1.04
27	07/01/2012 - 07/07/2012	1.02		1.04
28	07/08/2012 - 07/14/2012	1.03		1.05
29	07/15/2012 - 07/21/2012	1.04		1.06
30	07/22/2012 - 07/28/2012	1.03		1.05
31	07/29/2012 - 08/04/2012	1.03		1.05
32	08/05/2012 - 08/11/2012	1.03		1.05
33	08/12/2012 - 08/18/2012	1.03		1.05
34	08/19/2012 - 08/25/2012	1.02		1.04
35	08/26/2012 - 09/01/2012	1.01		1.03
36	09/02/2012 - 09/08/2012	1.01		1.03
37	09/09/2012 - 09/15/2012	1.01		1.02
38	09/16/2012 - 09/22/2012	1.00		1.02
39	09/23/2012 - 09/29/2012	0.99		1.01
40	09/30/2012 - 10/06/2012	0.99		1.01
41	10/07/2012 - 10/13/2012	0.98		1.00
42	10/14/2012 - 10/20/2012	0.98		1.00
43	10/21/2012 - 10/27/2012	0.99		1.01
44	10/28/2012 - 11/03/2012	0.99		1.01
45	11/04/2012 - 11/10/2012	1.00		1.02
46	11/11/2012 - 11/17/2012	1.00		1.02
47	11/18/2012 - 11/24/2012	1.01		1.03
48	11/25/2012 - 12/01/2012	1.01		1.03
49	12/02/2012 - 12/08/2012	1.02		1.04
50	12/09/2012 - 12/15/2012	1.03		1.05
51	12/16/2012 - 12/22/2012	1.02		1.04
52	12/23/2012 - 12/29/2012	1.01		1.03
53	12/30/2012 - 12/31/2012	1.01		1.03

* PEAK SEASON

09-FEB-2013 12:30:26

REPORT: [1,0,0,1] C:\AFCO_PSEASON.TXT

Appendix D: Traffic Counts (TMC's & ATR's)

TABLE A5

North Bay Village II

AM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	INTERSECTION NAME	APPROACH	MOVEMENT	AM PEAK HR COUNT	DATE OF COUNT	PHF	SF	AM PEAK SEASONALLY ADJUSTED (EXISTING)	BACKGROUND GROWTH @ 0.89% FOR PROJECT BUILD-OUT OF 2017 (3 YEAR GROWTH)	NET TRAFFIC W/O PROJECT	SITE TRAFFIC (VPH)	TOTAL TRAFFIC (VPH) (PROPOSED) (2017)
1	78 Street (SR 934 / N Bay Causeway) & Adventure Avenue	SOUTHBOUND	SBR	0	Thursday January 09 2014	0.927	1.02	0	0	0	12	12
			SBT	0				0	0	10	10	
			SBL	0				0	0	12	12	
		TOTAL	0	0				0	34	34		
		WESTBOUND	WBR	0				0	0	3	3	
			WBT	1,323				36	1,385	44	1,430	
			WBL	41				1	43	6	49	
		NORTHBOUND	WBU	11				0	12	4	16	
			TOTAL	1,375				38	1,440	57	1,497	
			NBR	45				1	47	0	47	
		EASTBOUND	NBT	0				0	0	12	12	
			NBL	167				5	175	0	175	
TOTAL	212		6	222	12	234						
TOTAL	EBR	76	2	80	0	80						
	EBT	1,377	38	1,442	0	1,442						
	EBL	0	0	0	40	40						
TOTAL		1,453	40	1,522	40	1,562						
TOTAL		3,040	84	3,101	143	3,327						

Notes

- 1 Intersection Name
- 2 Intersection Approach
- 3 Intersection Approach Movement
- 4 TMC data provided by RGA, Inc
- 5 Date of Count
- 6 Peak Hour Factor
- 7 Seasonal Factor obtained from FDOT
- 8 Seasonally Adjusted TMC = Count * SF (Existing Condition)
- 9 A 0.89 percent background growth was utilized with a project build out of 2017
- 10 Proposed Traffic w/o Project = Seasonally Adjusted TMC + Background
- 11 Site traffic assignment
- 12 Total Traffic = Net Traffic + Site Traffic (Proposed Condition with Project)

TABLE: A6

North Bay Village II

PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING)	BACKGROUND GROWTH @ 0.99% FOR PROJECT BUILD-OUT OF 2017 (3 YEAR GROWTH)	NET TRAFFIC W/O PROJECT	SITE TRAFFIC (VPH)	TOTAL TRAFFIC (VPH) (PROPOSED) (2017)			
1	79 Street (SR 894) / N Bay Causeway) & Adventure Avenue	SOUTHBOUND	SBR	0	Wednesday January 08 2014	0.92	1.02	0	0	0	0	0	0		
			SBT	0			1.02	0	0	0	0	0			
			SBL	0			1.02	0	0	0	0	0	0		
			TOTAL	0			1.02	0	0	0	0	0	0		
		WESTBOUND	WBR	0			1.02	1,288	35	1.02	1,288	35	1,323	35	1,358
			WBT	1,263			1.02	53	1	1.02	53	1	54	5	59
			WBL	52			1.02	11	0	1.02	11	0	12	2	14
			TOTAL	1,326			1.02	1,353	36	1.02	1,353	36	1,389	45	1,434
		NORTHBOUND	NBR	56			1.02	57	2	1.02	57	2	59	0	59
			NBT	0			1.02	0	0	1.02	0	0	0	12	12
			NBL	98			1.02	100	3	1.02	100	3	103	0	103
			TOTAL	154			1.02	157	4	1.02	157	4	161	12	173
EASTBOUND	EBR	112	1.02	114	3	1.02	114	3	117	0	117				
	EBT	1,351	1.02	1,379	37	1.02	1,379	37	1,415	0	1,415				
	EBL	0	1.02	0	0	1.02	0	0	0	55	55				
	TOTAL	1,463	1.02	1,492	40	1.02	1,492	40	1,532	55	1,587				
		TOTAL		2,943			3,002	81	3,083	140	3,223				

Notes

- 1 Intersection Name
- 2 Intersection Approach
- 3 Intersection Approach Movement
- 4 TMC data provided by RGA, Inc
- 5 Date of Count
- 6 Peak Hour Factor
- 7 Seasonal factor obtained from FDOT
- 8 Seasonally Adjusted TMC = Count * SF (Existing Condition)
- 9 A 0.99 percent background growth was utilized with a project build-out of 2017
- 10 Proposed Traffic w/o Project = Seasonally Adjusted TMC * Background
- 11 Site traffic assignment
- 12 Total Traffic = Net Traffic + Site Traffic (Proposed Condition with Project)



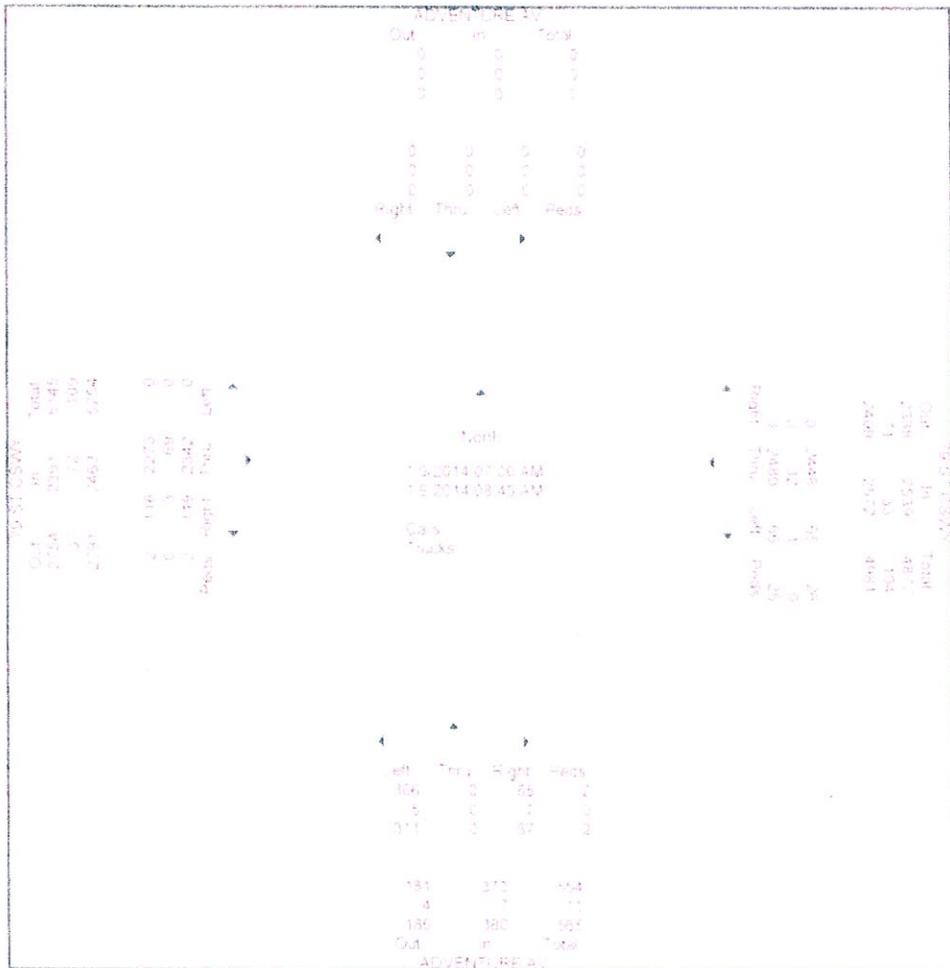
Richard Garcia & Associates, Inc.

8065 NW 98th Street
 Hialeah Gardens FL 33016
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 Fax: 305-675-6474

File Name 79 St Cswy_Adventure Av_AM
 Site Code 00000000
 Start Date 1/9/2014
 Page No 1

Groups Printed- Cars - Trucks

Start Time	ADVENTURE AV Southbound				79 ST CSWY Westbound				ADVENTURE AV Northbound				79 ST CSWY Eastbound									
	Right	Thru	Left	Peaks	Right	Thru	Left	Peaks	Right	Thru	Left	Peaks	Right	Thru	Left	Peaks						
07:00 AM	0	0	0	0	0	0	194	3	3	0	200	2	0	29	0	31	6	182	0	1	189	420
07:15 AM	0	0	0	0	0	0	283	10	8	0	281	4	0	32	0	37	8	216	0	0	224	542
07:30 AM	0	0	0	0	0	0	336	6	0	1	343	7	0	43	0	50	10	256	0	0	266	659
07:45 AM	0	0	0	0	0	0	364	6	2	0	372	9	0	39	0	48	19	311	0	0	320	750
Total	0	0	0	0	0	0	1177	25	13	1	1196	22	0	144	0	166	43	965	0	1	1000	2371
08:00 AM	0	0	0	0	0	0	321	6	0	0	327	9	0	40	0	49	24	388	0	0	412	788
08:15 AM	0	0	0	0	0	0	329	4	6	0	339	13	0	41	1	55	19	279	0	0	298	692
08:30 AM	0	0	0	0	0	0	334	10	1	0	345	8	0	41	1	50	17	400	0	0	417	812
08:45 AM	0	0	0	0	0	0	339	21	4	1	365	15	0	45	0	60	16	310	0	1	327	752
Total	0	0	0	0	0	0	1327	41	11	1	1376	45	0	157	2	214	76	1441	0	1	1454	3044
Grand Total	0	0	0	0	0	0	2643	66	24	2	2672	67	0	311	2	380	119	2406	0	2	2463	5415
Approach %	0	0	0	0	0	0	46.4	2.6	0.9	0.1	47.5	1.8	0	81.8	0.5	4.8	98.1	0	0	0.1		
Total %	0	0	0	0	0	0	45.8	1.2	0.4	0	47.5	1.2	0	5.7	0	7	2.2	43.3	0	0	45.5	
% Cars	0	0	0	0	0	0	98.7	99.5	100	100	98.7	97	0	99.4	100	98.2	97.5	97.1	0	100	97.1	97.9
% Trucks	0	0	0	0	0	0	1.3	0.5	0	0	1.3	3	0	0.6	0	1.8	2.5	2.9	0	0	2.9	2.1

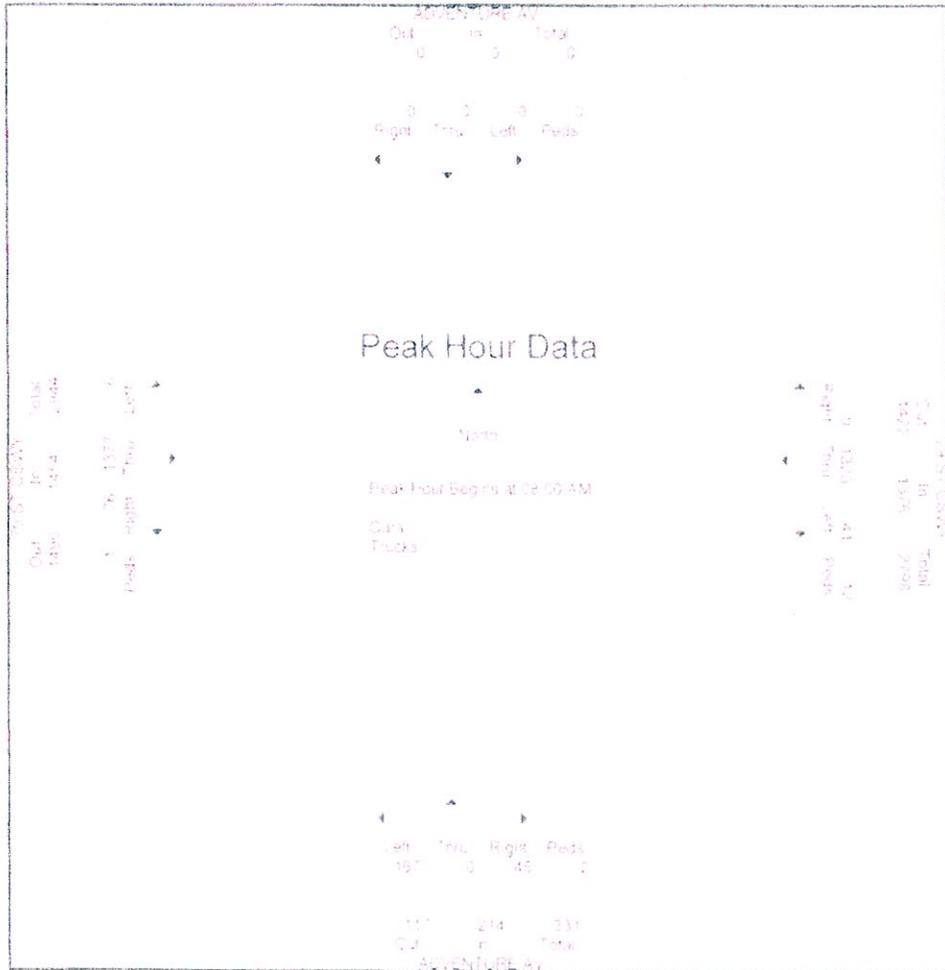




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File Name 79 St Cswy_Adventure Av_AM
 Site Code 00000000
 Start Date 1/9/2014
 Page No 2

Start Time	ADVENTURE AV Southbound				79 ST CSWY Westbound				ADVENTURE AV Northbound				79 ST CSWY Eastbound									
	Out	In	Left	Revs	Out	In	Left	Revs	Out	In	Left	Revs	Out	In	Left	Revs						
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 08:00 AM																						
08:00 AM	0	0	0	0	0	0	321	9	0	40	0	49	24	368	0	0	412	788				
08:15 AM	0	0	0	0	0	0	329	4	6	0	339	13	0	41	1	55	19	279	692			
08:30 AM	0	0	0	0	0	0	334	10	1	0	345	8	0	41	1	50	17	400	812			
08:45 AM	0	0	0	0	0	0	339	21	4	1	365	15	0	45	0	60	16	310	827			
Volume	0	0	0	0	0	0	1371	41	11	1	1376	45	0	167	2	214	76	1	1454	3044		
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.76	4.88	4.56	2.50	0.42	7.50	0.70	0.26	0.00	0.99	1.42	0.61	0.00	2.60	8.72	9.37



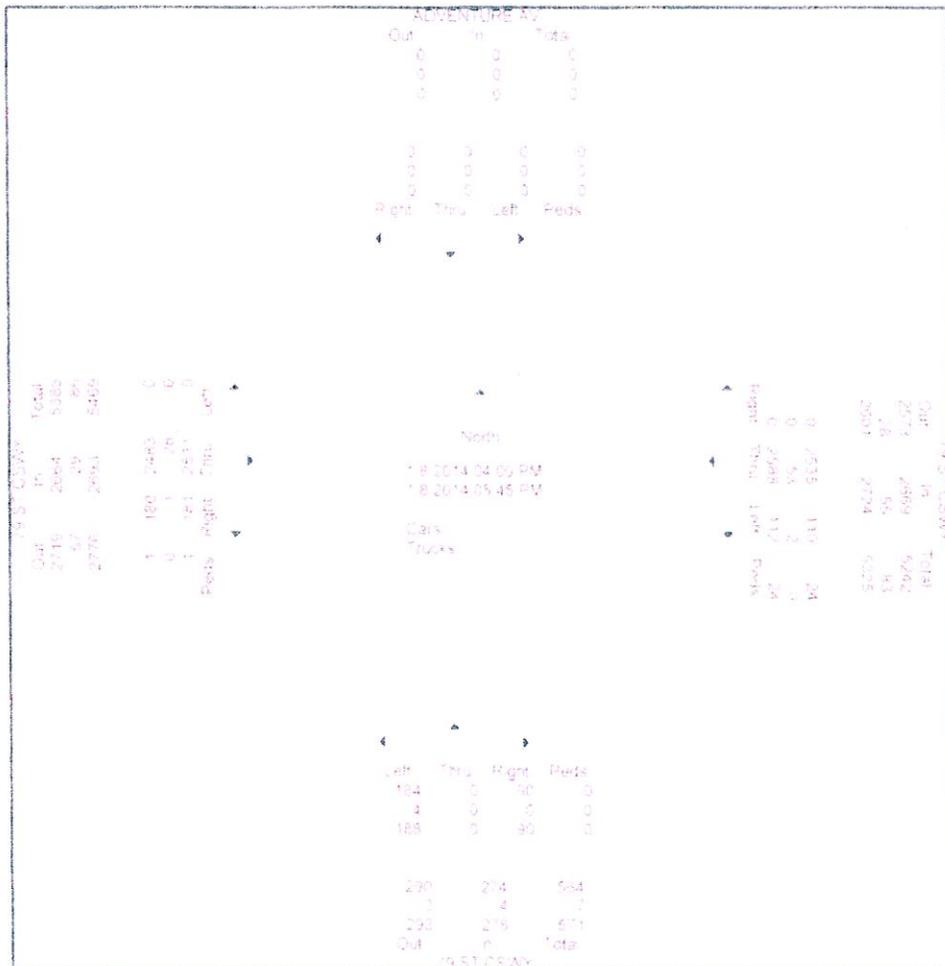


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File Name 79 St Cswy_Adventure Av_PM
 Site Code 00000000
 Start Date 1/8/2014
 Page No 1

Start Time	ADVENTURE AV Southbound					79 ST CSWY Westbound					79 ST CSWY Northbound					79 ST CSWY Eastbound						
	Right	Thru	Left	Pebs	Left	Right	Thru	Left	Pebs	Right	Thru	Left	Pebs	Right	Thru	Left	Pebs					
04:00 PM	0	0	0	0	0	0	286	12	4	0	302	11	0	24	0	35	12	251	0	0	263	600
04:15 PM	0	0	0	0	0	0	329	18	3	0	350	7	0	16	0	23	16	330	0	0	346	719
04:30 PM	0	0	0	0	0	0	368	16	2	0	386	8	0	25	0	33	19	280	0	0	299	718
04:45 PM	0	0	0	0	0	0	342	14	4	0	360	8	0	25	0	33	22	299	0	0	321	714
Total	0	0	0	0	0	0	1325	60	13	0	1398	34	0	90	0	124	69	1160	0	0	1229	2751
05:00 PM	0	0	0	0	0	0	335	8	3	0	346	7	0	22	0	29	26	315	0	0	342	717
05:15 PM	0	0	0	0	0	0	370	10	2	0	382	13	0	23	0	36	24	315	0	0	339	757
05:30 PM	0	0	0	0	0	0	268	20	5	0	293	19	0	29	0	48	32	353	0	1	366	727
05:45 PM	0	0	0	0	0	0	290	14	1	0	305	17	0	24	0	41	30	367	0	0	397	743
Total	0	0	0	0	0	0	1363	52	11	0	1326	56	0	98	0	154	112	1307	0	1	1454	2944
Grand Total	0	0	0	0	0	0	2688	112	24	0	2724	90	0	188	0	278	181	2467	0	1	2693	5695
Approch %	0	0	0	0	0	0	95	4.1	0.9	0	32.4	0	67.6	0	6.7	93.2	0	0				
Total %	0	0	0	0	0	0	45.4	2	0.4	0	47.8	1.6	0	3.3	0	4.9	3.2	44.1	0	0	47.3	
% Cars	0	0	0	0	0	0	2571	110	24	0	2669	90	0	184	0	274	180	2467	0	1	2664	5607
% Trucks	0	0	0	0	0	0	98	98.2	100	0	98	100	0	97.9	0	98.6	99.4	98.9	0	100	98.9	98.5
% Trucks	0	0	0	0	0	0	53	2	0	0	55	0	0	4	0	4	1	28	0	0	29	88
% Trucks	0	0	0	0	0	0	2	1.8	0	0	2	0	0	2.1	0	1.4	0.6	1.1	0	0	1.1	1.5

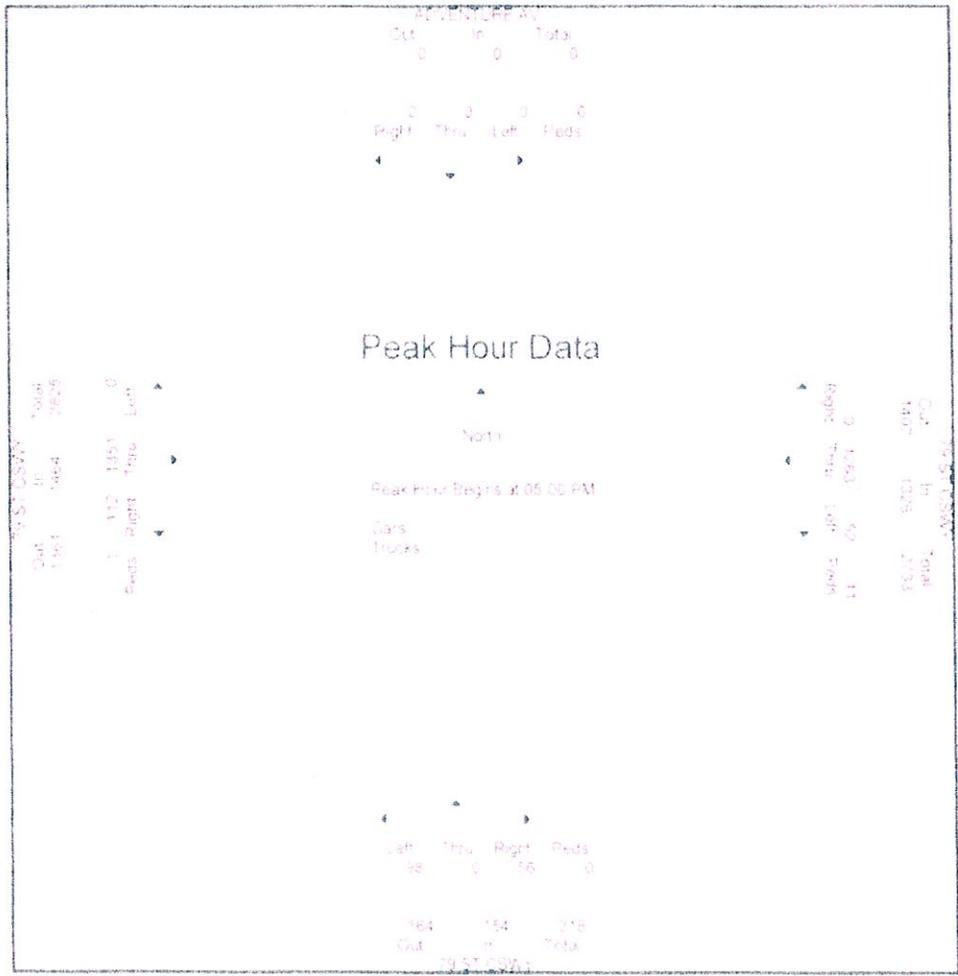




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File Name 79 St Cswy_Adventure Av_PM
 Site Code 00000000
 Start Date 1/8/2014
 Page No 2

Start Time	ADVENTURE AV Southbound				79 ST CSWY Westbound				79 ST CSWY Northbound				79 ST CSWY Eastbound									
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds						
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 05:00 PM																						
05:00 PM	0	0	0	0	0	0	335	8	3	0	346	7	0	22	0	29	26	516	0	0	342	717
05:15 PM	0	0	0	0	0	0	370	10	2	0	382	13	0	23	0	36	24	315	0	0	339	757
05:30 PM	0	0	0	0	0	0	266	20	5	0	293	19	0	29	0	48	32	353	0	1	386	727
05:45 PM	0	0	0	0	0	0	290	14	1	0	305	17	0	24	0	41	30	367	0	0	397	743
Total Volume	0	0	0	0	0	0	1261	52	11	0	1326	56	0	98	0	154	112	1547	0	1	1464	2944
Peak Time	0	0	0	0	0	0	65.2	3.9	0.6	0	66.4	0	0	63.6	0	7.7	92.3	0	0	1		
PHF	0.00	0.00	0.00	0.00	0.00	0.00	85.0	65.0	56.0	0.00	85.0	75.1	0.00	84.5	0.00	8.02	97.5	92.0	0.00	25.0	92.2	97.2



Appendix E: Level of Service (LOS) Analyses

TABLE A7

North Bay Village II

Intersection LOS Summary - AM & PM Peak Hour

Existing AM Peak Hour Condition		Intersection Control	Intersection Approach						Overall			
			Eastbound		Westbound		Northbound				Southbound	
Location			LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
79 Street (N Bay Cswy) & Adventure Avenue	Signalized		B	19.8	A	7.0	C	21.0	N/A	N/A	B	14.1
Proposed AM Peak Hour Condition with Project Traffic		Intersection Control	Intersection Approach						Overall			
Location			Eastbound		Westbound		Northbound				Southbound	
79 Street (N Bay Cswy) & Adventure Avenue	Signalized		C	30.2	C	25.2	C	24.1	C	29.9	C	27.6
79 Street (N Bay Cswy) & Driveway 2	Two-Way Stop		A	0.0	A	0.0	N/A	N/A	C	24.3	A	0.5
Existing PM Peak Hour Condition		Intersection Control	Intersection Approach						Overall			
Location			Eastbound		Westbound		Northbound				Southbound	
79 Street (N Bay Cswy) & Adventure Avenue	Signalized		B	19.7	A	6.5	B	18.9	N/A	N/A	B	13.7
Proposed PM Peak Hour Condition with Project Traffic		Intersection Control	Intersection Approach						Overall			
Location			Eastbound		Westbound		Northbound				Southbound	
79 Street (N Bay Cswy) & Adventure Avenue	Signalized		C	29.1	C	23.8	C	24.5	C	27.8	C	26.5
79 Street (N Bay Cswy) & Driveway 2	Two-Way Stop		A	0.0	A	0.0	N/A	N/A	C	22.6	A	0.4

Existing AM Peak Hour Condition

North Bay Village II



HCM 2010 Signalized Intersection Summary
 1: Adventure Av & 79 St / N Bay Cswy

Existing AM Peak Hour Condition
 North Bay Village II



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↓		↙	↑↑↑	↙	↗
Volume (veh/h)	1405	78	53	1349	170	46
Number	2	12	1	6	3	18
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
Adj Sat Flow, veh/h/n	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1495	83	56	1435	181	49
Adj No. of Lanes	3	0	1	3	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh. %	2	2	2	2	2	2
Cap, veh/h	1867	104	286	2867	256	229
Arrive On Green	0.38	0.38	0.06	0.56	0.14	0.14
Sat Flow, veh/h	5099	274	1774	5253	1774	1583
Grp Volume(v) veh/h	1028	550	56	1435	181	49
Grp Sat Flow(s) veh/h/n	1695	1814	1774	1695	1774	1583
Q Serve(g_s), s	12.7	12.7	0.8	8.1	4.6	1.3
Cycle Q Clear(g_c), s	12.7	12.7	0.8	8.1	4.6	1.3
Prop In Lane		0.15	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1283	687	286	2867	256	229
V/C Ratio(X)	0.80	0.80	0.20	0.50	0.71	0.21
Avail Cap(c_a), veh/h	2455	1314	453	5102	1852	1653
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	13.0	13.0	9.4	6.2	19.1	17.7
Incr Delay (d2), s/veh	5.3	9.5	0.1	0.6	2.7	0.3
Initial Q Delay(d3) s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/n	6.8	8.1	0.4	3.9	2.4	0.6
LnGrp Delay(d) s/veh	18.3	22.5	9.6	6.9	21.8	18.1
LnGrp LOS	B	C	A	A	C	B
Approach Vol, veh/h	1578			1491	230	
Approach Delay, s/veh	19.8			7.0	21.0	
Approach LOS	B			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.7	87.5				96.2		13.8
Change Period (Y+Rc), s * 6 1000000.69999998						* 6.69999998		7.0
Max Green Setting (Gmax), s	* 7	* 34				* 47.0999998		49.0
Max Q Clear Time (g_c+I), s	2.8	14.7				10.1		6.6
Green Ext Time (p_c), s	0.0	3.1				3.1		0.6

Intersection Summary

HCM 2010 Ctrl Delay	14.1
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier

Timings

1: Adventure Av & '79 St / N Bay Cswy

Existing AM Peak Hour Condition

North Bay Village II



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑↓	↖	↑↑↑	↖	↗
Volume (vph)	1405	53	1349	170	46
Turn Type	NA	pm+pt	NA	Prot	Perm
Protected Phases	2	1	6	8	8
Permitted Phases		6			8
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	16.0	5.0	16.0	7.0	7.0
Minimum Split (s)	22.7	11.1	22.7	46.0	46.0
Total Split (s)	40.7	13.1	53.8	56.0	56.0
Total Split (%)	37.1%	11.9%	49.0%	51.0%	51.0%
Yellow Time (s)	4.0	3.4	4.0	4.0	4.0
All-Red Time (s)	2.7	2.7	2.7	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.1	6.7	7.0	7.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effect Green (s)	70.2	80.3	79.7	16.4	16.4
Actuated g/C Ratio	0.64	0.73	0.73	0.15	0.15
v/c Ratio	0.49	0.24	0.39	0.69	0.18
Control Delay	12.2	7.5	6.6	56.9	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	12.2	7.5	6.6	56.9	12.0
LOS	B	A	A	E	B
Approach Delay	12.2		6.6	47.3	
Approach LOS	B		A	D	

Intersection Summary

Cycle Length: 109.8
 Actuated Cycle Length: 109.8
 Offset: 84 (77%) Referenced to phase 2 EBT and 6 WBT. Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 12.1
 Intersection Capacity Utilization: 59.0%
 Analysis Period (min): 15
 Intersection LOS: B
 ICU Level of Service: B

Splits and Phases: 1: Adventure Av & NW 79 St / N Bay Cswy





HCM 2010 Signalized Intersection Summary
 1: Adventure Av & 79 St / N Bay Cswy

Existing PM Peak Hour Condition
 North Bay Village II

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↘	↑↑↑	↘	↗
Volume (veh/h)	1378	114	64	1288	100	57
Number	2	12	1	6	3	18
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
Adj Sat Flow, veh/h/in	186.3	190.0	186.3	186.3	186.3	186.3
Adj Flow Rate, veh/h	1421	118	66	1328	103	59
Adj No. of Lanes	3	0	1	3	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh. %	2	2	2	2	2	2
Cap, veh/h	1780	148	303	2884	237	211
Arrive On Green	0.37	0.37	0.06	0.57	0.13	0.13
Sat Flow, veh/h	4953	397	1774	5253	1774	1583
Grp Volume(v), veh/h	1007	532	66	1328	103	59
Grp Sat Flow(s), veh/h/in	1695	1793	1774	1695	1774	1583
Q Serve(g, s), s	12.1	12.1	0.9	7.0	2.4	1.5
Cycle Q Clear(g, c), s	12.1	12.1	0.9	7.0	2.4	1.5
Prop In Lane		0.22	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1261	667	303	2884	237	211
VC Ratio(X)	0.80	0.80	0.22	0.46	0.44	0.28
Avail Cap(c, a), veh/h	2519	1332	464	5234	1899	1695
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	12.8	12.8	9.2	5.8	18.2	17.8
Incr Delay (d2), s/veh	5.3	9.7	0.1	0.5	0.9	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/in	6.5	7.7	0.4	3.3	1.3	0.7
LnGrp Delay(d), s/veh	18.2	22.5	9.3	6.3	19.2	18.4
LnGrp LOS	B	C	A	A	B	B
Approach Vol, veh/h	1539			1394	162	
Approach Delay, s/veh	19.7			6.5	18.9	
Approach LOS	B			A	B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	8.9	86.0				96.9		13.1
Change Period (Y+Rc), s	6.100000	6.6999998				6.6999998		7.0
Max Green Setting (Gmax), s	*7	*34				*47.0999998		49.0
Max Q Clear Time (g, c+I), s	2.9	14.1				9.0		4.4
Green Ext Time (p, c), s	0.0	2.9				2.9		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	13.7
HCM 2010 LOS	B

Notes
 * HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier

Timings

1: Adventure Av & 79 St / N Bay Cswy

Existing PM Peak Hour Condition

North Bay Village II



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↑↑↑	↑	↑
Volume (vph)	1378	64	1288	100	57
Turn Type	NA	pm+pt	NA	Prot	Perm
Protected Phases	2	1	6	8	
Permitted Phases		6			8
Detector Phase	2	1	6	8	8
Switch Phase					
Minimum Initial (s)	16.0	5.0	16.0	7.0	7.0
Minimum Split (s)	22.7	11.1	22.7	46.0	46.0
Total Split (s)	40.7	13.1	53.8	56.0	56.0
Total Split (%)	37.1%	11.9%	49.0%	51.0%	51.0%
Yellow Time (s)	4.0	3.4	4.0	4.0	4.0
All-Red Time (s)	2.7	2.7	2.7	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.7	6.1	6.7	7.0	7.0
Lead/Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes			
Recall Mode	C-Min	None	C-Min	None	None
Act Effct Green (s)	75.0	85.3	84.7	11.4	11.4
Actuated g/C Ratio	0.68	0.78	0.77	0.10	0.10
v/c Ratio	0.45	0.25	0.34	0.56	0.27
Control Delay	9.3	5.7	4.4	57.7	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	5.7	4.4	57.7	14.3
LOS	A	A	A	E	B
Approach Delay	9.3		4.5	41.9	
Approach LOS	A		A	D	

Intersection Summary

Cycle Length: 109.8
 Actuated Cycle Length: 109.8
 Offset: 102 (93%) Referenced to phase 2 EBT and 6 WBT. Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 8.9
 Intersection Capacity Utilization: 55.7%
 Analysis Period (min): 15
 Intersection LOS: A
 ICU Level of Service: B

Splits and Phases 1: Adventure Av & NW 79 St / N Bay Cswy



Queues
1: Adventure Av & 79 St / N Bay Cswy

Existing PM Peak Hour Condition
North Bay Village II



Lane Group	EBT	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	1539	66	1328	103	59
v/c Ratio	0.45	0.25	0.34	0.56	0.27
Control Delay	9.3	5.7	4.4	57.7	14.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.3	5.7	4.4	57.7	14.3
Queue Length 50th (ft)	170	9	86	70	0
Queue Length 95th (ft)	248	23	130	121	37
Internal Link Dist (ft)	140		715	394	
Turn Bay Length (ft)		165			
Base Capacity (vph)	3434	281	3920	789	739
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.45	0.23	0.34	0.13	0.08

Intersection Summary

HCM 2010 Signalized Intersection Summary
 1: Adventure Av/D/W 1 & 79 St / N Bay Cswy

Proposed AM Peak Hour w/ Project
 North Bay Village II

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	48	1442	80	65	1430	4	175	14	47	14	11	14
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus. Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	51	1534	85	69	1521	4	186	15	50	15	12	15
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	224	1768	98	224	1920	5	397	62	207	238	48	61
Arrive On Green	0.05	0.36	0.36	0.05	0.37	0.37	0.13	0.16	0.16	0.03	0.06	0.06
Sat Flow, veh/h	1774	4932	273	1774	5237	14	1774	378	1262	1774	754	942
Grp Volume(v), veh/h	51	1054	565	69	985	540	186	0	65	15	0	27
Grp Sat Flow(s), veh/h/ln	1774	1695	1815	1774	1695	1860	1774	0	1640	1774	0	1696
Q Serve(g_s), s	1.2	19.5	19.5	1.6	17.5	17.5	6.2	0.0	2.3	0.5	0.0	1.0
Cycle Q Clear(g_c), s	1.2	19.5	19.5	1.6	17.5	17.5	6.2	0.0	2.3	0.5	0.0	1.0
Prop In Lane	1.00		0.15	1.00		0.01	1.00		0.77	1.00		0.56
Lane Grp Cap(c), veh/h	224	1215	651	224	1243	682	397	0	269	238	0	109
VIC Ratio(X)	0.23	0.87	0.87	0.31	0.79	0.79	0.47	0.00	0.24	0.06	0.00	0.25
Avail Cap(c_a), veh/h	328	1712	916	313	1712	939	701	0	536	719	0	554
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(f)	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	14.8	20.1	20.1	15.7	19.0	19.0	23.2	0.0	24.5	28.1	0.0	30.0
Incr Delay (d2), s/veh	0.2	8.5	14.6	0.3	5.2	9.2	0.6	0.0	0.3	0.1	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.6	10.5	12.4	0.8	9.0	10.6	3.0	0.0	1.1	0.3	0.0	0.5
LnGrp Delay(d) s/veh	15.0	28.6	34.7	16.0	24.3	28.2	23.9	0.0	24.8	28.2	0.0	30.8
LnGrp LOS	B	C	C	B	C	C	C		C	C		C
Approach Vol, veh/h		1670			1594			251				42
Approach Delay, s/veh		30.2			25.2			24.1				29.9
Approach LOS		C			C			C				C

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.7	73.5	15.4	11.3	9.2	74.1	8.7	18.1
Change Period (Y+Rc), s	6.0	6.0	7.0	7.0	6.0	6.0	7.0	7.0
Max Green Setting (Gmax), s	*7	*34	20.0	22.0	*7	*34	20.0	22.0
Max Q Clear Time (g_c+I1), s	3.6	21.5	8.2	3.0	3.2	19.5	2.5	4.3
Green Ext Time (p_c), s	0.0	2.6	0.3	0.2	0.0	2.7	0.0	0.2

Intersection Summary
 HCM 2010 Ctrl Delay 27.6
 HCM 2010 LOS C

Notes
 * HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier

Queues

1: Adventure Av/D/W 1 & 79 St / N Bay Cswy

Proposed AM Peak Hour w/ Project

North Bay Village II



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	51	1619	69	1525	186	65	15	27
v/c Ratio	0.24	0.56	0.34	0.52	0.64	0.21	0.09	0.25
Control Delay	12.1	18.8	13.9	17.9	46.0	16.3	31.1	35.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	18.8	13.9	17.9	46.0	16.3	31.1	35.5
Queue Length 50th (ft)	13	291	18	265	109	8	8	8
Queue Length 95th (ft)	33	404	42	367	161	46	23	36
Internal Link Dist (ft)		140		228		394		35
Turn Bay Length (ft)	75		165					
Base Capacity (vph)	231	2871	215	2909	360	389	373	354
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.56	0.32	0.52	0.52	0.17	0.04	0.08

Intersection Summary

Timings

1: Adventure Av/D/W 1 & 79 St / N Bay Cswy

Proposed AM Peak Hour w/ Project

North Bay Village II



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	←	↑↑↑	←	↑↑↑	←	↑	←	↑
Volume (vph)	48	1442	65	1430	175	14	14	11
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	16.0	5.0	16.0	7.0	5.0	7.0	5.0
Minimum Split (s)	11.1	22.7	11.1	22.7	14.0	29.0	14.0	29.0
Total Split (s)	13.1	40.7	13.1	40.7	27.0	29.0	27.0	29.0
Total Split (%)	11.9%	37.1%	11.9%	37.1%	24.6%	26.4%	24.6%	26.4%
Yellow Time (s)	3.4	4.0	3.4	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.7	2.7	2.7	2.7	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.7	6.1	6.7	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes							
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Act Effect Green (s)	67.9	62.4	68.7	62.8	23.5	17.9	11.1	6.1
Actuated g/C Ratio	0.62	0.57	0.63	0.57	0.21	0.16	0.10	0.06
v/c Ratio	0.24	0.56	0.34	0.52	0.64	0.21	0.09	0.25
Control Delay	12.1	18.8	13.9	17.9	46.0	16.3	31.1	35.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.1	18.8	13.9	17.9	46.0	16.3	31.1	35.5
LOS	B	B	B	B	D	B	C	D
Approach Delay		18.6		17.7		38.3		33.9
Approach LOS		B		B		D		C

Intersection Summary

Cycle Length: 109.8
 Actuated Cycle Length: 109.8
 Offset: 84 (77%), Referenced to phase 2 EBTL and 6 WBTL. Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 19.8
 Intersection Capacity Utilization: 66.7%
 Analysis Period (min): 15
 Intersection LOS: B
 ICU Level of Service: C

Splits and Phases: 1: Adventure Av/D/W 1 & NW 79 St / N Bay Cswy



Intersection

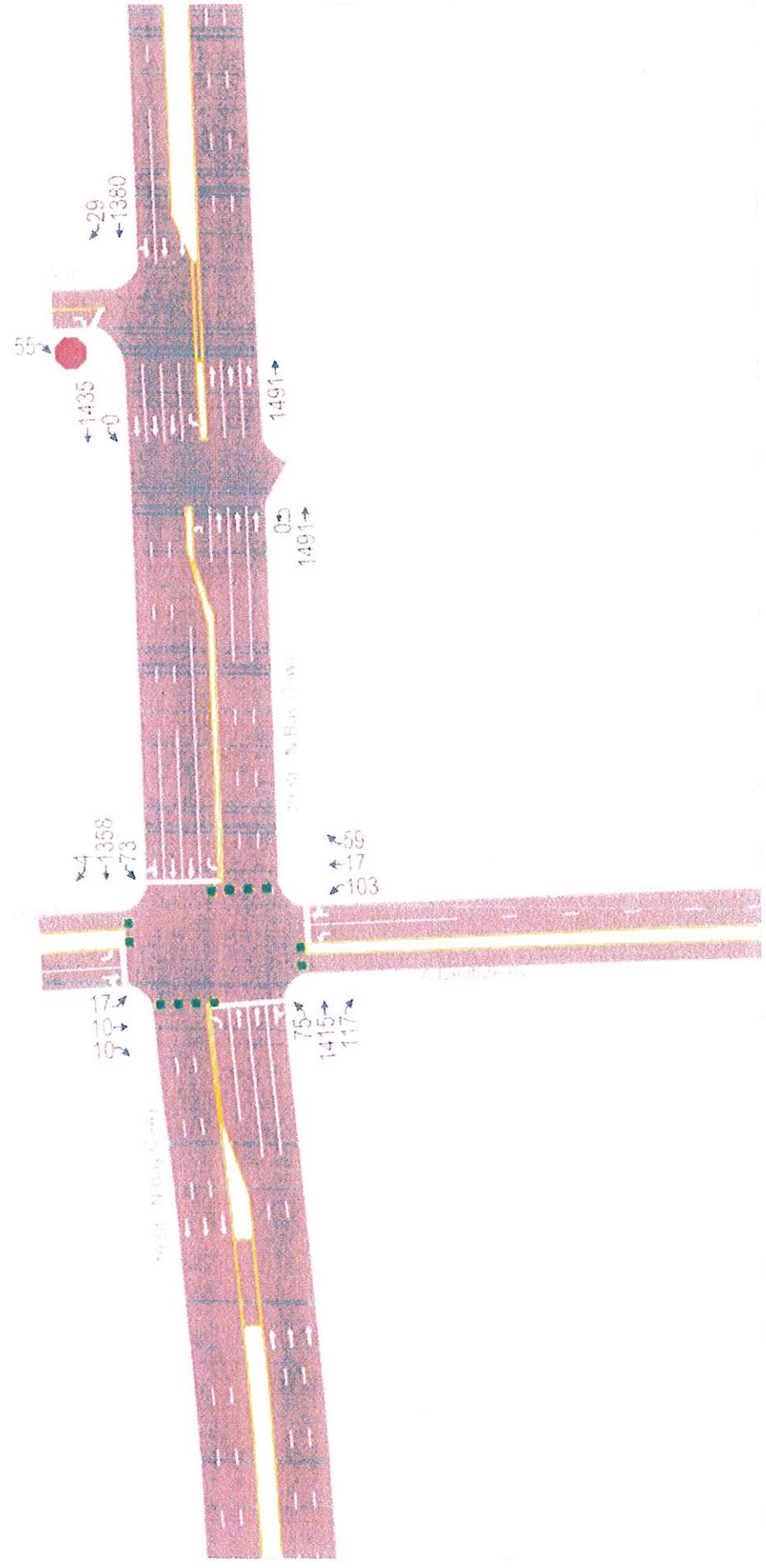
Int Delay s/veh 0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol. veh/h	0	1503	1437	14	0	62
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1768	1691	16	0	73

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1707	0	854
Stage 1	-	-	1699
Stage 2	-	-	707
Critical Hdwy	5.34	-	7.14
Critical Hdwy Stg 1	-	-	6.64
Critical Hdwy Stg 2	-	-	5.04
Follow-up Hdwy	3.12	-	3.92
Pot Cap-1 Maneuver	176	-	259
Stage 1	-	-	89
Stage 2	-	-	409
Platoon blocked %	-	-	-
Mov Cap-1 Maneuver	176	-	259
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	89
Stage 2	-	-	409

Approach	EB	WB	SB
HCM Control Delay s	0	0	24.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	176	-	-	-	259
HCM Lane V/C Ratio	-	-	-	-	0.282
HCM Control Delay (s)	0	-	-	-	24.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.1



HCM 2010 Signalized Intersection Summary
 1: Adventure Av/D/W 1 & 79 St / N Bay Cswy

Proposed PM Peak Hour w/ Project
 North Bay Village II

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SRT	SBR
Lane Configurations												
Volume (veh/h)	75	1415	117	73	1358	4	103	17	59	17	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	77	1459	121	75	1400	4	106	18	61	18	10	10
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	1692	140	236	1847	5	378	54	182	254	58	58
Arrive On Green	0.66	0.35	0.35	0.65	0.35	0.36	0.11	0.14	0.14	0.03	0.07	0.07
Sat Flow, veh/h	1774	4786	397	1774	5235	15	1774	374	1286	1774	856	856
Grp Volume(v) veh/h	77	1033	547	75	907	497	106	0	79	18	0	20
Grp Sat Flow(s) veh/h/ln	1774	1695	1793	1774	1695	1860	1774	0	1639	1774	0	1712
Q Serve(g_s) s	1.7	18.3	18.3	1.7	15.2	15.2	3.4	0.0	2.8	0.6	0.0	0.7
Cycle Q Clear(g_c) s	1.7	18.3	18.3	1.7	15.2	15.2	3.4	0.0	2.8	0.6	0.0	0.7
Prop In Lane	1.00		0.22	1.00		0.01	1.00		0.77	1.00		0.50
Lane Grp Cap(c) veh/h	259	1198	634	236	1196	656	378	0	236	254	0	116
ViC Ratio(X)	0.30	0.66	0.66	0.32	0.76	0.76	0.28	0.00	0.34	0.07	0.00	0.17
Avail Cap(c_a) veh/h	349	1787	945	327	1787	981	741	0	559	751	0	584
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(f)	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	14.0	19.4	19.4	15.1	18.4	18.4	23.4	0.0	24.8	26.5	0.0	28.3
Incr Delay (d2), s/veh	0.2	8.3	14.5	0.3	4.5	8.0	0.3	0.0	0.6	0.1	0.0	0.5
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(50%),veh/ln	0.9	9.9	11.5	0.8	7.8	9.2	1.7	0.0	1.3	0.3	0.0	0.3
LnGrp Delay(d) s/veh	14.2	27.7	33.9	15.3	23.0	26.5	23.7	0.0	25.5	26.6	0.0	28.9
LnGrp LOS	B	C	C	B	C	C	C		C	C		C
Approach Vol. veh/h		1657			1479			185				38
Approach Delay, s/veh		29.1			23.8			24.5				27.8
Approach LOS		C			C			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.8	75.0	13.8	11.4	9.8	75.0	8.9	16.3				
Change Period (Y+Rc), s	6.0	6.0	7.0	7.0	6.0	6.0	7.0	7.0				
Max Green Setting (Gmax), s	17	134	20.0	22.0	17	134	20.0	22.0				
Max Q Clear Time (g_c+I1), s	3.7	20.3	5.4	2.7	3.7	17.2	2.6	4.8				
Green Ext Time (p_c), s	0.0	2.5	0.2	0.2	0.0	2.5	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			26.5									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier												

Timings

1 Adventure Av/D/W 1 & 79 St / N Bay Cswy

Proposed PM Peak Hour w/ Project

North Bay Village II



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↵	↑↑↑	↵	↑↑↑	↵	↑	↵	↑
Volume (vph)	75	1415	73	1358	103	17	17	10
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	16.0	5.0	16.0	7.0	5.0	7.0	5.0
Minimum Split (s)	11.1	22.7	11.1	22.7	14.0	29.0	14.0	29.0
Total Split (s)	13.1	40.7	13.1	40.7	27.0	29.0	27.0	29.0
Total Split (%)	11.9%	37.1%	11.9%	37.1%	24.6%	26.4%	24.6%	26.4%
Yellow Time (s)	3.4	4.0	3.4	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.7	2.7	2.7	2.7	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.7	6.1	6.7	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes							
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	75.3	69.6	75.6	69.8	16.0	10.7	9.9	5.9
Actuated g/C Ratio	0.69	0.63	0.69	0.64	0.15	0.10	0.09	0.05
v/c Ratio	0.28	0.49	0.32	0.43	0.51	0.37	0.11	0.20
Control Delay	9.0	13.7	10.0	12.9	48.0	21.0	37.2	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	13.7	10.0	12.9	48.0	21.0	37.2	37.2
LOS	A	B	B	B	D	C	D	D
Approach Delay		13.5		12.7		36.5		37.2
Approach LOS		B		B		D		D

Intersection Summary

Cycle Length: 109.8
 Actuated Cycle Length: 109.8
 Offset: 102 (93%), Referenced to phase 2 EBTL and 6 WBTL. Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 14.7
 Intersection Capacity Utilization: 63.0%
 Analysis Period (min): 15
 intersection LOS: B
 ICU Level of Service: B

Splits and Phases 1 Adventure Av/D/W 1 & NW 79 St / N Bay Cswy



Queues

1: Adventure Av/D/W 1 & 79 St / N Bay Cswy

Proposed PM Peak Hour w/ Project

North Bay Village II



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	77	1580	75	1404	106	79	18	20
v/c Ratio	0.28	0.49	0.32	0.43	0.51	0.37	0.11	0.20
Control Delay	9.0	13.7	10.0	12.9	48.0	21.0	37.2	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	13.7	10.0	12.9	48.0	21.0	37.2	37.2
Queue Length 50th (ft)	10	176	10	149	73	12	12	7
Queue Length 85th (ft)	40	352	39	298	106	56	28	32
Internal Link Dist (ft)		140		228		394		35
Turn Bay Length (ft)	75		165					
Base Capacity (vph)	289	3192	251	3230	343	378	367	353
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.49	0.30	0.43	0.31	0.21	0.05	0.06

Intersection Summary

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol. veh/h	0	1491	1380	29	0	55
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1754	1624	34	0	65

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1658	0	2343
Stage 1	-	-	1641
Stage 2	-	-	702
Critical Hdwy	5.34	-	5.74
Critical Hdwy Stg 1	-	-	6.64
Critical Hdwy Stg 2	-	-	6.04
Follow-up Hdwy	3.12	-	3.82
Pot Cap-1 Maneuver	186	-	61
Stage 1	-	-	96
Stage 2	-	-	412
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	186	-	61
Mov Cap-2 Maneuver	-	-	61
Stage 1	-	-	96
Stage 2	-	-	412

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	186	-	-	-	269
HCM Lane V/C Ratio	-	-	-	-	0.241
HCM Control Delay (s)	0	-	-	-	22.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %ile Q(veh)	0	-	-	-	0.9

TABLE A8
North Bay Village II
 Arterial Level of Service (LOS) Summary

Arterial LOS Summary			AM Peak Hour				PM Peak Hour						
FDOT STATION	ROAD	LOCATION	DIR	Existing Condition	Proposed Condition		Existing Condition	Proposed Condition					
					without Project	with Project		without Project	with Project				
0503	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway		EB	1,410	1,448	1,488	1,245	1,279	1,334				
			WB	1,433	1,472	1,529	1,281	1,472	1,617				
			2-WAY	2,843	2,919	3,016	2,526	2,750	2,850				
			LOS	D	D	D	D	D	D				
Source: 2013 FDOT Quality Level of Service Handbook Table 4													
				B	C	D	E						
						2,090					4,590		

TABLE A-9

North Bay Village II

ARTERIAL LOS - EXISTING AM PEAK HOUR (TWO-WAY ANALYSIS)

STATION	ROAD	LOCATION	SOURCE	FROM	TO	DATE	RAW TRAFFIC DATA				SEASONALLY ADJUSTED AM PEAK HOUR VOLUMES	JURISDICTIONAL CLASSIFICATION	EXISTING LOS
							TUESDAY	WEDNESDAY	THURSDAY	THURSDAY			
05.00	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway		FDOT	4327.12	4327.12	05/01	1447	1403	1404	1410	5-Lane Divided State Road - Class II (30 MPH)	D	
							1464	1518	1450	1433			
			2-WAY	2909	2911	2876	2932	2843					

Source: 2013 FDOT Quality/Level of Service Handbook Table 4

A	B	C	D	E
0.00 - 1000	1000 - 1200	1200 - 1500	1500 - 2000	2000 - 4500

- 1. Road Name/Number
- 2. Stationing
- 3. Direction of Travel
- 4. Date of Data Collection
- 5. Source of Data
- 6. Date of Analysis
- 7. Analysis Method
- 8. Analysis Software
- 9. Analysis Version
- 10. Analysis Date

TABLE A-10

North Bay Village II

ARTERIAL LOS - EXISTING PM PEAK HOUR (TWO-WAY ANALYSIS)

STATION	ARTERIAL LOS - EXISTING PM PEAK HOUR		SOURCE	3	4	5	6	7	8	RAW TRAFFIC DATA			10	11	12	13
	ROAD	LOCATION								TUESDAY	WEDNESDAY	THURSDAY				
0933	79 Street / SR 9347 / J.F. Kennedy Causeway / N Bay Causeway	200 E. Treasure Dr	FDOT	4220	4220	4220	4220	4220	4220	1270	1298	1284	1284	1245	6-Lane Divided State Road - Class II (30 MPH)	D
				2-WAY	2563	2563	2563	2563	2563	2563	2563	2563	2526			

Source: 2013 FDOT Quality Level of Service Handbook Table 4

B	C	D	E
1200	1200	4500	4500

- 1. Stationing
- 2. Direction of travel
- 3. Direction of travel
- 4. Direction of travel
- 5. Direction of travel
- 6. Direction of travel
- 7. Direction of travel
- 8. Direction of travel
- 9. Direction of travel
- 10. Direction of travel
- 11. Direction of travel
- 12. Direction of travel
- 13. Direction of travel

TABLE A11

North Bay Village II

ARTERIAL LOS - PROPOSED AM PEAK HOUR (TWO-WAY ANALYSIS)

STATION	1	2	3	4	5	6	7	8	9	10
ARTERIAL LOS - PROPOSED AM PEAK HOUR	ROAD	LOCATION	DIR	PEAK HOUR VOLUMES (EXISTING)	BACKGROUND GROWTH (8.0% PER ANNUM) FOR PROJECT BUILD OUT OF 2017 (3 YEARS GROWTH)	PROPOSED VOLUMES W/O PROJECT (2017)	PROJECT TRAFFIC (VPH)	PROPOSED VOLUMES W/ PROJECT (2017)	FUNCTIONAL CLASSIFICATION	PROPOSED LOS
0050	75 Street / SR 954 / J.F. Kennedy Causeway / N Gay Causeway	100 E Treasure Dr	EB	1,416	58	1,448	40	1,488	6-Lane Divided State Road - Class II (30 MPH)	D
			WB	1,430	59	1,472	57	1,529		
			2-WAY	2,843	77	2,915	97	3,016		

Source: 2013 FDOT Quality Level of Service Handbook Table 4



Table 4.10

North Bay Village II

ARTERIAL LOS ANALYSIS - PROPOSED PM PEAK HOUR (TWO WAY ANALYSIS)

NO. OF LANE	1		2		3		4		5		6		7		8		9		10	
	ARTERIAL LOS	PROPOSED PM PEAK HOUR	DIR	TRUCK PERCENT	TRUCK VOLUMES (EXISTING)	BACKGROUND GROWTH FOR PROJECT BUILD OUT OF 2017 (YEARS GROWTH)	PROPOSED VOLUMES W/O PROJECT (2017)	PROJECT TRAFFIC (VPH)	PROPOSED VOLUME WITH PROJECT (2017)	JURISDICTIONAL CLASSIFICATION	PROPOSED LOS WITHOUT PROJECT	PROPOSED LOS WITH PROJECT								
2	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway		EB	1.24%	14	14	1,176	15	1,191	6-Lane Divided State Road Class II (30 MPH)	D	D								
2			WB	1.42%	19	19	1,472	15	1,491		D	D								
2			2-WAY	2.84%	72	72	2,750	100	2,850											

Source: 2013 FDOT Quality Level of Service Handbook Table 4

Source: 2013 FDOT Quality Level of Service Handbook Table 4

Generalized Peak Hour Two-Way Volumes for Florida's Urbanized Areas¹

TABLE 4

12/18/12

INTERRUPTED FLOW FACILITIES						UNINTERRUPTED FLOW FACILITIES					
STATE SIGNALIZED ARTERIALS						FREEWAYS					
Class I (40 mph or higher posted speed limit)						Lanes	B	C	D	F	
Lanes	Median	B	C	D	E	4	4,120	5,540	6,700	7,190	
2	Undivided	*	1,510	1,600	**	6	6,130	8,370	10,060	11,100	
4	Divided	*	3,420	3,580	**	8	8,230	11,100	13,390	15,010	
6	Divided	*	5,250	5,390	**	10	10,330	14,040	16,840	18,930	
8	Divided	*	7,090	7,210	**	12	14,450	18,880	22,030	22,860	
Class II (35 mph or slower posted speed limit)						Freeway Adjustments					
Lanes	Median	B	C	D	E	Auxiliary Lane Present in Both Directions + 1,800		Ramp Metering + 5%			
2	Undivided	*	660	1,330	1,410						
4	Divided	*	1,310	2,920	3,040						
6	Divided	*	2,090	4,500	4,590						
8	Divided	*	2,880	6,060	6,130						
Non-State Signalized Roadway Adjustments						UNINTERRUPTED FLOW HIGHWAYS					
(After corresponding state volumes to the indicated percent)						Lanes	Median	B	C	D	F
Non-State Signalized Roadways - < 10%						2	Undivided	770	1,530	2,170	2,990
Median & Turn Lane Adjustments						4	Divided	3,300	4,660	5,200	6,530
Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors	6	Divided	4,950	6,990	8,840	9,790	
2	Divided	Yes	No	+8%	Uninterrupted Flow Highway Adjustments						
2	Undivided	No	No	-20%	Lanes	Median	Exclusive left lanes	Adjustment factors			
Multi	Undivided	Yes	No	-8%	2	Divided	Yes	+5%			
Multi	Undivided	No	No	-25%	Multi	Undivided	Yes	+5%			
-	-	-	Yes	5%	Multi	Undivided	No	-25%			
One-Way Facility Adjustment											
Multiply the corresponding two-directional volumes in this table by 0.6											
BICYCLE MODE²						<p>Volumes shown are presented as peak hour two-way volumes for all class of service and are for the entire facility (not a single lane). Facility class 1. The first two rows contain a general and should be used as a general reference application. The computer models from which these values are derived should be used to make specific pattern applications. The third and fourth computer models should only be used for corridor or intersection designs where a combination of the application of the models is not based on planning applications of the Highway Capacity Manual and the Traffic Capacity and Quality of Service Manual.</p> <p>* Level of service for the bicycle mode pedestrian modes in this table is based on number of bicycles per hour per lane of facility or pedestrian mode in the facility.</p> <p>** Best practice - pedestrian mode - stopped flow in the same direction of travel such as a traffic light.</p> <p>* Cannot be a lane of travel in any of the facility.</p> <p>** Not applicable for best level of service letter grade 0 in the automotive mode. Volume of pedestrian mode of use will increase if the volume of automobile use increases. However, the facility should be designed to accommodate the volume of pedestrian mode of use from a general design volume and not from the volume of automobile use.</p>					
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way directional bicycle volumes.)											
Paved Shoulder Bicycle											
Lane Coverage	B	C	D	E							
0-49%	*	260	680	1,770							
50-84%	190	600	1,770	>1,770							
85-100%	830	1,770	1,770	**							
PEDESTRIAN MODE²											
(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way pedestrian mode volume.)											
Sidewalk Coverage	B	C	D	E							
0-49%	*	*	250	850							
50-84%	*	150	780	1,420							
85-100%	340	960	1,560	1,770							
BUS MODE (Scheduled Fixed Route)³											
(Buses in peak hour in peak direction)											
Sidewalk Coverage	B	C	D	E							
0-84%	-5	-4	-3	-2							
85-100%	-4	3	-2	1							

Source: Florida Department of Transportation, Systems Planning Office, http://www.dot.state.fl.us/transportation/quality_of_service/

Intersection

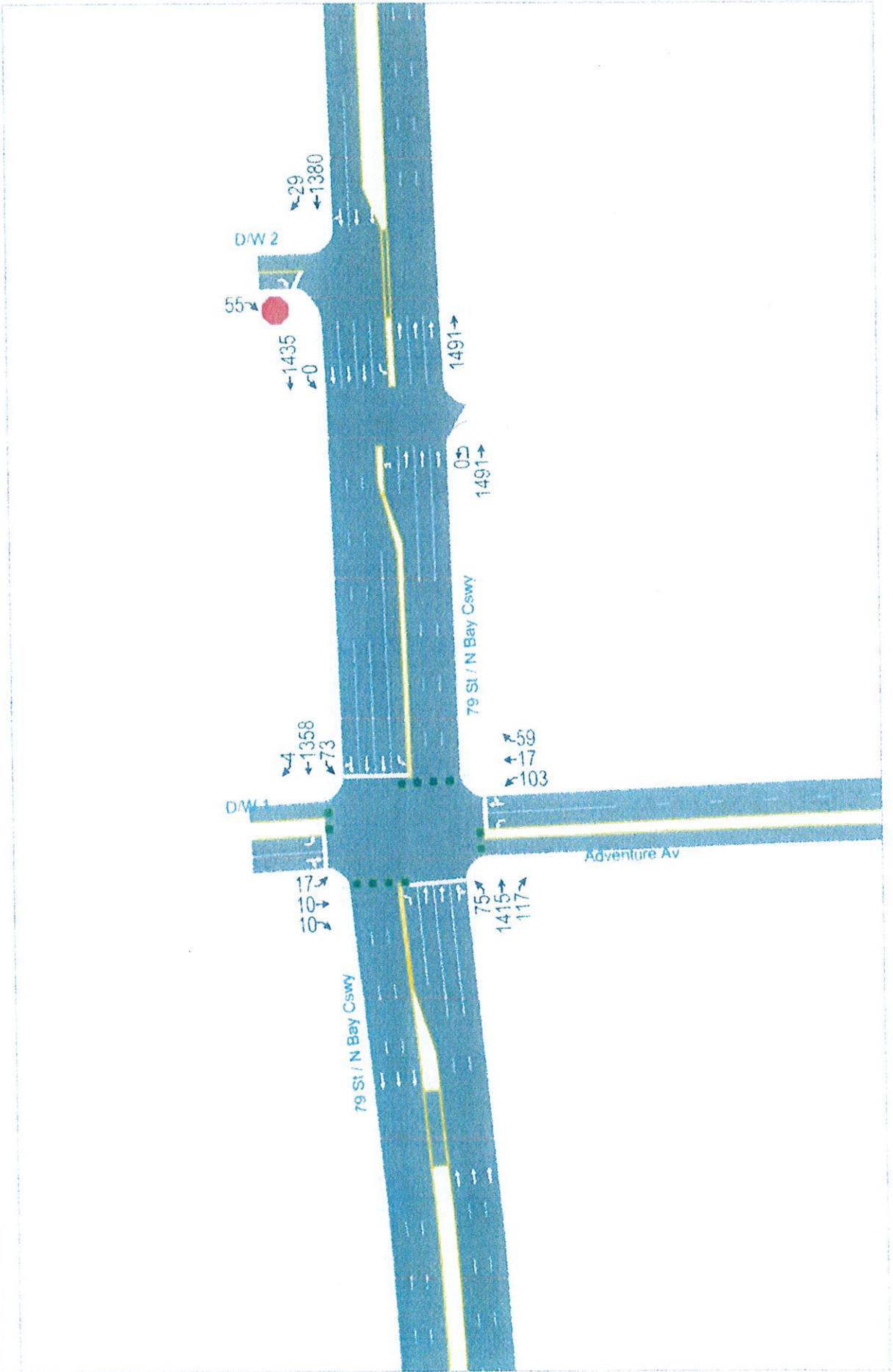
Int Delay, s/veh 0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	1503	1437	14	0	62
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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1768	1691	16	0	73

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1707	0	2406
Stage 1	-	-	1699
Stage 2	-	-	707
Critical Hdwy	5.34	-	5.74
Critical Hdwy Stg 1	-	-	6.64
Critical Hdwy Stg 2	-	-	6.04
Follow-up Hdwy	3.12	-	3.82
Pot Cap-1 Maneuver	176	-	56
Stage 1	-	-	89
Stage 2	-	-	409
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	176	-	56
Mov Cap-2 Maneuver	-	-	56
Stage 1	-	-	89
Stage 2	-	-	409

Approach	EB	WB	SB
HCM Control Delay, s	0	0	24.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	176	-	-	-	259
HCM Lane VC Ratio	-	-	-	-	0.282
HCM Control Delay (s)	0	-	-	-	24.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	1.1



HCM 2010 Signalized Intersection Summary
 1: Adventure Av/D/W 1 & 79 St / N Bay Cswy

Proposed PM Peak Hour w/ Project
 North Bay Village II

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	75	1415	117	73	1358	4	103	17	59	17	10	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0	186.3	186.3	190.0
Adj Flow Rate, veh/h	77	1459	121	75	1400	4	106	18	61	18	10	10
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	1692	140	236	1847	5	378	54	182	254	58	58
Arrive On Green	0.06	0.35	0.35	0.06	0.35	0.35	0.11	0.14	0.14	0.03	0.07	0.07
Sat Flow, veh/h	1774	4786	397	1774	5235	15	1774	374	1266	1774	856	856
Grp Volume(v), veh/h	77	1033	547	75	907	497	106	0	79	18	0	20
Grp Sat Flow(s), veh/h/ln	1774	1695	1793	1774	1695	1860	1774	0	1639	1774	0	1712
Q Serve(g_s), s	1.7	18.3	18.3	1.7	15.2	15.2	3.4	0.0	2.8	0.6	0.0	0.7
Cycle Q Clear(g_c), s	1.7	18.3	18.3	1.7	15.2	15.2	3.4	0.0	2.8	0.6	0.0	0.7
Prop In Lane	1.00		0.22	1.00		0.01	1.00		0.77	1.00		0.50
Lane Grp Cap(c), veh/h	259	1198	634	236	1196	656	378	0	236	254	0	116
V/C Ratio(X)	0.30	0.86	0.86	0.32	0.76	0.76	0.28	0.00	0.34	0.07	0.00	0.17
Avail Cap(c_a), veh/h	349	1787	945	327	1787	981	741	0	559	751	0	584
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	14.0	19.4	19.4	15.1	18.4	18.4	23.4	0.0	24.8	26.5	0.0	28.3
Incr Delay (d2), s/veh	0.2	8.3	14.5	0.3	4.5	8.0	0.3	0.0	0.6	0.1	0.0	0.5
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(50%), veh/ln	0.9	9.9	11.5	0.8	7.8	9.2	1.7	0.0	1.3	0.3	0.0	0.3
LnGrp Delay(d), s/veh	14.2	27.7	33.9	15.3	23.0	26.5	23.7	0.0	25.5	26.6	0.0	28.9
LnGrp LOS	B	C	C	B	C	C	C		C	C		C
Approach Vol. veh/h		1657			1479			185				38
Approach Delay, s/veh		29.1			23.8			24.5				27.8
Approach LOS		C			C			C				C

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	75.0	13.8	11.4	9.8	75.0	8.9	16.3
Change Period (Y+Rc), s	6	6999998	7.0	7	6	6999998	7.0	7.0
Max Green Setting (Gmax), s	*7	*34	20.0	22.0	*7	*34	20.0	22.0
Max Q Clear Time (g_c+I), s	3.7	20.3	5.4	2.7	3.7	17.2	2.6	4.8
Green Ext Time (p_c), s	0.0	2.5	0.2	0.2	0.0	2.5	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.5
HCM 2010 LOS	C

Notes
 * HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier

Timings
1: Adventure Av/D/W 1 & 79 St / N Bay Cswy

Proposed PM Peak Hour w/ Project
North Bay Village II



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	↖	↕	↖	↕	↖	↕	↖	↕
Volume (vph)	75	1415	73	1358	103	17	17	10
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	5	2	1	6	3	8	7	4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	3	8	7	4
Switch Phase								
Minimum Initial (s)	5.0	16.0	5.0	16.0	7.0	5.0	7.0	5.0
Minimum Split (s)	11.1	22.7	11.1	22.7	14.0	29.0	14.0	29.0
Total Split (s)	13.1	40.7	13.1	40.7	27.0	29.0	27.0	29.0
Total Split (%)	11.9%	37.1%	11.9%	37.1%	24.6%	26.4%	24.6%	26.4%
Yellow Time (s)	3.4	4.0	3.4	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.7	2.7	2.7	2.7	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.7	6.1	6.7	7.0	7.0	7.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes							
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Act Effct Green (s)	75.3	69.6	75.6	69.8	16.0	10.7	9.9	5.9
Actuated g/C Ratio	0.69	0.63	0.69	0.64	0.15	0.10	0.09	0.05
v/c Ratio	0.28	0.49	0.32	0.43	0.51	0.37	0.11	0.20
Control Delay	9.0	13.7	10.0	12.9	48.0	21.0	37.2	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	13.7	10.0	12.9	48.0	21.0	37.2	37.2
LOS	A	B	B	B	D	C	D	D
Approach Delay		13.5		12.7		36.5		37.2
Approach LOS		B		B		D		D

Intersection Summary

Cycle Length: 109.8
 Actuated Cycle Length: 109.8
 Offset: 102 (93%), Referenced to phase 2 EBTL and 6 WBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.51
 Intersection Signal Delay: 14.7
 Intersection Capacity Utilization 63.0%
 Analysis Period (min): 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases 1 Adventure Av/D/W 1 & NW 79 St / N Bay Cswy



Queues

1: Adventure Av/D/W 1 & 79 St / N Bay Cswy

Proposed PM Peak Hour w/ Project

North Bay Village II



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	77	1580	75	1404	106	79	18	20
v/c Ratio	0.28	0.49	0.32	0.43	0.51	0.37	0.11	0.20
Control Delay	9.0	13.7	10.0	12.9	48.0	21.0	37.2	37.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	13.7	10.0	12.9	48.0	21.0	37.2	37.2
Queue Length 50th (ft)	10	176	10	149	73	12	12	7
Queue Length 95th (ft)	40	352	39	298	106	56	28	32
Internal Link Dist (ft)		140		228		394		35
Turn Bay Length (ft)	75		165					
Base Capacity (vph)	289	3192	251	3230	343	378	367	353
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.49	0.30	0.43	0.31	0.21	0.05	0.06

Intersection Summary

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	1491	1380	29	0	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1754	1624	34	0	65

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1658	0	2343
Stage 1	-	-	1641
Stage 2	-	-	702
Critical Hdwy	5.34	-	5.74
Critical Hdwy Stg 1	-	-	6.64
Critical Hdwy Stg 2	-	-	6.04
Follow-up Hdwy	3.12	-	3.82
Pot Cap-1 Maneuver	186	-	61
Stage 1	-	-	96
Stage 2	-	-	412
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	186	-	61
Mov Cap-2 Maneuver	-	-	61
Stage 1	-	-	96
Stage 2	-	-	412

Approach	EB	WB	SB
HCM Control Delay, s	0	0	22.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	186	-	-	-	269
HCM Lane V/C Ratio	-	-	-	-	0.241
HCM Control Delay (s)	0	-	-	-	22.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.9

TABLE A8
North Bay Village II
 Arterial Level of Service (LOS) Summary

Arterial LOS Summary		AM Peak Hour			PM Peak Hour					
FDOT STATID	ROAD	LOCATION	DIR	Existing Condition	Proposed Condition without Project	Proposed Condition with Project	Existing Condition	Proposed Condition without Project	Proposed Condition with Project	
0533	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway	200 E E Treasure Dr	EB	1,410	1,448	1,488	1,245	1,279	1,334	
			WB	1,433	1,472	1,529	1,281	1,472	1,517	
			2-WAY	2,843	2,919	3,016	2,526	2,750	2,860	
			LOS	D	D	D	D	D	D	
Source: 2013 FDOT Quality/Level of Service Handbook Table 4							B	C	D	E
							-	2,090	4,500	4,590

TABLE A-12

North Bay Village II

ARTERIAL LOS ANALYSIS - PROPOSED PM PEAK HOUR (TWO-WAY ANALYSIS)

STATION	1. ARTERIAL LOS - PROPOSED PM PEAK HOUR		3. D/R	4. PEAK HOUR VOLUMES (EXISTING)	5. BACKGROUND GROWTH @ 0.87% FOR PROJECT BUILD OUT OF 2017 (3 YEARS GROWTH)	6. PROPOSED VOLUMES W/O PROJECT (2017)	7. PROJECT TRAFFIC (VPH)	8. PROPOSED VOLUMES W/ PROJECT (2017)	9. JURISDICTIONAL CLASSIFICATION	10. PROPOSED LOS	
	ROAD	LOCATION								WITHOUT PROJECT	WITH PROJECT
0+33	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway	200' E Treasure Dr	EB	1,245	34	1,279	55	1,334	6-Lane Divided State Road - Class II (30 MPH)	D	D
			WB	1,433	39	1,472	45	1,517		D	D
			2-WAY	2,843	72	2,750	100	2,850		D	D

- Notes:
1. Roadway Name
 2. Location of Count
 3. Link Direction
 4. Existing Peak Hour Volumes
 5. A 0.87 percent background growth was utilized with a project build-out of 2017
 6. Existing Peak Hour Volumes with Project Traffic
 7. Project Traffic
 8. Proposed Peak Hour Volumes with Project Traffic
 9. Roadway Jurisdictional Classification
 10. Level of Service

Source: 2013 FDOT Quality/Level of Service Handbook Table 4

B	C	D	E
	2,090	2,508	4,650

TABLE A5
North Bay Village II
ARTERIAL LOS - EXISTING AM PEAK HOUR (TWO-WAY ANALYSIS)

STATION	1		3	4	5	6	7	8	9			10	11	12	13
	ARTERIAL LOS - EXISTING AM PEAK HOUR								RAW TRAFFIC DATA						
ROAD	LOCATION	SOURCE	FROM	TO	SF	ACF	DIR	TUESDAY	WEDNESDAY	THURSDAY					
0534	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway	2007 E. Treasure Dr	FDOT	4/24/2012	4/28/12	1.01	0.96	EB	1,445	1,453	1,424	1,454	1,410	6-Lane Divided State Road - Class II (30 MPH)	D
								WB	1,464	1,518	1,462	1,478	1,433		
								2-WAY	2,909	3,011	2,876	2,932	2,843		

Source: 2013 FDOT Quality/Level of Service Handbook Table 4

B	C	D	E
2,000	4,500	4,500	4,500

- Notes:
1. Roadway Name
 2. Location of Count
 3. Source of Data: FDOT/Richard Garcia & Associates, Inc.
 4. Date Started Count
 5. Date Stopped Count
 6. Seasonal Factor
 7. Data Correction Factor
 8. Link Direction
 9. Raw Data
 10. Raw Data Average
 11. Seasonally Adjusted Calculation
 12. Roadway Jurisdictional Classification
 13. Level of Service

TABLE A10

North Bay Village II
ARTERIAL LOS - EXISTING PM PEAK HOUR (TWO-WAY ANALYSIS)

STATION	1		2		3	4	5	6	7	8	9			10	11	12	13
	ARTERIAL LOS - EXISTING PM PEAK HOUR		LOCATION								RAW TRAFFIC DATA						
	ROAD				SOURCE	FROM	TO	SF	ACF	DIR	TUESDAY	WEDNESDAY	THURSDAY	AVERAGE	SEASONALLY ADJUSTED PM PEAK HOUR VOLUMES	JURISDICTIONAL CLASSIFICATION	EXISTING LOS
0533	79 Street / SR 934 / Kennedy Causeway / N Bay Causeway	J.F.	200 E E Treasure Dr		FOOT	4/24/2012	4/26/12	1.01	0.86	EP	1,270	1,298	1,284	1,264	1,245	6-Lane Divided State Road - Class II (30 MPH)	D
										WB	1,293	1,335	1,337	1,322	1,281		
										2-WAY	2,563	2,633	2,621	2,606	2,526		

Source: 2013 FDOT Quality/Level of Service Handbook Table 4

B	C	D	E
-	2,060	4,500	4,590

- Notes:
- 1. Roadway Name
 - 2. Location of Count
 - 3. Source of Data: PCU=Richard Garcia & Associates, Inc.
 - 4. Date Started Count
 - 5. Date Stopped Count
 - 6. Seasonal Factor
 - 7. Area Correction Factor
 - 8. Link Description
 - 9. Raw Data
 - 10. Raw Link Average
 - 11. Seasonally Adjusted Calculation
 - 12. Roadway Jurisdictional Classification
 - 13. Level of Service

TABLE A11

North Bay Village II

ARTERIAL LOS - PROPOSED AM PEAK HOUR (TWO-WAY ANALYSIS)

STATION	1		2	3	4	5	6	7	8	9	10	
	ROAD	LOCATION	DIR	PEAK HOUR VOLUMES (EXISTING)	BACKGROUND GROWTH @ 0.89% FOR PROJECT BUILD OUT OF 2017 (3 YEARS GROWTH)	PROPOSED VOLUMES W/O PROJECT (2017)	PROJECT TRAFFIC (VPH)	PROPOSED VOLUMES W/ PROJECT (2017)	JURISDICTIONAL CLASSIFICATION	WITHOUT PROJECT	WITH PROJECT	PROPOSED LOS
0500	79 Street / SR 934 / J.F. Kennedy Causeway / N Bay Causeway	200' E Treasure Dr	EB	1,410	38	1,448	40	1,488	6-Lane Divided State Road - Class II (50 MPH)	D	D	D
			WB	1,433	39	1,472	52	1,529		D	D	
			2-WAY	2,843	77	2,919	97	3,016		D	D	

Source: 2013 FDOT Quality Level of Service Handbook Table 4

B	C	D	E
	2,000	4,500	4,500

- 1. Highway Name
- 2. Location of Count
- 3. Count Direction
- 4. Existing Peak Hour Volumes
- 5. A 0.89 percent background growth was utilized with a project build-out of 2017
- 6. Proposed Peak Hour Volumes without Project Traffic
- 7. Project Traffic
- 8. Proposed Peak Hour Volumes with Project Traffic
- 9. Roadway Jurisdictional Classification
- 10. Level of Service

Generalized **Peak Hour Two-Way Volumes** for Florida's
Urbanized Areas¹

TABLE 4

12/18/12

INTERRUPTED FLOW FACILITIES						UNINTERRUPTED FLOW FACILITIES						
STATE SIGNALIZED ARTERIALS						FREEWAYS						
Class I (40 mph or higher posted speed limit)						Lanes	B	C	D	E		
Lanes	Median	B	C	D	E	4	4,120	5,540	6,700	7,190		
2	Undivided	*	1,510	1,600	**	6	6,130	8,370	10,060	11,100		
4	Divided	*	3,420	3,580	**	8	8,230	11,100	13,390	15,010		
6	Divided	*	5,250	5,390	**	10	10,330	14,040	16,840	18,930		
8	Divided	*	7,090	7,210	**	12	14,450	18,880	22,030	22,860		
Class II (35 mph or slower posted speed limit)						Freeway Adjustments						
Lanes	Median	B	C	D	E	Auxiliary Lanes Present in Both Directions + 1,800		Ramp Metering + 5%				
2	Undivided	*	660	1,330	1,410							
4	Divided	*	1,310	2,920	3,040							
6	Divided	*	2,090	4,500	4,590							
8	Divided	*	2,880	6,060	6,130							
Non-State Signalized Roadway Adjustments (Alter corresponding state volumes by the indicated percent.)												
Non-State Signalized Roadways - 10%												
Median & Turn Lane Adjustments												
Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors								
2	Divided	Yes	No	+5%								
2	Undivided	No	No	-20%								
Multi	Undivided	Yes	No	-5%								
Multi	Undivided	No	No	-25%								
-	-	-	Yes	-5%								
One-Way Facility Adjustment Multiply the corresponding two-directional volumes in this table by 0.6												
BICYCLE MODE ² (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)												
Paved Shoulder Bicycle												
Lane Coverage	B	C	D	E								
0-49%	*	260	680	1,770								
50-84%	190	600	1,770	>1,770								
85-100%	830	1,770	>1,770	**								
PEDESTRIAN MODE ² (Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)												
Sidewalk Coverage	B	C	D	E								
0-49%	*	*	250	850								
50-84%	*	150	780	1,420								
85-100%	340	960	1,560	>1,770								
BUS MODE (Scheduled Fixed Route) ³ (Buses in peak hour in peak direction)												
Sidewalk Coverage	B	C	D	E								
0-84%	> 5	> 4	> 3	> 2								
85-100%	> 4	> 3	> 2	> 1								
						<p>¹ Values shown are presented as peak hour two-way volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.</p> <p>² Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.</p> <p>³ Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.</p> <p>* Cannot be achieved using table input value defaults.</p> <p>** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.</p> <p>Source: Florida Department of Transportation Systems Planning Office www.dot.state.fl.us/planning/systems/mbos_defaults.shtml</p>						

Project Location / Description

The subject site is located on the north side of 79th Street (SR 934/J.F. Kennedy Causeway/North Bay Causeway) and Adventure Avenue within the City of North Bay Village. Although this site currently has a building structure which will be demolished, it is considered vacant since the building has not been used for an extended period of time (i.e. over a year). The following land uses (LU), as identified by the Institute of Transportation Engineers (ITE), most closely resemble the proposed mixed-use development:

Proposed

- LU 232: High-Rise Residential Condominium with 128 Dwelling Units
- LU 710: General Office with 7,262 Square Feet
- LU 911: Bank (Walk-in) with 2,520 Square Feet
- LU 931: Quality Restaurant with 12,250 Square Feet
- LU 940: Bread/Donut/Bagel/Coffee Shop with 2,520 Square Feet

The subject project is proposing vehicular access via two (2) driveways on 79th Street (SR 934/J.F. Kennedy Causeway/N Bay Causeway). The east driveway will operate as right-in and right-out only while the west driveway will form the southbound approach for the signalized intersection of 79th Street and Adventure Avenue. Figure 1 below depicts a location map and Figure 2 is the site plan shown for illustrative purposes only.

Figure 1: Location Map

