

Wellington Traffic Consultant Letters (Pg. 1 and Pg. 44-45)
Traffic Study (Land Use Pg. 2-43 and Master Plan Pg. 46-120)

November 14, 2024

Mr. Damian Newell
Wellington
Planning, Zoning & Building Department
12300 W. Forest Hill Boulevard
Wellington, FL 33414

**Re: WG 10 Ac Park CPA - #PTC24-001J.1
2024-0001-CPA**

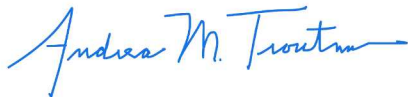
Dear Mr. Newell:

Pinder Troutman Consulting, Inc. (PTC) has completed our review of the Comprehensive Plan/Future Land Use Amendment (FLUA) Application for the above referenced project. The Traffic Impact Analysis completed by MacKenzie Engineering & Planning dated October 16, 2024, was reviewed. It is proposed to change the future land use designations on 10.00 acres from Community Facilities (CF) to High Density (H).

The analysis has demonstrated that the maximum intensity of the proposed land use designation generates less traffic than the maximum intensity of the existing land use designation. With construction of a direct sidewalk connection along Wellington Green Drive to Forest Hill Boulevard (as recommended for the master plan 2024-0001-MP), the proposed FLUA is in compliance with the level of service standards of the Mobility Element of the Village's Comprehensive Plan.

Please contact me by phone or at atrouman@pindertroutman.com if you need any additional information or have any questions.

Sincerely,



Andrea M. Troutman, P.E.
President

FUTURE LAND USE
TRAFFIC IMPACT ANALYSIS

Axis at Wellington Phase II
Wellington, FL

Prepared for:
WG 10Park LLC
Lake Worth Beach, FL

Prepared by:


Engineering & Planning, Inc.

1172 SW 30th Street, Suite 500
Palm City, FL 34990
(772) 286-8030

137005
October 2024
Revised August 2024
Revised May 2024
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CA 29013

Shaun G. MacKenzie P.E.
PE Number 61751

EXECUTIVE SUMMARY

A future land use amendment is proposed on 10.00 acres located at 2175 Wellington Green Drive in unincorporated Wellington, Florida (73-41-44-13-01-016-0000). The amendment proposes to change the future land use (FLU) from Community Facility (CF) to High Density (H).

The net change in long-term trip generation for the future land use amendment is as follows:

- -2,101 daily, -377 AM peak hour (-325 in/-52 out), and -149 PM peak hour (-6 in/-143 out) tips.

The net change in short-term trip generation of the future land use amendment is as follows:

- 785 daily, 78 AM peak hour (17 in/61 out), and 37 PM peak hour (20 in/17 out) trips.

The proposed change in future land use has no significant long-term transportation impact within the Village of Wellington. All significantly impact roadways in the short-term are projected to operate acceptably.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
TABLE OF CONTENTS	ii
LIST OF TABLES	iii
LIST OF FIGURES	iii
LIST OF EXHIBITS	iii
INTRODUCTION.....	1
FUTURE LAND USE CHANGE ANALYSIS.....	3
Existing Future Land Use.....	3
Proposed Future Land Use	3
TRAFFIC GENERATION	4
Rates and equations	4
Trip Generation – Long Term	4
Existing Use	4
Proposed Future Land Use	4
Net Impact	4
Internal Capture	4
Pass-by Trip Capture	5
Trip Generation – Short Term	5
Existing Use	5
Proposed Future Land Use	5
Net Impact	6
Internal Capture	6
Pass-by Trip Capture	6
TRAFFIC DISTRIBUTION AND ASSIGNMENT	7
ASSURED AND PROGRAMMED CONSTRUCTION.....	8
GROWTH RATE	8
LONG TERM ANALYSIS (2045)	8
SHORT TERM ANALYSIS (2029)	9
Test for LOS E Link Service Volumes.....	9
CONCLUSION	10
APPENDICES.....	11

LIST OF TABLES

Table 1. Future Land Use Change Summary 1
Table 2A. Trip Generation – Long Term Analysis 5
Table 2B. Trip Generation – Short Term Analysis 6
Table 3. Growth Rate Calculation 8

LIST OF FIGURES

Figure 1. Property Location Map 2
Figure 2. Traffic Assignment 7

LIST OF EXHIBITS

Exhibit 1A. Trip Generation – Long Term
Exhibit 1B. Trip Generation – Short Term
Exhibit 2A. Part 2– Peak Hour One-Way Link Analysis
Exhibit 2B. Part 2 – AM Peak Hour One-Way Link Analysis

INTRODUCTION

A future land use amendment is proposed on 10.00 acres located at at 2175 Wellington Green Drive in unincorporated Wellington, Florida (73-41-44-13-01-016-0000). The amendment proposes to change the future land use (FLU) from Community Facility (CF) to High Density (H) as shown in Table 1.

The purpose of this statement is to determine the total traffic volume that will be on each roadway link within the site radius of development influence. This statement will also identify which roadway links (if any) will exceed the adopted Level of Service volume for the subject links addressed within the project's radius of development influence. Figure 1 illustrates the property location.

Table 1. Future Land Use Change Summary

Property Size (Acres)	Existing Maximum FLU				Proposed Maximum FLU			
	Land Use	FAR	Maximum Intensity (SF)	ITE	Land Use	Maximum Density	Maximum Intensity (DUs)	ITE
10.00	Community Facility (CF)	0.35	152,460	730	High Density (H)	22 DU/AC	220	221

The existing property is currently utilized by three (3) soccer fields.

Figure 1. Property Location Map



FUTURE LAND USE CHANGE ANALYSIS

Existing Future Land Use

The existing FLU uses the most intense reasonable maximum development scenario based on the existing land development regulations. This scenario uses Community Facility use at a FAR of 0.35. Therefore, based on the 10.00 acre parcel, the maximum expected intensity with respect to traffic is 152,460 square feet calculated as follows:

Community Facility: $10.00 \text{ Acres} \times 0.35 \times 43,560 \text{ SF/Acre} = 152,460 \text{ SF}$

Proposed Future Land Use

The proposed FLU for the property is 10.00 acres of High Density. Based on the Wellington Comprehensive Plan, the High Density land use permits 22 homes per acre of land. Therefore, the maximum proposed future land use is 220 single family homes (DUs) calculated as follows:

High Density: $10.00 \text{ Acres} \times 22 \text{ DUs per Acre} = 220 \text{ DUs}$

TRAFFIC GENERATION

Rates and equations

The study uses trip generation rates for Multi-Family Mid-Rise Housing (ITE Land Use 221), Government Office (ITE Land Use 730) and Soccer Complex (ITE Land Use 488) published in Palm Beach County Trip Generation Rates and the Institute of Transportation Engineer (ITE)'s report, *Trip Generation (11th Edition)*.

Trip Generation – Long Term

Existing Use

- 152,460 SF of Government Office (ITE Land Use 730)

The existing use generates the following net external trips:

- 3,100 daily, 458 AM peak hour (344 in/114 out), and 235 PM peak hour (58 in/177 out) trips.

Proposed Future Land Use

- 220 Multi-Family Mid-Rise Housing DUs (ITE Land Use 221)

The proposed FLU is expected to generate the following net proposed trips:

- 999 daily, 81 AM peak hour (19 in/62 out), and 86 PM peak hour (52 in/34 out) trips.

Net Impact

The difference between the maximum trip generation potential of the existing future land use and the proposed future land use was examined to determine the maximum (worst case/conservative) impact to the existing and future roadway network. Table 2A displays the resulting trip generation.

- -2,101 daily, -377 AM peak hour (-325 in/-52 out), and -149 PM peak hour (-6 in/-143 out) trips.

Internal Capture

This site contains no internal capture traffic.

Pass-by Trip Capture

The proposed pass-by capture is in accordance with the Palm Beach County pass-by rates for the respective uses.

Table 2A. Trip Generation – Long Term Analysis

Land Use	Intensity		Daily Trips	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Existing Use Traffic									
Government Office	152.460	1000 SF	3,444	509	382	127	261	65	196
Pass-By Traffic									
Government Office	10.0%		344	51	38	13	26	7	19
NET EXISTING TRIPS			3,100	458	344	114	235	58	177
Total Existing Driveway Volumes			3,444	509	382	127	261	65	196
Proposed Maximum Land Use Traffic									
Multifamily Mid-Rise Housing 4-10 story	220	DU	999	81	19	62	86	52	34
NET PROPOSED TRIPS			999	81	19	62	86	52	34
NET CHANGE IN TRIPS (FOR THE PURPOSES OF 2045 LAND USE CHANGE)			(2,101)	(377)	(325)	(52)	(149)	(6)	(143)
Note: Trip generation was calculated using the following data:									
				Pass-by Rate	AM Peak Hour		PM Peak Hour		
Land Use	ITE Code	Unit	Daily Rate		in/out	Rate	in/out	Equation	
Government Office	730	1000 SF	22.59	10%	75/25	3.34	25/75	1.71	
Multifamily Mid-Rise Housing 4-10 story	221	DU	4.54	0%	23/77	0.37	61/39	0.39	

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Trip Generation – Short Term

Existing Use

- 3 Fields of Soccer Complex (ITE Land Use 488)

The existing use generates the following net external trips:

- 214 daily, 3 AM peak hour (2 in/1 out), and 49 PM peak hour (32 in/17 out) trips.

Proposed Future Land Use

- 220 Multi-Family Mid-Rise Housing DUs (ITE Land Use 221)

The proposed FLU is expected to generate the following net proposed trips:

- 999 daily, 81 AM peak hour (19 in/62 out), and 86 PM peak hour (52 in/34 out) trips.

Net Impact

The difference between the maximum trip generation potential of the existing future land use and the proposed future land use was examined to determine the maximum (worst case/conservative) impact to the existing and future roadway network. Table 2B displays the resulting trip generation.

- 785 daily, 78 AM peak hour (17 in/61 out), and 37 PM peak hour (20 in/17 out) trips.

Internal Capture

This site contains no internal capture traffic.

Pass-by Trip Capture

The proposed pass-by capture is 0.

Table 2B. Trip Generation – Short Term Analysis

Land Use				Intensity	Daily Trips	AM Peak Hour			PM Peak Hour			
						Total	In	Out	Total	In	Out	
Existing Use Traffic												
Soccer Complex				3.000 Fields	214	3	2	1	49	32	17	
Proposed Maximum Land Use Traffic												
Multifamily Mid-Rise Housing 4-10 story				220 DU	999	81	19	62	86	52	34	
NET PROPOSED TRIPS					999	81	19	62	86	52	34	
NET CHANGE IN TRIPS					785	78	17	61	37	20	17	
Note: Trip generation was calculated using the following data:												
					Pass-by Rate	AM Peak Hour		PM Peak Hour				
Land Use	ITE Code	Unit	Daily Rate		Rate	in/out	Rate	in/out	Equation			
Soccer Complex	488	Fields	71.33		0%	61/39	0.99	66/34	16.43			
Multifamily Mid-Rise Housing 4-10 story	221	DU	4.54		0%	23/77	0.37	61/39	0.39			

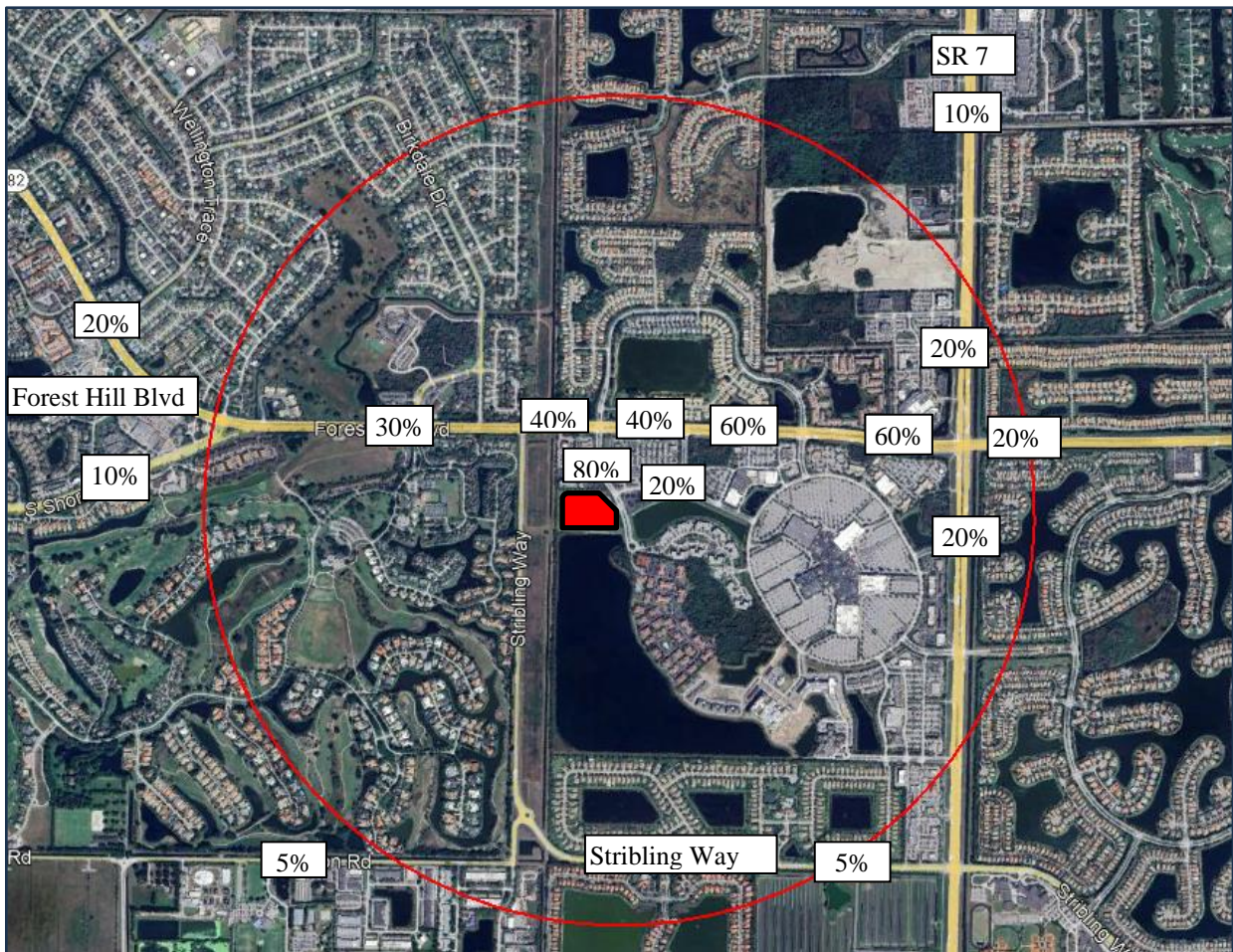
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TRAFFIC DISTRIBUTION AND ASSIGNMENT

Traffic distribution and assignment was determined using engineering judgment, trip lengths based on the uses and from a review of the roadway network. The property traffic assignment is shown in Figure 2. The overall distribution is summarized by general directions and is depicted below:

EAST	-	60 percent
WEST	-	40 percent

Figure 2. Traffic Assignment



ASSURED AND PROGRAMMED CONSTRUCTION

A review conducted of the Five-Year Plans of Palm Beach County and FDOT, as well as those improvements committed by the developers of projects in the area. No improvements are identified in the plans to add capacity within the study area.

GROWTH RATE

According to the requirements of the TPS Article 12 Chapter C.1.C.4.b., the existing traffic volumes were adjusted using factors determined by a review of the historic traffic count data published by FDOT. The study uses a 2.0 percent growth rate as shown in Table 3.

Table 3. Growth Rate Calculation

Road Name	Count Station	Segment	2018 AADT	2019 AADT	2020 AADT	2021 AADT	2022 AADT	Annual Absolute Growth	Growth Rate
Forest Hill Blvd	93-7087	Wellington Trc to South Shore Blvd	30,258	-	-	-	28,664	-399	-1.39%
	93-3407	South Shore Blvd to SR 7	49,836	-	-	-	53,987	1,038	1.92%
	93-0060	SR 7 to E of SR 7/441	38,500	39,500	-	-	38,500	-77	-0.20%
SR 7	93-0721	S of Foresthill Blvd	51,500	61,000	-	-	60,000	1,558	2.60%
	93-0037	S of SR 80/Southern Blvd	63,500	65,500	-	-	67,500	923	1.37%
Stribling Wy	93-7480	Pierson Rd to Forest Hill Blvd	13,259	-	-	-	13,303	11	0.08%
Pierson Rd	93-7525	S Shore Blvd to Stribling Way	4,743	-	-	-	4,238	-126	-2.98%
Weighted Average									1.10%
Growth Rate Used									2.00%

LONG TERM ANALYSIS (2045)

The net daily and peak hour impact of the change is less than 0 peak hour trips as a result of the proposed land use amendment from Community Facility to High Density. The proposed FLU amendment has no impact upon transportation infrastructure. Therefore, Long-Term Analysis is not necessary.

SHORT TERM ANALYSIS (2029)

According to the City's Land Development Regulations Section 9.4.2 B, Part II requires analysis of Wellington roadways where a project's traffic is significant. The total traffic in the peak hour on the link shall be compared to applicable thresholds in 9.4.2-D (LOS E Link Service Volumes) for Link Service Volumes and Peak Hour Directional Volume thresholds. Significant links are road segments impacted by project traffic that equal or exceed one percent of a roadway's service volume.

Test for LOS E Link Service Volumes

The project significantly impacts Forest Hill Boulevard from Olive Drive to State Road 7 in the AM peak hour as shown in Exhibit 2A. Therefore, the study analyzed Forest Hill Boulevard. The applied growth rate on the roads in the radius of development impact used the greater of one percent growth rate plus committed traffic or the historical growth.

The project related traffic and total traffic for the AM peak hour for one-way peak hour conditions in 2029 are shown in Exhibit 2B. The Peak Hour is projected to operate acceptably. Therefore, short-term analysis is acceptable.

CONCLUSION

A future land use amendment is proposed on 10.00 acres located at 2175 Wellington Green Drive in unincorporated Wellington, Florida (73-41-44-13-01-016-0000). The amendment proposes to change the future land use (FLU) from Community Facility (CF) to High Density (H).

The net change in long-term trip generation for the future land use amendment is as follows:

- -2,101 daily, -377 AM peak hour (-325 in/-52 out), and -149 PM peak hour (-6 in/-143 out) trips.

The net change in short-term trip generation of the future land use amendment is as follows:

- 785 daily, 78 AM peak hour (17 in/61 out), and 37 PM peak hour (20 in/17 out) trips.

The proposed change in future land use has no significant long-term transportation impact within the Village of Wellington. All significantly impacted roadways in the short-term are projected to operate acceptably.

APPENDICES

Exhibit 1A. Trip Generation – Long Term

Exhibit 1B. Trip Generation – Short Term

Exhibit 2A. Part 2 – Peak Hour One-Way Link Analysis

Exhibit 2B. Part 2 – AM Peak Hour One-Way Link Analysis

- A. Property ID Card
- B. PBC Trip Generation Rates
- C. Institute of Transportation Engineers' (ITE) report, Trip Generation (11th Edition)
- D. FDOT Historical AADT Volumes
- E. PBC TPS Committed Link Volume
- F. Village of Wellington Tables 9.4.2.C-9.4.2.D
- G. Property ID Card
- H. Palm Beach County 2023 Counts
- I. Wellington Comprehensive Plan
- J. Wellington Future Land Use Map
- K. Site plan
- L. Wellington Roadway Classification Map

EXHIBIT 1A
FLU TRIP GENERATION - MAXIMUM DEVELOPMENT INTENSITY - LONG TERM
AXIS AT WELLINGTON PHASE II

Land Use	Intensity		Daily Trips	AM Peak Hour			PM Peak Hour		
				Total	In	Out	Total	In	Out
Existing Use Traffic									
Government Office	152.460	1000 SF	3,444	509	382	127	261	65	196
Pass-By Traffic									
Government Office	10.0%		344	51	38	13	26	7	19
NET EXISTING TRIPS			3,100	458	344	114	235	58	177
Total Existing Driveway Volumes			3,444	509	382	127	261	65	196
Proposed Maximum Land Use Traffic									
Multifamily Mid-Rise Housing 4-10 story	220	DU	999	81	19	62	86	52	34
NET PROPOSED TRIPS			999	81	19	62	86	52	34
NET CHANGE IN TRIPS (FOR THE PURPOSES OF 2045 LAND USE CHANGE)			(2,101)	(377)	(325)	(52)	(149)	(6)	(143)
Note: Trip generation was calculated using the following data:									
Land Use	ITE Code	Unit	Daily Rate	Pass-by Rate	AM Peak Hour		PM Peak Hour		
					in/out	Rate	in/out	Equation	
Government Office	730	1000 SF	22.59	10%	75/25	3.34	25/75	1.71	
Multifamily Mid-Rise Housing 4-10 story	221	DU	4.54	0%	23/77	0.37	61/39	0.39	

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EXHIBIT 1B
FLU TRIP GENERATION - MAXIMUM DEVELOPMENT INTENSITY - SHORT TERM
AXIS AT WELLINGTON PHASE II

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Existing Use Traffic								
Soccer Complex	3.000 Fields	214	3	2	1	49	32	17
Proposed Maximum Land Use Traffic								
Multifamily Mid-Rise Housing 4-10 story	220 DU	999	81	19	62	86	52	34
NET PROPOSED TRIPS		999	81	19	62	86	52	34
NET CHANGE IN TRIPS		785	78	17	61	37	20	17

Note: Trip generation was calculated using the following data:

Land Use	ITE Code	Unit	Daily Rate	Pass-by Rate	AM Peak Hour		PM Peak Hour	
					in/out	Rate	in/out	Equation
Soccer Complex	488	Fields	71.33	0%	61/39	0.99	66/34	16.43
Multifamily Mid-Rise Housing 4-10 story	221	DU	4.54	0%	23/77	0.37	61/39	0.39

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**EXHIBIT 2A
FLU WELLINGTON
SHORT TERM HORIZON (PEAK HOUR ONE-WAY)(5-YEAR)(PART 2) ANALYSIS**

Roadway From	To	MR	Class	Existing		Committed		Percent Project Assignment	AM Peak Hour		PM Peak Hour		Project Significance				Significant Impact ???
				Number Of Lanes	LOS 'E' Capacity	Number Of Lanes	LOS 'E' Capacity		Project Trips		Project Trips		AM		PM		
									NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Stribling Wy																	
Forest Hill Blvd	Pierson Rd	W	1	2L	880	2L	880	10%	2	6	2	2	0.23%	0.68%	0.23%	0.23%	No
Pierson Rd	SR 7	W	1	2L	880	2L	880	5%	3	1	1	1	0.34%	0.11%	0.11%	0.11%	No
SR 7	Lyons Rd	W	1	2L	880	2L	880	5%	3	1	1	1	0.34%	0.11%	0.11%	0.11%	No
SR-7																	
Southern Blvd	Forest Hill Blvd	F	1	8LD	3,940	8LD	3,940	20%	12	3	3	4	0.30%	0.08%	0.08%	0.10%	No
Forest Hill Blvd	Stribling Wy	F	1	8LD	3,940	8LD	3,940	20%	3	12	4	3	0.08%	0.30%	0.10%	0.08%	No
Stribling Wy	Lake Worth Rd	F	1	8LD	3,940	8LD	3,940	10%	2	6	2	2	0.05%	0.15%	0.05%	0.05%	No
S Shore Blvd																	
Pierson Rd	Forest Hill Blvd	W	1	4LD	2,000	4LD	2,000	10%	6	2	2	2	0.30%	0.10%	0.10%	0.10%	No
Pierson Rd																	
S Shore Blvd	Stribling Wy	W	2	2L (NL)	640	2L (NL)	640	5%	1	3	1	1	0.16%	0.47%	0.16%	0.16%	No
Forest Hill Blvd																	
South Shore Blvd	Wellington Green Dr	W	1	6LD	3,020	6LD	3,020	40%	7	24	8	7	0.23%	0.79%	0.26%	0.23%	No
Wellington Green Dr	Olive Dr	W	1	6LD	3,020	6LD	3,020	40%	24	7	7	8	0.79%	0.23%	0.23%	0.26%	No
Olive Dr	SR 7	W	1	6LD	3,020	6LD	3,020	60%	37	10	10	12	1.23%	0.33%	0.33%	0.40%	Yes
SR 7	Lyons Rd	PBC	1	6LD	2,940	6LD	2,940	20%	12	3	3	4	0.41%	0.10%	0.10%	0.14%	No

Notes:

MR - Maintenance Responsibility

F - FDOT

PBC - Palm Beach County

W - Wellington

NL - No left-turn lane at signalized intersection

**EXHIBIT 2B
WELLINGTON
PART TWO - AM PEAK HOUR ONE-WAY LINK ANALYSIS**

Roadway From	To	Class	Existing		2029 Background Needed Lanes		Project Trips		2023 Existing PHPD Volume (1)		Count Year	Growth Factor	Committed Traffic (2)		Committed Traffic + 1% Growth Rate		Growth from Historic Growth Rate		2029 Background		2029 Total		Meets Test 1 Standard ?		v/c Ratio			
			Number Of Lanes	LOS 'D' Capacity	Number Of Lanes	LOS 'D' Capacity	NB/EB	SB/WB	NB/EB	SB/WB			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Forest Hill Blvd Olive Dr	SR 7	2	6LD	3,020	6LD	3,020	37	10	1,993	1,599	2,023	2.00%	213	154	336	252	251	202	2,329	1,851	2,366	1,861	Yes	Yes	78%	62%		

1. Obtained from PBC Historic Traffic Counts (Station ID 3407)
2. Committed traffic obtained from Palm Beach County Active TPS Projects

Palm Beach County Trip Generation Rates

(Must be used with traffic studies submitted to the County on or after 9/1/2022. However, immediate use is highly recommended)

Gr	Landuse	ITE Code	Unit	Daily Rate/Equation	Pass-By %	AM Peak Hour		PM Peak Hour	
						In/Out	Rate/Equation	In/Out	Rate/Equation
Industrial	General Light Industrial	110	1000 S.F.	4.87	10%	88/12	0.74	14/86	0.65
	Manufacturing	140	1000 S.F.	4.75	10%	76/24	0.68	31/69	0.74
	Warehouse	150	1000 S.F.	1.71	10%	77/23	0.17	28/72	0.18
	Mini-Warehouse/SS	151	1000 S.F.	1.45	10%	59/41	0.09	47/53	0.15
	HCF Center Warehouse - Non Sort	155	1000 S.F.	1.81	10%	81/19	0.15	39/61	0.16
Residential	Single Family Detached	210	Dwelling Unit	10	0%	26/74	0.7	63/37	0.94
	Multifamily Low-Rise Housing upto 3 story (Apartment/Condo/TH)	220	Dwelling Unit	6.74	0%	24/76	0.4	63/37	0.51
	Multifamily Mid-Rise Housing 4-10 story (Apartment/Condo/TH)	221	Dwelling Unit	4.54	0%	23/77	0.37	61/39	0.39
	55+ SF Detached	251	Dwelling Unit	4.31	0%	33/67	0.24	61/39	0.30
	55+ SF Attached	252	Dwelling Unit	3.24	0%	34/66	0.2	56/44	0.25
	Congregate Care Facility	253	Dwelling Unit	2.21	0%	58/42	0.08	49/51	0.18
	Assisted Living Facility	254	Beds	2.6	0%	60/40	0.18	39/61	0.24
Ldg	Hotel	310	Rooms	7.99	10%	56/44	0.46	51/49	0.59
Rec	Golf Course	430	Holes	30.38	5%	79/21	1.76	53/47	2.91
	Health/Fitness Club	492	1000 S.F.	32.93	5%	51/49	1.31	57/43	3.45
Institutional	Elementary School	520	Students	2.27	0%	54/46	0.74	46/54	0.16
	Middle/Junior School	522	Students	2.1	0%	54/46	0.67	48/52	0.15
	High School	525	Students	1.94	0%	68/32	0.52	48/52	0.14
	Private School (K-8)	530	Students	3.17 ^a	0%	56/44	1.01	46/54	0.26
	Private School (K-12)	532	Students	2.48	0%	63/37	0.79	43/57	0.17
	Church/Synagogue ^b	560	1000 S.F.	7.6	5%	62/38	0.32	44/56	0.49
	Day Care	565	Students	4.09	50%	53/47	0.78	47/53	0.79
	Library	590	1000 S.F.	72.05	10%	71/29	1	48/52	8.16
Med	Hospital	610	1000 S.F.	10.77	10%	67/33	0.82	35/65	0.86
	Nursing Home	620	Beds	3.06	10%	72/28	0.14	33/67	0.14
Office	General Office (10k-250k SF GFA) ^h	710	1000 S.F.	10.84	10%	88/12	1.52	17/83	1.44
	General Office (>250k SF GFA) ^h	710	1000 S.F.	$\ln(T) = 0.87 \ln(X) + 3.05$	10%	88/12	$\ln(T) = 0.86 \ln(X) + 1.16$	17/83	1.44
	Small Office Building (<=10k SF GFA)	712	1000 S.F.	14.39	10%	82/18	1.67	34/66	2.16
	Medical Office (Stand-Alone)	720	1000 S.F.	$T=42.97(X)-108.01$	10%	79/21	3.10	30/70	3.93
	Medical Office (Near Hospital)	720	1000 S.F.	31.86	10%	81/19	2.68	25/75	2.84
	Government Office	730	1000 S.F.	22.59	10%	75/25	3.34	25/75	1.71

Palm Beach County Trip Generation Rates

(Must be used with traffic studies submitted to the County on or after 9/1/2022. However, immediate use is highly recommended)

Gr	Landuse	ITE Code	Unit	Daily Rate/Equation	Pass-By %	AM Peak Hour		PM Peak Hour	
						In/Out	Rate/Equation	In/Out	Rate/Equation
Retail	Nursery (Garden Center)	817	Acre	108.1	0%	50/50	2.82	50/50	8.06
	Nursery (Wholesale)	818	Acre	19.50	0%	50/50	0.23	50/50	0.36
	Landscape Services	PBC	Acre ^c	121.70	0%	40/60	34.4	58/42	15.1
	Shop Center (>150ksf)	820	1000 S.F.	37.01	24%	62/38	0.84	48/52	3.4
	Shop Plaza (40-150ksf) w/Sup Market	821	1000 S.F.	94.49	39%	62/38	3.53	48/52	9.03
	Shop Plaza (40-150ksf) w/out Sup Market	821	1000 S.F.	67.52	39%	62/38	1.73	49/51	5.19
	Strip Retail Plaza (<40ksf)	822	1000 S.F.	54.45	63%	60/40	2.36	50/50	6.59
	Automobile Sales (New)	840	1000 S.F.	27.84	15%	73/27	1.86	40/60	2.42
	Automobile Parts Sales	843	1000 S.F.	54.57	28%	55/45	2.51	48/52	4.9
	Tire Store	848	1000 S.F.	27.69	28%	64/36	2.61	43/57	3.75
Services	Supermarket	850	1000 S.F.	93.84	36%	59/41	2.86	50/50	8.95
	Pharmacy + DT	881	1000 S.F.	108.40	50%	52/48	3.74	50/50	10.25
	Drive-In Bank	912	1000 S.F.	100.35	47%	58/42	9.95	50/50	21.01
	Fine Dining Restaurant	931	1000 S.F.	83.84	44%	50/50	0.73	67/33	7.8
	High Turnover Sit-Down Rest.	932	1000 S.F.	107.2	43%	55/45	9.57	61/39	9.05
	Fast Food Restaurant w/o DT	933	1000 S.F.	450.49	45%	58/42	43.18	50/50	33.21
	Fast Food Restaurant + DT	934	1000 S.F.	467.48	49%	51/49	44.61	52/48	33.03
	Coffee/Donut Shop w/o DT	936	1000 S.F.	441.88 ^d	45%	51/49	93.08	50/50	32.29
	Coffee/Donut Shop + DT	937	1000 S.F.	533.57	49%	51/49	85.88	50/50	38.99
	Coffee/Donut Shop + DT w/No Seat	938	DT Lanes	179	49%	50/50	39.81	50/50	15.08
Gas Station w/Convenience Store ^e	FDOT	FP, 1000 S.F.	14.3*PM Trips	61%	50/50	Note f	50/50	12.3*FP+15.5*(X)	
Carwash (Automated) ^g	PBC	Lane	166.00	0%	50/50	11.97	50/50	13.65	

Footnotes

- a) Based on Daily to AM peak ratio for LUC 532 (Private School (K-12))
- b) Weekend peak hour rate = 10.36 per 1,000 s.f. with a 48/52 directional split
- c) Landscape Services acreage consists of overnight vehicle and equipment storage as well as areas (covered or uncovered) for chemicals, fertilizers, landscape materials (excluding plants) and other items needed for day-to-day operations. Not included are drive aisles, customer/employee parking, structures shared by nursery and landscape services, facilities that solely serve the onsite landscape activities or any nursery growing areas.
- d) Based on Daily to PM ratio for ITE Code 937 (Coffee Donut Shop + DT)
- e) FP=Fueling Position. Use both FP and Convenience Store size in estimating trips using the provided equation. Note that no internalization between the gas pumps and convenience store, as per ULDC Article 12, should be applied to estimate the net trips.
- f) Use PM rates
- g) Daily rate taken from PBC trip gen. study. Peak hour rates derived by applying peak to daily ratios for gas station to daily carwash rate from older ITE TGM. New PBC rate study underway.
- h) Based on PBC analysis of ITE TGM data plots

Modification History
3/2/2020: Added Landscape Services, modification history, edited formatting
7/25/2022: Updated with ITE TG Manual 11th ed information

Land Use: 488

Soccer Complex

Description

A soccer complex is an outdoor facility that is used for non-professional soccer games. It may consist of multiple fields. The size of each field within the land use may vary to accommodate games for different age groups. On-site amenities may include stadium seating, a fitness trail, an activities shelter, aquatic center, picnic grounds, basketball and tennis courts, and a playground. Public park (Land Use 411) is a related use.

Additional Data

Caution should be used when applying these data. Peaking at soccer complexes typically occurred in time periods shorter than 1 hour. These peaking periods may have durations of 10 to 15 minutes. To assist in the future analysis of this land use, it is important to collect driveway counts in 10-minute intervals.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1990s and the 2010s in California, Colorado, Hawaii, Indiana, New Jersey, and Washington.

Source Numbers

377, 519, 565, 722, 856, 908, 952, 956, 1004

Soccer Complex (488)

Vehicle Trip Ends vs: Fields
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 3

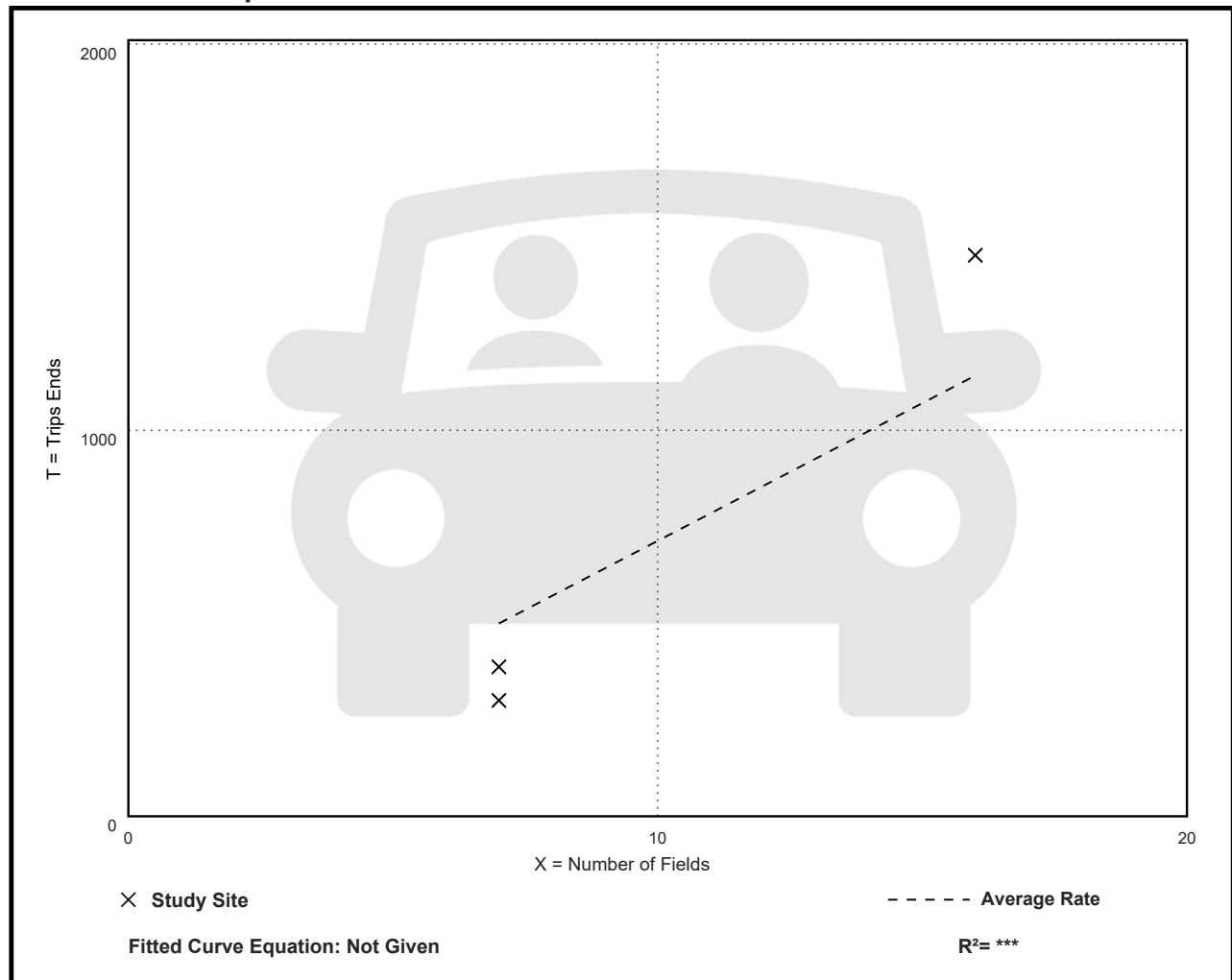
Avg. Num. of Fields: 10

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Field

Average Rate	Range of Rates	Standard Deviation
71.33	42.86 - 90.81	26.03

Data Plot and Equation



Soccer Complex (488)

Vehicle Trip Ends vs: Fields

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

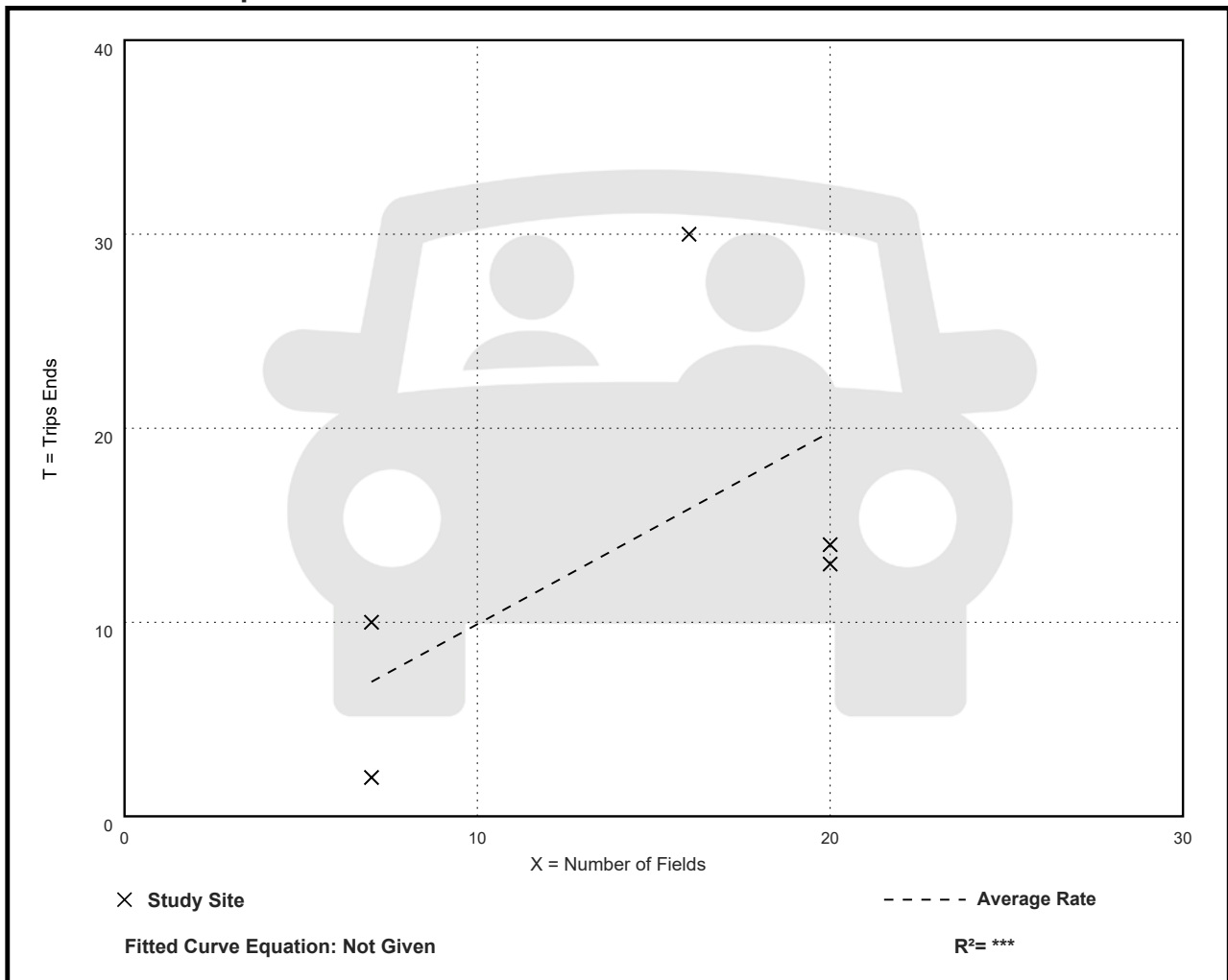
Avg. Num. of Fields: 14

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Field

Average Rate	Range of Rates	Standard Deviation
0.99	0.29 - 1.88	0.62

Data Plot and Equation



Soccer Complex (488)

Vehicle Trip Ends vs: Fields

On a: **Weekday,**

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

Avg. Num. of Fields: 14

Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per Field

Average Rate	Range of Rates	Standard Deviation
16.43	8.71 - 24.88	6.36

Data Plot and Equation

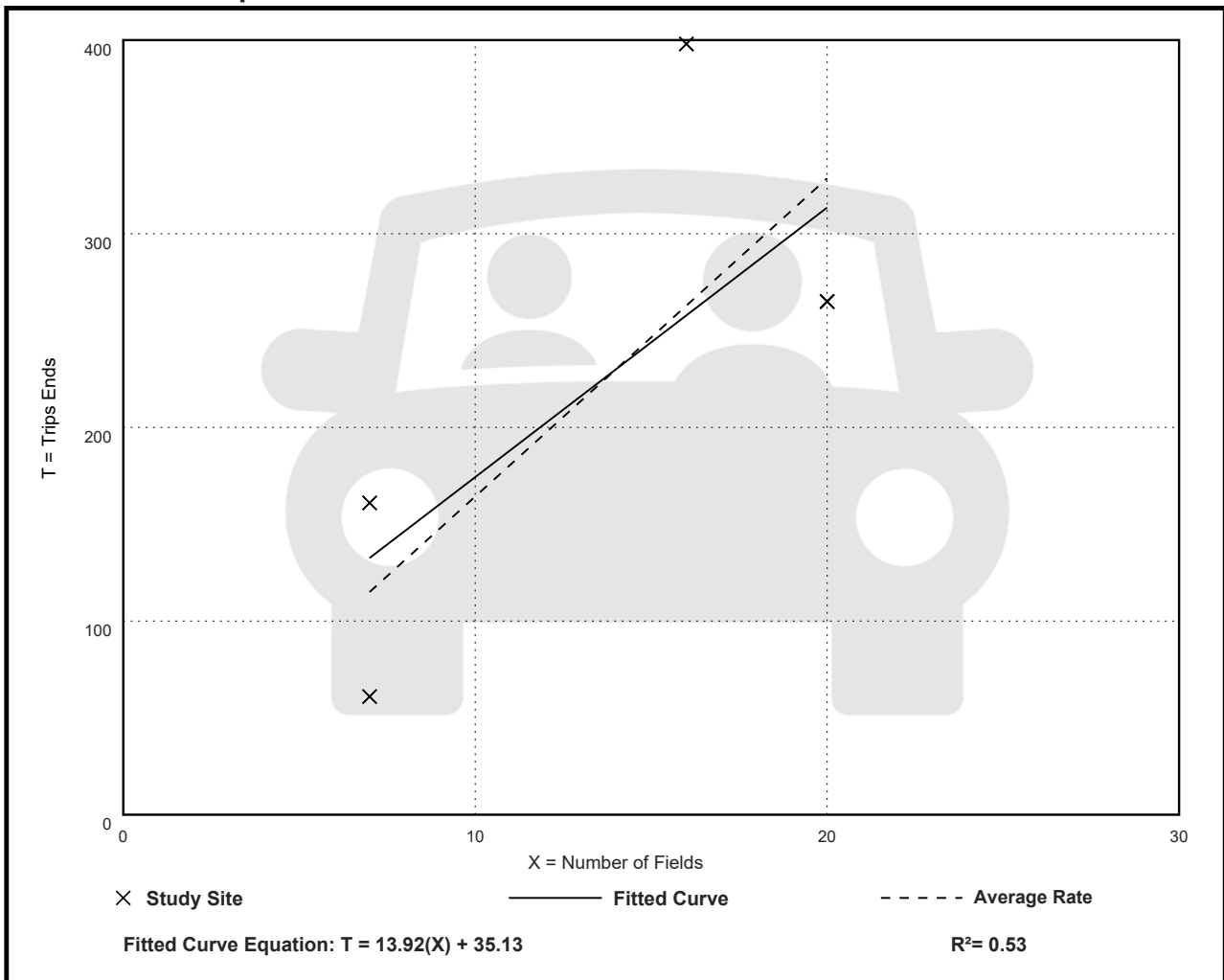


Exhibit 3A
Wellington Speed and Count Study
Traffic Volume and Growth - Weekday

Loc #	Road	From	To	Lanes	Daily Traffic Volumes			2022 AM Peak Hour ²		2022 PM Peak Hour ²	
					2018 ¹	2022 ²	4-Yr Growth Rate	NB/EB	SB/WB	NB/EB	SB/WB
1	Flying Cow Ranch Road	Southern Boulevard	1 Mile South	2L	1,708	1,782	1.07% /Year	51	84	83	87
2	Flying Cow Ranch Road	1 Mile South	Rustic Road	2L	N/A	1,784	/Year	50	84	77	75
3	Binks Forest Drive	Southern Boulevard	Greenview Shores Boulevard	4LD	13,181	13,373	0.36% /Year	749	575	589	600
4	Aero Club Drive	Binks Forest Drive	Greenbriar Boulevard	2L	5,817	4,098	-8.38% /Year	115	213	194	150
5	Greenbriar Boulevard	Aero Club Drive	Greenview Shores Boulevard	2L	6,301	2,999	-16.94% /Year	192	167	216	168
6	Greenview Shores Boulevard	Binks Forest Drive	Wellington Trace	4LD	13,212	13,082	-0.25% /Year	484	430	651	608
7	Greenview Shores Boulevard	Wellington Trace	South Shore Boulevard	4LD	19,343	16,708	-3.59% /Year	641	824	722	731
8	Wellington Trace	Greenview Shores Boulevard	Big Blue Trace	4LD	24,104	23,493	-0.64% /Year	875	788	963	996
9	Wellington Trace	Big Blue Trace	Forest Hill Boulevard (North)	4LD	21,732	22,600	0.98% /Year	963	783	885	1,027
10	Wellington Trace	Forest Hill Boulevard (North)	Forest Hill Boulevard (South)	2L	6,033	5,900	-0.56% /Year	343	224	306	271
11	Paddock Drive	Greenview Shores Boulevard	Big Blue Trace	2L	2,438	2,667	2.27% /Year	120	110	187	131
12	Big Blue Trace	Southern Boulevard	Wellington Trace	2L/4L	11,465	8,443	-7.36% /Year	436	390	336	394
13	Big Blue Trace	Wellington Trace	South Shore Boulevard	2L	11,760	11,565	-0.42% /Year	271	506	481	480
14	Forest Hill Boulevard	Southern Boulevard	Wellington Trace	6LD	39,502	47,545	4.74% /Year	1,441	2,368	1,768	2,220
15	Forest Hill Boulevard ³	Wellington Trace	South Shore Boulevard	4LD/6LD	30,258	28,664	-1.34% /Year	930	1,215	1,248	1,275
16	Forest Hill Boulevard	South Shore Boulevard	SR 7	6LD	49,836	53,987	2.02% /Year	2,546	1,622	2,330	2,202
17	Birkdale Drive	Forest Hill Boulevard	Wellington Trace	2L	4,229	3,303	-5.99% /Year	113	211	239	98
18	Stribling Way	Forest Hill Boulevard	Pierson Road	2L	13,259	13,303	0.08% /Year	265	799	610	651
19	Stribling Way	Pierson Road	SR 7	2L	16,078	14,618	-2.35% /Year	737	443	743	670
20	Stribling Way	SR 7	Lyons Road	2L	5,613	6,315	2.99% /Year	467	437	408	250
21	South Shore Boulevard ³	Forest Hill Boulevard	Greenview Shores Boulevard	4LD	26,302	14,057	-14.50% /Year	639	716	627	501
22	South Shore Boulevard	Greenview Shores Boulevard	Pierson Road	4LD	23,417	19,837	-4.06% /Year	528	875	986	688
23	South Shore Boulevard	Pierson Road	Lake Worth Road	2LD	18,764	16,444	-3.25% /Year	486	733	816	598
24	40th Street South	Palm Beach Point Boulevard	Lake Worth Road	2L	N/A	2,187	/Year	39	94	131	78
25	Lake Worth Road	South Shore Boulevard	120th Avenue South	2L	12,936	11,164	-3.62% /Year	469	398	457	557
26	Pierson Road	South Shore Boulevard	Stribling Way	2L	4,743	4,238	-2.78% /Year	132	141	209	214
27	Pierson Road	Ousley Farms Road	South Shore Boulevard	2L	10,154	4,796	-17.10% /Year	166	245	214	165
28	South Shore Boulevard	Lake Worth Road	50th Street South	2L	5,202	4,600	-3.03% /Year	106	230	242	138
29	120th Avenue South	Pierson Road	Lake Worth Road	2L	1,056	4,001	39.52% /Year	149	114	274	168
30	120th Avenue South	Lake Worth Road	50th Street South	2L	3,461	1,800	-15.08% /Year	53	75	75	79
31	50th Street South	130th Avenue South	120th Avenue South	2L	3,523	4,029	3.41% /Year	146	159	199	146
32	Little Ranches Trail	Southern Boulevard	Acme Road	2L	2,381	2,304	-0.82% /Year	92	76	88	87

¹ Source: Wellington Traffic Counts and Analysis, April 11, 2018.

² See Appendix A for count data.

³ Locations 15 and 21 were recounted in June and adjusted based on peak factors from control Location #9. See Appendix A. Use with caution.

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 0037 - SR 7/US 441 - S OF SR 80/SOUTHERN BLVD C-13 (COUNTY LINK: 3408)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	67500	C	N 34500		S 33000	9.00	57.90	5.70
2021	66000	C	N 34000		S 32000	9.00	53.20	5.70
2020	63500	F	N 32500		S 31000	9.00	54.00	3.50
2019	65500	C	N 33500		S 32000	9.00	54.90	3.50
2018	63500	C	N 31500		S 32000	9.00	59.90	3.50
2017	66500	C	N 33500		S 33000	9.00	59.50	4.90
2016	65500	C	N 33000		S 32500	9.00	59.80	4.90
2015	62000	C	N 32000		S 30000	9.00	60.30	4.90
2014	64000	C	N 32000		S 32000	9.00	60.30	4.10
2013	56500	C	N 29000		S 27500	9.00	60.60	5.40
2012	53000	C	N 27500		S 25500	9.00	60.60	5.40
2011	52000	C	N 26000		S 26000	9.00	60.90	5.90
2010	48500	C	N 24500		S 24000	9.73	61.28	9.60
2009	55000	C	N 27500		S 27500	9.88	61.89	9.60
2008	50500	C	N 27000		S 23500	10.36	61.44	9.60
2007	45000	C	N 22000		S 23000	10.30	61.43	17.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 0060 - SR 822 / FORESTHILL BLVD - E OF SR 7/441 (COUNTY LINK: 3423)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	38500	C	E 18500		W 20000	9.00	57.90	3.50
2021	38000	C	E 18500		W 19500	9.00	53.20	4.90
2020	38500	F	E 19500		W 19000	9.00	54.00	4.90
2019	39500	C	E 20000		W 19500	9.00	54.90	4.90
2018	38500	C	E 17500		W 21000	9.00	59.90	3.40
2017	38500	C	E 19000		W 19500	9.00	59.50	3.40
2016	39500	C	E 20000		W 19500	9.00	59.80	3.40
2015	38000	C	E 19500		W 18500	9.00	60.30	3.60
2014	36000	C	E 18000		W 18000	9.00	60.30	2.30
2013	37000	C	E 18500		W 18500	9.00	60.60	3.60
2012	34000	C	E 17000		W 17000	9.00	60.60	3.60
2011	31000	C	E 15500		W 15500	9.00	60.90	9.40
2010	35000	F	E 17000		W 18000	9.73	61.28	4.30
2009	34000	C	E 16500		W 17500	9.88	61.89	4.30
2008	38500	C	E 19000		W 19500	10.36	61.44	4.30
2007	33000	C	E 16000		W 17000	10.30	61.43	19.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 0721 - SR 7/441 - S OF FORESTHILL BLVD (COUNTY LINK: 4102)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	60000	C	N 29500		S 30500	9.00	57.90	5.20
2021	52500	C	N 25000		S 27500	9.00	53.20	3.50
2020	59000	F	N 28500		S 30500	9.00	54.00	3.50
2019	61000	C	N 29500		S 31500	9.00	54.90	3.50
2018	51500	C	N 25000		S 26500	9.00	59.90	5.20
2017	56000	C	N 27000		S 29000	9.00	59.50	5.20
2016	58000	C	N 29500		S 28500	9.00	59.80	5.20
2015	56000	C	N 27500		S 28500	9.00	60.30	5.50
2014	47000	C	N 23000		S 24000	9.00	60.30	3.30
2013	51000	C	N 25000		S 26000	9.00	60.60	6.50
2012	47000	C	N 23500		S 23500	9.00	60.60	5.40
2011	44000	C	N 22000		S 22000	9.00	60.90	5.90
2010	41000	C	N 19000		S 22000	9.73	61.28	6.30
2009	45500	C	N 22500		S 23000	9.88	61.89	6.30
2008	47000	C	N 22500		S 24500	10.36	61.44	6.30
2007	44500	C	N 22000		S 22500	10.30	61.43	15.30

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 7086 - FOREST HILL BLVD FROM SOUTH SHORE BLVD TO SR 7 .(COUNTY LINK: 3407)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	44500	C	E 21500		W 23000	9.00	59.60	8.30
2021	47500	R	E 23000		W 24500	9.00	58.70	4.90
2020	47500	T	E 23000		W 24500	9.00	58.20	6.30
2019	48500	S	E 23500		W 25000	9.00	62.10	4.50
2018	46500	F	E 22500		W 24000	9.00	59.50	4.50
2017	44000	C	E 21500		W 22500	9.00	59.40	4.60
2016	44000	C	E 21500		W 22500	9.00	60.40	4.00
2015	44500	C	E 21500		W 23000	9.00	61.20	1.70
2014	45500	C	E 22500		W 23000	9.00	57.80	2.70
2013	40000	F	E 19500		W 20500	9.00	57.80	3.60
2012	41000	C	E 20000		W 21000	9.00	57.50	4.20
2011	39500	C	E 19500		W 20000	9.00	55.70	3.30
2010	43500	C	E 21500		W 22000	9.63	53.63	4.40

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 7087 - FOREST HILL BLVD FROM WELLINGTON TRC TO SOUTH SHORE BLVD (CNTY LINK: 3430)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	33000	C	E 16000		W 17000	9.00	59.60	8.30
2021	33000	V	E 17000		W 16000	9.00	58.70	4.90
2020	33000	R	E 17000		W 16000	9.00	58.20	6.30
2019	33000	T	E 17000		W 16000	9.00	62.10	4.50
2018	32000	S	E 16500		W 15500	9.00	59.50	4.50
2017	30000	F	E 15500		W 14500	9.00	59.40	4.60
2016	28000	C	E 14500		W 13500	9.00	60.40	4.00
2015	27000	C	E 14000		W 13000	9.00	61.20	1.70
2014	28000	C	E 15000		W 13000	9.00	57.80	2.70
2013	25000	F	E 12500		W 12500	9.00	57.80	3.60
2012	25000	C	E 12500		W 12500	9.00	57.50	4.20
2011	25000	C	E 12500		W 12500	9.00	55.70	3.30
2010	27500	C	E 14000		W 13500	9.63	53.63	4.40

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Input Data

ROAD NAME: Forest Hill Blvd	STATION: 3407	Report Created
CURRENT YEAR: 2023	FROM: Stribling Way	7/17/2024
ANALYSIS YEAR: 2029	TO: MIDPOINT	
GROWTH RATE: 0.35%	COUNT DATE: 3/6/2023	
	PSF: 1	

Link Analysis

Time Period Direction	AM			PM		
	2-way	NB/EB	SB/WB	2-way	NB/EB	SB/WB
Existing Volume	3578	1993	1599	3854	1800	2054
Peak Volume	3578	1993	1599	3854	1800	2054
Diversion(%)	0	0	0	0	0	0
Volume after Diversion	3578	1993	1599	3854	1800	2054

Committed Developments Type % Complete

Palms West Medical	3	1	2	3	2	1	NR	92%
Lotis of Wellington	53	29	24	106	55	52	NR	0%
Wellington Regional Medical Center	54	16	38	63	43	21	NR	80%
Southern Center	1	0	0	3	1	2	NR	90%
278 ProfessionalWay	1	0	1	2	1	1	NR	65%
Cheddars Cafe	5	3	2	6	2	3	NR	75%
Wellington North	1	20	-18	22	-12	35	NR	0%
Wellington Charter School	45	25	20	12	6	7	NR	65%
Flying Cow Ranch	0	0	0	0	0	0	Res	0%
Islepointe	0	0	0	0	0	0	Res	0%
Village Royale Charter School	182	111	71	38	17	22	NR	0%
Lotis II	27	10	17	34	19	14	Res	0%
Total Committed Developments	372	215	157	289	134	158		
Total Committed Residential	27	10	17	34	19	14		
Total Committed Non-Residential	345	205	140	255	115	144		
Double Count Reduction	7	3	4	9	5	4		

Total Discounted Committed Developments	365	212	153	280	129	154
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Historical Growth	76	43	34	82	38	44
Comm Dev+1% Growth	585	335	251	517	240	280
Growth Volume Used	585	335	251	517	240	280
Total Volume	4163	2328	1850	4371	2040	2334

Lanes	6LD					
LOS D Capacity	4880	2680	2680	4880	2680	2680
Link Meets Test 1?	YES	YES	YES	YES	YES	YES
LOS E Capacity	5150	2830	2830	5150	2830	2830
Link Meets Test 2?	YES	YES	YES	YES	YES	YES

Input Data

ROAD NAME: Forest Hill Blvd STATION: 3407
 CURRENT YEAR: 2023 FROM: MIDPOINT
 ANALYSIS YEAR: 2029 TO: S State Road 7
 GROWTH RATE: 0.35% COUNT DATE: 3/6/2023
 PSF: 1

Report Created
 7/17/2024

Link Analysis

Time Period	AM			PM		
	2-way	NB/EB	SB/WB	2-way	NB/EB	SB/WB
Existing Volume	3578	1993	1599	3854	1800	2054
Peak Volume	3578	1993	1599	3854	1800	2054
Diversion(%)	0	0	0	0	0	0
Volume after Diversion	3578	1993	1599	3854	1800	2054

Committed Developments Type % Complete

Palms West Medical	3	1	2	3	2	1	NR	92%
Lotis of Wellington	53	29	24	106	55	52	NR	0%
Wellington Regional Medical Center	56	17	39	66	44	22	NR	80%
Southern Center	1	0	0	3	1	2	NR	90%
278 ProfessionalWay	1	0	1	2	1	1	NR	65%
Cheddars Cafe	5	3	2	6	2	3	NR	75%
Wellington North	1	20	-18	22	-12	35	NR	0%
Wellington Charter School	45	25	20	12	6	7	NR	65%
Flying Cow Ranch	0	0	0	0	0	0	Res	0%
Islepointe	0	0	0	0	0	0	Res	0%
Village Royale Charter School	182	111	71	38	17	22	NR	0%
Lotis II	27	10	17	34	19	14	Res	0%
Total Committed Developments	374	216	158	292	135	159		
Total Committed Residential	27	10	17	34	19	14		
Total Committed Non-Residential	347	206	141	258	116	145		
Double Count Reduction	7	3	4	9	5	4		

Total Discounted Committed Developments 367 213 154 283 130 155

Historical Growth	76	43	34	82	38	44
Comm Dev+1% Growth	587	336	252	520	241	281
Growth Volume Used	587	336	252	520	241	281
Total Volume	4165	2329	1851	4374	2041	2335

Lanes	6LD					
LOS D Capacity	4880	2680	2680	4880	2680	2680
Link Meets Test 1?	YES	YES	YES	YES	YES	YES
LOS E Capacity	5150	2830	2830	5150	2830	2830
Link Meets Test 2?	YES	YES	YES	YES	YES	YES

Note: The delay identifies seconds of delay greater than 55.0 and less than or equal to 80.0.

Table 9.4.2-C: LOS D Link Service Volumes

Facility Type		ADT		Peak Hour Directional	
		Class I	Class II	Class I	Class II
2 lanes undivided ⁽¹⁾	2L	17,700	14,800	880	750
2 lanes divided	2LD	18,600	15,500	920	790
4 lanes undivided ⁽¹⁾	4L	37,800	30,800	1,900	1,550
4 lanes divided	4LD	39,800	32,400	2,000	1,630
5 lanes two-way	5L	39,800	32,400	2,000	1,630
6 lanes divided	6LD	59,900	50,000	3,020	2,520
8 lanes divided	8LD	80,100	67,300	4,040	3,390

Notes:

Based on the 2012 FDOT Quality/LOS Handbook.

Class I - Roadways with 40 mph or higher posted speed limits.

Class II - Roadways with 35 mph or lower posted speed limits.

If heavy vehicle percentages for a facility are greater than 10 percent as determined by the Wellington Engineer then service volumes may be subject to a corresponding reduction. ⁽¹⁾

Service volumes for undivided roadways assume exclusive left turn lanes are provided at signalized intersections. If there are no left turn lanes reduce these values by 20 percent.

Table 9.4.2-D: LOS E Link Service Volumes

Facility Type		ADT		Peak Hour Directional	
		Class I	Class II	Class I	Class II
2 lanes undivided ⁽¹⁾	2L	17,700	15,600	880	800
2 lanes divided	2LD	18,600	16,400	920	840
4 lanes undivided ⁽¹⁾	4L	37,800	32,100	1,900	1,610
4 lanes divided	4LD	39,800	33,800	2,000	1,700
5 lanes two-way	5L	39,800	33,800	2,000	1,700
6 lanes divided	6LD	59,900	50,900	3,020	2560
8 lanes divided	8LD	80,100	68,100	4,040	3,420

Notes:

Based on the 2012 FDOT Quality/LOS Handbook.

Class I - Roadways with 40 mph or higher posted speed limits.

Class II - Roadways with 35 mph or lower posted speed limits.

If heavy vehicle percentages for facility are greater than 10 percent as determined by the Wellington Engineer then service volumes may be subject to a corresponding reduction. ⁽¹⁾

Service volumes for undivided roadways assume exclusive left turn lanes are provided at signalized intersections. If there are no left turn lanes reduce these values by 20 percent.

Table 9.4.2-E: LOS D Speed Thresholds

Urban Street Class	I	II	III
Range of Free Flow Speeds (FFS)	55 to 45 miles per hour	45 to 35 miles per hour	35 to 30 miles per hour
Typical FFS	50 miles per hour	40 miles per hour	35 miles per hour

Property Detail
 Location Address : 2175 WELLINGTON GREEN DR
 Municipality : WELLINGTON
 Parcel Control Number : 73-41-44-13-01-016-0000
 Subdivision : WELLINGTON GREEN
 Official Records Book/Page : 12830 / 751
 Sale Date : JUL-2001
 Legal Description : WELLINGTON GREEN PARK TR

Owner Information
Owner(s)
 WELLINGTON VILLAGE OF
Mailing Address
 12300 FOREST HILL BLVD
 WELLINGTON FL 33414 5785

Sales Information

Sales Date	Price	OR Book/Page	Sale Type	Owner
JUL-2001	\$10	12830 / 00751	WARRANTY DEED	WELLINGTON VILLAGE OF

Exemption Information
Applicant/Owner(s)

Year
2024

Property Information
 Number of Units :
 *Total Square Feet : 0
 Acres : 10.0004
 Property Use Code : 8900—MUNICIPAL
 Zoning : CF—COMMUNITY FACILITIES (73-WELLINGTON)

Appraisals

	2023	2022	2021
Improvement Value	\$102,485	\$105,016	\$87,465
Land Value	\$2,251,090	\$2,144,086	\$1,837,574
Total Market Value	\$2,353,575	\$2,249,102	\$1,925,039

Assessed and Taxable Values

	2023	2022	2021
Assessed Value	\$2,329,297	\$2,117,543	\$1,925,039
Exemption Amount	\$2,329,297	\$2,117,543	\$1,925,039
Taxable Value	\$0	\$0	\$0

Taxes

	2023	2022	2021
AD VALOREM	\$0	\$0	\$0
NON AD VALOREM	\$0	\$0	\$0
TOTAL TAX	\$0	\$0	\$0

STN#	ROAD	FROM	TO	LANES	HISTORICAL DAILY TRAFFIC VOLUMES					2023 DAILY		DIR LOS STD	AM PEAK HOUR			PM PEAK HOUR		
					2018	2019	2020	2021	2022	VOL	DATE		2-WAY	NB/EB	SB/WB	2-WAY	NB/EB	SB/WB
4800	DIXIE HWY	10th Ave N	Lake/Lucerne	4	22218	23829		23099		22885	12/7/2022	1680	1481	825	677	1798	971	837
1219	DONALD ROSS RD	I-95	Parkside Dr	6D		41340	43576	38740	39873	42541	1/18/2023	2680	3854	2319	1567	3859	1773	2091
1211	DONALD ROSS RD	Central Blvd	SR 811	6D	32453	34155	33386	34401	34010	32824	1/10/2023	2940	2836	1923	1088	2941	1213	1766
1805	DONALD ROSS RD	SR 811	Prosperity Farms Rd	6D	31854	32601	31257	28227	28916	31947	1/10/2023	2940	2783	1719	1115	2833	1140	1714
3638	DREXEL RD	Okeechobee Bl	Belvedere Rd	2	10698	10822		10898	12008	12011	3/13/2023	880	963	529	448	1049	512	553
2304	ELLISON-WILSON RD	Donald Ross Rd	Universe Blvd	2	6845	6305	6978	4851		7102	1/10/2023	880	843	232	611	914	625	295
2844	ELLISON-WILSON RD	Universe Blvd	PGA Blvd	2	10985	10864		8325	10616	10632	2/6/2023	880	1077	676	401	1050	410	640
3661	ELMHURST RD	Haverhill Rd	Military Tr	2	8716	8478		8121	9103	9493	3/6/2023	880	675	446	237	851	390	470
4826	FEDERAL HWY	Miner Rd	Gateway Blvd	4D	17405	17606	17349	15629		16907	12/7/2022	1960	1349	488	862	1543	896	648
5824	FEDERAL HWY	NE 6th Ave	23rd Ave	4D	26919	25099	25281	24887	25048	24875	2/21/2023	1960	1826	657	1182	2018	1248	891
5838	FEDERAL HWY	Lowson Blvd	Linton Blvd	4D	35268	33073	32404	27747		32329	2/1/2023	1770	2012	959	1153	2628	1445	1197
5663	FLAVOR PICT RD	Hagen Ranch Rd	Jog Rd	2	7559	7643		7874	8042	8959	3/28/2023	880	665	389	289	754	371	400
5654	FLAVOR PICT RD	Jog Rd	Military Tr	2	8472	9967	10379	9737	10145	12521	2/21/2023	880	889	436	477	997	414	584
4212	FLORIDA MANGO RD	Forest Hill Blvd	10th Ave N	2	11389	11464		10848				880						
3407	FOREST HILL BLVD	South Shore Blvd	SR 7	6D	50083	46754	47391	43665	48135	47895	3/6/2023	2680	3578	1993	1599	3854	1800	2054
3667	FOREST HILL BLVD	Sherwood Forest Blvd	Haverhill Rd	6D	40627	41992		38096	40922	42545	1/25/2023	2680	3138	1933	1252	3297	1455	1893
3629	FOREST HILL BLVD	Kirk Rd	Congress Ave	6D	45722	47705				43988	3/13/2023	2680	3111	1849	1360	3001	1344	1742
3841	FOREST HILL BLVD	Dixie Hwy	Olive Ave	2	5307	5396	5306	4987		5995	3/15/2023	810	517	247	270	449	202	298



**Table LU&CD 1-1
Land Use Designations: Density and Intensity**

Land Use Type	Land Use	Residential Density (max du/ac)		Intensity (max FAR)		Reinvestment Bonus Density**
		Standard	Bonus*	Standard	Bonus**	
Residential						
Low Density	A	0.1	--	--	--	N/A
	B	0.1	1	--	--	N/A
	C	1	3	--	--	N/A
Medium Density	D	2	5	--	--	10
	E	3	8	--	--	16
	F	5	12	--	--	24
High Density	G	5	18	--	--	30
	H	5	22	--	--	30
Commercial						
	Commercial (C)	--	--	0.4	0.8	N/A
	Equestrian Commercial Recreation (ECR)	--	--	0.1	--	N/A
	Open Space Recreation (OSR)	--	--	0.1	--	N/A
Mixed-Use						
	Mixed-Use (MU) < 60 AC	5	--	0.5	0.8	22
	Large-Scale Mixed-Use > 60 AC	6	--	0.4	0.8	N/A
Flex						
	Flex (FLX)	--	--	0.4	--	N/A
Community Facility						
	Community Facility (CF)	--	--	0.35	--	N/A
Parks & Preserves						
	Parks (PK)	--	--	0.25	--	N/A
	Conservation (CN)	--	--	0.05	--	N/A

Note:

*Residential Density bonus is planned unit development maximum density and may be limited by the Land Development Regulations or Wellington’s Council.

**Reinvestment bonus density is in addition to the PUD maximum density and may be limited by the Land Development Regulations or Wellington’s Council.

All parcels with previously issued development orders shall be governed by the specific densities within the respective development orders.



Policy LU&CD 1.6.4

Archaeological Resources Protection

Enforce the Archaeological Resources Protection regulations of the Land Development Regulations that establishes the designation, protection, and procedures of the potential local archaeological sites.

Objective LU&CD 1.7

Community Facilities Land Use

Provide a full range of local or regional community-based uses primarily intended to serve the public by appropriately applying the Community Facilities land use designation.

Policy LU&CD 1.7.1

Community Facilities Land Use

The Community Facilities (CF) land use designation permits a full range of community uses such as educational, child and adult care facilities, medical and accessory offices, governmental, religious, cemetery, civic, cultural, communications, public works, utility, and related uses. The maximum FAR is 0.35.

[This section is intentionally left blank.]



State Road 30

Southern Blvd

Legend

- Municipal Boundaries
- Equestrian Preserve Area

Residential

	A 1 d.u./10 acre	Low Density
	B 0.1 d.u./acre - 1.0 d.u./acre	
	C 1.0 d.u./acre - 3.0 d.u./acre	
	D 2.0 d.u./acre - 5.0 d.u./acre	Medium Density
	E 3.0 d.u./acre - 8.0 d.u./acre	
	F 5.0 d.u./acre - 12.0 d.u./acre	High Density
	G 5.0 d.u./acre - 18.0 d.u./acre	
	H 5.0 d.u./acre - 22.0 d.u./acre	

Commercial

- Commercial
- Equestrian Commercial Recreation
- Open Space Recreation

Mixed Use

- Mixed Use
- Regional Commercial / LSMU

Flex

- Flex

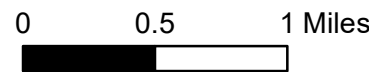
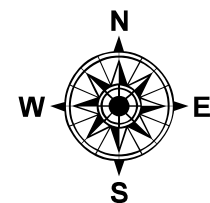
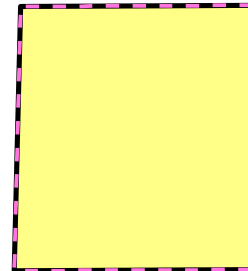
Community Facility

- Community Facilities

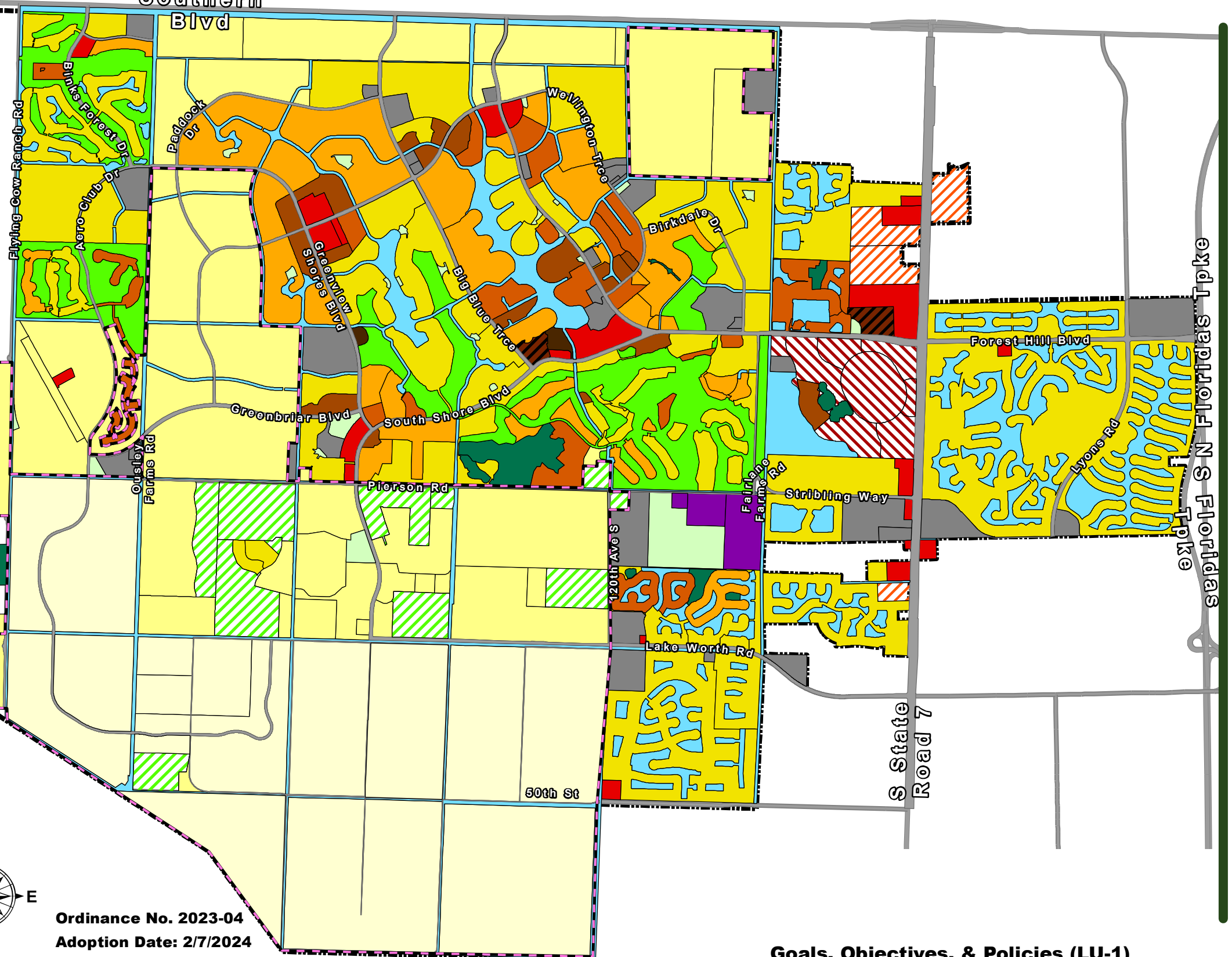
Parks & Preserves

- Park
- Conservation
- Major Water Bodies

Stormwater Treatment Area

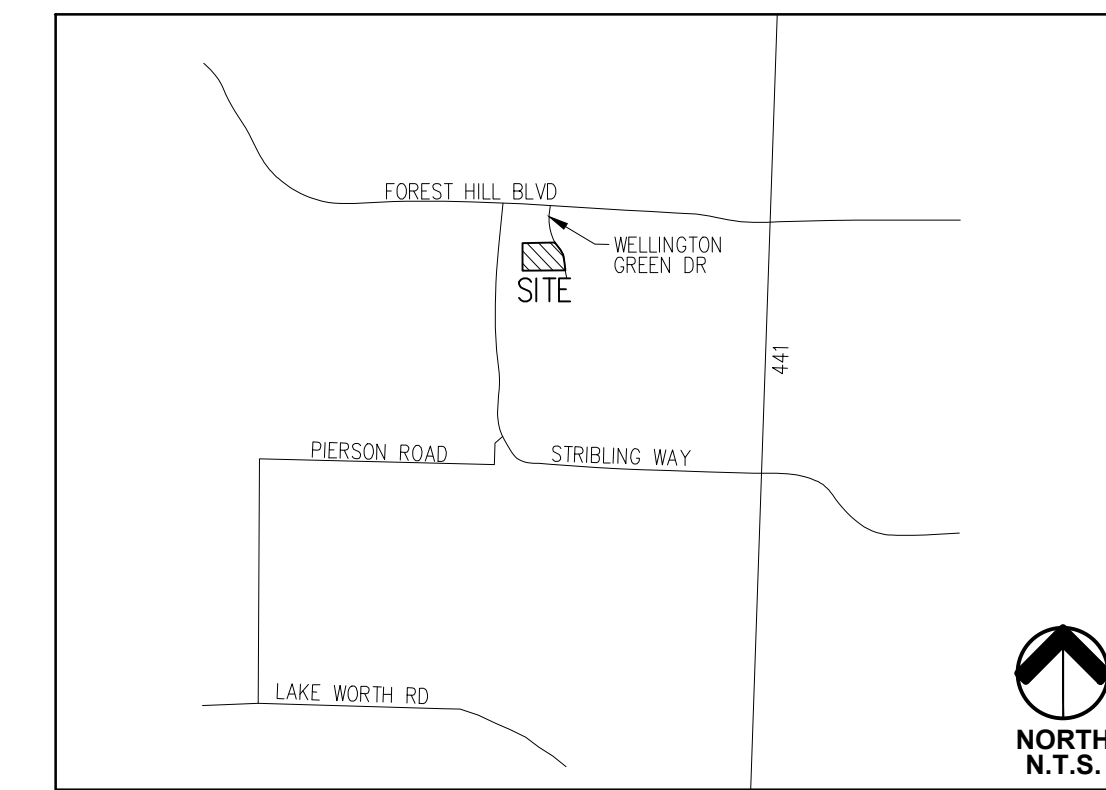


Ordinance No. 2023-04
Adoption Date: 2/7/2024



Goals, Objectives, & Policies (LU-1)

LOCATION MAP



SITE DATA

PETITION NAME:	AXIS AT WELLINGTON
PETITION NUMBER:	TBD
EXISTING LAND USE:	(CF) COMMUNITY FACILITIES
PROPOSED LAND USE:	(H) RESIDENTIAL H
EXISTING ZONING:	(CF) COMMUNITY FACILITIES
PROPOSED ZONING:	(PUD) PLANNED UNIT DEVELOPMENT
LAND USE DESIGNATION:	MUNICIPAL
ZONING DISTRICT:	CF - COMMUNITY FACILITIES
OVERLAY(S)/NEIGHBORHOOD PLAN(S):	N/A
PROPERTY CONTROL NUMBER:	73 41 44 13 01 016 0000
EXISTING USE:	MUNICIPAL (SOCCER FIELDS)
PROPOSED USE:	MULTIFAMILY RESIDENTIAL
TOTAL SITE AREA:	10.00 AC. (435600 S.F.)

DENSITY:	22 UNITS / AC
UNIT TYPE:	MULTI-FAMILY
MINIMUM LOT SIZE:	10 AC
PROPOSED LOT SIZE:	10 AC
MAX. BUILDING COVERAGE:	45%
PROPOSED BUILDING COVERAGE:	21%

RESIDENT CALCULATIONS	
NUMBER OF RESIDENTS:	673
NUMBER OF DWELLING UNITS:	220 UNITS
RESIDENTS / DWELLING UNITS:	3.06 / DU

PRIVATE RECREATION REQUIREMENTS	
AREA REQUIRED:	1.70 AC. (74,052 SF)
AREA PROPOSED:	2.03 AC

PUBLIC RECREATION REQUIREMENTS	
AREA REQUIRED:	3.37 AC. (146,797.20 SF)
AREA PROPOSED:	*PAY IN LIEU

CIVIC REQUIREMENTS	
AREA REQUIRED:	0.673 AC. (2,931.59 SF)
AREA PROPOSED:	*PAY IN LIEU

PARKING REQUIREMENTS	
2.25 SP. / UNIT	495 SP.

PARKING PROVIDED	
377 SURFACE SPACES	499 SP
73 GARAGE SPACES	
49 TANDEM SPACES	

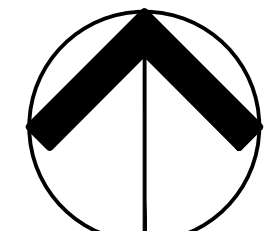
SETBACK REQUIREMENTS	
FRONT SETBACK	50'
SIDE SETBACK	25'
REAR SETBACK	25'

OPEN SPACE PROVIDED	XX SF
---------------------	-------

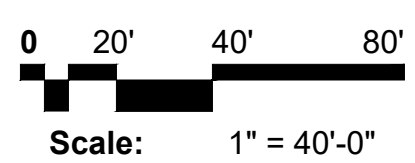
Axis at Wellington

Wellington, Florida Conceptual Site Plan

H:\055\Barridge\Recreation\Wellington_22-046\WG_10park.LLCC_DD_001\Drawings\Site Plan\024-0718_SP_Revised.dwg



NORTH



ZONING APPROVAL BOX

Date:	May 2024
Project No.:	22-046.001
Designed By:	JEV
Drawn By:	JEV
Checked By:	JB
Revision Dates:	
2024-05-15	Submittal
2024-07-18	Resubmittal

CSP-1 of 1



LEGAL DESCRIPTION

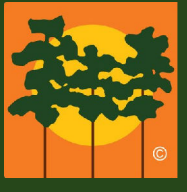
THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF PALM BEACH, STATE OF FLORIDA, AND IS DESCRIBED AS FOLLOWS:

PARK TRACT, OF THE PLAT OF WELLINGTON GREEN, A MUPD/PUD, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 87, PAGES 81-90, INCLUSIVE, OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA.

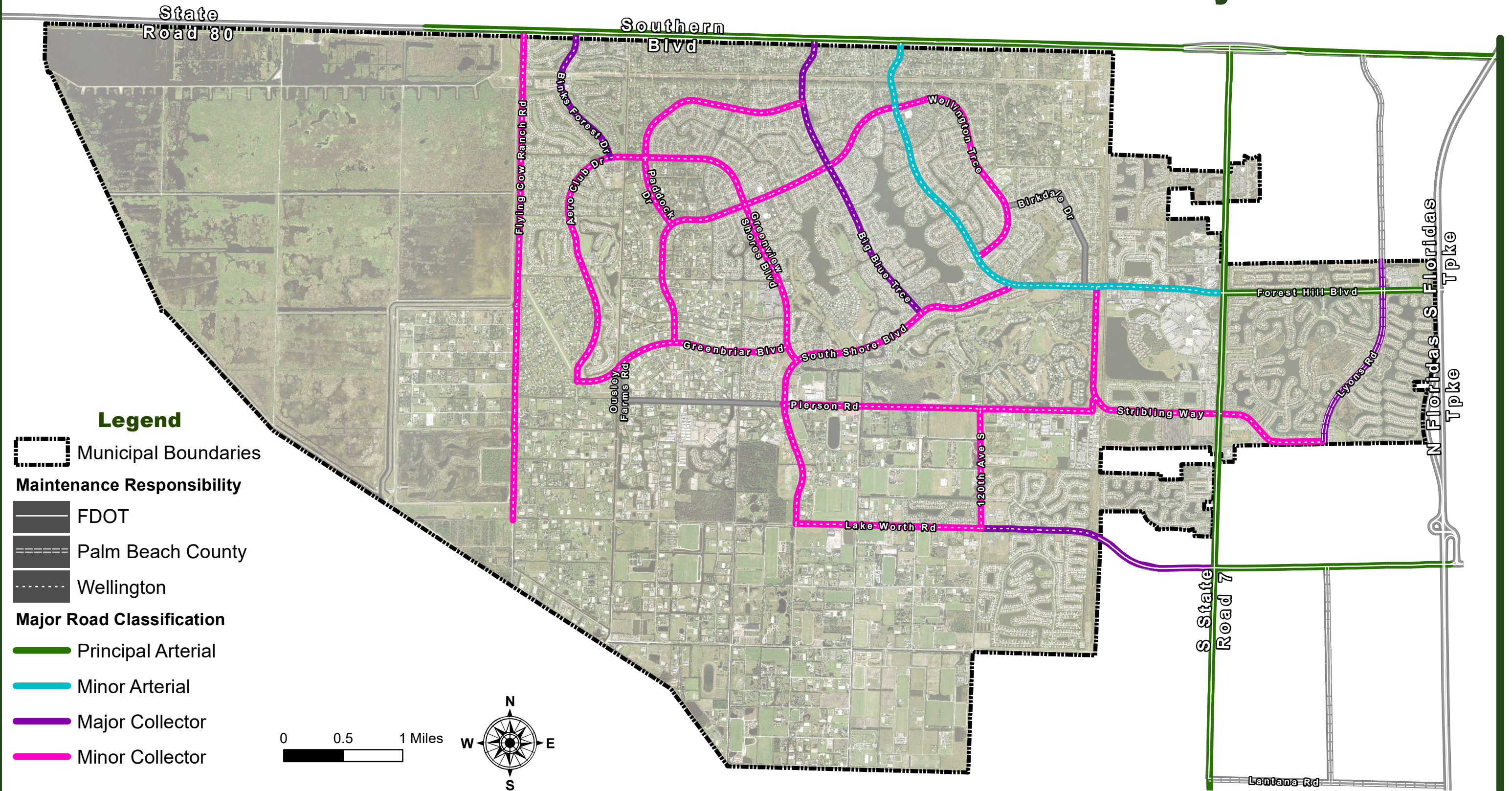
CONTAINING 10.00 ACRES MORE OR LESS.

DEVELOPMENT TEAM

OWNER / APPLICANT: WG 10PARK LLC 512 LAKE AVENUE LAKE WORTH BEACH, FL 33460	ARCHITECT: CORMIA DESIGN GROUP 429 S. KELLER RD., SUITE 200 ORLANDO, FL 32810 (407) 660-2766	TRAFFIC ENGINEER: MACKENZIE ENGINEERING & PLANNING 1172 SW 30TH ST., #500 PALM CITY, FL 34990 (772) 286-8030
PLANNER: URBAN DESIGN STUDIO 610 CLEMATIS STREET, SUITE CU02 WEST PALM BEACH, FL 33401 (561) 366-1100	SURVEYOR: ENGUITY GROUP, INC. 1280 N. CONGRESS AVE., SUITE 101 WEST PALM BEACH, FL 33409 (561) 655-1151	
LANDSCAPE ARCHITECT: DIX-HITE 150 WEST JESSUP AVE. LONGWOOD, FL 32750 (407) 667-1777	CIVIL ENGINEER: THOMAS ENGINEERING GROUP 6300 NW 31ST AVE. FT. LAUDERDALE, FL 33309 (954) 202-7000	



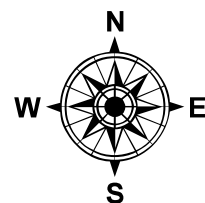
Roadway Classification



Legend

- Municipal Boundaries
- Maintenance Responsibility**
- FDOT
- Palm Beach County
- Wellington
- Major Road Classification**
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector

0 0.5 1 Miles



Goals, Objectives, & Policies (M-1)

November 14, 2024

Mr. Damian Newell
Wellington
Planning, Zoning & Building Department
12300 W. Forest Hill Boulevard
Wellington, FL 33414

**Re: WG 10 Ac Park MP - #PTC24-001J.3
2024-0001-MP**

Dear Mr. Newell:

Pinder Troutman Consulting, Inc. (PTC) has completed our review of the Master Plan Application for the above referenced project. The Traffic Impact Analysis completed by MacKenzie Engineering & Planning dated October 16, 2024, was reviewed. The resubmittal addressed our comments. We have no new comments.

The project is summarized below:

Existing Uses: 3 Soccer Fields
Proposed Uses: 220 Multi-Family Residential Units

Net Daily Trips: 785
Net Peak Hour Trips: AM: 17 In, 61 Out, 78 Total
PM: 20 In, 17 Out, 37 Total

It has been demonstrated that the proposed development meets the Traffic Performance Standards of Wellington and Palm Beach County. We recommend the following conditions of approval.

1. No building permits are to be issued after December 31, 2029, unless a time extension has been approved.
2. The County traffic concurrency approval is subject to the Project Aggregation Rules as set forth in the Traffic Performance Standards Ordinance.
3. The Property Owner shall construct the pedestrian improvements as shown on the site plan.

Mr. Newell
Re: PTC24-001J.3
November 14, 2024
Page 2

4. A direct sidewalk connection from the site to Forest Hill Boulevard shall be provided along Wellington Green Drive. Posting of surety for this sidewalk shall be provided to Wellington prior to first building permit. The surety shall only be released upon construction of the sidewalk or completion of a civil engineering feasibility study that is accepted by the Village Engineer which demonstrates that the sidewalk cannot be built.

Please contact me by phone or at atroutman@pindertroutman.com if you need any additional information or have any questions.

Sincerely,



Andrea M. Troutman, P.E.
President

Enclosures

TRAFFIC IMPACT ANALYSIS

Axis at Wellington Phase II Wellington, FL

Prepared for:
WG 10Park LLC
Lake Worth Beach, FL

Prepared by:



Engineering & Planning, Inc.

1172 SW 30th Street, Suite 500
Palm City, FL 34990
(772) 286-8030

137005
October 2024
Revised August 2024
Revised May 2024
© MacKenzie Engineering and Planning, Inc.
CA 29013

Shaun G. MacKenzie P.E.
Florida License # 61751

EXECUTIVE SUMMARY

MacKenzie Engineering and Planning, Inc. performed an analysis of the traffic impacts resulting from the proposed Wellington. The project is located at 2175 Wellington Green Drive in unincorporated Wellington, Florida (73-41-44-13-01-016-0000). The existing use includes 3 Fields soccer complex. The project proposes 220 multi-family DUs. A buildout year of 2029 was analyzed for the proposed project.

The proposed project is expected to generate the following net new external trips:

- 785 daily, 78 AM peak hour (17 in/61 out), and 37 PM peak hour (20 in/17 out) trips.

The proposed project is expected to generate the following net new external and cumulative driveway trips:

- 999 daily, 81 AM peak hour (19 in/62 out), and 86 PM peak hour (52 in/34 out) trips.

This traffic impact analysis shows that the proposed project will meet the Village of Wellington's Land Development Regulations (i.e. Part I and Part II). No improvements are recommended.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
TABLE OF CONTENTS.....	ii
LIST OF TABLES	iii
LIST OF FIGURES	iii
LIST OF EXHIBITS.....	iii
INTRODUCTION	1
INVENTORY AND PLANNING DATA	2
PROJECT TRAFFIC	2
Traffic Generation.....	2
Pass-by Trip & Internal Capture	3
TRAFFIC DISTRIBUTION	4
ASSURED AND PROGRAMMED CONSTRUCTION	5
COMMITTED PROJECTS	5
GROWTH.....	5
PART II (INTERSECTION ANALYSIS).....	6
Intersections with Ten Percent Project Traffic on Approach.....	6
Intersections with 80 Percent V/C Ratio Traffic on Approach.....	6
PART II (LINK EVALUATION)	6
Test for LOS D Link Service Volumes.....	6
Test for LOS E Link Service Volumes	7
INTERSECTION	8
Intersection Analysis.....	8
DRIVEWAYS.....	11
Driveway Turn Lane Analysis	13
CONCLUSION.....	14
APPENDICES	15

LIST OF TABLES

Table 1. Trip Generation.....	3
Table 2. Growth Rate Calculation	5
Table 3A. Forest Hill Boulevard & Wellington Green Drive Intersection Analysis Results – AM	9
Table 3B. Forest Hill Boulevard & Wellington Green Drive Intersection Analysis Results – PM.....	9
Table 4A. Forest Hill Boulevard & Olive Drive Intersection Analysis Results – AM	10
Table 4B. Forest Hill Boulevard & Olive Drive Intersection Analysis Results – PM	10

LIST OF FIGURES

Figure 1. Site Location Map	1
Figure 2. Traffic Assignment.....	4
Figure 3. Driveway Volumes.....	12

LIST OF EXHIBITS

Exhibit 1. Trip Generation	
Exhibit 2A. Test 1 Part 1– Peak Hour One-Way Link Analysis	
Exhibit 2B. Test 1 Part 2– AM Peak Hour One-Way Link Analysis	
Exhibit 3. Test 2– Peak Hour One-Way Link Analysis	
Exhibit 4. Intersection Analysis Results	

INTRODUCTION

MacKenzie Engineering & Planning, Inc. was retained to prepare a traffic impact analysis for Wellington. This document presents the methodology used and the findings of the traffic impact analysis. The analysis was conducted in accordance with the requirements of the Countywide Traffic Performance Standards of Palm Beach County.

The project is located at 2175 Wellington Green Drive in unincorporated Wellington, Florida (73-41-44-13-01-016-0000). A buildout year of 2029 was analyzed for the proposed project. The existing use includes 3 Fields soccer complex. The project proposes 220 multi-family DUs. Figure 1 illustrates the site location.

Figure 1. Site Location Map



INVENTORY AND PLANNING DATA

The traffic data used in this analysis were obtained from Palm Beach County and MEP. Palm Beach County provided committed trip information. The data included:

- Roadway Geometrics
- Intersection Turning Movement Counts

PROJECT TRAFFIC

Traffic Generation

The study uses Palm Beach County trip generation rates and equations for Multi-Family Mid-Rise Housing (ITE Land Use 221). The daily and peak hour traffic generation for Soccer Complex (ITE Land Use 488) used the trip generation rates published by the Institute of Transportation Engineers (ITE)'s report. Table 1 presents the project's trip generation.

Existing Use

- 3 Fields of Soccer Complex (ITE Land Use 488)

The existing site is expected to generate the following net new external and cumulative driveway trips:

- 214 daily, 3 AM peak hour (2 in/1 out), and 49 PM peak hour (32 in/17 out) trips.

Proposed Use

- 220 Multi-Family Mid-Rise Housing (ITE Land Use 221)

The proposed project is expected to generate the following net new external and cumulative driveway trips:

- 999 daily, 81 AM peak hour (19 in/62 out), and 86 PM peak hour (52 in/34 out) trips.

Net Change

The resulting net external trips change is:

- 785 daily, 78 AM peak hour (17 in/61 out), and 37 PM peak hour (20 in/17 out) trips.

Pass-by Trip & Internal Capture

The pass-by and internal capture is 0.

Table 1. Trip Generation

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Existing Site Traffic								
Soccer Complex	3 Fields	214	3	2	1	49	32	17
Proposed Site Traffic								
Multifamily Mid-Rise Housing 4-10 story	220 DU	999	81	19	62	86	52	34
NET CHANGE IN TRIPS (FOR THE PURPOSES OF TEST 2)		785	78	17	61	37	20	17
NET CHANGE IN DRIVEWAY VOLUMES		785	78	17	61	37	20	17
Note: Trip generation was calculated using the following data:								
Land Use	ITE Code	Unit	Daily Rate	Pass-by Rate	AM Peak Hour		PM Peak Hour	
					in/out	Rate	in/out	Equation
Multifamily Mid-Rise Housing 4-10 story	221	DU	4.54	0%	23/77	0.37	61/39	0.39
Soccer Complex	488	Fields	71.33	0%	61/39	0.99	66/34	16.43

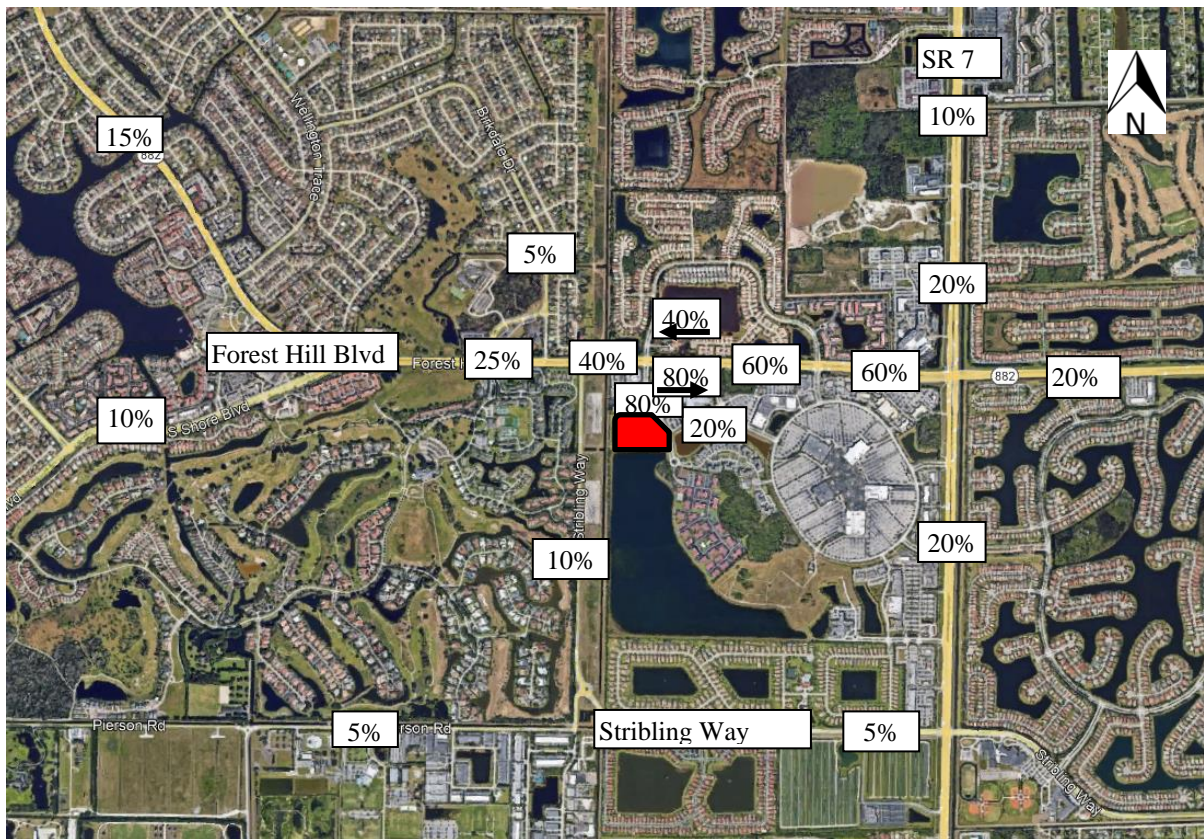
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TRAFFIC DISTRIBUTION

Traffic distribution and assignment was determined using engineering judgment, trip lengths based on the uses and from a review of the roadway network. The overall distribution is summarized by general directions and is depicted below:

EAST	-	60 percent
WEST	-	40 percent

Figure 2. Traffic Assignment



ASSURED AND PROGRAMMED CONSTRUCTION

A review conducted of the Five-Year Plans of Palm Beach County and FDOT, as well as those improvements committed by the developers of projects in the area. No improvements are identified in the plans to add capacity within the study area.

COMMITTED PROJECTS

The Palm Beach County Traffic Division has developed a database containing anticipated traffic volumes associated with committed development projects in the area. These volumes were obtained, and their impacts were added to the roadway links and intersections within the study area.

GROWTH

In order to provide an accurate traffic analysis, the growth rate at each intersection was determined by a volume weighted averaging of the growth on each leg of the intersection as shown in Table 2.

Table 2. Growth Rate Calculation

Road Name	Count Station	Segment	2018 AADT	2019 AADT	2020 AADT	2021 AADT	2022 AADT	Annual Absolute Growth	Growth Rate
Forest Hill Blvd	93-7087	Wellington Trc to South Shore Blvd	30,258	-	-	-	28,664	-399	-1.39%
	93-3407	South Shore Blvd to SR 7	49,836	-	-	-	53,987	1,038	1.92%
	93-0060	SR 7 to E of SR 7/441	38,500	39,500	-	-	38,500	-77	-0.20%
SR 7	93-0721	S of Foresthill Blvd	51,500	61,000	-	-	60,000	1,558	2.60%
	93-0037	S of SR 80/Southern Blvd	63,500	65,500	-	-	67,500	923	1.37%
Stribling Wy	93-7480	Pierson Rd to Forest Hill Blvd	13,259	-	-	-	13,303	11	0.08%
Pierson Rd	93-7525	S Shore Blvd to Srtibling Way	4,743	-	-	-	4,238	-126	-2.98%
Weighted Average									1.10%
Growth Rate Used									2.00%

PART II (INTERSECTION ANALYSIS)

According to the City's Land Development Regulations Section 9.4.2 A, Part I requires an analysis of the major intersection(s) nearest to each link that is directly assessed and significantly impacted by the proposed project. In addition, it is also required that an analysis be performed on all intersections where the project traffic is equal to or greater than 10 percent of the total traffic on at least one of the intersection approaches. All Wellington intersections where links are operating at 80 percent or greater of LOS D and where the project has a significant impact on any approach require intersection analysis.

Intersections with Ten Percent Project Traffic on Approach

Based on the project trip generation at the end of buildout phase, there are no intersections where the project traffic was equal to or greater than 10 percent on at least one of the intersection approaches.

Intersections with 80 Percent V/C Ratio Traffic on Approach

Based on the project trip generation at the end of buildout phase, there are no intersections where the links are operating at 80 percent or greater of LOS D on the intersection approaches.

Part I is satisfied. No intersection needs to be analyzed.

PART II (LINK EVALUATION)

Test for LOS D Link Service Volumes

According to the City's Land Development Regulations Section 9.4.2 B, Part II requires analysis of Wellington roadways where a project's traffic is significant. The total traffic in the peak hour on the link shall be compared to applicable thresholds in Table 9.4.2-C (LOS D Link Service Volumes) for Link Service Volumes and Peak Hour Directional Volume thresholds. Significant links are road segments impacted by project traffic that equal or exceed one percent of a roadway's service volume.

The project has two direct access on Wellington Green Drive. The project significantly impacts Forest Hill Boulevard from Wellington Green Drive to State Road 7 in the AM peak hour as shown in Exhibit 2A. Therefore, the study analyzed Forest Hill Boulevard. The applied growth rate on the roads in the radius of development impact used the greater of one percent growth rate plus committed traffic or the historical growth.

The project related traffic and total traffic for the AM peak hours for one-way peak hour conditions in 2029 are shown in Exhibit 2B. The Peak Hour is projected to operate acceptably.

Test for LOS E Link Service Volumes

According to the City's Land Development Regulations Section 9.4.2 B, Part II requires analysis of Wellington roadways where a project's traffic is significant. The total traffic in the peak hour on the link shall be compared to applicable thresholds in 9.4.2-D (LOS E Link Service Volumes) for Link Service Volumes and Peak Hour Directional Volume thresholds. Significant links are road segments impacted by project traffic that equal or exceed three percent of a roadway's service volume.

The project has two direct access on Wellington Green Drive. A Test 2 one-way peak hour link performance standard evaluation was undertaken for all thoroughfare links within the project study area. Based on the analysis, none of the Test Two roadway links are significantly impacted by the project as shown in Exhibit 3.

Part II is satisfied.

INTERSECTION

Intersection Analysis

The intersections within the study area were evaluated in 2029 total (existing traffic plus background plus project) traffic conditions. This study analyzes the impacts to the following intersections for the AM and PM peak hours:

- Forest Hill Boulevard & Wellington Green Drive
- Forest Hill Boulevard & Olive Drive

Data from the existing facilities within the study area were collected based on aerial photography and site observations. MacKenzie Engineering and Planning, Inc. collected AM and PM peak hour turning movement counts on April 25, 2024. The counts were adjusted to peak season conditions using FDOT's peak season adjustment factors.

Forest Hill Boulevard & Wellington Green Drive

MEP evaluated the Forest Hill Boulevard & Wellington Green Drive intersection using HCS 2024. MEP obtained the 95th percentile queue from HCS 2024 for each turn-lane at the intersection and compared it to the existing turn-lane lane storage. The intersection is projected to operate acceptably as shown in Table 3A and Table 3B.

Table 3A. Forest Hill Boulevard & Wellington Green Drive Intersection Analysis Results –
AM

Description	2029 Pre-Development	2029 Post-Development			Acceptable?
	V/C Ratio	95th Queue Length (ft)	Existing Storage Length (ft)	V/C Ratio	
WBL	0.07	25	310	0.08	YES
NBR	0.25	50	-	0.36	YES
Delay (s/veh)	15.4	17.2			YES
LOS	C	C			YES

Table 3B. Forest Hill Boulevard & Wellington Green Drive Intersection Analysis Results –
PM

Description	2029 Pre-Development	2029 Post-Development			Acceptable?
	V/C Ratio	95th Queue Length (ft)	Existing Storage Length (ft)	V/C Ratio	
WBL	0.24	25	310	0.25	YES
NBR	0.24	50	-	0.27	YES
Delay (s/veh)	15.2	15.7			YES
LOS	C	C			YES

Forest Hill Boulevard & Olive Drive

MEP evaluated the Forest Hill Boulevard & Olive Drive intersection using HCS 2024. MEP obtained the 95th percentile queue from HCS 2024 for each turn-lane at the intersection and compared it to the existing turn-lane lane storage. The intersection is projected to operate acceptably as shown in Table 4A and Table 4B.

Table 4A. Forest Hill Boulevard & Olive Drive Intersection Analysis Results – AM

Description	2029 Pre-Development	2029 Post-Development			Acceptable?
	V/C Ratio	95th Queue Length (ft)	Existing Storage Length (ft)	V/C Ratio	
WBL	0.630	75	440	0.638	YES
NBL	0.768	150	-	0.767	YES
NBR	0.262	100	-	0.352	YES
Delay (s/veh)	10.8	11.9			YES
LOS	B	B			YES

Table 4B. Forest Hill Boulevard & Olive Drive Intersection Analysis Results – PM

Description	2029 Pre-Development	2029 Post-Development			Acceptable?
	V/C Ratio	95th Queue Length (ft)	Existing Storage Length (ft)	V/C Ratio	
WBL	0.728	125	440	0.737	YES
NBL	0.835	350	-	0.893	YES
NBR	0.387	200	-	0.416	YES
Delay (s/veh)	21.0	21.3			YES
LOS	C	C			YES

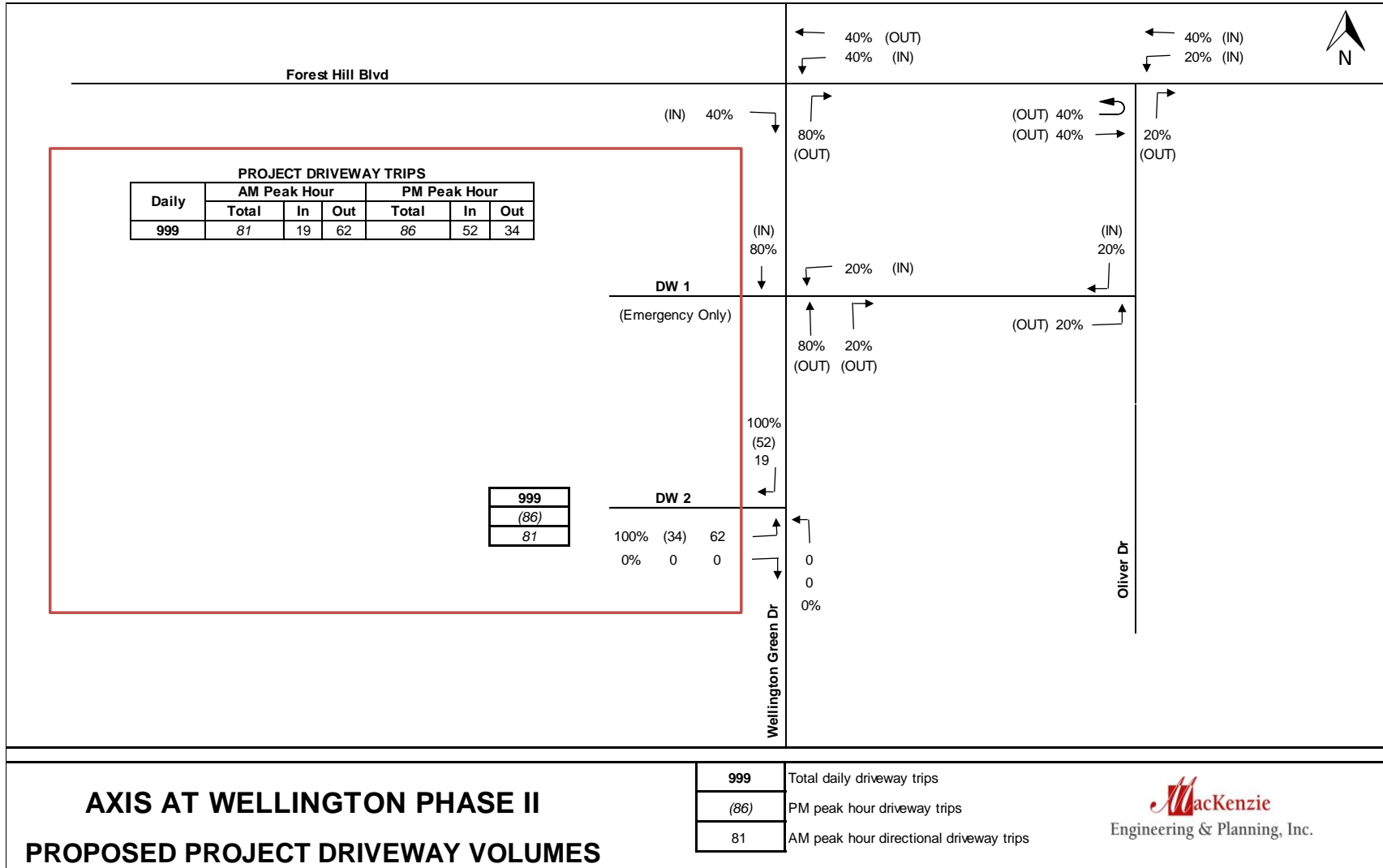
DRIVEWAYS

The applicant has one existing access and one proposed access. The accesses are as follows:

- Wellington Green Drive & DW 1 (North) – Emergency Access Only – Proposed
- Wellington Green Drive & DW 2 (South) – Full opening – Existing

Figure 3 illustrates the driveway volumes.

Figure 3. Driveway Volumes



Driveway Turn Lane Analysis

Wellington Green Drive & DW 1 (North)

Driveway 1 is emergency access only. Therefore, no turn lanes are needed.

Wellington Green Drive & DW 2 (South)

Ingress Right Turn Lane

A right-turn lane at this location is not required because the projected right-turn volume of 52 vehicles does not satisfy criteria identified within PBC Code 300 Driveways and Other Turnouts Section 6B.

PBC Code 300 Driveways and Other Turnouts Section 6B. Requirements for a right-turn lane:

- a) The adjacent street roadway AADT exceeds 10,000; and (Not meet)
- b) Driveway volume exceeds 1,000 vehicles per day (999); and (Not meet)
- c) Right turn ingress volumes exceed 75 vehicles per hour per peak hour (52). (Not meet)

Therefore, a right-turn lane into the site is not required or needed.

Ingress Left Turn Lane

There are no ingress left-turn movement volumes. Therefore, a left-turn lane into the site is not required or needed.

CONCLUSION

MacKenzie Engineering and Planning, Inc. performed an analysis of the traffic impacts resulting from the proposed Wellington. The project is located at 2175 Wellington Green Drive in unincorporated Wellington, Florida (73-41-44-13-01-016-0000). The existing use includes 3 Fields soccer complex. The project proposes 220 multi-family DUs. A buildout year of 2029 was analyzed for the proposed project.

The proposed project is expected to generate the following net new external trips:

- 785 daily, 78 AM peak hour (17 in/61 out), and 37 PM peak hour (20 in/17 out) trips.

The proposed project is expected to generate the following net new external and cumulative driveway trips:

- 999 daily, 81 AM peak hour (19 in/62 out), and 86 PM peak hour (52 in/34 out) trips.

This traffic impact analysis shows that the proposed project will meet the Village of Wellington's Land Development Regulations (i.e. Part I and Part II). No improvements are recommended.

APPENDICES

Exhibit 1. Trip Generation

Exhibit 2A. Test 1 Part 1– Peak Hour One-Way Link Analysis

Exhibit 2B. Test 1 Part 2– AM Peak Hour One-Way Link Analysis

Exhibit 3. Test 2– Peak Hour One-Way Link Analysis

Exhibit 4. Intersection Analysis Results

A- PBC Trip Generation Rates

B- Institute of Transportation Engineers' (ITE) report, *Trip Generation (11th Edition)*

C- FDOT Historical AADT Volumes

D- FDOT Peak Season Factor

E- PBC TPS Committed Intersection & Link Volume

F- Village of Wellington Tables 9.4.2.C-9.4.2.D

G- Property ID Card

H- Site Plan

I- Palm Beach County TPS Approval Letter

J- Signal Timing

K- Palm Beach County 2023 Counts

L- Wellington Roadway Classification Map

**EXHIBIT 1
TRIP GENERATION
AXIS AT WELLINGTON PHASE II**

Land Use	Intensity	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Existing Site Traffic								
Soccer Complex	3 Fields	214	3	2	1	49	32	17
Proposed Site Traffic								
Multifamily Mid-Rise Housing 4-10 story	220 DU	999	81	19	62	86	52	34
NET CHANGE IN TRIPS (FOR THE PURPOSES OF TEST 2)		785	78	17	61	37	20	17
NET CHANGE IN DRIVEWAY VOLUMES		785	78	17	61	37	20	17

Note: Trip generation was calculated using the following data:

Land Use	ITE Code	Unit	Daily Rate	Pass-by Rate	AM Peak Hour		PM Peak Hour	
					in/out	Rate	in/out	Equation
Multifamily Mid-Rise Housing 4-10 story	221	DU	4.54	0%	23/77	0.37	61/39	0.39
Soccer Complex	488	Fields	71.33	0%	61/39	0.99	66/34	16.43

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**EXHIBIT 2A
 AXIS AT WELLINGTON PHASE II
 TEST 1 PART 2 - PEAK HOUR ONE-WAY LINK ANALYSIS - 2029**

Roadway From	To	MR	Class	Existing		Committed		Percent Project Assignment	AM Peak Hour		PM Peak Hour		Project Significance				Significant Impact ???
				Number Of Lanes	LOS 'D' Capacity	Number Of Lanes	LOS 'D' Capacity		Project Trips		Project Trips		AM		PM		
									NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Stribling Wy																	
Forest Hill Blvd	Pierson Rd	W	1	2L	880	2L	880	10%	2	6	2	2	0.23%	0.68%	0.23%	0.23%	No
Pierson Rd	SR 7	W	1	2L	880	2L	880	5%	3	1	1	1	0.34%	0.11%	0.11%	0.11%	No
SR 7	Lyons Rd	W	1	2L	880	2L	880	5%	3	1	1	1	0.34%	0.11%	0.11%	0.11%	No
SR-7																	
Southern Blvd	Forest Hill Blvd	F	1	8LD	3,940	8LD	3,940	20%	12	3	3	4	0.30%	0.08%	0.08%	0.10%	No
Forest Hill Blvd	Stribling Wy	F	1	8LD	3,940	8LD	3,940	20%	3	12	4	3	0.08%	0.30%	0.10%	0.08%	No
Stribling Wy	Lake Worth Rd	F	1	8LD	3,940	8LD	3,940	10%	2	6	2	2	0.05%	0.15%	0.05%	0.05%	No
S Shore Blvd																	
Pierson Rd	Forest Hill Blvd	W	1	4LD	2,000	4LD	2,000	10%	6	2	2	2	0.30%	0.10%	0.10%	0.10%	No
Pierson Rd																	
S Shore Blvd	Stribling Wy	W	2	2L (NL)	600	2L (NL)	600	5%	1	3	1	1	0.17%	0.50%	0.17%	0.17%	No
Forest Hill Blvd																	
South Shore Blvd	Wellington Green Dr	W	1	6LD	3,020	6LD	3,020	40%	7	24	8	7	0.23%	0.79%	0.26%	0.23%	No
Wellington Green Dr	Olive Dr	W	1	6LD	3,020	6LD	3,020	80%/40%	49	7	14	8	1.62%	0.23%	0.46%	0.26%	Yes
Olive Dr	SR 7	W	1	6LD	3,020	6LD	3,020	60%	37	10	10	12	1.23%	0.33%	0.33%	0.40%	Yes
SR 7	Lyons Rd	PBC	1	6LD	2,940	6LD	2,940	20%	12	3	3	4	0.41%	0.10%	0.10%	0.14%	No

Notes:
 MR - Maintenance Responsibility
 F - FDOT
 PBC - Palm Beach County
 W - Wellington
 NL - No left-turn lane at signalized intersction

**EXHIBIT 2B - AM PEAK HOUR
WELLINGTON
TEST 1 PART 2 - AM PEAK HOUR ONE-WAY LINK ANALYSIS**

Roadway From	To	Class	Existing		2029 Background Needed Lanes		Project Trips		2023 Existing PHPD Volume (1)		Count Year	Growth Factor	Committed Traffic (2)		Committed Traffic + 1% Growth Rate		Growth from Historic Growth Rate		2029 Background		2029 Total		Meets Test 1 Standard ?		v/c Ratio			
			Number Of Lanes	LOS 'D' Capacity	Number Of Lanes	LOS 'D' Capacity	NB/EB	SB/WB	NB/EB	SB/WB			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Forest Hill Blvd																												
Wellington Green Dr	Olive Dr	1	6LD	3,020	6LD	3,020	49	7	1,993	1,599	2,023	2.00%	212	153	335	251	251	202	2,328	1,850	2,377	1,857	Yes	Yes	79%	61%		
Olive Dr	SR 7	1	6LD	3,020	6LD	3,020	37	10	1,993	1,599	2,023	2.00%	213	154	336	252	251	202	2,329	1,851	2,366	1,861	Yes	Yes	78%	62%		

1. Obtained from PBC Historic Traffic Counts (Station ID 3407)
2. Committed traffic obtained from Palm Beach County Active TPS Projects

EXHIBIT 3
AXIS AT WELLINGTON PHASE II
TEST 2 - PEAK HOUR ONE-WAY LINK ANALYSIS - 2029

Roadway From	To	MR	Class	Existing		Committed		Percent Project Assignment	AM Peak Hour		PM Peak Hour		Project Significance				Significant Impact ???
				Number Of Lanes	LOS 'E' Capacity	Number Of Lanes	LOS 'E' Capacity		Project Trips		Project Trips		AM		PM		
									NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	
Stribling Wy																	
Forest Hill Blvd	Pierson Rd	W	1	2L	880	2L	880	10%	2	6	2	2	0.23%	0.68%	0.23%	0.23%	No
Pierson Rd	SR 7	W	1	2L	880	2L	880	5%	3	1	1	1	0.34%	0.11%	0.11%	0.11%	No
SR 7	Lyons Rd	W	1	2L	880	2L	880	5%	3	1	1	1	0.34%	0.11%	0.11%	0.11%	No
SR-7																	
Southern Blvd	Forest Hill Blvd	F	1	8LD	3,940	8LD	3,940	20%	12	3	3	4	0.30%	0.08%	0.08%	0.10%	No
Forest Hill Blvd	Stribling Wy	F	1	8LD	3,940	8LD	3,940	20%	3	12	4	3	0.08%	0.30%	0.10%	0.08%	No
Stribling Wy	Lake Worth Rd	F	1	8LD	3,940	8LD	3,940	10%	2	6	2	2	0.05%	0.15%	0.05%	0.05%	No
S Shore Blvd																	
Pierson Rd	Forest Hill Blvd	W	1	4LD	2,000	4LD	2,000	10%	6	2	2	2	0.30%	0.10%	0.10%	0.10%	No
Pierson Rd																	
S Shore Blvd	Stribling Wy	W	2	2L (NL)	640	2L (NL)	640	5%	1	3	1	1	0.16%	0.47%	0.16%	0.16%	No
Forest Hill Blvd																	
South Shore Blvd	Wellington Green Dr	W	1	6LD	3,020	6LD	3,020	40%	7	24	8	7	0.23%	0.79%	0.26%	0.23%	No
Wellington Green Dr	Olive Dr	W	1	6LD	3,020	6LD	3,020	80%/40%	49	7	14	8	1.62%	0.23%	0.46%	0.26%	No
Olive Dr	SR 7	W	1	6LD	3,020	6LD	3,020	60%	37	10	10	12	1.23%	0.33%	0.33%	0.40%	No
SR 7	Lyons Rd	PBC	1	6LD	2,940	6LD	2,940	20%	12	3	3	4	0.41%	0.10%	0.10%	0.14%	No

Notes:

MR - Maintenance Responsibility

F - FDOT

PBC - Palm Beach County

W - Wellington

NL - No left-turn lane at signalized intersction

Wellington
 AM PEAK HOUR TURNING MOVEMENTS
 EXHIBIT 4
 Wellington Green Dr & Forest Hill Blvd

		ebu	ebl	ebt	ebr	wbu	wbl	wbt	wbr	nbu	nbl	nbt	nbr	sbu	sbl	sbt	sbr	totals
7:00 AM	7:15 AM	6	3	347	11	0	5	240	0	1	0	0	23	0	0	0	13	649
7:15 AM	7:30 AM	11	5	345	12	0	12	272	1	0	0	0	24	0	0	0	19	701
7:30 AM	7:45 AM	15	11	371	23	1	6	346	2	0	0	0	29	0	0	0	23	827
7:45 AM	8:00 AM	5	4	393	10	0	10	362	4	0	0	0	22	0	0	0	12	822
8:00 AM	8:15 AM	9	3	406	8	1	6	315	2	0	0	0	20	0	0	0	6	776
8:15 AM	8:30 AM	3	5	351	7	0	9	345	5	0	0	0	23	0	0	0	11	759
8:30 AM	8:45 AM	4	7	333	8	0	11	310	4	0	0	0	21	0	0	0	7	705
8:45 AM	9:00 AM	1	3	313	15	0	22	338	1	0	0	0	22	0	0	0	18	733
Peak Hour Traffic Volume		54	41	2859	94	2	81	2528	19	1	0	0	184	0	0	0	109	5972
7:30 AM	8:30 AM	32	23	1521	48	2	31	1368	13	0	0	0	94	0	0	0	52	3184

Count Taken: 4/25/2024
 Buildout year: 2029
 Growth Rate: 1.0% 2.00%
 Seasonal Factor: 1.04

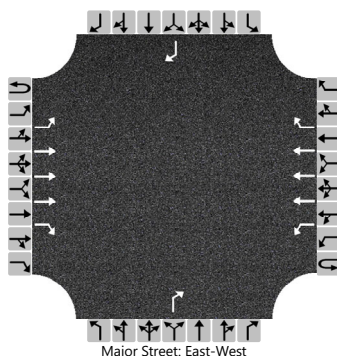
	ebu	ebl	ebt	ebr	wbu	wbl	wbt	wbr	nbu	nbl	nbt	nbr	sbu	sbl	sbt	sbr
4/25/2024	32	23	1521	48	2	31	1368	13	0	0	0	94	0	0	0	52
Seasonal Factor	1	1	61	2	0	1	55	1	0	0	0	4	0	0	0	2
Adjusted Volumes	33	24	1582	50	2	32	1423	14	0	0	0	98	0	0	0	54
Growth 1%	0	1	81	3	0	2	73	1	0	0	0	5	0	0	0	3
Committed**	0	0	226	0	0	0	183	0	0	0	0	0	0	0	0	0
Committed + 1%	0	1	307	3	0	2	256	1	0	0	0	5	0	0	0	3
Growth 2%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Growth 2% or Committed + 1%	3	2	165	5	0	3	148	1	0	0	0	10	0	0	0	6
2029 Volumes	36	26	1889	55	2	35	1679	15	0	0	0	108	0	0	0	60
Pre W/ Div	36	26	1889	55	2	35	1679	15	0	0	0	108	0	0	0	60
Project	0	0	0	7	0	7	24	0	0	0	0	49	0	0	0	0
Post	36	26	1889	62	2	42	1703	15	0	0	0	157	0	0	0	60

Project Traffic Assignment	0%	0%	0%	In	0%	In	Out	0%	0%	0%	0%	0%	Out	0%	0%	0%	0%
	0%	0%	0%	40%	0%	40%	40%	0%	0%	0%	0%	0%	80%	0%	0%	0%	0%

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	MEP			Intersection	Forest Hill & Wellington		
Agency/Co.	MEP			Jurisdiction	Wellington		
Date Performed	5/2/2024			East/West Street	Forest Hill Blvd		
Analysis Year	2029			North/South Street	Wellington Green Dr		
Time Analyzed				Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	2029 Pre-Development AM						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	3	1	0	1	3	1		0	0	1		0	0	1
Configuration		L	T	R		L	T	R				R				R
Volume (veh/h)	36	26	1889	55	2	35	1679	15				108				60
Percent Heavy Vehicles (%)	2	2			2	2						2				2
Proportion Time Blocked		0.500				0.500						0.500				0.500
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)	5.6	5.3			5.6	5.3							7.1				7.1
Critical Headway (sec)	5.64	5.34			5.64	5.34							7.14				7.14
Base Follow-Up Headway (sec)	2.3	3.1			2.3	3.1							3.9				3.9
Follow-Up Headway (sec)	2.32	3.12			2.32	3.12							3.92				3.92

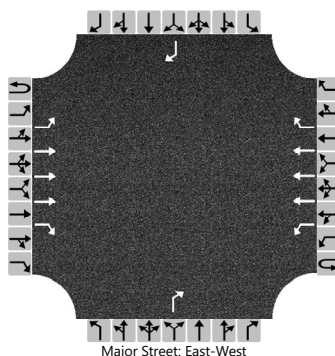
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		65				39							114				63
Capacity, c (veh/h)		627				577							459				459
v/c Ratio		0.10				0.07							0.25				0.14
95% Queue Length, Q ₉₅ (veh)		0.3				0.2							1.0				0.5
95% Queue Length, Q ₉₅ (ft)		7.6				5.1							25.4				12.7
Control Delay (s/veh)		11.4				11.7							15.4				14.1
Level of Service (LOS)		B				B							C				B
Approach Delay (s/veh)		0.4				0.2				15.4				14.1			
Approach LOS		A				A				C				B			

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	MEP			Intersection	Forest Hill & Wellington		
Agency/Co.	MEP			Jurisdiction	Wellington		
Date Performed	5/2/2024			East/West Street	Forest Hill Blvd		
Analysis Year	2029			North/South Street	Wellington Green Dr		
Time Analyzed				Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	2029 Post-Development AM						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	3	1	0	1	3	1		0	0	1		0	0	1
Configuration		L	T	R		L	T	R				R				R
Volume (veh/h)	36	26	1889	62	2	42	1703	15				157				60
Percent Heavy Vehicles (%)	2	2			2	2						2				2
Proportion Time Blocked		0.500				0.500						0.500				0.500
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)	5.6	5.3			5.6	5.3							7.1				7.1
Critical Headway (sec)	5.64	5.34			5.64	5.34							7.14				7.14
Base Follow-Up Headway (sec)	2.3	3.1			2.3	3.1							3.9				3.9
Follow-Up Headway (sec)	2.32	3.12			2.32	3.12							3.92				3.92

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		65			46								165				63
Capacity, c (veh/h)		627			573								459				459
v/c Ratio		0.10			0.08								0.36				0.14
95% Queue Length, Q ₉₅ (veh)		0.3			0.3								1.6				0.5
95% Queue Length, Q ₉₅ (ft)		7.6			7.6								40.6				12.7
Control Delay (s/veh)		11.4			11.8								17.2				14.1
Level of Service (LOS)		B			B								C				B
Approach Delay (s/veh)	0.4				0.3				17.2				14.1				
Approach LOS	A				A				C				B				

Wellington
 PM PEAK HOUR TURNING MOVEMENTS
 EXHIBIT 4
 Wellington Green Dr & Forest Hill Blvd

		ebu	ebl	ebt	ebr	wbu	wbl	wbt	wbr	nbu	nbl	nbt	nbr	sbu	sbl	sbt	sbr	totals
4:00 PM	4:15 PM	11	13	388	28	1	21	409	4	0	0	0	31	0	0	0	5	911
4:15 PM	4:30 PM	8	12	384	32	4	27	439	2	0	0	0	28	0	0	0	10	946
4:30 PM	4:45 PM	10	8	368	21	2	33	454	7	0	0	0	22	0	0	0	10	935
4:45 PM	5:00 PM	9	9	397	16	5	31	472	1	0	0	0	21	0	0	0	6	967
5:00 PM	5:15 PM	10	16	410	14	3	28	486	4	0	0	0	22	0	0	0	10	1003
5:15 PM	5:30 PM	11	13	413	28	3	23	448	3	0	0	0	20	0	0	0	15	977
5:30 PM	5:45 PM	8	13	408	26	2	18	449	6	0	0	0	26	0	0	0	10	966
5:45 PM	6:00 PM	6	5	343	29	2	24	478	5	0	0	0	31	0	0	0	7	930
		73	89	3111	194	22	205	3635	32	0	0	0	201	0	0	0	73	7635
Peak Hour Traffic Volume																		
4:45 PM	5:45 PM	38	51	1628	84	13	100	1855	14	0	0	0	89	0	0	0	41	3913

Count Taken: 4/25/2024
 Buildout year: 2029
 Growth Rate: 1.0% 2.00%
 Seasonal Factor: 1.04

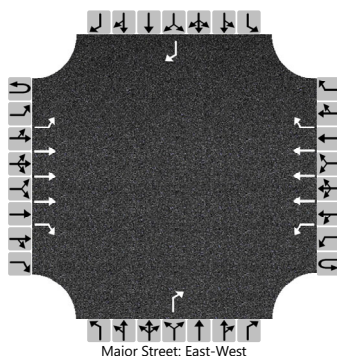
	ebu	ebl	ebt	ebr	wbu	wbl	wbt	wbr	nbu	nbl	nbt	nbr	sbu	sbl	sbt	sbr
4/25/2024	38	51	1628	84	13	100	1855	14	0	0	0	89	0	0	0	41
Seasonal Factor	2	2	65	3	1	4	74	1	0	0	0	4	0	0	0	2
Adjusted Volumes	40	53	1693	87	14	104	1929	15	0	0	0	93	0	0	0	43
Growth 1%	0	3	86	4	0	5	98	1	0	0	0	5	0	0	0	2
Committed**	0	0	165	0	0	0	171	0	0	0	0	0	0	0	0	0
Committed + 1%	0	3	251	4	0	5	269	1	0	0	0	5	0	0	0	2
Growth 2%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Growth 2% or Committed + 1%	4	6	176	9	1	11	201	2	0	0	0	10	0	0	0	4
2029 Volumes	44	59	1944	96	15	115	2198	17	0	0	0	103	0	0	0	47
Pre W/ Div	44	59	1944	96	15	115	2198	17	0	0	0	103	0	0	0	47
Project	0	0	0	8	0	8	7	0	0	0	0	14	0	0	0	0
Post	44	59	1944	104	15	123	2205	17	0	0	0	117	0	0	0	47

	In	In	Out	Out
Project Traffic Assignment	0%	0%	40%	80%

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	MEP			Intersection	Forest Hill & Wellington		
Agency/Co.	MEP			Jurisdiction	Wellington		
Date Performed	5/2/2024			East/West Street	Forest Hill Blvd		
Analysis Year	2029			North/South Street	Wellington Green Dr		
Time Analyzed				Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	2029 Pre-Development PM						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	3	1	0	1	3	1		0	0	1		0	0	1
Configuration		L	T	R		L	T	R				R				R
Volume (veh/h)	44	59	1944	96	15	115	2198	17				103				47
Percent Heavy Vehicles (%)	2	2			2	2						2				2
Proportion Time Blocked		0.500				0.500						0.500				0.500
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)	5.6	5.3			5.6	5.3							7.1				7.1
Critical Headway (sec)	5.64	5.34			5.64	5.34							7.14				7.14
Base Follow-Up Headway (sec)	2.3	3.1			2.3	3.1							3.9				3.9
Follow-Up Headway (sec)	2.32	3.12			2.32	3.12							3.92				3.92

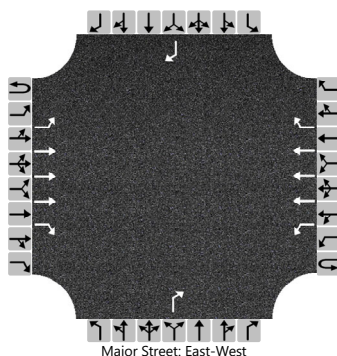
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		108				137							108				49
Capacity, c (veh/h)		557				579							459				459
v/c Ratio		0.19				0.24							0.24				0.11
95% Queue Length, Q ₉₅ (veh)		0.7				0.9							0.9				0.4
95% Queue Length, Q ₉₅ (ft)		17.8				22.9							22.9				10.2
Control Delay (s/veh)		13.0				13.1							15.2				13.8
Level of Service (LOS)		B				B							C				B
Approach Delay (s/veh)	0.6				0.7				15.2				13.8				
Approach LOS	A				A				C				B				

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	MEP			Intersection	Forest Hill & Wellington		
Agency/Co.	MEP			Jurisdiction	Wellington		
Date Performed	5/2/2024			East/West Street	Forest Hill Blvd		
Analysis Year	2029			North/South Street	Wellington Green Dr		
Time Analyzed				Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	2029 Post-Development PM						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	1	3	1	0	1	3	1		0	0	1		0	0	1
Configuration		L	T	R		L	T	R				R				R
Volume (veh/h)	44	59	1944	104	15	123	2205	17				117				47
Percent Heavy Vehicles (%)	2	2			2	2						2				2
Proportion Time Blocked		0.500				0.500						0.500				0.500
Percent Grade (%)									0				0			
Right Turn Channelized	No				No				No				No			
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

Base Critical Headway (sec)	5.6	5.3			5.6	5.3							7.1				7.1
Critical Headway (sec)	5.64	5.34			5.64	5.34							7.14				7.14
Base Follow-Up Headway (sec)	2.3	3.1			2.3	3.1							3.9				3.9
Follow-Up Headway (sec)	2.32	3.12			2.32	3.12							3.92				3.92

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		108			145								123				49
Capacity, c (veh/h)		551			576								459				459
v/c Ratio		0.20			0.25								0.27				0.11
95% Queue Length, Q ₉₅ (veh)		0.7			1.0								1.1				0.4
95% Queue Length, Q ₉₅ (ft)		17.8			25.4								27.9				10.2
Control Delay (s/veh)		13.1			13.3								15.7				13.8
Level of Service (LOS)		B			B								C				B
Approach Delay (s/veh)	0.6				0.8				15.7				13.8				
Approach LOS	A				A				C				B				

Wellington
AM PEAK HOUR TURNING MOVEMENTS
EXHIBIT 4
Olive Dr & Forest Hill Blvd

	ebu	ebl	ebt	ebr	wbu	wbl	wbt	wbr	nbu	nbl	nbt	nbr	sbu	sbl	sbt	sbr	totals	
7:00 AM	7:15 AM	1	0	330	13	3	10	219	0	0	27	0	10	0	0	0	0	613
7:15 AM	7:30 AM	6	0	368	21	3	5	253	0	0	21	0	7	0	0	0	0	684
7:30 AM	7:45 AM	6	0	370	25	0	10	304	0	1	40	0	6	0	0	0	0	762
7:45 AM	8:00 AM	1	0	403	31	1	9	356	0	0	20	0	10	0	0	0	0	831
8:00 AM	8:15 AM	3	0	396	32	3	14	296	0	1	26	0	6	0	0	0	0	777
8:15 AM	8:30 AM	5	0	333	26	4	11	320	0	1	31	0	7	0	0	0	0	738
8:30 AM	8:45 AM	3	0	341	28	2	4	290	0	0	30	0	6	0	0	0	0	704
8:45 AM	9:00 AM	6	0	275	35	2	13	347	0	0	29	0	5	0	0	0	0	712
Peak Hour Traffic Volume		31	0	2816	211	18	76	2385	0	3	224	0	57	0	0	0	0	5821
7:30 AM	8:30 AM	15	0	1502	114	8	44	1276	0	3	117	0	29	0	0	0	0	3108

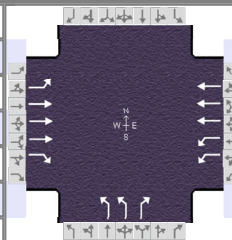
Count Taken: 4/25/2024
Buildout year: 2029
Growth Rate: 1.0% 2.00%
Seasonal Factor: 1.04

	ebu	ebl	ebt	ebr	wbu	wbl	wbt	wbr	nbu	nbl	nbt	nbr	sbu	sbl	sbt	sbr
4/25/2024	15	0	1502	114	8	44	1276	0	3	117	0	29	0	0	0	0
Seasonal Factor	1	0	60	5	0	2	51	0	0	5	0	1	0	0	0	0
Adjusted Volumes	16	0	1562	119	8	46	1327	0	3	122	0	30	0	0	0	0
		1.0%	1.0%	1.0%		1.0%	1.0%	1.0%		1.0%	1.0%	1.0%		1.0%	1.0%	1.0%
Growth 1%	0	0	80	6	0	2	68	0	0	6	0	2	0	0	0	0
Committed**	0	0	226	0	0	0	183	0	0	0	0	0	0	0	0	0
Committed + 1%	0	0	306	6	0	2	251	0	0	6	0	2	0	0	0	0
	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Growth 2%	2	0	163	12	1	5	138	0	0	13	0	3	0	0	0	0
Growth 2% or Committed + 1%	2	0	306	12	1	5	251	0	0	13	0	3	0	0	0	0
2029 Volumes	18	0	1868	131	9	51	1578	0	3	135	0	33	0	0	0	0
Pre W/ Div	18	0	1868	131	9	51	1578	0	3	135	0	33	0	0	0	0
Project	24	0	24	0	0	3	7	0	0	0	0	12	0	0	0	0
Post	42	0	1892	131	9	54	1585	0	3	135	0	45	0	0	0	0

Project Traffic Assignment	Out	Out	In	In	Out	Out	In	In	Out	Out	In	In	Out	Out	In	In
	40%	0%	40%	0%	0%	20%	40%	0%	0%	0%	0%	0%	20%	0%	0%	0%

HCS Signalized Intersection Input Data

General Information				Intersection Information				
Agency	MEP			Duration, h	0.250			
Analyst	MEP		Analysis Date	May 6, 2024		Area Type	Other	
Jurisdiction	Wellington		Time Period				PHF	0.95
Urban Street	Forest Hill Blvd		Analysis Year	2029		Analysis Period	1 > 7:00	
Intersection	Forest Hill Blvd & Olive Dr		File Name	Olive & Forest AM PRE.xus				
Project Description	2029 Pre AM							



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	18	1868	131	60	1578		138		33			

Signal Information				Signal Timing (s)										
Cycle, s	160.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	2.3	2.4	124.6	8.7	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	0.0	5.0	4.0	0.0	0.0				
				Red	2.0	0.0	2.0	4.0	0.0	0.0				

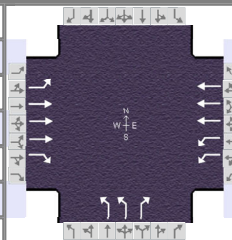
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	18	1868	131	60	1578		138		33			
Initial Queue (Q_b), veh/h	0	0	0	0	0		0		0			
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900		1900		1900			
Parking (N_m), man/h		None			None			None				
Heavy Vehicles (P_{HV}), %	2	2	2	2	2		2		2			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	3	3	3	3		3		3			
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0		12.0			
Turn Bay Length, ft	260	0	290	440	0		0		0			
Grade (P_g), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35		35		35			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	15.0	125.0	15.0	125.0	20.0	20.0		
Yellow Change Interval (Y), s	5.0	5.0	5.0	5.0	4.0	4.0		
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	4.0	4.0		
Minimum Green (G_{min}), s	4	20	4	20	6	6		
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0			
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0		
Recall Mode	Off	Min	Off	Min	Off	Off		
Dual Entry	No	Yes	No	Yes	No	Yes		
Walk ($Walk$), s		7.0				7.0		0.0
Pedestrian Clearance Time (PC), s		35.0				22.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0.0	No	25.0				0.0	No	25.0	0.0	No	25.0
Walkway / Crosswalk Width / Length, ft	9.0	12.0	0.0				9.0	12.0	0.0	9.0	12.0	0.0
Street Width / Island / Curb, ft	0.0	0	No	0.0		No	0.0	0	No		0	
Width Outside / Bike Lane / Shoulder, ft	12.0	5.0	2.0	12.0	5.0	2.0	12.0	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50			0.50	No		0.50	No		

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 7:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest AM PRE.xus		
Project Description	2029 Pre AM				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	18	1868	131	60	1578		138		33			

Signal Information				Phase Diagram										
Cycle, s	160.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On											
Force Mode	Fixed	Simult. Gap N/S	On											
		Green	2.3	2.4	124.6	8.7	0.0	0.0						
		Yellow	5.0	0.0	5.0	4.0	0.0	0.0						
		Red	2.0	0.0	2.0	4.0	0.0	0.0						

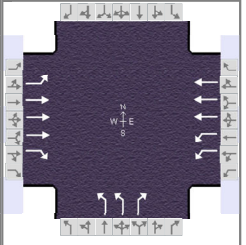
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		
Case Number	2.0	3.0	2.0	4.0		9.0		
Phase Duration, s	9.3	131.6	11.6	134.0		16.7		
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0		8.0		
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.2		
Queue Clearance Time (g_s), s	3.7		4.9			8.6		
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.1		
Phase Call Probability	0.57		0.94			1.00		
Max Out Probability	0.00		0.00			0.79		

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2		7		14			
Adjusted Flow Rate (v), veh/h	19	1966	138	63	1661		145		35			
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1698	1585	1730	1698		1730		1585			
Queue Service Time (g_s), s	1.7	22.2	2.5	2.9	16.0		6.6		3.3			
Cycle Queue Clearance Time (g_c), s	1.7	22.2	2.5	2.9	16.0		6.6		3.3			
Green Ratio (g/C)	0.01	0.78	0.83	0.03	0.79		0.05		0.08			
Capacity (c), veh/h	25	3968	1321	100	4043		189		133			
Volume-to-Capacity Ratio (X)	0.747	0.496	0.104	0.630	0.411		0.768		0.262			
Back of Queue (Q), ft/ln (95 th percentile)	40	299	32	60	224		142		62			
Back of Queue (Q), veh/ln (95 th percentile)	1.6	11.8	1.3	2.4	8.8		5.6		2.4			
Queue Storage Ratio (RQ) (95 th percentile)	0.16	0.00	0.11	0.14	0.00		0.00		0.00			
Uniform Delay (d_1), s/veh	78.6	6.4	2.4	76.8	5.1		74.6		68.7			
Incremental Delay (d_2), s/veh	14.9	0.4	0.2	2.4	0.3		5.7		0.4			
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (d), s/veh	93.5	6.8	2.6	79.3	5.4		80.3		69.1			
Level of Service (LOS)	F	A	A	E	A		F		E			
Approach Delay, s/veh / LOS	7.3		A	8.1		A	78.2		E		0.0	
Intersection Delay, s/veh / LOS	10.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.21	B	1.33	A	2.76	C	2.76	C
Bicycle LOS Score / LOS	1.66	B	1.44	A		F		

HCS Signalized Intersection Intermediate Values

General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 7:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest AM PRE.xus		
Project Description	2029 Pre AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	18	1868	131	60	1578		138		33			

Signal Information				Signal Phases									
Cycle, s	160.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		2.3	2.4	124.6	8.7	0.0	0.0				
		Yellow		5.0	0.0	5.0	4.0	0.0	0.0				
		Red		2.0	0.0	2.0	4.0	0.0	0.0				

Saturation Flow / Delay	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Heavy Vehicles and Grade Factor (f_{HVg})	0.984	0.984	0.984	0.984	0.984	1.000	0.984	1.000	0.984			
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Lane Utilization Adjustment Factor (f_{LU})	1.000	0.908	1.000	0.971	0.908	1.000	0.971	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		0.952	0.000		0.952	0.000				
Right-Turn Adjustment Factor (f_{RT})		0.000	0.847		1.000	1.000		0.000	0.847			
Left-Turn Pedestrian Adjustment Factor (f_{LPB})	1.000			1.000			1.000					
Right-Turn Ped-Bike Adjustment Factor (f_{RPB})			1.000			1.000			1.000			
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$)	1.00			1.00								
Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$)												
Movement Saturation Flow Rate (s), veh/h	1781	5095	1585	3459	5267	0	3563	0	1585			
Proportion of Vehicles Arriving on Green (P)	0.01	0.78	0.78	0.03	0.79	0.00	0.05	0.00	0.05	0.00	0.00	0.00
Incremental Delay Factor (k)	0.04	0.50	0.50	0.04	0.50		0.10		0.04			

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	7.0	7.0	7.0	7.0		4.0		
Green Ratio (g/C)	0.01	0.78	0.03	0.79		0.05		
Permitted Saturation Flow Rate (s_p), veh/h/ln	0	0	0	0		1781		
Shared Saturation Flow Rate (s_{sh}), veh/h/ln								
Permitted Effective Green Time (g_p), s	0.0	0.0	0.0	0.0		0.0		
Permitted Service Time (g_u), s	0.0	0.0	0.0	0.0		0.0		
Permitted Queue Service Time (g_{ps}), s								
Time to First Blockage (g_t), s	0.0	0.0	0.0	0.0		0.0		
Queue Service Time Before Blockage (g_{ts}), s								
Protected Right Saturation Flow (s_R), veh/h/ln			1585			1585		
Protected Right Effective Green Time (g_R), s			8.7			4.6		

Multimodal	EB			WB			NB			SB		
Pedestrian F_w / F_v	1.557	0.000	0.681	0.000	1.983	0.000	1.983	0.000	1.983	0.000		
Pedestrian F_s / F_{delay}	0.000	0.055	0.000	0.049	0.000	0.176	0.000	0.176	0.000	0.176		
Pedestrian M_{corner} / M_{cw}	0.00		0.00		0.00		0.00		0.00			
Bicycle c_b / d_b	1557.76	3.91	1587.21	3.41			89.25		-62.50		85.08	
Bicycle F_w / F_v	-3.64	1.17	-3.64	0.95	-3.64	Infinity	-3.64		-3.64			

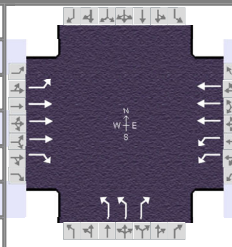
HCS Signalized Intersection Results Graphical Summary

General Information

Agency	MEP		
Analyst	MEP	Analysis Date	May 6, 2024
Jurisdiction	Wellington	Time Period	
Urban Street	Forest Hill Blvd	Analysis Year	2029
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest AM PRE.xus
Project Description	2029 Pre AM		

Intersection Information

Duration, h	0.250
Area Type	Other
PHF	0.95
Analysis Period	1 > 7:00



Demand Information

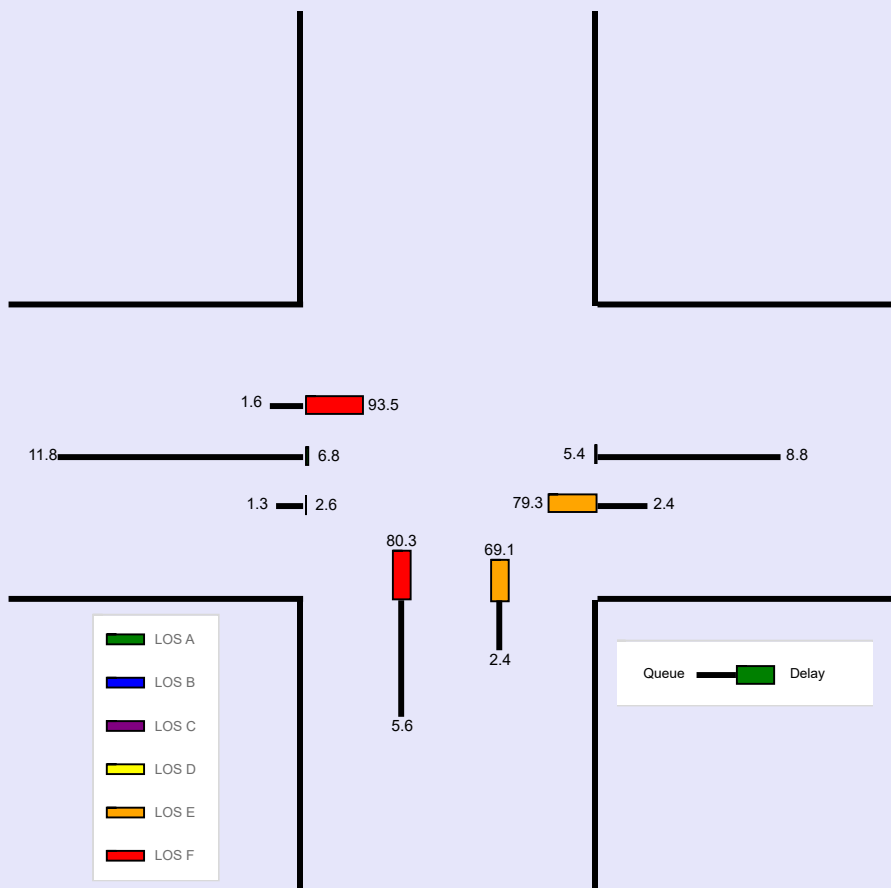
Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	18	1868	131	60	1578		138		33			

Signal Information

Cycle, s	160.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	2.3	2.4	124.6	8.7	0.0	0.0			
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	0.0	5.0	4.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	0.0	2.0	4.0	0.0	0.0			

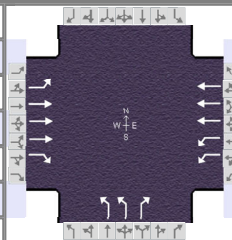
Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Back of Queue (Q), ft/ln (95 th percentile)	40	299	32	60	224		142		62			
Back of Queue (Q), veh/ln (95 th percentile)	1.6	11.8	1.3	2.4	8.8		5.6		2.4			
Queue Storage Ratio (RQ) (95 th percentile)	0.16	0.00	0.11	0.14	0.00		0.00		0.00			
Control Delay (d), s/veh	93.5	6.8	2.6	79.3	5.4		80.3		69.1			
Level of Service (LOS)	F	A	A	E	A		F		E			
Approach Delay, s/veh / LOS	7.3 A			8.1 A			78.2 E			0.0		
Intersection Delay, s/veh / LOS	10.8						B					



HCS Signalized Intersection Input Data

General Information				Intersection Information			
Agency	MEP			Duration, h	0.250		
Analyst	MEP		Analysis Date	May 6, 2024		Area Type	Other
Jurisdiction	Wellington		Time Period			PHF	0.95
Urban Street	Forest Hill Blvd		Analysis Year	2029		Analysis Period	1 > 7:00
Intersection	Forest Hill Blvd & Olive Dr		File Name	Olive & Forest AM POST.xus			
Project Description	2029 Post AM						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	42	1892	131	63	1585		138		45			

Signal Information				Signal Phases										
Cycle, s	160.0	Reference Phase	2											
Offset, s	0	Reference Point	End	Green	4.8	0.3	124.1	8.8	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	0.0	5.0	4.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	0.0	2.0	4.0	0.0	0.0				

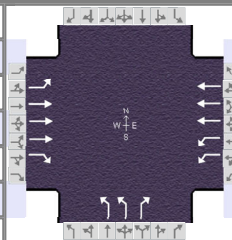
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	42	1892	131	63	1585		138		45			
Initial Queue (Q_b), veh/h	0	0	0	0	0		0		0			
Base Saturation Flow Rate (s_o), veh/h	1900	1900	1900	1900	1900		1900		1900			
Parking (N_m), man/h	None			None			None					
Heavy Vehicles (P_{HV}), %	2	2	2	2	2		2		2			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0		0	0	
Buses (N_b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	3	3	3	3		3		3			
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0		12.0			
Turn Bay Length, ft	260	0	290	440	0		0		0			
Grade (P_g), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35		35		35			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G_{max}) or Phase Split, s	15.0	125.0	15.0	125.0	20.0	20.0		
Yellow Change Interval (Y), s	5.0	5.0	5.0	5.0	4.0	4.0		
Red Clearance Interval (R_c), s	2.0	2.0	2.0	2.0	4.0	4.0		
Minimum Green (G_{min}), s	4	20	4	20	6	6		
Start-Up Lost Time (l_t), s	2.0	2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0			
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0		
Recall Mode	Off	Min	Off	Min	Off	Off		
Dual Entry	No	Yes	No	Yes	No	Yes		
Walk ($Walk$), s		7.0				7.0		0.0
Pedestrian Clearance Time (PC), s		35.0				22.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0.0	No	25.0				0.0	No	25.0	0.0	No	25.0
Walkway / Crosswalk Width / Length, ft	9.0	12.0	0.0				9.0	12.0	0.0	9.0	12.0	0.0
Street Width / Island / Curb, ft	0.0	0	No	0.0		No	0.0	0	No		0	
Width Outside / Bike Lane / Shoulder, ft	12.0	5.0	2.0	12.0	5.0	2.0	12.0	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50			0.50		No	0.50		No		

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 7:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest AM POST.xus		
Project Description	2029 Post AM				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	42	1892	131	63	1585		138		45			

Signal Information				Signal Timing (s)																				
Cycle, s	160.0	Reference Phase	2	Green	4.8	0.3	124.1	8.8	0.0	0.0	Yellow	5.0	0.0	5.0	4.0	0.0	0.0	Red	2.0	0.0	2.0	4.0	0.0	0.0
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

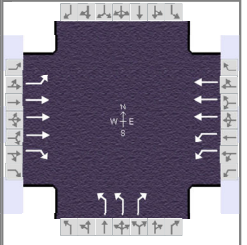
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		
Case Number	2.0	3.0	2.0	4.0		9.0		
Phase Duration, s	12.1	131.4	11.8	131.1		16.8		
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0		8.0		
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.2		
Queue Clearance Time (g_s), s	5.9		5.0			8.6		
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.1		
Phase Call Probability	0.86		0.95			1.00		
Max Out Probability	0.02		0.00			0.81		

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2		7		14			
Adjusted Flow Rate (v), veh/h	44	1992	138	66	1668		145		47			
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1698	1585	1730	1698		1730		1585			
Queue Service Time (g_s), s	3.9	22.8	2.6	3.0	17.5		6.6		4.5			
Cycle Queue Clearance Time (g_c), s	3.9	22.8	2.6	3.0	17.5		6.6		4.5			
Green Ratio (g/C)	0.03	0.78	0.83	0.03	0.78		0.05		0.08			
Capacity (c), veh/h	57	3962	1319	104	3952		189		134			
Volume-to-Capacity Ratio (X)	0.775	0.503	0.105	0.638	0.422		0.767		0.352			
Back of Queue (Q), ft/ln (95 th percentile)	89	306	32	63	247		142		85			
Back of Queue (Q), veh/ln (95 th percentile)	3.5	12.0	1.3	2.5	9.7		5.6		3.3			
Queue Storage Ratio (RQ) (95 th percentile)	0.34	0.00	0.11	0.14	0.00		0.00		0.00			
Uniform Delay (d_1), s/veh	76.9	6.5	2.5	76.7	6.0		74.6		69.1			
Incremental Delay (d_2), s/veh	8.1	0.5	0.2	2.4	0.3		5.7		0.6			
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (d), s/veh	85.0	6.9	2.6	79.1	6.3		80.3		69.7			
Level of Service (LOS)	F	A	A	E	A		F		E			
Approach Delay, s/veh / LOS	8.3		A	9.1		A	77.7		E		0.0	
Intersection Delay, s/veh / LOS	11.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.21	B	1.34	A	2.76	C	2.76	C
Bicycle LOS Score / LOS	1.68	B	1.44	A		F		

HCS Signalized Intersection Intermediate Values

General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 7:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest AM POST.xus		
Project Description	2029 Post AM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	42	1892	131	63	1585		138		45			

Signal Information				Signal Timing Diagram									
Cycle, s	160.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		4.8	0.3	124.1	8.8	0.0	0.0				
		Yellow		5.0	0.0	5.0	4.0	0.0	0.0				
		Red		2.0	0.0	2.0	4.0	0.0	0.0				

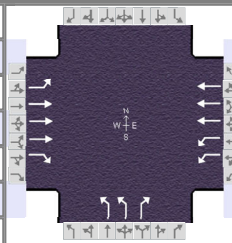
Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Heavy Vehicles and Grade Factor (f_{HVg})	0.984	0.984	0.984	0.984	0.984	1.000	0.984	1.000	0.984			
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Lane Utilization Adjustment Factor (f_{LU})	1.000	0.908	1.000	0.971	0.908	1.000	0.971	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		0.952	0.000		0.952	0.000				
Right-Turn Adjustment Factor (f_{RT})		0.000	0.847		1.000	1.000		0.000	0.847			
Left-Turn Pedestrian Adjustment Factor (f_{LPB})	1.000			1.000			1.000					
Right-Turn Ped-Bike Adjustment Factor (f_{RPB})			1.000			1.000			1.000			
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$)	1.00			1.00								
Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$)												
Movement Saturation Flow Rate (s), veh/h	1781	5095	1585	3459	5267	0	3563	0	1585			
Proportion of Vehicles Arriving on Green (P)	0.03	0.78	0.78	0.03	0.78	0.00	0.05	0.00	0.05	0.00	0.00	0.00
Incremental Delay Factor (k)	0.04	0.50	0.50	0.04	0.50		0.10		0.04			

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	7.0	7.0	7.0	7.0		4.0		
Green Ratio (g/C)	0.03	0.78	0.03	0.78		0.05		
Permitted Saturation Flow Rate (s_p), veh/h/ln	0	0	0	0		1781		
Shared Saturation Flow Rate (s_{sh}), veh/h/ln								
Permitted Effective Green Time (g_p), s	0.0	0.0	0.0	0.0		0.0		
Permitted Service Time (g_u), s	0.0	0.0	0.0	0.0		0.0		
Permitted Queue Service Time (g_{ps}), s								
Time to First Blockage (g_t), s	0.0	0.0	0.0	0.0		0.0		
Queue Service Time Before Blockage (g_{fs}), s								
Protected Right Saturation Flow (s_R), veh/h/ln			1585			1585		
Protected Right Effective Green Time (g_R), s			8.8			4.8		

Multimodal	EB			WB			NB			SB		
Pedestrian F_w / F_v	1.557	0.000	0.681	0.000	1.983	0.000	1.983	0.000	1.983	0.000		
Pedestrian F_s / F_{delay}	0.000	0.055	0.000	0.056	0.000	0.176	0.000	0.176	0.000	0.176		
Pedestrian M_{corner} / M_{cw}	0.00		0.00		0.00		0.00		0.00			
Bicycle c_b / d_b	1555.38	3.95	1551.48	4.02			89.25		-62.50		85.08	
Bicycle F_w / F_v	-3.64	1.20	-3.64	0.95	-3.64	Infinity	-3.64		-3.64			

HCS Signalized Intersection Results Graphical Summary

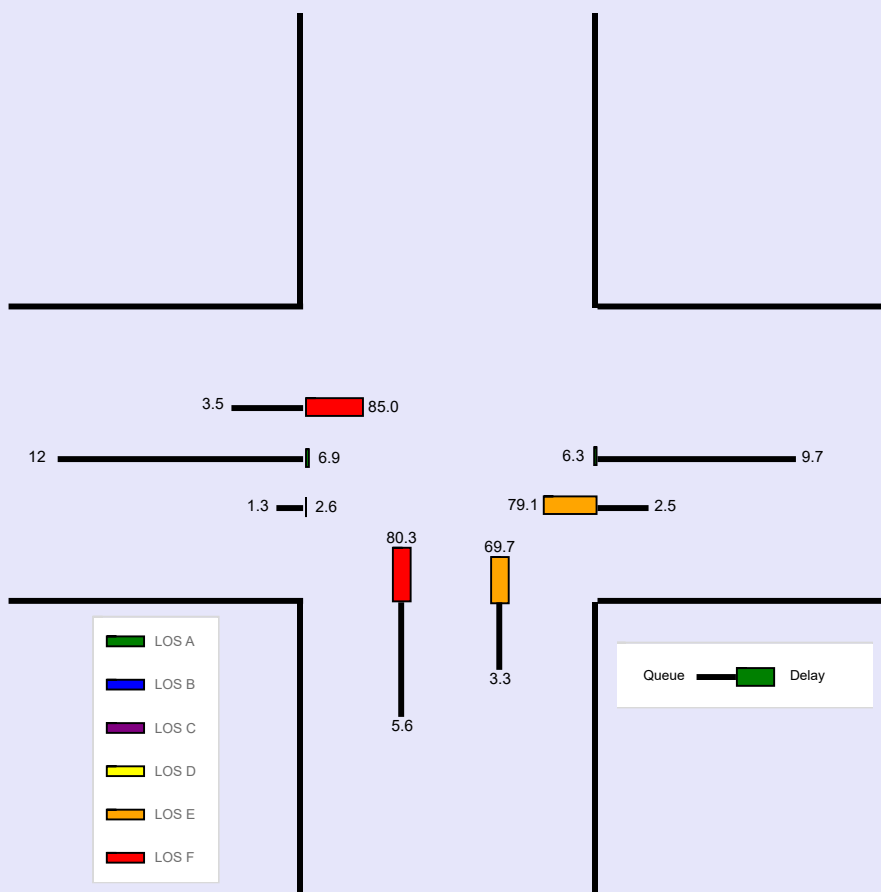
General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 7:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest AM POST.xus		
Project Description	2029 Post AM				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	42	1892	131	63	1585		138		45			

Signal Information				Signal Timing and Phases									
Cycle, s	160.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	4.8	0.3	124.1	8.8	0.0	0.0			
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	0.0	5.0	4.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	0.0	2.0	4.0	0.0	0.0			

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Back of Queue (Q), ft/ln (95 th percentile)	89	306	32	63	247		142		85			
Back of Queue (Q), veh/ln (95 th percentile)	3.5	12.0	1.3	2.5	9.7		5.6		3.3			
Queue Storage Ratio (RQ) (95 th percentile)	0.34	0.00	0.11	0.14	0.00		0.00		0.00			
Control Delay (d), s/veh	85.0	6.9	2.6	79.1	6.3		80.3		69.7			
Level of Service (LOS)	F	A	A	E	A		F		E			
Approach Delay, s/veh / LOS	8.3 A			9.1 A			77.7 E			0.0		
Intersection Delay, s/veh / LOS	11.9						B					



Wellington
 PM PEAK HOUR TURNING MOVEMENTS
 EXHIBIT 4
 Olive Dr & Forest Hill Blvd

		ebu	ebl	ebt	ebr	wbu	wbl	wbt	wbr	nbu	nbl	nbt	nbr	sbu	sbl	sbt	sbr	totals
4:00 PM	4:15 PM	14	0	371	47	4	19	354	0	0	72	0	22	0	0	0	0	903
4:15 PM	4:30 PM	11	0	310	46	0	23	382	0	0	74	0	18	0	0	0	0	864
4:30 PM	4:45 PM	11	0	379	52	2	11	424	0	1	72	0	25	0	0	0	0	977
4:45 PM	5:00 PM	13	0	349	53	1	26	408	0	0	80	0	10	0	0	0	0	940
5:00 PM	5:15 PM	6	0	358	44	6	20	455	0	0	77	0	33	0	0	0	0	999
5:15 PM	5:30 PM	15	0	377	77	1	27	416	0	2	67	0	19	0	0	0	0	1001
5:30 PM	5:45 PM	8	0	353	56	6	33	395	0	1	79	0	20	0	0	0	0	951
5:45 PM	6:00 PM	15	0	328	45	4	39	434	0	0	58	0	24	0	0	0	0	947
Peak Hour Traffic Volume		93	0	2825	420	24	198	3268	0	4	579	0	171	0	0	0	0	7582
4:30 PM	5:30 PM	45	0	1463	226	10	84	1703	0	3	296	0	87	0	0	0	0	3917

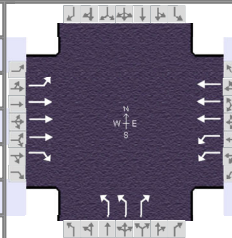
Count Taken: 4/25/2024
 Buildout year: 2029
 Growth Rate: 1.0% 2.00%
 Seasonal Factor: 1.04

	ebu	ebl	ebt	ebr	wbu	wbl	wbt	wbr	nbu	nbl	nbt	nbr	sbu	sbl	sbt	sbr
4/25/2024	45	0	1463	226	10	84	1703	0	3	296	0	87	0	0	0	0
Seasonal Factor	2	0	59	9	0	3	68	0	0	12	0	3	0	0	0	0
Adjusted Volumes	47	0	1522	235	10	87	1771	0	3	308	0	90	0	0	0	0
Growth 1%	0	0	78	12	0	4	90	0	0	16	0	5	0	0	0	0
Committed**	0	0	165	0	0	0	171	0	0	0	0	0	0	0	0	0
Committed + 1%	0	0	243	12	0	4	261	0	0	16	0	5	0	0	0	0
Growth 2%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Growth 2% or Committed + 1%	5	0	158	24	1	9	184	0	0	32	0	9	0	0	0	0
2029 Volumes	52	0	1765	259	11	96	2032	0	3	340	0	99	0	0	0	0
Pre W/ Div	52	0	1765	259	11	96	2032	0	3	340	0	99	0	0	0	0
Project	7	0	7	0	0	4	8	0	0	0	0	3	0	0	0	0
Post	59	0	1772	259	11	100	2040	0	3	340	0	102	0	0	0	0

Project Traffic Assignment	Out	Out	In	In	Out	Out	Out	Out
	40%	0%	40%	0%	0%	20%	40%	0%

HCS Signalized Intersection Input Data

General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 16:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest PM PRE.xus		
Project Description	2029 Pre PM				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	52	1765	259	107	2032		343		99			

Signal Information				Phase Diagram								
Cycle, s	160.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green	6.3	0.9	110.8	20.0	0.0	0.0				
		Yellow	5.0	0.0	5.0	4.0	0.0	0.0				
		Red	2.0	0.0	2.0	4.0	0.0	0.0				

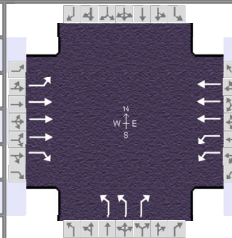
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	52	1765	259	107	2032		343		99			
Initial Queue (Q _b), veh/h	0	0	0	0	0		0		0			
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900		1900		1900			
Parking (N _m), man/h		None				None				None		
Heavy Vehicles (P _{HV}), %	2	2	2	2	2		2		2			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0		0	0	
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	3	3	3	3		3		3			
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0		12.0			
Turn Bay Length, ft	260	0	290	440	0		0		0			
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35		35		35			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	15.0	117.0	15.0	117.0	28.0	28.0		
Yellow Change Interval (Y), s	5.0	5.0	5.0	5.0	4.0	4.0		
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	4.0	4.0		
Minimum Green (G _{min}), s	4	20	4	20	6	6		
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0			
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0		
Recall Mode	Off	Min	Min	Min	Off	Ped		
Dual Entry	No	Yes	No	Yes	No	Yes		
Walk (Walk), s		7.0				7.0		0.0
Pedestrian Clearance Time (PC), s		22.0				35.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0.0	No	25.0				0.0	No	25.0	0.0	No	25.0
Walkway / Crosswalk Width / Length, ft	9.0	12.0	0.0				9.0	12.0	0.0	9.0	12.0	0.0
Street Width / Island / Curb, ft	0.0	0	No	0.0		No	0.0	0	No		0	
Width Outside / Bike Lane / Shoulder, ft	12.0	5.0	2.0	12.0	5.0	2.0	12.0	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50			0.50		No	0.50		No		

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 16:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest PM PRE.xus		
Project Description	2029 Pre PM				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	52	1765	259	107	2032		343		99			

Signal Information				Phase Diagram									
Cycle, s	160.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green	6.3	0.9	110.8	20.0	0.0	0.0					
		Yellow	5.0	0.0	5.0	4.0	0.0	0.0					
		Red	2.0	0.0	2.0	4.0	0.0	0.0					

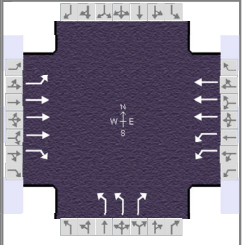
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		
Case Number	2.0	3.0	2.0	4.0		9.0		
Phase Duration, s	13.3	117.8	14.2	118.7		28.0		
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0		8.0		
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.2		
Queue Clearance Time (g_s), s	6.9		7.1			18.3		
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.2		
Phase Call Probability	0.91		1.00			1.00		
Max Out Probability	1.00		1.00			1.00		

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2		7		14			
Adjusted Flow Rate (v), veh/h	55	1858	273	113	2139		361		104			
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1698	1585	1730	1698		1730		1585			
Queue Service Time (g_s), s	4.9	28.2	6.1	5.1	34.9		16.3		9.3			
Cycle Queue Clearance Time (g_c), s	4.9	28.2	6.1	5.1	34.9		16.3		9.3			
Green Ratio (g/C)	0.04	0.69	0.82	0.04	0.70		0.12		0.17			
Capacity (c), veh/h	70	3529	1296	155	3558		432		269			
Volume-to-Capacity Ratio (X)	0.784	0.526	0.210	0.728	0.601		0.835		0.387			
Back of Queue (Q), ft/ln (95 th percentile)	122	401	81	115	478		320		173			
Back of Queue (Q), veh/ln (95 th percentile)	4.8	15.8	3.2	4.5	18.8		12.6		6.8			
Queue Storage Ratio (RQ) (95 th percentile)	0.47	0.00	0.28	0.26	0.00		0.00		0.00			
Uniform Delay (d_1), s/veh	76.2	11.9	3.2	75.5	12.6		68.4		59.0			
Incremental Delay (d_2), s/veh	22.1	0.6	0.4	10.3	0.8		12.5		0.3			
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (d), s/veh	98.3	12.5	3.6	85.7	13.3		80.9		59.4			
Level of Service (LOS)	F	B	A	F	B		F		E			
Approach Delay, s/veh / LOS	13.5		B	16.9		B	76.1		E	0.0		
Intersection Delay, s/veh / LOS	21.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.36	A	2.76	C	2.76	C
Bicycle LOS Score / LOS	1.69	B	1.73	B		F		

HCS Signalized Intersection Intermediate Values

General Information				Intersection Information		
Agency	MEP			Duration, h	0.250	
Analyst	MEP	Analysis Date	May 6, 2024		Area Type	Other
Jurisdiction	Wellington		Time Period		PHF	0.95
Urban Street	Forest Hill Blvd		Analysis Year	2029	Analysis Period	1 > 16:00
Intersection	Forest Hill Blvd & Olive Dr		File Name	Olive & Forest PM PRE.xus		
Project Description	2029 Pre PM					



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	52	1765	259	107	2032		343		99			

Signal Information				Signal Timing Diagram									
Cycle, s	160.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		6.3	0.9	110.8	20.0	0.0	0.0				
		Yellow		5.0	0.0	5.0	4.0	0.0	0.0				
		Red		2.0	0.0	2.0	4.0	0.0	0.0				

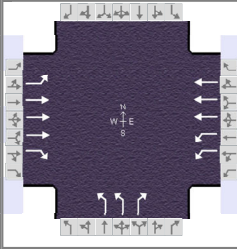
Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Heavy Vehicles and Grade Factor (f_{HVg})	0.984	0.984	0.984	0.984	0.984	1.000	0.984	1.000	0.984			
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Lane Utilization Adjustment Factor (f_{LU})	1.000	0.908	1.000	0.971	0.908	1.000	0.971	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		0.952	0.000		0.952	0.000				
Right-Turn Adjustment Factor (f_{RT})		0.000	0.847		1.000	1.000		0.000	0.847			
Left-Turn Pedestrian Adjustment Factor (f_{LPB})	1.000			1.000			1.000					
Right-Turn Ped-Bike Adjustment Factor (f_{RPB})			1.000			1.000			1.000			
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$)	1.00			1.00								
Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$)												
Movement Saturation Flow Rate (s), veh/h	1781	5095	1585	3459	5267	0	3563	0	1585			
Proportion of Vehicles Arriving on Green (P)	0.04	0.69	0.69	0.04	0.70	0.00	0.13	0.00	0.13	0.00	0.00	0.00
Incremental Delay Factor (k)	0.15	0.50	0.50	0.18	0.50		0.35		0.04			

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	7.0	7.0	7.0	7.0		4.0		
Green Ratio (g/C)	0.04	0.69	0.04	0.70		0.13		
Permitted Saturation Flow Rate (s_p), veh/h/ln	0	0	0	0		1781		
Shared Saturation Flow Rate (s_{sh}), veh/h/ln								
Permitted Effective Green Time (g_p), s	0.0	0.0	0.0	0.0		0.0		
Permitted Service Time (g_u), s	0.0	0.0	0.0	0.0		0.0		
Permitted Queue Service Time (g_{ps}), s								
Time to First Blockage (g_t), s	0.0	0.0	0.0	0.0		0.0		
Queue Service Time Before Blockage (g_{fs}), s								
Protected Right Saturation Flow (s_R), veh/h/ln			1585			1585		
Protected Right Effective Green Time (g_R), s			20.0			7.2		

Multimodal	EB			WB			NB			SB		
Pedestrian F_w / F_v	1.557	0.000	0.681	0.000	1.983	0.000	1.983	0.000	1.983	0.000		
Pedestrian F_s / F_{delay}	0.000	0.081	0.000	0.080	0.000	0.176	0.000	0.176	0.000	0.176		
Pedestrian M_{corner} / M_{cw}	0.00		0.00		0.00		0.00		0.00			
Bicycle c_b / d_b	1385.49	7.55	1396.56	7.28			89.25		-62.50		85.08	
Bicycle F_w / F_v	-3.64	1.20	-3.64	1.24	-3.64	Infinity	-3.64		-3.64			

HCS Signalized Intersection Results Graphical Summary

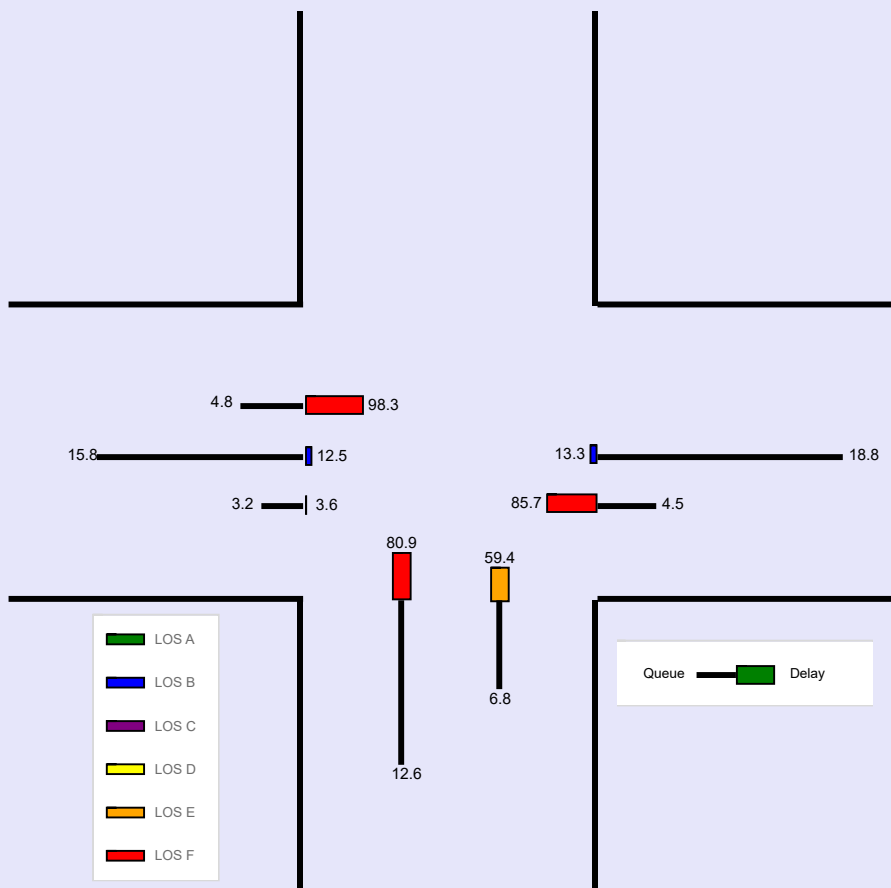
General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 16:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest PM PRE.xus		
Project Description	2029 Pre PM				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (<i>v</i>), veh/h	52	1765	259	107	2032		343		99			

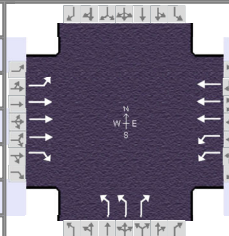
Signal Information				Signal Timing (s)																				
Cycle, s	160.0	Reference Phase	2	Green	6.3	0.9	110.8	20.0	0.0	0.0	Yellow	5.0	0.0	5.0	4.0	0.0	0.0	Red	2.0	0.0	2.0	4.0	0.0	0.0
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Back of Queue (<i>Q</i>), ft/ln (95 th percentile)	122	401	81	115	478		320		173			
Back of Queue (<i>Q</i>), veh/ln (95 th percentile)	4.8	15.8	3.2	4.5	18.8		12.6		6.8			
Queue Storage Ratio (<i>RQ</i>) (95 th percentile)	0.47	0.00	0.28	0.26	0.00		0.00		0.00			
Control Delay (<i>d</i>), s/veh	98.3	12.5	3.6	85.7	13.3		80.9		59.4			
Level of Service (LOS)	F	B	A	F	B		F		E			
Approach Delay, s/veh / LOS	13.5	B		16.9	B		76.1	E		0.0		
Intersection Delay, s/veh / LOS	21.0						C					



HCS Signalized Intersection Input Data

General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 16:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest PM POST.xus		
Project Description	2029 Post PM				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	59	1772	259	111	2040		343		102			

Signal Information				Phase Diagram									
Cycle, s	160.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green	7.1	0.3	112.0	18.7	0.0	0.0					
		Yellow	5.0	0.0	5.0	4.0	0.0	0.0					
		Red	2.0	0.0	2.0	4.0	0.0	0.0					

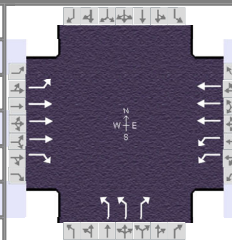
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	59	1772	259	111	2040		343		102			
Initial Queue (Q _b), veh/h	0	0	0	0	0		0		0			
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900		1900		1900			
Parking (N _m), man/h		None			None			None				
Heavy Vehicles (P _{HV}), %	2	2	2	2	2		2		2			
Ped / Bike / RTOR, /h	0	0	0	0	0		0	0		0	0	
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0			
Arrival Type (AT)	3	3	3	3	3		3		3			
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00		1.00		1.00			
Lane Width (W), ft	12.0	12.0	12.0	12.0	12.0		12.0		12.0			
Turn Bay Length, ft	260	0	290	440	0		0		0			
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35		35		35			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	15.0	117.0	15.0	117.0	28.0	28.0		
Yellow Change Interval (Y), s	5.0	5.0	5.0	5.0	4.0	4.0		
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	4.0	4.0		
Minimum Green (G _{min}), s	4	20	4	20	6	6		
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	2.0			
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0		
Recall Mode	Off	Min	Off	Min	Off	Off		
Dual Entry	No	Yes	No	Yes	No	Yes		
Walk (Walk), s		7.0				7.0		0.0
Pedestrian Clearance Time (PC), s		22.0				35.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0.0	No	25.0				0.0	No	25.0	0.0	No	25.0
Walkway / Crosswalk Width / Length, ft	9.0	12.0	0.0				9.0	12.0	0.0	9.0	12.0	0.0
Street Width / Island / Curb, ft	0.0	0	No	0.0		No	0.0	0	No		0	
Width Outside / Bike Lane / Shoulder, ft	12.0	5.0	2.0	12.0	5.0	2.0	12.0	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50			0.50		No	0.50		No		

HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 16:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest PM POST.xus		
Project Description	2029 Post PM				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	59	1772	259	111	2040		343		102			

Signal Information				Signal Timing (s)														
Cycle, s	160.0	Reference Phase	2	Green	7.1	0.3	112.0	18.7	0.0	0.0	Yellow	5.0	0.0	5.0	4.0	0.0	0.0	
Offset, s	0	Reference Point	End	Red	2.0	0.0	2.0	4.0	0.0	0.0	Uncoordinated	No	Simult. Gap E/W	On	Force Mode	Fixed	Simult. Gap N/S	On

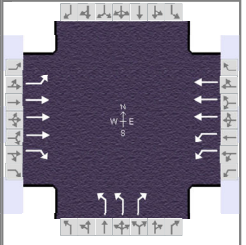
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		
Case Number	2.0	3.0	2.0	4.0		9.0		
Phase Duration, s	14.1	119.0	14.3	119.2		26.7		
Change Period, ($Y+R_c$), s	7.0	7.0	7.0	7.0		8.0		
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0		3.2		
Queue Clearance Time (g_s), s	7.5		7.3			18.5		
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.2		
Phase Call Probability	0.94		0.99			1.00		
Max Out Probability	1.00		1.00			1.00		

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2		7		14			
Adjusted Flow Rate (v), veh/h	62	1865	273	117	2147		361		107			
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1698	1585	1730	1698		1730		1585			
Queue Service Time (g_s), s	5.5	27.7	6.1	5.3	34.8		16.5		9.7			
Cycle Queue Clearance Time (g_c), s	5.5	27.7	6.1	5.3	34.8		16.5		9.7			
Green Ratio (g/C)	0.04	0.70	0.82	0.05	0.70		0.12		0.16			
Capacity (c), veh/h	79	3565	1294	159	3574		404		258			
Volume-to-Capacity Ratio (X)	0.790	0.523	0.211	0.737	0.601		0.893		0.416			
Back of Queue (Q), ft/ln (95 th percentile)	135	393	82	116	475		332		181			
Back of Queue (Q), veh/ln (95 th percentile)	5.3	15.5	3.2	4.5	18.7		13.1		7.1			
Queue Storage Ratio (RQ) (95 th percentile)	0.52	0.00	0.28	0.26	0.00		0.00		0.00			
Uniform Delay (d_1), s/veh	75.7	11.4	3.2	75.4	12.3		69.7		60.2			
Incremental Delay (d_2), s/veh	18.9	0.6	0.4	6.9	0.8		18.7		0.4			
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (d), s/veh	94.7	11.9	3.6	82.3	13.1		88.3		60.6			
Level of Service (LOS)	F	B	A	F	B		F		E			
Approach Delay, s/veh / LOS	13.2		B	16.6		B	82.0		F	0.0		
Intersection Delay, s/veh / LOS	21.3						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	1.36	A	2.76	C	2.76	C
Bicycle LOS Score / LOS	1.70	B	1.73	B		F		

HCS Signalized Intersection Intermediate Values

General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 16:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest PM POST.xus		
Project Description	2029 Post PM				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	59	1772	259	111	2040		343		102			

Signal Information				Signal Timing Diagram														
Cycle, s	160.0	Reference Phase	2															
Offset, s	0	Reference Point	End															
Uncoordinated	No	Simult. Gap E/W	On															
Force Mode	Fixed	Simult. Gap N/S	On															
		Green		7.1	0.3	112.0	18.7	0.0	0.0									
		Yellow		5.0	0.0	5.0	4.0	0.0	0.0									
		Red		2.0	0.0	2.0	4.0	0.0	0.0									

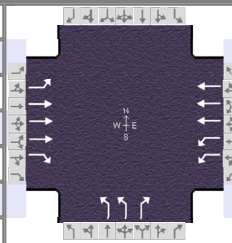
Saturation Flow / Delay	L	T	R	L	T	R	L	T	R	L	T	R
Lane Width Adjustment Factor (f_w)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Heavy Vehicles and Grade Factor (f_{HVg})	0.984	0.984	0.984	0.984	0.984	1.000	0.984	1.000	0.984			
Parking Activity Adjustment Factor (f_p)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000
Bus Blockage Adjustment Factor (f_{bb})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	0.000	0.000	0.000
Area Type Adjustment Factor (f_a)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Lane Utilization Adjustment Factor (f_{LU})	1.000	0.908	1.000	0.971	0.908	1.000	0.971	1.000	1.000	1.000	1.000	1.000
Left-Turn Adjustment Factor (f_{LT})	0.952	0.000		0.952	0.000		0.952	0.000				
Right-Turn Adjustment Factor (f_{RT})		0.000	0.847		1.000	1.000		0.000	0.847			
Left-Turn Pedestrian Adjustment Factor (f_{LPB})	1.000			1.000			1.000					
Right-Turn Ped-Bike Adjustment Factor (f_{RPB})			1.000			1.000			1.000			
Work Zone Adjustment Factor (f_{wz})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
DDI Factor (f_{DDI})	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000			
Left-Turn Prot. CAV Adj. Factor ($f_{CAV,prot}$)	1.00			1.00								
Left-Turn Perm. CAV Adj. Factor ($f_{CAV,perm}$)												
Movement Saturation Flow Rate (s), veh/h	1781	5095	1585	3459	5267	0	3563	0	1585			
Proportion of Vehicles Arriving on Green (P)	0.04	0.70	0.70	0.05	0.70	0.00	0.12	0.00	0.12	0.00	0.00	0.00
Incremental Delay Factor (k)	0.13	0.50	0.50	0.11	0.50		0.35		0.04			

Signal Timing / Movement Groups	EBL	EBT/R	WBL	WBT/R	NBL	NBT/R	SBL	SBT/R
Lost Time (t_L)	7.0	7.0	7.0	7.0		4.0		
Green Ratio (g/C)	0.04	0.70	0.05	0.70		0.12		
Permitted Saturation Flow Rate (s_p), veh/h/ln	0	0	0	0		1781		
Shared Saturation Flow Rate (s_{sh}), veh/h/ln								
Permitted Effective Green Time (g_p), s	0.0	0.0	0.0	0.0		0.0		
Permitted Service Time (g_u), s	0.0	0.0	0.0	0.0		0.0		
Permitted Queue Service Time (g_{ps}), s								
Time to First Blockage (g_t), s	0.0	0.0	0.0	0.0		0.0		
Queue Service Time Before Blockage (g_{fs}), s								
Protected Right Saturation Flow (s_R), veh/h/ln			1585			1585		
Protected Right Effective Green Time (g_R), s			18.7			7.3		

Multimodal	EB			WB			NB			SB		
Pedestrian F_w / F_v	1.557	0.000	0.681	0.000	1.983	0.000	1.983	0.000	1.983	0.000		
Pedestrian F_s / F_{delay}	0.000	0.079	0.000	0.079	0.000	0.176	0.000	0.176	0.000	0.176		
Pedestrian M_{corner} / M_{cw}	0.00		0.00		0.00		0.00		0.00			
Bicycle c_b / d_b	1399.61	7.21	1403.07	7.13			89.25		-62.50		85.08	
Bicycle F_w / F_v	-3.64	1.21	-3.64	1.25	-3.64	Infinity	-3.64		-3.64			

HCS Signalized Intersection Results Graphical Summary

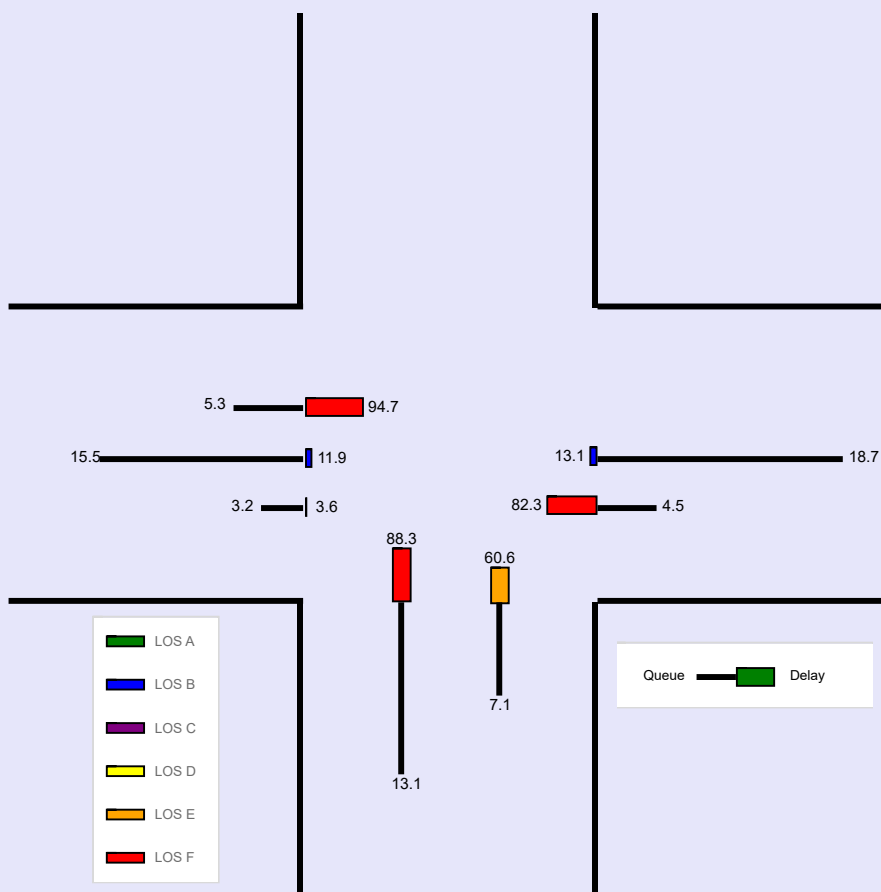
General Information				Intersection Information	
Agency	MEP			Duration, h	0.250
Analyst	MEP	Analysis Date	May 6, 2024	Area Type	Other
Jurisdiction	Wellington	Time Period		PHF	0.95
Urban Street	Forest Hill Blvd	Analysis Year	2029	Analysis Period	1 > 16:00
Intersection	Forest Hill Blvd & Olive Dr	File Name	Olive & Forest PM POST.xus		
Project Description	2029 Post PM				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	59	1772	259	111	2040		343		102			

Signal Information				Signal Phases											
Cycle, s	160.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On												
Force Mode	Fixed	Simult. Gap N/S	On												
		Green		7.1	0.3	112.0	18.7	0.0	0.0						
		Yellow		5.0	0.0	5.0	4.0	0.0	0.0						
		Red		2.0	0.0	2.0	4.0	0.0	0.0						

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Back of Queue (Q), ft/ln (95 th percentile)	135	393	82	116	475		332		181			
Back of Queue (Q), veh/ln (95 th percentile)	5.3	15.5	3.2	4.5	18.7		13.1		7.1			
Queue Storage Ratio (RQ) (95 th percentile)	0.52	0.00	0.28	0.26	0.00		0.00		0.00			
Control Delay (d), s/veh	94.7	11.9	3.6	82.3	13.1		88.3		60.6			
Level of Service (LOS)	F	B	A	F	B		F		E			
Approach Delay, s/veh / LOS	13.2		B	16.6		B	82.0		F		0.0	
Intersection Delay, s/veh / LOS	21.3						C					



Palm Beach County Trip Generation Rates

(Must be used with traffic studies submitted to the County on or after 9/1/2022. However, immediate use is highly recommended)

Gr	Landuse	ITE Code	Unit	Daily Rate/Equation	Pass-By %	AM Peak Hour		PM Peak Hour	
						In/Out	Rate/Equation	In/Out	Rate/Equation
Industrial	General Light Industrial	110	1000 S.F.	4.87	10%	88/12	0.74	14/86	0.65
	Manufacturing	140	1000 S.F.	4.75	10%	76/24	0.68	31/69	0.74
	Warehouse	150	1000 S.F.	1.71	10%	77/23	0.17	28/72	0.18
	Mini-Warehouse/SS	151	1000 S.F.	1.45	10%	59/41	0.09	47/53	0.15
	HCF Center Warehouse - Non Sort	155	1000 S.F.	1.81	10%	81/19	0.15	39/61	0.16
Residential	Single Family Detached	210	Dwelling Unit	10	0%	26/74	0.7	63/37	0.94
	Multifamily Low-Rise Housing upto 3 story (Apartment/Condo/TH)	220	Dwelling Unit	6.74	0%	24/76	0.4	63/37	0.51
	Multifamily Mid-Rise Housing 4-10 story (Apartment/Condo/TH)	221	Dwelling Unit	4.54	0%	23/77	0.37	61/39	0.39
	55+ SF Detached	251	Dwelling Unit	4.31	0%	33/67	0.24	61/39	0.30
	55+ SF Attached	252	Dwelling Unit	3.24	0%	34/66	0.2	56/44	0.25
	Congregate Care Facility	253	Dwelling Unit	2.21	0%	58/42	0.08	49/51	0.18
	Assisted Living Facility	254	Beds	2.6	0%	60/40	0.18	39/61	0.24
Ldg	Hotel	310	Rooms	7.99	10%	56/44	0.46	51/49	0.59
Rec	Golf Course	430	Holes	30.38	5%	79/21	1.76	53/47	2.91
	Health/Fitness Club	492	1000 S.F.	32.93	5%	51/49	1.31	57/43	3.45
Institutional	Elementary School	520	Students	2.27	0%	54/46	0.74	46/54	0.16
	Middle/Junior School	522	Students	2.1	0%	54/46	0.67	48/52	0.15
	High School	525	Students	1.94	0%	68/32	0.52	48/52	0.14
	Private School (K-8)	530	Students	3.17 ^a	0%	56/44	1.01	46/54	0.26
	Private School (K-12)	532	Students	2.48	0%	63/37	0.79	43/57	0.17
	Church/Synagogue ^b	560	1000 S.F.	7.6	5%	62/38	0.32	44/56	0.49
	Day Care	565	Students	4.09	50%	53/47	0.78	47/53	0.79
	Library	590	1000 S.F.	72.05	10%	71/29	1	48/52	8.16
Med	Hospital	610	1000 S.F.	10.77	10%	67/33	0.82	35/65	0.86
	Nursing Home	620	Beds	3.06	10%	72/28	0.14	33/67	0.14
Office	General Office (10k-250k SF GFA) ^h	710	1000 S.F.	10.84	10%	88/12	1.52	17/83	1.44
	General Office (>250k SF GFA) ^h	710	1000 S.F.	$\text{Ln}(T) = 0.87 \text{Ln}(X) + 3.05$	10%	88/12	$\text{Ln}(T) = 0.86 \text{Ln}(X) + 1.16$	17/83	1.44
	Small Office Building (<=10k SF GFA)	712	1000 S.F.	14.39	10%	82/18	1.67	34/66	2.16
	Medical Office (Stand-Alone)	720	1000 S.F.	$T=42.97(X)-108.01$	10%	79/21	3.10	30/70	3.93
	Medical Office (Near Hospital)	720	1000 S.F.	31.86	10%	81/19	2.68	25/75	2.84
	Government Office	730	1000 S.F.	22.59	10%	75/25	3.34	25/75	1.71

Palm Beach County Trip Generation Rates

(Must be used with traffic studies submitted to the County on or after 9/1/2022. However, immediate use is highly recommended)

Gr	Landuse	ITE Code	Unit	Daily Rate/Equation	Pass-By %	AM Peak Hour		PM Peak Hour	
						In/Out	Rate/Equation	In/Out	Rate/Equation
Retail	Nursery (Garden Center)	817	Acre	108.1	0%	50/50	2.82	50/50	8.06
	Nursery (Wholesale)	818	Acre	19.50	0%	50/50	0.23	50/50	0.36
	Landscape Services	PBC	Acre ^c	121.70	0%	40/60	34.4	58/42	15.1
	Shop Center (>150ksf)	820	1000 S.F.	37.01	24%	62/38	0.84	48/52	3.4
	Shop Plaza (40-150ksf) w/Sup Market	821	1000 S.F.	94.49	39%	62/38	3.53	48/52	9.03
	Shop Plaza (40-150ksf) w/out Sup Market	821	1000 S.F.	67.52	39%	62/38	1.73	49/51	5.19
	Strip Retail Plaza (<40ksf)	822	1000 S.F.	54.45	63%	60/40	2.36	50/50	6.59
	Automobile Sales (New)	840	1000 S.F.	27.84	15%	73/27	1.86	40/60	2.42
	Automobile Parts Sales	843	1000 S.F.	54.57	28%	55/45	2.51	48/52	4.9
	Tire Store	848	1000 S.F.	27.69	28%	64/36	2.61	43/57	3.75
Services	Supermarket	850	1000 S.F.	93.84	36%	59/41	2.86	50/50	8.95
	Pharmacy + DT	881	1000 S.F.	108.40	50%	52/48	3.74	50/50	10.25
	Drive-In Bank	912	1000 S.F.	100.35	47%	58/42	9.95	50/50	21.01
	Fine Dining Restaurant	931	1000 S.F.	83.84	44%	50/50	0.73	67/33	7.8
	High Turnover Sit-Down Rest.	932	1000 S.F.	107.2	43%	55/45	9.57	61/39	9.05
	Fast Food Restaurant w/o DT	933	1000 S.F.	450.49	45%	58/42	43.18	50/50	33.21
	Fast Food Restaurant + DT	934	1000 S.F.	467.48	49%	51/49	44.61	52/48	33.03
	Coffee/Donut Shop w/o DT	936	1000 S.F.	441.88 ^d	45%	51/49	93.08	50/50	32.29
	Coffee/Donut Shop + DT	937	1000 S.F.	533.57	49%	51/49	85.88	50/50	38.99
	Coffee/Donut Shop + DT w/No Seat	938	DT Lanes	179	49%	50/50	39.81	50/50	15.08
Gas Station w/Convenience Store ^e	FDOT	FP, 1000 S.F.	14.3*PM Trips	61%	50/50	Note f	50/50	12.3*FP+15.5*(X)	
Carwash (Automated) ^g	PBC	Lane	166.00	0%	50/50	11.97	50/50	13.65	

Footnotes	a) Based on Daily to AM peak ratio for LUC 532 (Private School (K-12))	Modification History 3/2/2020: Added Landscape Services, modification history, edited formatting 7/25/2022: Updated with ITE TG Manual 11th ed information
	b) Weekend peak hour rate = 10.36 per 1,000 s.f. with a 48/52 directional split	
	c) Landscape Services acreage consists of overnight vehicle and equipment storage as well as areas (covered or uncovered) for chemicals, fertilizers, landscape materials (excluding plants) and other items needed for day-to-day operations. Not included are drive aisles, customer/employee parking, structures shared by nursery and landscape services, facilities that solely serve the onsite landscape activities or any nursery growing areas.	
	d) Based on Daily to PM ratio for ITE Code 937 (Coffee Donut Shop + DT)	
	e) FP=Fueling Position. Use both FP and Convenience Store size in estimating trips using the provided equation. Note that no internalization between the gas pumps and convenience store, as per ULDC Article 12, should be applied to estimate the net trips.	
	f) Use PM rates	
	g) Daily rate taken from PBC trip gen. study. Peak hour rates derived by applying peak to daily ratios for gas station to daily carwash rate from older ITE TGM. New PBC rate study underway.	
	h) Based on PBC analysis of ITE TGM data plots	

Land Use: 488

Soccer Complex

Description

A soccer complex is an outdoor facility that is used for non-professional soccer games. It may consist of multiple fields. The size of each field within the land use may vary to accommodate games for different age groups. On-site amenities may include stadium seating, a fitness trail, an activities shelter, aquatic center, picnic grounds, basketball and tennis courts, and a playground. Public park (Land Use 411) is a related use.

Additional Data

Caution should be used when applying these data. Peaking at soccer complexes typically occurred in time periods shorter than 1 hour. These peaking periods may have durations of 10 to 15 minutes. To assist in the future analysis of this land use, it is important to collect driveway counts in 10-minute intervals.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (<https://www.ite.org/technical-resources/topics/trip-and-parking-generation/>).

The sites were surveyed in the 1990s and the 2010s in California, Colorado, Hawaii, Indiana, New Jersey, and Washington.

Source Numbers

377, 519, 565, 722, 856, 908, 952, 956, 1004

Soccer Complex (488)

Vehicle Trip Ends vs: Fields
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 3

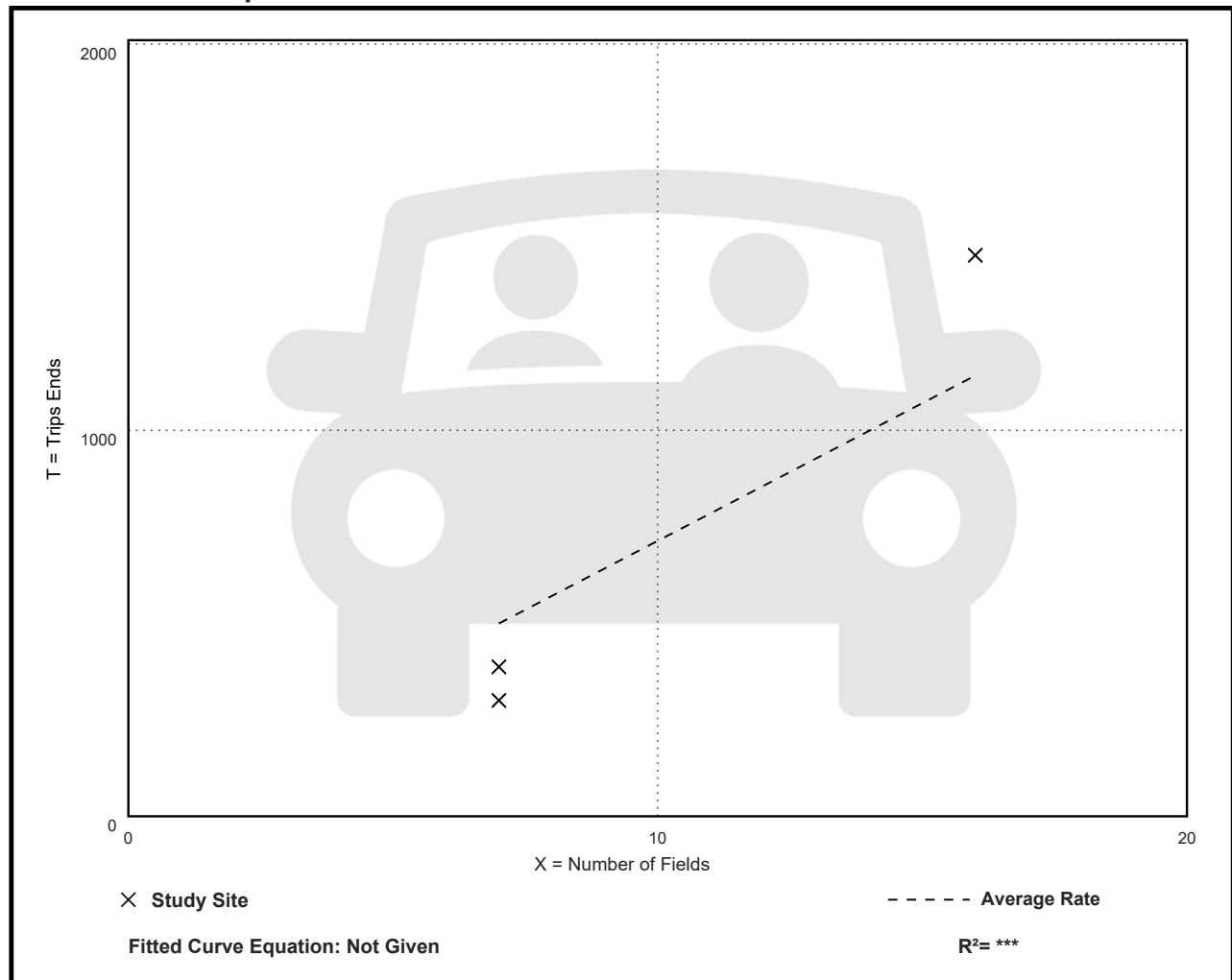
Avg. Num. of Fields: 10

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Field

Average Rate	Range of Rates	Standard Deviation
71.33	42.86 - 90.81	26.03

Data Plot and Equation



Soccer Complex (488)

Vehicle Trip Ends vs: Fields

On a: **Weekday,**

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

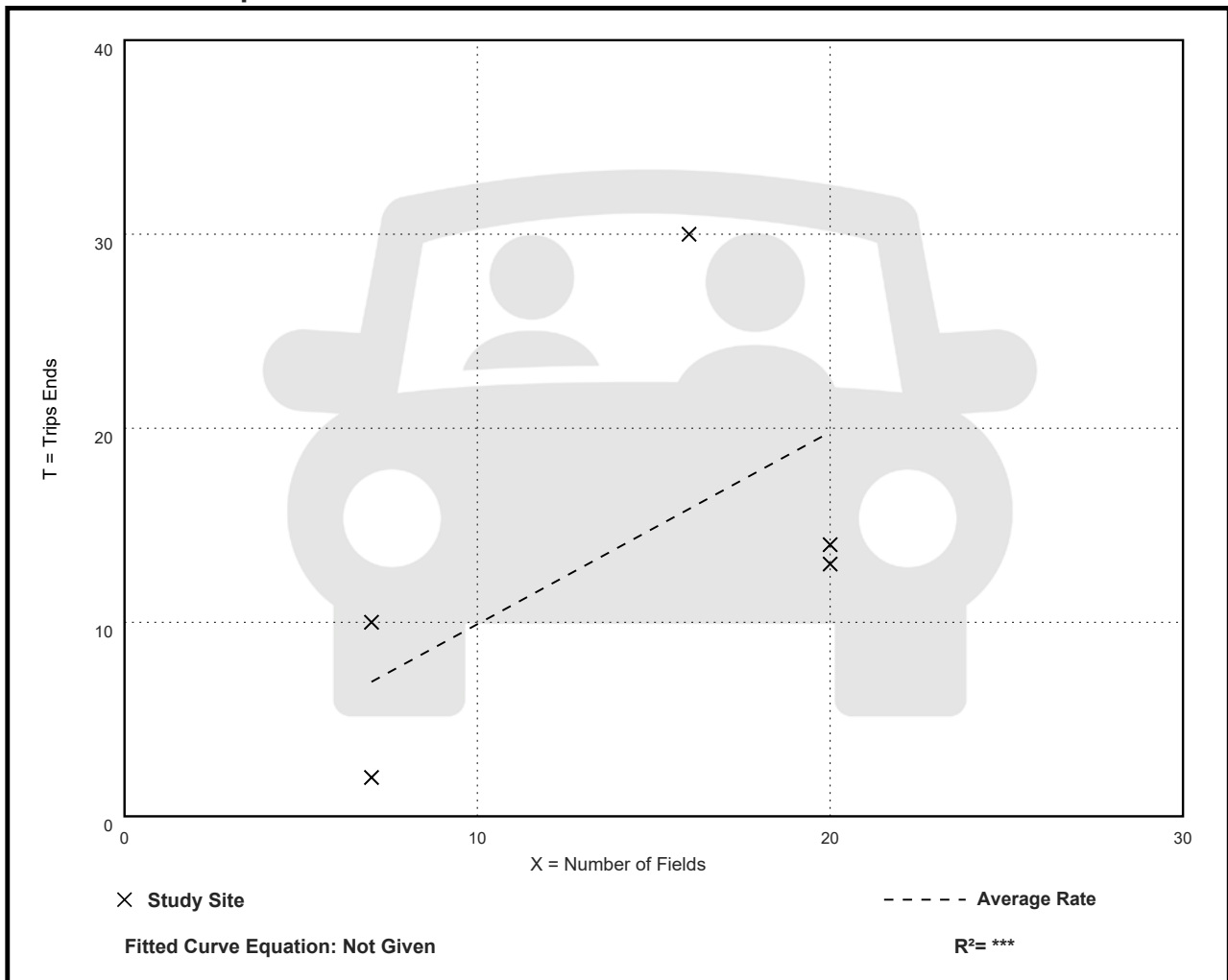
Avg. Num. of Fields: 14

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Field

Average Rate	Range of Rates	Standard Deviation
0.99	0.29 - 1.88	0.62

Data Plot and Equation



Soccer Complex (488)

Vehicle Trip Ends vs: Fields

On a: **Weekday,**

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

Avg. Num. of Fields: 14

Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per Field

Average Rate	Range of Rates	Standard Deviation
16.43	8.71 - 24.88	6.36

Data Plot and Equation

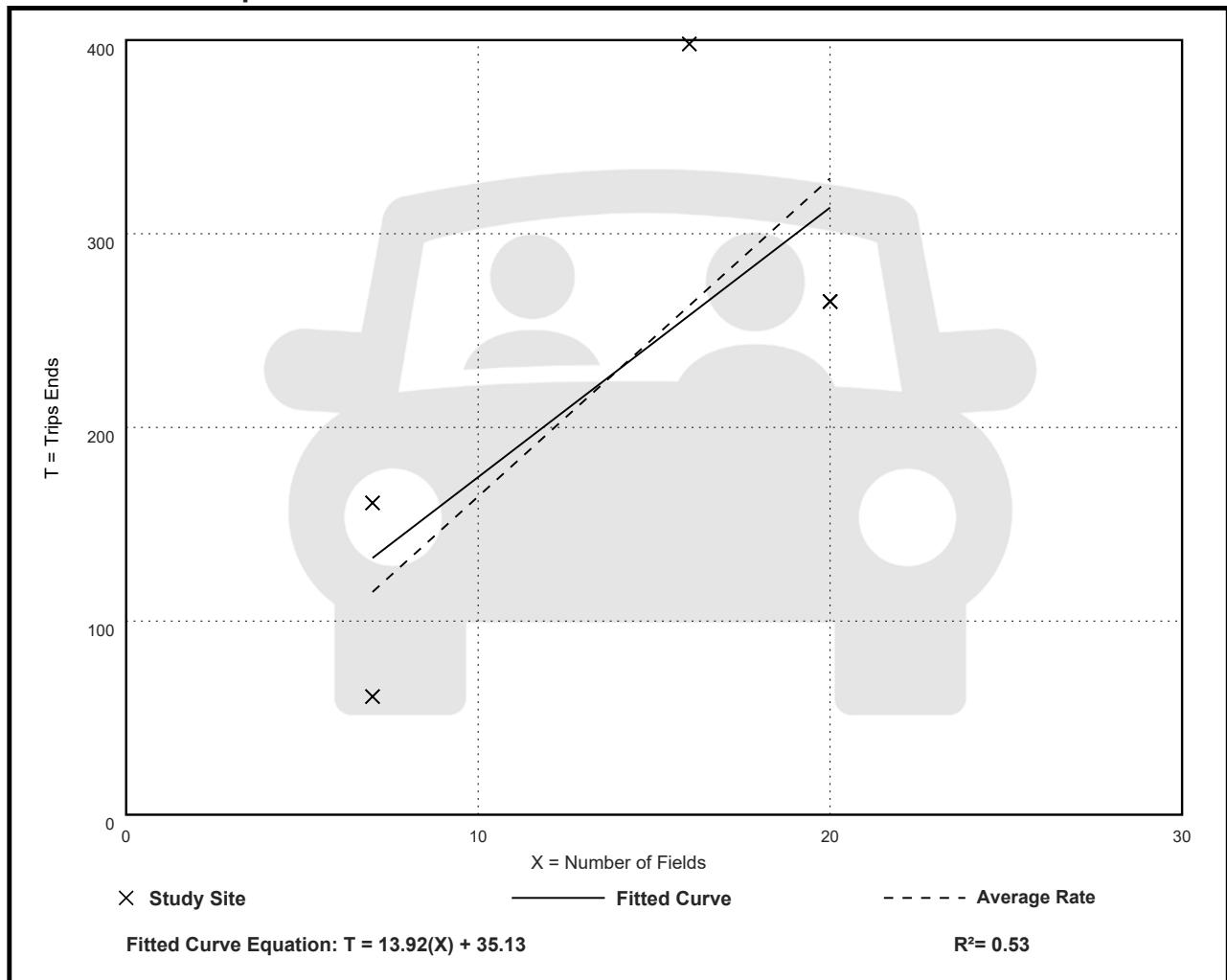


Exhibit 3A
Wellington Speed and Count Study
Traffic Volume and Growth - Weekday

Loc #	Road	From	To	Lanes	Daily Traffic Volumes			2022 AM Peak Hour ²		2022 PM Peak Hour ²	
					2018 ¹	2022 ²	4-Yr Growth Rate	NB/EB	SB/WB	NB/EB	SB/WB
1	Flying Cow Ranch Road	Southern Boulevard	1 Mile South	2L	1,708	1,782	1.07% /Year	51	84	83	87
2	Flying Cow Ranch Road	1 Mile South	Rustic Road	2L	N/A	1,784	/Year	50	84	77	75
3	Binks Forest Drive	Southern Boulevard	Greenview Shores Boulevard	4LD	13,181	13,373	0.36% /Year	749	575	589	600
4	Aero Club Drive	Binks Forest Drive	Greenbriar Boulevard	2L	5,817	4,098	-8.38% /Year	115	213	194	150
5	Greenbriar Boulevard	Aero Club Drive	Greenview Shores Boulevard	2L	6,301	2,999	-16.94% /Year	192	167	216	168
6	Greenview Shores Boulevard	Binks Forest Drive	Wellington Trace	4LD	13,212	13,082	-0.25% /Year	484	430	651	608
7	Greenview Shores Boulevard	Wellington Trace	South Shore Boulevard	4LD	19,343	16,708	-3.59% /Year	641	824	722	731
8	Wellington Trace	Greenview Shores Boulevard	Big Blue Trace	4LD	24,104	23,493	-0.64% /Year	875	788	963	996
9	Wellington Trace	Big Blue Trace	Forest Hill Boulevard (North)	4LD	21,732	22,600	0.98% /Year	963	783	885	1,027
10	Wellington Trace	Forest Hill Boulevard (North)	Forest Hill Boulevard (South)	2L	6,033	5,900	-0.56% /Year	343	224	306	271
11	Paddock Drive	Greenview Shores Boulevard	Big Blue Trace	2L	2,438	2,667	2.27% /Year	120	110	187	131
12	Big Blue Trace	Southern Boulevard	Wellington Trace	2L/4L	11,465	8,443	-7.36% /Year	436	390	336	394
13	Big Blue Trace	Wellington Trace	South Shore Boulevard	2L	11,760	11,565	-0.42% /Year	271	506	481	480
14	Forest Hill Boulevard	Southern Boulevard	Wellington Trace	6LD	39,502	47,545	4.74% /Year	1,441	2,368	1,768	2,220
15	Forest Hill Boulevard ³	Wellington Trace	South Shore Boulevard	4LD/6LD	30,258	28,664	-1.34% /Year	930	1,215	1,248	1,275
16	Forest Hill Boulevard	South Shore Boulevard	SR 7	6LD	49,836	53,987	2.02% /Year	2,546	1,622	2,330	2,202
17	Birkdale Drive	Forest Hill Boulevard	Wellington Trace	2L	4,229	3,303	-5.99% /Year	113	211	239	98
18	Stribling Way	Forest Hill Boulevard	Pierson Road	2L	13,259	13,303	0.08% /Year	265	799	610	651
19	Stribling Way	Pierson Road	SR 7	2L	16,078	14,618	-2.35% /Year	737	443	743	670
20	Stribling Way	SR 7	Lyons Road	2L	5,613	6,315	2.99% /Year	467	437	408	250
21	South Shore Boulevard ³	Forest Hill Boulevard	Greenview Shores Boulevard	4LD	26,302	14,057	-14.50% /Year	639	716	627	501
22	South Shore Boulevard	Greenview Shores Boulevard	Pierson Road	4LD	23,417	19,837	-4.06% /Year	528	875	986	688
23	South Shore Boulevard	Pierson Road	Lake Worth Road	2LD	18,764	16,444	-3.25% /Year	486	733	816	598
24	40th Street South	Palm Beach Point Boulevard	Lake Worth Road	2L	N/A	2,187	/Year	39	94	131	78
25	Lake Worth Road	South Shore Boulevard	120th Avenue South	2L	12,936	11,164	-3.62% /Year	469	398	457	557
26	Pierson Road	South Shore Boulevard	Stribling Way	2L	4,743	4,238	-2.78% /Year	132	141	209	214
27	Pierson Road	Ousley Farms Road	South Shore Boulevard	2L	10,154	4,796	-17.10% /Year	166	245	214	165
28	South Shore Boulevard	Lake Worth Road	50th Street South	2L	5,202	4,600	-3.03% /Year	106	230	242	138
29	120th Avenue South	Pierson Road	Lake Worth Road	2L	1,056	4,001	39.52% /Year	149	114	274	168
30	120th Avenue South	Lake Worth Road	50th Street South	2L	3,461	1,800	-15.08% /Year	53	75	75	79
31	50th Street South	130th Avenue South	120th Avenue South	2L	3,523	4,029	3.41% /Year	146	159	199	146
32	Little Ranches Trail	Southern Boulevard	Acme Road	2L	2,381	2,304	-0.82% /Year	92	76	88	87

¹ Source: Wellington Traffic Counts and Analysis, April 11, 2018.

² See Appendix A for count data.

³ Locations 15 and 21 were recounted in June and adjusted based on peak factors from control Location #9. See Appendix A. Use with caution.

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 0037 - SR 7/US 441 - S OF SR 80/SOUTHERN BLVD C-13 (COUNTY LINK: 3408)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	67500	C	N 34500		S 33000	9.00	57.90	5.70
2021	66000	C	N 34000		S 32000	9.00	53.20	5.70
2020	63500	F	N 32500		S 31000	9.00	54.00	3.50
2019	65500	C	N 33500		S 32000	9.00	54.90	3.50
2018	63500	C	N 31500		S 32000	9.00	59.90	3.50
2017	66500	C	N 33500		S 33000	9.00	59.50	4.90
2016	65500	C	N 33000		S 32500	9.00	59.80	4.90
2015	62000	C	N 32000		S 30000	9.00	60.30	4.90
2014	64000	C	N 32000		S 32000	9.00	60.30	4.10
2013	56500	C	N 29000		S 27500	9.00	60.60	5.40
2012	53000	C	N 27500		S 25500	9.00	60.60	5.40
2011	52000	C	N 26000		S 26000	9.00	60.90	5.90
2010	48500	C	N 24500		S 24000	9.73	61.28	9.60
2009	55000	C	N 27500		S 27500	9.88	61.89	9.60
2008	50500	C	N 27000		S 23500	10.36	61.44	9.60
2007	45000	C	N 22000		S 23000	10.30	61.43	17.70

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 0060 - SR 822 / FORESTHILL BLVD - E OF SR 7/441 (COUNTY LINK: 3423)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	38500	C	E 18500		W 20000	9.00	57.90	3.50
2021	38000	C	E 18500		W 19500	9.00	53.20	4.90
2020	38500	F	E 19500		W 19000	9.00	54.00	4.90
2019	39500	C	E 20000		W 19500	9.00	54.90	4.90
2018	38500	C	E 17500		W 21000	9.00	59.90	3.40
2017	38500	C	E 19000		W 19500	9.00	59.50	3.40
2016	39500	C	E 20000		W 19500	9.00	59.80	3.40
2015	38000	C	E 19500		W 18500	9.00	60.30	3.60
2014	36000	C	E 18000		W 18000	9.00	60.30	2.30
2013	37000	C	E 18500		W 18500	9.00	60.60	3.60
2012	34000	C	E 17000		W 17000	9.00	60.60	3.60
2011	31000	C	E 15500		W 15500	9.00	60.90	9.40
2010	35000	F	E 17000		W 18000	9.73	61.28	4.30
2009	34000	C	E 16500		W 17500	9.88	61.89	4.30
2008	38500	C	E 19000		W 19500	10.36	61.44	4.30
2007	33000	C	E 16000		W 17000	10.30	61.43	19.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 0721 - SR 7/441 - S OF FORESTHILL BLVD (COUNTY LINK: 4102)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	60000	C	N 29500		S 30500	9.00	57.90	5.20
2021	52500	C	N 25000		S 27500	9.00	53.20	3.50
2020	59000	F	N 28500		S 30500	9.00	54.00	3.50
2019	61000	C	N 29500		S 31500	9.00	54.90	3.50
2018	51500	C	N 25000		S 26500	9.00	59.90	5.20
2017	56000	C	N 27000		S 29000	9.00	59.50	5.20
2016	58000	C	N 29500		S 28500	9.00	59.80	5.20
2015	56000	C	N 27500		S 28500	9.00	60.30	5.50
2014	47000	C	N 23000		S 24000	9.00	60.30	3.30
2013	51000	C	N 25000		S 26000	9.00	60.60	6.50
2012	47000	C	N 23500		S 23500	9.00	60.60	5.40
2011	44000	C	N 22000		S 22000	9.00	60.90	5.90
2010	41000	C	N 19000		S 22000	9.73	61.28	6.30
2009	45500	C	N 22500		S 23000	9.88	61.89	6.30
2008	47000	C	N 22500		S 24500	10.36	61.44	6.30
2007	44500	C	N 22000		S 22500	10.30	61.43	15.30

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 7086 - FOREST HILL BLVD FROM SOUTH SHORE BLVD TO SR 7 .(COUNTY LINK: 3407)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	44500	C	E 21500		W 23000	9.00	59.60	8.30
2021	47500	R	E 23000		W 24500	9.00	58.70	4.90
2020	47500	T	E 23000		W 24500	9.00	58.20	6.30
2019	48500	S	E 23500		W 25000	9.00	62.10	4.50
2018	46500	F	E 22500		W 24000	9.00	59.50	4.50
2017	44000	C	E 21500		W 22500	9.00	59.40	4.60
2016	44000	C	E 21500		W 22500	9.00	60.40	4.00
2015	44500	C	E 21500		W 23000	9.00	61.20	1.70
2014	45500	C	E 22500		W 23000	9.00	57.80	2.70
2013	40000	F	E 19500		W 20500	9.00	57.80	3.60
2012	41000	C	E 20000		W 21000	9.00	57.50	4.20
2011	39500	C	E 19500		W 20000	9.00	55.70	3.30
2010	43500	C	E 21500		W 22000	9.63	53.63	4.40

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2022 HISTORICAL AADT REPORT

COUNTY: 93 - PALM BEACH

SITE: 7087 - FOREST HILL BLVD FROM WELLINGTON TRC TO SOUTH SHORE BLVD (CNTY LINK: 3430)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	33000	C	E 16000		W 17000	9.00	59.60	8.30
2021	33000	V	E 17000		W 16000	9.00	58.70	4.90
2020	33000	R	E 17000		W 16000	9.00	58.20	6.30
2019	33000	T	E 17000		W 16000	9.00	62.10	4.50
2018	32000	S	E 16500		W 15500	9.00	59.50	4.50
2017	30000	F	E 15500		W 14500	9.00	59.40	4.60
2016	28000	C	E 14500		W 13500	9.00	60.40	4.00
2015	27000	C	E 14000		W 13000	9.00	61.20	1.70
2014	28000	C	E 15000		W 13000	9.00	57.80	2.70
2013	25000	F	E 12500		W 12500	9.00	57.80	3.60
2012	25000	C	E 12500		W 12500	9.00	57.50	4.20
2011	25000	C	E 12500		W 12500	9.00	55.70	3.30
2010	27500	C	E 14000		W 13500	9.63	53.63	4.40

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 9327 WEST-W OF SR7

WEEK	DATES	SF	MOCF: 0.95 PSCF
1	01/01/2022 - 01/01/2022	0.97	1.02
2	01/02/2022 - 01/08/2022	1.00	1.05
3	01/09/2022 - 01/15/2022	1.03	1.08
4	01/16/2022 - 01/22/2022	1.01	1.06
5	01/23/2022 - 01/29/2022	0.99	1.04
* 6	01/30/2022 - 02/05/2022	0.97	1.02
* 7	02/06/2022 - 02/12/2022	0.95	1.00
* 8	02/13/2022 - 02/19/2022	0.94	0.99
* 9	02/20/2022 - 02/26/2022	0.93	0.98
*10	02/27/2022 - 03/05/2022	0.93	0.98
*11	03/06/2022 - 03/12/2022	0.92	0.97
*12	03/13/2022 - 03/19/2022	0.92	0.97
*13	03/20/2022 - 03/26/2022	0.93	0.98
*14	03/27/2022 - 04/02/2022	0.94	0.99
*15	04/03/2022 - 04/09/2022	0.96	1.01
*16	04/10/2022 - 04/16/2022	0.97	1.02
*17	04/17/2022 - 04/23/2022	0.98	1.03
*18	04/24/2022 - 04/30/2022	0.99	1.04
19	05/01/2022 - 05/07/2022	1.00	1.05
20	05/08/2022 - 05/14/2022	1.01	1.06
21	05/15/2022 - 05/21/2022	1.02	1.07
22	05/22/2022 - 05/28/2022	1.03	1.08
23	05/29/2022 - 06/04/2022	1.05	1.11
24	06/05/2022 - 06/11/2022	1.06	1.12
25	06/12/2022 - 06/18/2022	1.07	1.13
26	06/19/2022 - 06/25/2022	1.08	1.14
27	06/26/2022 - 07/02/2022	1.08	1.14
28	07/03/2022 - 07/09/2022	1.09	1.15
29	07/10/2022 - 07/16/2022	1.09	1.15
30	07/17/2022 - 07/23/2022	1.08	1.14
31	07/24/2022 - 07/30/2022	1.07	1.13
32	07/31/2022 - 08/06/2022	1.07	1.13
33	08/07/2022 - 08/13/2022	1.06	1.12
34	08/14/2022 - 08/20/2022	1.05	1.11
35	08/21/2022 - 08/27/2022	1.05	1.11
36	08/28/2022 - 09/03/2022	1.06	1.12
37	09/04/2022 - 09/10/2022	1.06	1.12
38	09/11/2022 - 09/17/2022	1.06	1.12
39	09/18/2022 - 09/24/2022	1.04	1.09
40	09/25/2022 - 10/01/2022	1.02	1.07
41	10/02/2022 - 10/08/2022	1.00	1.05
42	10/09/2022 - 10/15/2022	0.98	1.03
43	10/16/2022 - 10/22/2022	0.98	1.03
44	10/23/2022 - 10/29/2022	0.98	1.03
45	10/30/2022 - 11/05/2022	0.98	1.03
46	11/06/2022 - 11/12/2022	0.98	1.03
47	11/13/2022 - 11/19/2022	0.98	1.03
48	11/20/2022 - 11/26/2022	0.98	1.03
49	11/27/2022 - 12/03/2022	0.98	1.03
50	12/04/2022 - 12/10/2022	0.98	1.03
51	12/11/2022 - 12/17/2022	0.97	1.02
52	12/18/2022 - 12/24/2022	1.00	1.05
53	12/25/2022 - 12/31/2022	1.03	1.08

* PEAK SEASON

23-FEB-2023 09:11:22

830UPD

4_9327_PKSEASON.TXT

A B C D E F G H I J K L M N O

Input Data

E-W Street: Forest Hill Blvd
 N-S STREET: N State Road 7
 TIME PERIOD: AM
 GROWTH RATE: 0.35%
 SIGNAL ID: 33400

COUNT DATE: 4/12/2023
 CURRENT YEAR: 2023
 ANALYSIS YEAR: 2029
 PSF: 1

Report
 5/6/2024

Intersection Volume Development

	Eastbound			Westbound			Northbound			Southbound			Type	% Complete
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Existing Volume	648	718	482	490	1028	422	400	1496	247	301	1709	478		
Diversions	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Peak Season Volume	648	718	482	490	1028	422	400	1496	247	301	1709	478		
Committed Developments														
Village Royale Charter School	111	0	0	0	0	74	0	37	0	47	24	71	NR	0%
Cheddars Cafe	3	0	0	0	0	3	0	2	0	2	1	2	NR	75%
Lotis of Wellington	29	0	0	0	0	49	0	39	0	40	32	24	NR	0%
Wellington Regional Medical Center	0	15	15	0	36	36	35	35	0	15	15	0	NR	80%
Wellington North	11	7	3	0	-7	0	-3	0	0	0	0	-10	NR	0%
Southern Center	0	0	0	0	0	1	0	1	0	0	1	0	NR	90%
Wellington Charter School	0	0	25	25	0	0	20	78	20	0	95	0	NR	65%
Palms West Medical	0	0	0	0	1	1	1	1	0	0	0	0	NR	92%
Lotis II	10	0	0	0	0	17	0	14	0	28	22	17	Res	0%
Total Committed Developments	164	22	43	25	30	181	53	207	20	132	190	104		
Total Committed Residential	10	0	0	0	0	17	0	14	0	28	22	17		
Total Committed Non-Residential	154	22	43	25	30	164	53	193	20	104	168	87		
Double Count Reduction	3	0	0	0	0	4	0	4	0	7	6	4		
Total Discounted Committed	161	22	43	25	30	177	53	203	20	125	184	100		
Historical Growth	14	15	10	10	22	9	8	32	5	6	36	10		
Comm Dev+1% Growth	201	66	73	55	93	203	78	295	35	144	289	129		
Growth Volume Used	201	66	73	55	93	203	78	295	35	144	289	129		
Total Volume	849	784	555	545	1121	625	478	1791	282	445	1998	607		

Forest Hill Boulevard from SR 7 to Stribling Way AM Peak Hour Peak Direction Traffic Volumes

EBT = EBL + EBT + EBR =	161	+	22	+	43	=	226
WBT = NBL + WBT + SBR =	53	+	30	+	100	=	183

Input Data

E-W Street: Forest Hill Blvd
 N-S STREET: N State Road 7
 TIME PERIOD: PM
 GROWTH RATE: 0.35%
 SIGNAL ID: 33400

COUNT DATE: 4/12/2023
 CURRENT YEAR: 2023
 ANALYSIS YEAR: 2029
 PSF: 1

Report
 5/6/2024

Intersection Volume Development

	Eastbound			Westbound			Northbound			Southbound			Type	% Complete
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Existing Volume	594	687	327	623	965	226	491	1358	317	792	1984	753		
Diversions	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Peak Season Volume	594	687	327	623	965	226	491	1358	317	792	1984	753		
Committed Developments														
Village Royale Charter School	17	0	0	0	0	11	0	6	0	15	7	22	NR	0%
Cheddars Cafe	3	0	0	0	0	2	0	2	0	3	3	3	NR	75%
Lotis of Wellington	55	0	0	0	0	91	0	73	0	86	69	52	NR	0%
Wellington Regional Medical Center	0	41	39	0	20	20	19	19	0	41	39	0	NR	80%
Wellington North	-7	-4	-2	0	12	0	5	0	0	0	0	19	NR	0%
Southern Center	1	0	0	0	0	2	0	5	0	3	5	2	NR	90%
Wellington Charter School	0	0	6	6	0	0	7	25	7	0	22	0	NR	65%
Palms West Medical	0	1	1	0	0	0	0	0	0	1	1	0	NR	92%
Lotis II	19	0	0	0	0	32	0	26	0	24	19	14	Res	0%
Total Committed Developments	88	38	44	6	32	158	31	156	7	173	165	112		
Total Committed Residential	19	0	0	0	0	32	0	26	0	24	19	14		
Total Committed Non-Residential	69	38	44	6	32	126	31	130	7	149	146	98		
Double Count Reduction	5	0	0	0	0	8	0	7	0	6	5	4		
Total Discounted Committed	83	38	44	6	32	150	31	149	7	167	160	108		
Historical Growth	13	15	7	13	20	5	10	29	7	17	42	16		
Comm Dev+1% Growth	120	80	64	44	91	164	61	233	27	216	282	154		
Growth Volume Used	120	80	64	44	91	164	61	233	27	216	282	154		
Total Volume	714	767	391	667	1056	390	552	1591	344	1008	2266	907		

Forest Hill Boulevard from SR 7 to Stribling Way PM Peak Hour Peak Direction Traffic Volumes

EBT = EBL + EBT + EBR =	83	+	38	+	44	=	165
WBT = NBL + WBT + SBR =	31	+	32	+	108	=	171

Input Data

ROAD NAME: Forest Hill Blvd	STATION: 3407	Report Created
CURRENT YEAR: 2023	FROM: Stribling Way	7/17/2024
ANALYSIS YEAR: 2029	TO: MIDPOINT	
GROWTH RATE: 0.35%	COUNT DATE: 3/6/2023	
	PSF: 1	

Link Analysis

Time Period Direction	AM			PM		
	2-way	NB/EB	SB/WB	2-way	NB/EB	SB/WB
Existing Volume	3578	1993	1599	3854	1800	2054
Peak Volume	3578	1993	1599	3854	1800	2054
Diversion(%)	0	0	0	0	0	0
Volume after Diversion	3578	1993	1599	3854	1800	2054

Committed Developments Type % Complete

Palms West Medical	3	1	2	3	2	1	NR	92%
Lotis of Wellington	53	29	24	106	55	52	NR	0%
Wellington Regional Medical Center	54	16	38	63	43	21	NR	80%
Southern Center	1	0	0	3	1	2	NR	90%
278 ProfessionalWay	1	0	1	2	1	1	NR	65%
Cheddars Cafe	5	3	2	6	2	3	NR	75%
Wellington North	1	20	-18	22	-12	35	NR	0%
Wellington Charter School	45	25	20	12	6	7	NR	65%
Flying Cow Ranch	0	0	0	0	0	0	Res	0%
Islepointe	0	0	0	0	0	0	Res	0%
Village Royale Charter School	182	111	71	38	17	22	NR	0%
Lotis II	27	10	17	34	19	14	Res	0%
Total Committed Developments	372	215	157	289	134	158		
Total Committed Residential	27	10	17	34	19	14		
Total Committed Non-Residential	345	205	140	255	115	144		
Double Count Reduction	7	3	4	9	5	4		

Total Discounted Committed Developments	365	212	153	280	129	154
---	-----	-----	-----	-----	-----	-----

Historical Growth	76	43	34	82	38	44
Comm Dev+1% Growth	585	335	251	517	240	280
Growth Volume Used	585	335	251	517	240	280
Total Volume	4163	2328	1850	4371	2040	2334

Lanes	6LD					
LOS D Capacity	4880	2680	2680	4880	2680	2680
Link Meets Test 1?	YES	YES	YES	YES	YES	YES
LOS E Capacity	5150	2830	2830	5150	2830	2830
Link Meets Test 2?	YES	YES	YES	YES	YES	YES

Input Data

ROAD NAME: Forest Hill Blvd STATION: 3407
 CURRENT YEAR: 2023 FROM: MIDPOINT
 ANALYSIS YEAR: 2029 TO: S State Road 7
 GROWTH RATE: 0.35% COUNT DATE: 3/6/2023
 PSF: 1

Report Created
 7/17/2024

Link Analysis

Time Period	AM			PM		
	2-way	NB/EB	SB/WB	2-way	NB/EB	SB/WB
Existing Volume	3578	1993	1599	3854	1800	2054
Peak Volume	3578	1993	1599	3854	1800	2054
Diversion(%)	0	0	0	0	0	0
Volume after Diversion	3578	1993	1599	3854	1800	2054

Committed Developments Type % Complete

Palms West Medical	3	1	2	3	2	1	NR	92%
Lotis of Wellington	53	29	24	106	55	52	NR	0%
Wellington Regional Medical Center	56	17	39	66	44	22	NR	80%
Southern Center	1	0	0	3	1	2	NR	90%
278 ProfessionalWay	1	0	1	2	1	1	NR	65%
Cheddars Cafe	5	3	2	6	2	3	NR	75%
Wellington North	1	20	-18	22	-12	35	NR	0%
Wellington Charter School	45	25	20	12	6	7	NR	65%
Flying Cow Ranch	0	0	0	0	0	0	Res	0%
Islepointe	0	0	0	0	0	0	Res	0%
Village Royale Charter School	182	111	71	38	17	22	NR	0%
Lotis II	27	10	17	34	19	14	Res	0%
Total Committed Developments	374	216	158	292	135	159		
Total Committed Residential	27	10	17	34	19	14		
Total Committed Non-Residential	347	206	141	258	116	145		
Double Count Reduction	7	3	4	9	5	4		

Total Discounted Committed Developments 367 213 154 283 130 155

Historical Growth	76	43	34	82	38	44
Comm Dev+1% Growth	587	336	252	520	241	281
Growth Volume Used	587	336	252	520	241	281
Total Volume	4165	2329	1851	4374	2041	2335

Lanes	6LD					
LOS D Capacity	4880	2680	2680	4880	2680	2680
Link Meets Test 1?	YES	YES	YES	YES	YES	YES
LOS E Capacity	5150	2830	2830	5150	2830	2830
Link Meets Test 2?	YES	YES	YES	YES	YES	YES

Note: The delay identifies seconds of delay greater than 55.0 and less than or equal to 80.0.

Table 9.4.2-C: LOS D Link Service Volumes

Facility Type		ADT		Peak Hour Directional	
		Class I	Class II	Class I	Class II
2 lanes undivided ⁽¹⁾	2L	17,700	14,800	880	750
2 lanes divided	2LD	18,600	15,500	920	790
4 lanes undivided ⁽¹⁾	4L	37,800	30,800	1,900	1,550
4 lanes divided	4LD	39,800	32,400	2,000	1,630
5 lanes two-way	5L	39,800	32,400	2,000	1,630
6 lanes divided	6LD	59,900	50,000	3,020	2,520
8 lanes divided	8LD	80,100	67,300	4,040	3,390

Notes:

Based on the 2012 FDOT Quality/LOS Handbook.

Class I - Roadways with 40 mph or higher posted speed limits.

Class II - Roadways with 35 mph or lower posted speed limits.

If heavy vehicle percentages for a facility are greater than 10 percent as determined by the Wellington Engineer then service volumes may be subject to a corresponding reduction. ⁽¹⁾

Service volumes for undivided roadways assume exclusive left turn lanes are provided at signalized intersections. If there are no left turn lanes reduce these values by 20 percent.

Table 9.4.2-D: LOS E Link Service Volumes

Facility Type		ADT		Peak Hour Directional	
		Class I	Class II	Class I	Class II
2 lanes undivided ⁽¹⁾	2L	17,700	15,600	880	800
2 lanes divided	2LD	18,600	16,400	920	840
4 lanes undivided ⁽¹⁾	4L	37,800	32,100	1,900	1,610
4 lanes divided	4LD	39,800	33,800	2,000	1,700
5 lanes two-way	5L	39,800	33,800	2,000	1,700
6 lanes divided	6LD	59,900	50,900	3,020	2560
8 lanes divided	8LD	80,100	68,100	4,040	3,420

Notes:

Based on the 2012 FDOT Quality/LOS Handbook.

Class I - Roadways with 40 mph or higher posted speed limits.

Class II - Roadways with 35 mph or lower posted speed limits.

If heavy vehicle percentages for facility are greater than 10 percent as determined by the Wellington Engineer then service volumes may be subject to a corresponding reduction. ⁽¹⁾

Service volumes for undivided roadways assume exclusive left turn lanes are provided at signalized intersections. If there are no left turn lanes reduce these values by 20 percent.

Table 9.4.2-E: LOS D Speed Thresholds

Urban Street Class	I	II	III
Range of Free Flow Speeds (FFS)	55 to 45 miles per hour	45 to 35 miles per hour	35 to 30 miles per hour
Typical FFS	50 miles per hour	40 miles per hour	35 miles per hour



June 11, 2024

Shaun G. MacKenzie, P.E.
MacKenzie Engineering & Planning, Inc.,
1172 SW 30th Street, Suite 500
Palm City, FL 34990

**Department of Engineering
and Public Works**

P.O. Box 21229
West Palm Beach, FL 33416-1229
(561) 684-4000
FAX: (561) 684-4050
www.pbcgov.com



**Palm Beach County
Board of County
Commissioners**

- Maria Sachs, Mayor
- Maria G. Marino, Vice Mayor
- Gregg K. Weiss
- Michael A. Barnett
- Marci Woodward
- Sara Baxter
- Mack Bernard

County Administrator

Verdenia C. Baker

**RE: Axis at Wellington Phase II
Project #: 240505
Traffic Performance Standards (TPS) Review**

Dear Mr. MacKenzie:

The Palm Beach County Traffic Division has reviewed the above referenced project Traffic Impact study, revised May 14, 2024, pursuant to the Traffic Performance Standards in Article 12 of the Palm Beach County (PBC) Unified Land Development Code (ULDC). The project is summarized as follows:

Municipality:	Wellington
Location:	800 ft S of Forest Hill Blvd, W of Wellington Green Dr
PCN:	73-41-44-13-01-016-0000
Access:	2 full on Wellington Green Dr (1 existing, 1 proposed)
Existing Uses:	Soccer Fields = 3
Proposed Uses:	Replace with Multi-Family Mid-Rise=220 DU
New Daily Trips:	785
New Peak Hour Trips:	78 (17/61) AM; 37 (20/17) PM
Proj Daily Trips:	999
Proj Peak Hour Trips:	81 (19/62) AM; 86 (52/34) PM
Build-out:	December 31, 2029

Based on our review, the Traffic Division has determined the proposed development **meets** the Traffic Performance Standards of Palm Beach County. The project is not expected to have any significant impact on non-municipal roadways or intersections.

Please note the receipt of a TPS approval letter does not constitute the review and issuance of a Palm Beach County Right-of-Way (R/W) Construction Permit nor does it eliminate any requirements that may be deemed as site related. For work within Palm Beach County R/W, a detailed review of the project will be provided upon submittal for a R/W permit application. The project is required to comply with all Palm Beach County standards and may include R/W dedication.

No building permits are to be issued by the Village after the build-out date specified above. The County traffic concurrency approval is subject to the Project Aggregation Rules set forth in the Traffic Performance Standards Ordinance.

The approval letter shall be valid no longer than one year from date of issuance, unless an application for a Site Specific Development Order has been approved, an application for a Site Specific Development Order has been submitted, or the

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Affirmative Action Employer"*



Shaun G. MacKenzie, P.E.
June 11, 2024
Page 2

approval letter has been superseded by another approval letter for the same property.

If you have any questions regarding this determination, please contact me at 561-684-4030 or email QBari@pbc.gov.

Sincerely,

Quazi Bari, P.E., PTOE
Manager – Growth Management
Traffic Division

QB:jb

cc: Addressee
Cory Lyn Cramer, AICP, Development Review Coordinator, Village of Wellington
Alberto Lopez, Technical Assistant III, Traffic Division

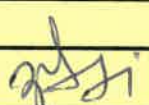
File: General - TPS - Mun - Traffic Study Review
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CONTROLLER TIME SHEET

DATE TIMING INSTALLED: _____

INTERSECTION:	FOREST HILL BLVD & WELLINGTON GREEN ENT	CONTROLLER TYPE:	NAZTEC
SIGNAL #	33399	SYSTEM #	2580

PHASE NUMBER	BOUND	TIMING INTERVAL													
		MIN GREEN	GAP EXT	MAX 1	MAX 2	YEL CLR	RED CLR	WALK	PED CLR	MIN RCL	MAX RCL	PED RCL	PHASE ENABLE	LOCKED CALLS	DETECTOR SETTINGS
1	EBLT	4.0	2.0	20.0	8.0	5.0	2.0	0.0	0.0				1		L1=NORMAL
2	WB	20.0	4.0	45.0	40.0	5.0	2.0	0.0	0.0	1			1	1	L2=NORMAL
3															
4	NB	6.0	2.0	40.0	20.0	4.0	4.0	7.0	35.0				1		L4=NORMAL L4R=D/N(10)
5	WB LT	4.0	2.0	30.0	10.0	5.0	2.0	0.0	0.0				1		L5=NORMAL
6	EB	20.0	4.0	45.0	40.0	5.0	2.0	7.0	22.0	1			1	1	L6=NORMAL
7															
8															

PRE-EMPTION TIMING									SPECIAL FUNCTIONS						
	DELAY BEFORE	GREEN BEFORE	PRE-EMPT 1 LOCK MEMORY	TRACK CLR Φ	TRACK CLR GREEN	DWELL Φ	MIN DWELL	EXIT Φ		START Φ	DUAL ENTRY	DET SWITCH	OUT OF FLASH	INTO FLASH	
R/R										2,6	2,6	NO	2,6	4	
BRIDGE									Notes: 1. REFER TO SYSTEM TIMING AND ALT TIMING PLANS						
FIRE STN									2. UPDATED DETECTION PROOF TIMING, SYSTEM TIMING, & ALT TIMING						
BUS									3. REFER TO WO2023-000126						
									4.						
TIMING DESIGNED BY: RONALD TIBBETTS			DATE: 11/14/2022			APPROVED BY: SUNIL GYAWALI, P.E., PTOE						DATE: 11/15/22			

SYSTEM TIMING SHEET

DATE TIMING INSTALLED: _____

INTERSECTION:	FOREST HILL BLVD & WELLINGTON GREEN ENT	CONTROLLER TYPE:	NAZTEC
SYSTEM:	FOREST HILL BLVD	SIGNAL #	33399
		SYSTEM #	2580

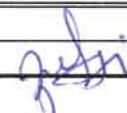
TOD SCHEDULER											
WEEKDAY				WEEKEND							
				SATURDAY				SUNDAY			
TIME	PATTERN	TIME	PATTERN	TIME	PATTERN	TIME	PATTERN	TIME	PATTERN	TIME	PATTERN
0:00	25	6:00	2	0:00	25	9:00	5	0:00	25	10:30	5
9:00	1	15:30	3	14:00	4	20:00	21	14:00	4	18:30	21
19:00	1	21:00	21								

TIMING PLANS													
PATTERN		1		2		3		4		5		6	
CYCLE LENGTH (SEC)		140		160		160		160		160			
OFFSET (SEC)		82		139		132		30		30			
COORDINATED PHASE		6		6		6		2		2			
SEQUENCE		2		2		2		3		3			
ALT TIMING PLAN		1		2		3		4		5			
		SPLIT	MODE	SPLIT	MODE	SPLIT	MODE	SPLIT	MODE	SPLIT	MODE	SPLIT	MODE
FORCE-OFF 1 (SEC)	EBLT	18	NON	18	NON	18	NON	18	NON	18	NON		
FORCE-OFF 2 (SEC)	WB	87	MAX	91	MAX	98	MAX	91	MAX	91	MAX		
FORCE-OFF 3 (SEC)													
FORCE-OFF 4 (SEC)	NB	35	NON	51	NON	44	NON	51	NON	51	NON		
FORCE-OFF 5 (SEC)	WBLT	22	NON	18	NON	18	NON	20	NON	22	NON		
FORCE-OFF 6 (SEC)	EB	83	MAX	91	MAX	98	MAX	89	MAX	87	MAX		
FORCE-OFF 7 (SEC)													
FORCE-OFF 8 (SEC)		35	NON	51	NON	44	NON	51	NON	51	NON		

Special Features:

- 1) PATTEN 21 MAX 2 ACTIVE
- 2) UNUSED DAY PLANS & PATTERNS TO REMAIN
- 3)

TIMING DESIGNED BY:	RONALD TIBBETTS	DATE:	11/14/2022
APPROVED BY:	SUNIL GYAWALI, P.E., PTOE	DATE:	11/15/2022



[1.1.6.1] ALTERNATE TIMING SHEET

INTERSECTION: FOREST HILL BLVD & WELLINGTON GREEN ENT											SIGNAL # 33399					SYSTEM # 2580					
	MIN GREEN	GAP TIME	MAX 1	MAX 2	YELLOW	RED CLEAR	WALK	PED CLEAR	ASSIGNED PHASE	BIKE CLEAR		MIN GREEN	GAP TIME	MAX 1	MAX 2	YELLOW	RED CLEAR	WALK	PED CLEAR	ASSIGNED PHASE	BIKE CLEAR
ALT TIMING PLAN 1											ALT TIMING PLAN 2										
1	4.0	2.0	15.0		5.0	2.0	0.0	0.0	1		1	4.0	2.0	15.0		5.0	2.0	0.0	0.0	1	
2	20.0	4.0	84.0		5.0	2.0	0.0	0.0	2		2	20.0	4.0	88.0		5.0	2.0	0.0	0.0	2	
3											3										
4	6.0	2.0	25.0		4.0	4.0	7.0	35.0	4		4	6.0	2.0	20.0		4.0	4.0	7.0	35.0	4	
5	4.0	2.0	19.0		5.0	2.0	0.0	0.0	5		5	4.0	2.0	15.0		5.0	2.0	0.0	0.0	5	
6	20.0	4.0	80.0		5.0	2.0	7.0	22.0	6		6	20.0	4.0	88.0		5.0	2.0	7.0	22.0	6	
7											7										
8											8										

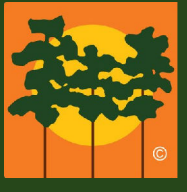
	MIN GREEN	GAP TIME	MAX 1	MAX 2	YELLOW	RED CLEAR	WALK	PED CLEAR	ASSIGNED PHASE	BIKE CLEAR		MIN GREEN	GAP TIME	MAX 1	MAX 2	YELLOW	RED CLEAR	WALK	PED CLEAR	ASSIGNED PHASE	BIKE CLEAR
ALT TIMING PLAN 3											ALT TIMING PLAN 4										
1	4.0	2.0	15.0		5.0	2.0	0.0	0.0	1		1	4.0	2.0	15.0		5.0	2.0	0.0	0.0	1	
2	20.0	4.0	95.0		5.0	2.0	0.0	0.0	2		2	20.0	4.0	88.0		5.0	2.0	0.0	0.0	2	
3											3										
4	6.0	2.0	28.0		4.0	4.0	7.0	35.0	4		4	6.0	2.0	28.0		4.0	4.0	7.0	35.0	4	
5	4.0	2.0	15.0		5.0	2.0	0.0	0.0	5		5	4.0	2.0	17.0		5.0	2.0	0.0	0.0	5	
6	20.0	4.0	95.0		5.0	2.0	7.0	22.0	6		6	20.0	4.0	86.0		5.0	2.0	7.0	22.0	6	
7											7										
8											8										

	MIN GREEN	GAP TIME	MAX 1	MAX 2	YELLOW	RED CLEAR	WALK	PED CLEAR	ASSIGNED PHASE	BIKE CLEAR	ALT TIMING PLAN ASSIGNMENTS	
ALT TIMING PLAN 5												
1	4.0	2.0	15.0		5.0	2.0	0.0	0.0	1		ALT TIMING PLAN 1	PATTERN 1
2	20.0	4.0	88.0		5.0	2.0	0.0	0.0	2		ALT TIMING PLAN 2	PATTERN 2
3											ALT TIMING PLAN 3	PATTERN 3
4	6.0	2.0	28.0		4.0	4.0	7.0	35.0	4		ALT TIMING PLAN 4	PATTERN 4
5	4.0	2.0	19.0		5.0	2.0	0.0	0.0	5		ALT TIMING PLAN 5	PATTERN 5
6	20.0	4.0	84.0		5.0	2.0	7.0	22.0	6			
7												
8												

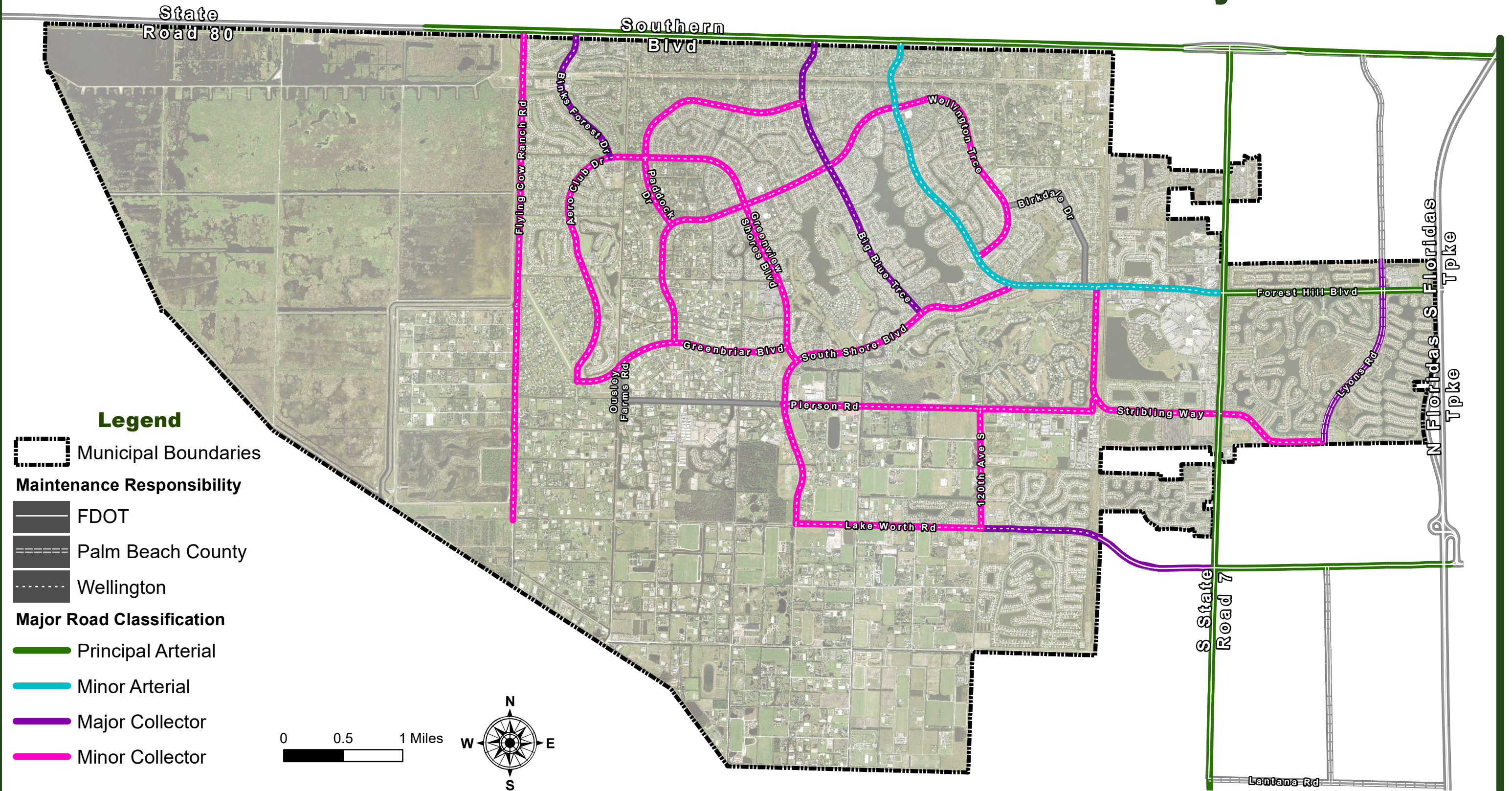
NOTES:

TIMING DESIGNED BY: RONALD TIBBETTS DATE: 11/14/2022
 APPROVED BY: SUNIL GYAWALI, P.E., PTOE DATE: 11/15/2022

STN#	ROAD	FROM	TO	LANES	HISTORICAL DAILY TRAFFIC VOLUMES					2023 DAILY		DIR LOS STD	AM PEAK HOUR			PM PEAK HOUR		
					2018	2019	2020	2021	2022	VOL	DATE		2-WAY	NB/EB	SB/WB	2-WAY	NB/EB	SB/WB
4800	DIXIE HWY	10th Ave N	Lake/Lucerne	4	22218	23829		23099		22885	12/7/2022	1680	1481	825	677	1798	971	837
1219	DONALD ROSS RD	I-95	Parkside Dr	6D		41340	43576	38740	39873	42541	1/18/2023	2680	3854	2319	1567	3859	1773	2091
1211	DONALD ROSS RD	Central Blvd	SR 811	6D	32453	34155	33386	34401	34010	32824	1/10/2023	2940	2836	1923	1088	2941	1213	1766
1805	DONALD ROSS RD	SR 811	Prosperity Farms Rd	6D	31854	32601	31257	28227	28916	31947	1/10/2023	2940	2783	1719	1115	2833	1140	1714
3638	DREXEL RD	Okeechobee Bl	Belvedere Rd	2	10698	10822		10898	12008	12011	3/13/2023	880	963	529	448	1049	512	553
2304	ELLISON-WILSON RD	Donald Ross Rd	Universe Blvd	2	6845	6305	6978	4851		7102	1/10/2023	880	843	232	611	914	625	295
2844	ELLISON-WILSON RD	Universe Blvd	PGA Blvd	2	10985	10864		8325	10616	10632	2/6/2023	880	1077	676	401	1050	410	640
3661	ELMHURST RD	Haverhill Rd	Military Tr	2	8716	8478		8121	9103	9493	3/6/2023	880	675	446	237	851	390	470
4826	FEDERAL HWY	Miner Rd	Gateway Blvd	4D	17405	17606	17349	15629		16907	12/7/2022	1960	1349	488	862	1543	896	648
5824	FEDERAL HWY	NE 6th Ave	23rd Ave	4D	26919	25099	25281	24887	25048	24875	2/21/2023	1960	1826	657	1182	2018	1248	891
5838	FEDERAL HWY	Lowson Blvd	Linton Blvd	4D	35268	33073	32404	27747		32329	2/1/2023	1770	2012	959	1153	2628	1445	1197
5663	FLAVOR PICT RD	Hagen Ranch Rd	Jog Rd	2	7559	7643		7874	8042	8959	3/28/2023	880	665	389	289	754	371	400
5654	FLAVOR PICT RD	Jog Rd	Military Tr	2	8472	9967	10379	9737	10145	12521	2/21/2023	880	889	436	477	997	414	584
4212	FLORIDA MANGO RD	Forest Hill Blvd	10th Ave N	2	11389	11464		10848				880						
3407	FOREST HILL BLVD	South Shore Blvd	SR 7	6D	50083	46754	47391	43665	48135	47895	3/6/2023	2680	3578	1993	1599	3854	1800	2054
3667	FOREST HILL BLVD	Sherwood Forest Blvd	Haverhill Rd	6D	40627	41992		38096	40922	42545	1/25/2023	2680	3138	1933	1252	3297	1455	1893
3629	FOREST HILL BLVD	Kirk Rd	Congress Ave	6D	45722	47705				43988	3/13/2023	2680	3111	1849	1360	3001	1344	1742
3841	FOREST HILL BLVD	Dixie Hwy	Olive Ave	2	5307	5396	5306	4987		5995	3/15/2023	810	517	247	270	449	202	298

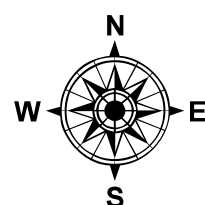
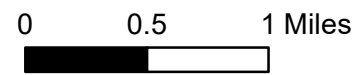


Roadway Classification



Legend

- Municipal Boundaries
- Maintenance Responsibility**
- FDOT
- Palm Beach County
- Wellington
- Major Road Classification**
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector



Goals, Objectives, & Policies (M-1)