



**City of Fort Pierce
Development Review Application**

for

WILLOW LAKES, LLC

**W. Midway Road
Fort Pierce, FL
St. Lucie County**

**Prepared By:
W. Lee Dobbins, Esq.
Dean, Mead, Minton & Zwemer
1903 South 25th Street, Suite 200
Fort Pierce, FL 34947
772-464-7700**

DeanMead.com

[Orlando](#) | [Fort Pierce/Stuart](#) | [Tallahassee](#) | [Viera/Melbourne](#)

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DEVELOPMENT REVIEW

Property address or Location TBD - General Location: Lying northwesterly of the interchange of W. Midway Road and I-95 (Section 02 and 03, Township 36S, Range 39E)

Parcel ID #(s) 3302-212-0001-000-4

Project description Resort village and community with residential, retail and commercial uses

Willow Lakes, LLC

Property Owner(s)

433 S. Main St. Ste 300

Street Address

West Hartford CT 06110

City State Zip

561-827-5742

Phone Number

clabonte@eaglebridgecapital.com

Email Address

Willow Lakes, LLC c/o Dean, Mead, Minton & Zwemer

Applicant/Representative, Title, Company

1903 S 25th Street Suite 200

Street Address

Fort Pierce FL 34947

City State Zip

772-464-7700

Phone Number

ldobbins@deanmead.com

Email Address

Property Owner(s) Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Representative to act in his/her behalf for the purposes of seeking approval for the application described herein. The undersigned consents to inspection and photographing of the subject property by the Planning staff for purposes of consideration of this Application and/or presentation to the Planning Board and City Commission.

[Signature] MANAGER

Property Owner(s) Signature(s)

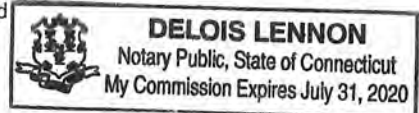
STATE OF FLORIDA CT COUNTY Fairfield

The foregoing instrument was acknowledged before me this 31 day of March, 2020, by

Chad P Labonte who is personally known to me or has produced CT Drivers License as identification.

[Signature]
Signature of Notary 156897

(seal)



INTAKE MEETINGS ARE REQUIRED FOR ALL SUBMITTALS. CALL (772) 467-3729

TO BE COMPLETED BY STAFF

Zoning	Future Land Use	Total Acres	Historic District	Historic Designation	
				Contributing	Individual
				Non-Contributing	None

Pre-Application Meeting Date _____

Fees _____ Control # _____ B. Permit # _____

Intake Planner _____

Planner Assigned _____

Approved By _____ Date _____

Comments _____

Intake Date Stamp



DEVELOPMENT REVIEW

General Information

- Incomplete application packets cannot be accepted.
- Site Plan approval is valid for one (1) year following City Commission approval. In order to maintain site plan approval, vertical improvements, permitted by the Building Department must commence prior to the 12-month expiration date, and building permits must be maintained until site plan is completed, per plans, or approval shall lapse.

Choose Application Type:

Application Type			
<input type="checkbox"/> Site Plan	<input type="checkbox"/> Conditional Use with New Const.	<input type="checkbox"/> Major Amendment	
<input type="checkbox"/> Conceptual Development Plan		<input type="checkbox"/> Minor Amendment	

Site Information:

Non-Residential: Proposed Sq. Ft.: $\frac{650,000 +}{700 \text{ hotel rooms}}$ Residential: Proposed Units: 1,000

Surrounding Uses: (i.e. single family home, retail, industrial, etc.)

North	South	East	West

Application Outlook



Site Plan submittal requirements:

Submit one (1) original & thirteen (13) hard copies and one (1) CD of the following. Additional copies will be required of subsequent submittals.

- Complete notarized application
- Warranty Deed
- SLC Property Record Card
- Statements of ownership & control of proposed development. Statement describing in detail: character & intended use.
- General location map (see Section 22-58.d.2)
- Survey (see Section 22-58.d.3)
- Site Plan (see Section 22-58.d.4)
- Landscaping Plan (see Section 22-187)
- Storm Drainage Plan (see Section 22-58.d.6)
- Environmental Impact Report
- Beach/Dune System protection plan, if applicable (see Section 22-58.d.7)
- Lighting Plan (see Section 22-58.d.8)
- Design Review submittals (see Design Review application)
- Traffic Impact Report
- Concurrency Review submittals (see Concurrency Review application)

This instrument prepared by:
DOUGLAS E. GONANO, ESQUIRE
Gonano & Harrell, Chartered
1600 S. Federal Highway, Suite 200
Fort Pierce, FL 34950-5178
(772) 464-1032

Parcel I.D. No: _____ * Doc Assump: \$ 0.00
* Doc Tax : \$ 30,333.80
Grantee(s) S.S. #(s): _____ * Int Tax : \$ 0.00

SPECIAL WARRANTY DEED

THIS SPECIAL WARRANTY DEED made this 30th day of July, 2004, by **HYMAN B. HENDLER** and **ALVIN D. SCHWARTZ**, : (a) individually and as Co-Trustees under the provisions of an unrecorded Trust Agreement known as The Restated and Amended Revocable Land Trust Agreement for HHP Associates, dated January 2, 1995, and (b) individually and as Co-Trustees under the provisions of an unrecorded Trust Agreement known as The Restated and Amended Revocable Land Trust Agreement for HHP Properties, dated January 2, 1995, as their respective interests may appear whose post office address is 900 N.E. Spanish River Boulevard, Unit 4-W, Boca Raton, Florida 33431, hereinafter called the Grantor, to **WILLOW LAKES, LLC**, a Florida limited liability company, whose post office address is 222 South US Highway One, #209, Tequesta, Florida 33469, hereinafter called the Grantee:

[Wherever used herein, the terms "Grantor" and "Grantee" include all the parties to this instrument and the heirs, legal representatives, and assigns of individuals, and the successors and assigns of corporations.]

WITNESSETH: That the Grantor, for and in consideration of the sum of \$10.00, and other valuable consideration, receipt of which is hereby acknowledged, hereby grants, bargains, sells, aliens, remises, releases, conveys, and confirms unto the Grantee, all that certain land situate in St. Lucie County, Florida, which is more particularly described on Exhibit "A" as attached hereto and incorporated herein by reference.

THE ABOVE DESCRIBED PROPERTY IS NOT THE HOMESTEAD OF THE GRANTOR. GRANTOR FURTHER WARRANTS THAT THE ABOVE DESCRIBED PROPERTY DOES NOT NOW AND NEVER HAS CONSTITUTED GRANTOR'S HOMESTEAD; IS NOT NOW AND NEVER HAS BEEN CONTIGUOUS TO GRANTOR'S HOMESTEAD.

TOGETHER, with all the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining and subject to: (a) all rights of way for public roads and drainage canals, if any, (b) utility easements of record, (c) all other covenants, restrictions, easements, limitations and reservations provided this reference shall not operate to reimpose the same, (d) and taxes accruing subsequent to December 31, 2003, and (e) zoning and governmental regulations.

TO HAVE AND TO HOLD, the same in fee simple forever.

AND the Grantor hereby covenants that the premises are free from all encumbrances made by Grantor and Grantor does hereby bind Grantor and Grantor's heirs, successors, and assigns to warrant and forever defend the title to the property to the Grantee above named and Grantee's heirs, successors, and assigns, against every person lawfully claiming the property, or any part thereof, by, through, or under the Grantor, but not otherwise.

JOANNE HOLMAN, CLERK OF THE CIRCUIT COURT - SAINT LUCIE COUNTY
File Number: 2454543 OR BOOK 2035 PAGE 1421
Recorded: 08/04/04 14:05

Mail - Haile Shaw; Pfaffenberger

[Handwritten initials]

IN WITNESS WHEREOF, the said Grantor has signed and sealed these presents the day and year first above-written.

Signed, sealed, and delivered in our presence:

Print Name: Douglas E. Leonard

Print Name: _____

Print Name: Douglas E. Leonard

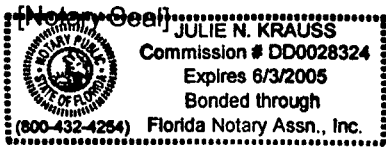
Print Name: Lawrence C. Griffin

x Hyman B. Hendler TEE
HYMAN B. HENDLER, individually and as Co-Trustee under the provisions of the unrecorded Trusts referenced above

x Alvin D. Schwartz
ALVIN D. SCHWARTZ, individually and as Co-Trustee under the provisions of the unrecorded Trusts referenced above

STATE OF Florida
COUNTY OF Palm Beach

The foregoing instrument was acknowledged before me this 30th day of July, 2004, by **HYMAN B. HENDLER, individually and as Co-Trustee under the unrecorded Trusts referenced above**, who is:
___ personally known to me, or
 who has produced a drivers license as identification and who did take an oath.

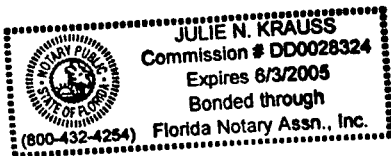


Julie N. Krauss
Notary Public, State of _____
Printed Name: _____
My Commission Expires: _____

STATE OF Florida
COUNTY OF Palm Beach

The foregoing instrument was acknowledged before me this 30th day of July, 2004, by **ALVIN D. SCHWARTZ, individually and as Co-Trustee under the unrecorded Trusts referenced above**, who is:
___ personally known to me, or
 who has produced a drivers license as identification and who did take an oath.

[Notary Seal]



Julie N. Krauss
Notary Public, State of _____
Printed Name: _____
My Commission Expires: _____

Handwritten mark

WILLOW LAKES PARCEL

EXHIBIT - A -

Parcel 1

A PARCEL OF LAND LYING IN SECTIONS 2 AND 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST IN ST. LUCIE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 3, THENCE N89°46'35"W ALONG THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 2622.04 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF N.S.L.R.W.C.D. CANAL NO. 93 (A 78 FEET WIDE RIGHT-OF-WAY); THENCE S00°02'49"W ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 52.50 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF A 200 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 377, PG. 2069-2076 AND BEING THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL; THENCE S89°46'35"E ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING PARALLEL TO THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 1,026.62 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF A 60 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 119, PG. 404; THENCE S32°18'17"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID 60 FEET WIDE FP&L EASEMENT A DISTANCE OF 1,746.02 FEET; THENCE N61°15'41"E A DISTANCE OF 335.12 FEET; THENCE N31°56'28"E A DISTANCE OF 78.35 FEET; THENCE N02°37'14"E A DISTANCE OF 332.85 FEET; THENCE N85°17'03"E A DISTANCE OF 146.97 FEET; THENCE N53°57'44"E A DISTANCE OF 58.71 FEET; THENCE N01°56'01"E A DISTANCE OF 142.19 FEET; THENCE N62°33'43"E A DISTANCE OF 139.15 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 335.00 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 365.79 FEET THROUGH A CENTRAL ANGLE OF 62°33'43"; THENCE N00°00'00"W A DISTANCE OF 142.46 FEET; THENCE S89°50'50"E A DISTANCE OF 1,811.20 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 150.00 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 308.52 FEET THROUGH A CENTRAL ANGLE OF 117°50'41"; THENCE S27°59'51"W A DISTANCE OF 671.72 FEET; THENCE S56°07'55"E A DISTANCE OF 323.59 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE HIGHWAY NO. 95) (WIDTH VARIES); THENCE S32°49'14"W ALONG THE WEST RIGHT-OF-WAY OF SAID STATE ROAD NO. 9 A DISTANCE OF 346.97 FEET; THENCE S44°46'35"W ALONG THE WEST RIGHT-OF-WAY LINE OF SAID STATE ROAD NO. 9 A DISTANCE OF 339.92 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF A ACCESS ROAD NO. 1 AS RECORDED IN PB 24, PG. 4J&K; THENCE N00°04'30"E A DISTANCE OF 99.51 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S44°46'35"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 236.51 FEET; THENCE DEPARTING SAID ACCESS ROAD NO. 1 N00°04'43"E A DISTANCE OF 535.11 FEET; THENCE S89°59'23"W A DISTANCE OF 166.33 FEET; THENCE S00°04'55"W A DISTANCE OF 680.33 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S50°43'56"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 478.34 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 266.00 FEET; THENCE WESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 171.53 FEET THROUGH A CENTRAL ANGLE OF 36°56'48"; THENCE S87°40'44"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 1,027.79 FEET; THENCE S00°01'50"E A DISTANCE OF 72.00 FEET; THENCE S89°58'10"W A DISTANCE OF 1,610.26 FEET; THENCE S00°01'50"E A DISTANCE OF 117.14 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY

DR BOOK 2035 PAGE 1423

LINE OF WHITE CITY ROAD (COUNTY ROAD 712) (A 70 FEET WIDE RIGHT-OF-WAY); THENCE N89°52'26"W ALONG THE NORTH RIGHT-OF-WAY OF SAID WHITE CITY ROAD (COUNTY ROAD 712) A DISTANCE OF 786.28 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93; THENCE N00°02'49"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 2,564.70 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING THE POINT OF BEGINNING.

CONTAINING 197.90 ACRES, MORE OR LESS

Parcel 2

A PARCEL OF LAND 60.00 FEET IN WIDTH LYING IN THE NE ¼ OF SECTION 35, TOWNSHIP 35 SOUTH, RANGE 39 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A PORTION OF THE NE ¼ OF SAID SECTION 35 LYING 60.00 FEET WEST OF (AS MEASURED AT RIGHT ANGLES) THE WEST RIGHT-OF-WAY LINE OF THE NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT CANAL NO. 96 AS RECORDED IN OFFICIAL RECORDS BOOK 396, PAGE 2511, LYING WEST OF THE WEST RIGHT-OF-WAY LINE OF INTERSTATE 95 (STATE ROAD 9)

Parcel 3

A PARCEL OF LAND 60.00 FEET IN WIDTH LYING IN THE NW ¼ OF SECTION 36 TOWNSHIP 35 SOUTH, RANGE 39 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SAID SECTION 36, TOWNSHIP 35 SOUTH, RANGE 39 EAST, THENCE N89°45'07"E, ALONG THE NORTH LINE OF SAID SECTION 36, A DISTANCE OF 824.95 FEET; THENCE S00°12'26"W A DISTANCE OF 662.15 FEET TO THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL:

THENCE S47°45'46"E A DISTANCE OF 60.00 FEET THE NORTHWESTERLY RIGHT-OF-WAY LINE OF STATE ROAD 9 (INTERSTATE ROAD 95); THENCE ALONG SAID NORTHWESTERLY RIGHT-OF-WAY LINE THE FOLLOWING THREE COURSES AND DISTANCES; S42°14'14"W A DISTANCE OF 83.45 FEET; THENCE S37°39'48"W A DISTANCE OF 200.64 FEET; THENCE S42°14'14"W A DISTANCE OF 955.24 FEET TO THE EAST RIGHT-OF-WAY LINE OF CANAL NO. 96; THENCE N00°08'06"E ALONG SAID EAST RIGHT-OF-WAY LINE A DISTANCE OF 89.49 FEET; TO A POINT 60.00 FEET NORTHWESTERLY OF (AS MEASURED AT RIGHT ANGLES) THE NORTHWESTERLY RIGHT-OF-WAY LINE OF INTERSTATE-95; THENCE N42°14'14"E PARALLEL WITH SAID NW RIGHT-OF-WAY LINE A DISTANCE OF 886.45 FEET; THENCE N37°39'48"E A DISTANCE OF 200.54 FEET; THENCE N42°14'14"E A DISTANCE OF 85.85 FEET TO THE POINT OF BEGINNING.

Parcel 4

A PARCEL OF LAND 80.00 FEET IN WIDTH LYING IN SW ¼ OF SECTION 25, TOWNSHIP 35 SOUTH, RANGE 39 EAST AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF SECTION 25, TOWNSHIP 35 SOUTH, RANGE 39 EAST, THENCE NORTH 89°45'07"E EAST, ALONG THE SOUTH LINE OF SAID

SECTION 25, A DISTANCE OF 824.95 FEET; THENCE N00°12'26"E A DISTANCE OF 871.61 FEET TO THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL:

THENCE CONTINUE N00°12'26"E A DISTANCE OF 197.52 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF THE SUNSHINE STATE PARKWAY; THENCE N23°41'09"W ALONG SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 320.73 FEET TO THE NORTH LINE OF THE SW ¼ OF THE SW ¼ OF SAID SECTION 25; THENCE N89°51'53"W ALONG SAID NORTH LINE A DISTANCE OF 650.74 FEET TO THE EAST RIGHT-OF-WAY LINE OF NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT CANAL NO. 96; THENCE S00°11'53"W ALONG SAID EAST RIGHT-OF-WAY LINE A DISTANCE OF 80.00 FEET; THENCE S89°51'53"E PARALLEL WITH SAID NORTH LINE A DISTANCE OF 598.70 FEET TO A POINT 80.00 FEET (AS MEASURED AT RIGHT ANGLES) SOUTHWEST OF THE WESTERLY RIGHT-OF-WAY OF THE SUNSHINE STATE PARKWAY; THENCE S23°41'09"E PARALLEL WITH SAID WESTERLY RIGHT-OF-WAY LINE A DISTANCE OF 449.19 FEET TO THE POINT OF BEGINNING.

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Property Identification

Site Address: TBD
Parcel ID: 3302-212-0001-000-4
Account #: 156019
Map ID: 33/02N
Use Type: 6000
Zoning:
City/County: Fort Pierce

Ownership

Willow Lakes LLC
433 S Main ST Ste 300
West Hartford, CT 06110

Legal Description

2/3 36 39 FROM NW COR OF SEC 3-36-39 RUN N 89 46 35 W ALG N LI OF SEC 3 2622 FT TO E R/W LI OF NSLRWCD CANAL NO. 93, TH S 00 02 49 W ALG E R/W LI 52.50 FT TO N R/W LI OF 200 FT FP&L ESMT AND POB, TH S 89 46 35 ALG N R/W LI 1026.62 FT TO E R/W LI OF 60 FT FP&L ESMT, TH S 32 18 17 E ALG E R/W LI 1746.02 FT, TH N 61 15 41 E 335.12 FT, TH N 31 56 28 E 78.35 FT, TH N 02 37 14 E 332.85 FT, TH N 85 17 03 E 146.97 FT, TH N 53 57 44 E 58.71 FT, TH N 01 56 01 E 142.19 FT, TH N 62 33 43 E 139.15 FT TO CURVE CONC NW, R OF 335 FT, TH NELY ALG ARC 365.79 FT, TH N 00 00 00 W 142.46 FT, TH S 89 50 50 E 1811.20 FT TO CURVE CONC SW, R OF 150 FT, TH SELY ALG ARC 308.52 FT, TH S 27 59 51 W 671.72 FT, TH S 56 07 55 E 323.59 FT TO W R/W LI OF I-95, TH S 32 49 14 W ALG W R/W LI 346.97 FT, TH S 44 46 35 W 339.92 FT, TH N 00 04 30 E 99.51 FT, TH S 44 46 35 W 303.05 FT, TH S 50 43 56 W 631.70 FT TO CURVE CONC N, R OF 266 FT, TH WLY ALG ARC 171.53 FT, TH S 87 40 44 W 1027.79 FT, TH S 00 01 50 E 72 FT, TH S 89 58 10 W 1610.26 FT, TH S 00 01 50 E 117.14 FT TO N R/W LI OF MIDWAY RD, TH N 89 52 26 W ALG N R/W LI 786.26 FT TO E R/W LI OF NSLRWCD CANAL NO. 93, TH N 00 02 49 E ALG E R/W LI 2564.70 FT TO N R/W LI OF FP&L ESMT AND POB- (200.30 AC - 8,725,068 SF) (OR 2658-2617: 2035-1421)

Current Values

Just/Market Value: \$1,509,043
Assessed Value: \$55,083
Exemptions: \$0
Taxable Value: \$55,083

Property taxes are subject to change upon change of ownership.

- Past taxes are not a reliable projection of future taxes.
- The sale of a property will prompt the removal of all exemptions, assessment caps, and special classifications.

Taxes for this parcel: [SLC Tax Collector's Office](#)
Download TRIM for this parcel: [Download PDF](#)



Total Areas

Finished/Under Air (SF): 0
Gross Sketched Area (SF): 0
Land Size (acres): 200.3
Land Size (SF): 8,725,068

STATEMENT OF OWNERSHIP AND CONTROL

The land which is the subject of this application is 100% owned and controlled by Willow Lakes, LLC (see Special Warranty Deed included in this submittal). Attached hereto is a copy of the printout from the Florida Secretary of State (Sunbiz) and the Articles of Organization of Willow Lakes, LLC, showing that it is a manager-managed limited liability company, and the current Managers are Roland G. Labonte and Chad Labonte.

The character and intended use of the project are described in detail in the Project Narrative, set forth in the Planned Development Guidelines.



Department of State / Division of Corporations / Search Records / Detail By Document Number /

Detail by Entity Name

Florida Limited Liability Company
WILLOW LAKES, LLC

Filing Information

Document Number L03000007328
FEI/EIN Number 54-2099867
Date Filed 02/27/2003
State FL
Status ACTIVE
Last Event LC AMENDMENT
Event Date Filed 10/30/2019
Event Effective Date NONE

Principal Address

c/o DEI Property Management LLC
 433 South Main Street
 218
 West Hartford, CT 06110

Changed: 02/15/2016

Mailing Address

c/o DEI Property Management LLC
 433 South Main Street
 218
 West Hartford, CT 06110

Changed: 02/15/2016

Registered Agent Name & Address

LABONTE, Roland G
 376 Eagle Drive
 Jupiter, FL 33477

Name Changed: 02/15/2016

Address Changed: 02/15/2016

Authorized Person(s) Detail

Name & Address

Title MGR

LABONTE, ROLAND G
376 Eagle Drive
JUPITER, FL 33477

Title MGR

LABONTE, CHAD
298 S BENSON RD
FAIRFIELD, CT 06824

Annual Reports

Report Year	Filed Date
2018	01/17/2018
2019	01/29/2019
2020	01/17/2020

Document Images

<u>01/17/2020 -- ANNUAL REPORT</u>	View image in PDF format
<u>10/30/2019 -- LC Amendment</u>	View image in PDF format
<u>01/29/2019 -- ANNUAL REPORT</u>	View image in PDF format
<u>01/17/2018 -- ANNUAL REPORT</u>	View image in PDF format
<u>04/19/2017 -- ANNUAL REPORT</u>	View image in PDF format
<u>02/15/2016 -- ANNUAL REPORT</u>	View image in PDF format
<u>02/11/2015 -- ANNUAL REPORT</u>	View image in PDF format
<u>03/19/2014 -- ANNUAL REPORT</u>	View image in PDF format
<u>02/07/2013 -- ANNUAL REPORT</u>	View image in PDF format
<u>01/04/2012 -- ANNUAL REPORT</u>	View image in PDF format
<u>02/21/2011 -- ANNUAL REPORT</u>	View image in PDF format
<u>01/15/2010 -- ANNUAL REPORT</u>	View image in PDF format
<u>03/19/2009 -- ANNUAL REPORT</u>	View image in PDF format
<u>04/15/2008 -- ANNUAL REPORT</u>	View image in PDF format
<u>12/18/2007 -- LC Amendment</u>	View image in PDF format
<u>01/31/2007 -- ANNUAL REPORT</u>	View image in PDF format
<u>04/13/2006 -- ANNUAL REPORT</u>	View image in PDF format
<u>04/13/2005 -- ANNUAL REPORT</u>	View image in PDF format
<u>06/14/2004 -- ANNUAL REPORT</u>	View image in PDF format
<u>01/06/2004 -- Reg. Agent Change</u>	View image in PDF format
<u>02/27/2003 -- Florida Limited Liabilites</u>	View image in PDF format

#03000065809

FILED
03 FEB 27 PM 8:20
SECRETARY OF STATE
TALLAHASSEE, FLORIDA

**ARTICLES OF ORGANIZATION
OF
WILLOW LAKES, LLC**

The undersigned authorized representative of a member, for the purpose of forming a limited liability company under the Florida Limited Liability Act, Florida Statutes Chapter 608 (the "Act"), hereby makes, acknowledges and files the following Articles of Organization:

ARTICLE I - NAME

The name of the limited liability company shall be WILLOW LAKES, LLC (the "Company").

ARTICLE II - ADDRESS

The mailing address and street address of the principal office of the Company is 433 South Main Street, Suite 300, West Hartford, CT 06110.

ARTICLE III - REGISTERED AGENT

The name of the registered agent of the Company in the State of Florida is WL Enterprises, LLC, a Florida limited liability company, and its address is 222 South U.S. Highway #1, Suite 209, Tequesta, Florida 33469.

ARTICLE IV - MANAGEMENT BY MANAGERS

The Company is to be a manager-managed limited liability company.

IN WITNESS WHEREOF, the undersigned has made, subscribed and affirmed these Articles of Organization under the penalties of perjury as the duly authorized representative of a Member of the Company at North Palm Beach, Florida, this 27th day of February, 2003.

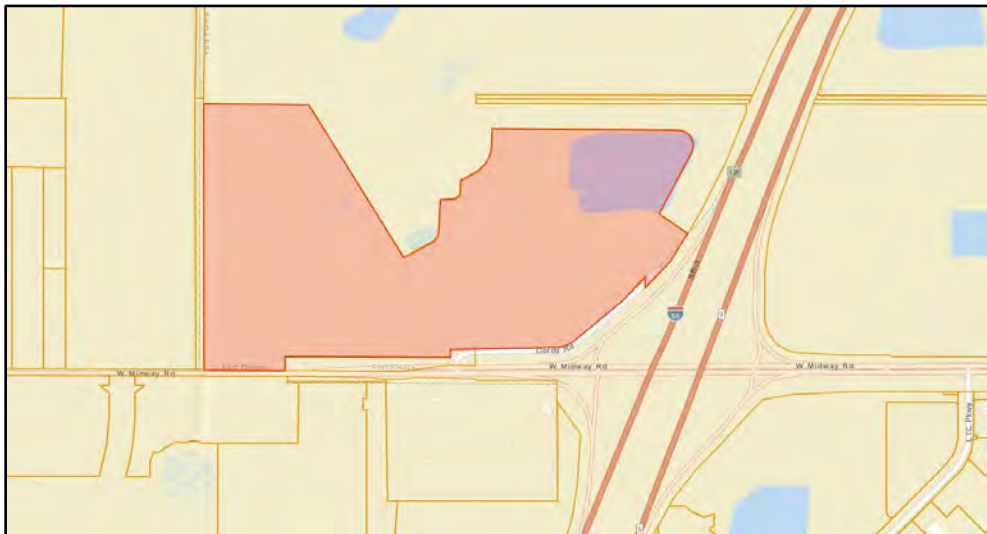
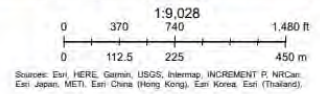

James H. Schnare II
as Authorized Representative

GENERAL LOCATION MAPS
WILLOW LAKES, LLC

3302-212-0001-000-4



March 31, 2020



BOUNDARY & TOPOGRAPHIC SURVEY

PREPARED FOR
CAPTEC Engineering, Inc.

SITUATED IN
**SECTIONS 2 AND 3
TOWNSHIP 36 SOUTH, RANGE 39 EAST
ST. LUCIE COUNTY, FLORIDA**

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN SECTIONS 2 AND 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST IN ST. LUCIE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 3, THENCE N89°46'35"W ALONG THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 2622.04 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF N.S.L.R.W.C.C.D. CANAL NO. 93 (A 70 FEET WIDE RIGHT-OF-WAY), THENCE S00°02'49"W ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.C.D. CANAL NO. 93 A DISTANCE OF 52.50 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF A 200 FEET WIDE FRAL EASEMENT AS RECORDED IN OR 3771, PG. 2008-2078 AND BEING THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL: THENCE S89°46'35"E ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FRAL EASEMENT AND BEING PARALLEL TO THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 5204.62 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF A 60 FEET WIDE FRAL EASEMENT AS RECORDED IN OR 119, PG. 404; THENCE S27°01'57"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID 60 FEET WIDE FRAL EASEMENT A DISTANCE OF 1,746.02 FEET; THENCE N61°52'41"E A DISTANCE OF 335.12 FEET; THENCE N31°56'28"E A DISTANCE OF 78.35 FEET; THENCE N02°37'14"E A DISTANCE OF 332.85 FEET; THENCE N89°17'03"E A DISTANCE OF 146.97 FEET; THENCE N57°07'47"E A DISTANCE OF 58.71 FEET; THENCE N01°50'01"E A DISTANCE OF 142.19 FEET; THENCE N62°33'43"E A DISTANCE OF 139.15 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 335.00 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 365.79 FEET THROUGH A CENTRAL ANGLE OF 62°33'43"; THENCE N00°00'00"W A DISTANCE OF 142.46 FEET; THENCE S89°30'50"E A DISTANCE OF 1,811.20 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 150.00 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 308.52 FEET THROUGH A CENTRAL ANGLE OF 117°04'41"; THENCE S27°59'07"W A DISTANCE OF 674.72 FEET; THENCE S69°07'50"E A DISTANCE OF 323.59 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE HIGHWAY NO. 95) (WIDTH VARIES); THENCE S32°49'14"W ALONG THE WEST RIGHT-OF-WAY OF SAID STATE ROAD NO. 9 A DISTANCE OF 346.97 FEET; THENCE S44°46'35"W ALONG THE WEST RIGHT-OF-WAY LINE OF SAID STATE ROAD NO. 9 A DISTANCE OF 339.92 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF A ACCESS ROAD NO. 1 AS RECORDED IN PB 24, PG. 4 JAK; THENCE N00°04'30"E A DISTANCE OF 99.91 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S44°46'35"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 236.91 FEET; THENCE DEPARTING SAID ACCESS ROAD NO. 1 N00°04'30"E A DISTANCE OF 335.11 FEET; THENCE S89°59'23"W A DISTANCE OF 166.33 FEET; THENCE S00°04'55"W A DISTANCE OF 680.33 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S50°43'56"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 478.34 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 268.00 FEET; THENCE WESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 171.53 FEET THROUGH A CENTRAL ANGLE OF 30°56'46"; THENCE S87°45'47"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 1,027.79 FEET; THENCE S00°01'50"E A DISTANCE OF 72.00 FEET; THENCE S89°51'07"W A DISTANCE OF 1,610.26 FEET; THENCE S00°01'50"E A DISTANCE OF 117.14 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF WHITE CITY ROAD (COUNTY ROAD 712) (A 70 FEET WIDE RIGHT-OF-WAY); THENCE N69°52'26"W ALONG THE NORTH RIGHT-OF-WAY OF SAID WHITE CITY ROAD (COUNTY ROAD 712) A DISTANCE OF 786.28 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.C.D. CANAL NO. 93; THENCE N00°02'49"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.C.D. CANAL NO. 93 A DISTANCE OF 2,264.70 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FRAL EASEMENT AND BEING THE POINT OF BEGINNING.

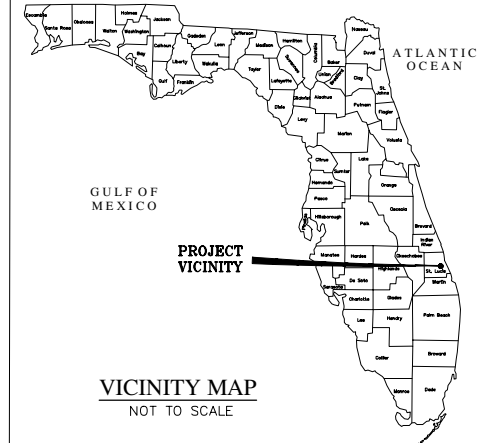
CONTAINING 197.90 ACRES, MORE OR LESS

TOGETHER WITH:

THE WEST 1/2 OF THE WEST 1/2 OF THE WEST 1/2 OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2, TOWNSHIP 36 SOUTH, RANGE 39 EAST, LESS AND EXCEPT THAT PORTION OF THE PROPERTY WHICH WAS TAKEN FOR 1-95, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

CONTAINING 2.33 ACRES, MORE OR LESS.

SURVEYED PARCEL CONTAINS A NET AREA OF 200.23 ACRES, MORE OR LESS.



Digitally signed by
Thomas P Kiernan
Date: 2020.04.02
14:33:02 -04'00'

THOMAS P. KIERNAN DATE
Professional Surveyor & Mapper
Florida Certificate No. 4199

GENERAL NOTES:

- 1) Not valid without the original signature and the raised seal of a Florida Licensed Surveyor and Mapper.
- 2) Description shown herein provided by the client and/or their agent.
- 3) The last date of field work was 11/13/2019.
- 4) Overall parcel contains 200.23 Acres, more or less.
- 5) Bearings shown herein are relative to the North line of Section 3, Township 36 South, Range 39 East, which bears S89°43'59"W and all other bearings are relative thereto.
- 6) Underground utilities, utility services, foundations and improvements were not located as a part of this survey.
- 7) The property shown herein is located within areas having Flood Zone Designations of "X" as shown on Flood Rate Maps No. 12111C0170 J and 12111C0260 J effective dates February 12, 2012, St. Lucie County, State of Florida, which is the current Flood Insurance Rate Maps for the community in which said premises is situated.
- 8) Additions or deletions to survey maps or reports by other than the signing party or parties is prohibited without written consent of the signing party or parties.
- 9) All interior improvements were located and are shown herein.
- 10) No Jurisdictional or Wetlands were determined or located as part of this survey.
- 11) Bearings and distances shown herein are the same as deed unless otherwise stated.
- 12) Additions Or Deletions To Survey Maps Or Reports By Other Than The Signing Party Or Parties Is Prohibited Without Written Consent Of The Signing Party Or Parties.
- 13) The horizontal datum for this survey is referenced to Florida State Plane, East Zone, NAD 83(2011) adjustment, as established by Florida Department Of Transportation FPRM.
- 14) The features shown herein were acquired using RTK GPS and Trigonometric methods and were verified through a redundancy of measurements for an expected horizontal accuracy of 0.10'.
- 15) Elevations shown herein are based on the National Geodetic Vertical Datum of 1929 (NGVD 29). The project benchmark used to establish said elevations is an aluminum disk stamped SLC Vertical Control "Gulfstream" having a published elevation of 21,248' relative to the NAVD 88 datum. A factor of +1.467 was used to convert this to elevation 22.72 relative to NGVD 29 datum.

VICINITY MAP, LOCATION MAP, GENERAL NOTES,
LEGAL DESCRIPTIONS & CERTIFICATION

COMPUTER FILE REF.	FIELD BK./PG.
19-253 Boundary	1706/54
19 Topo	

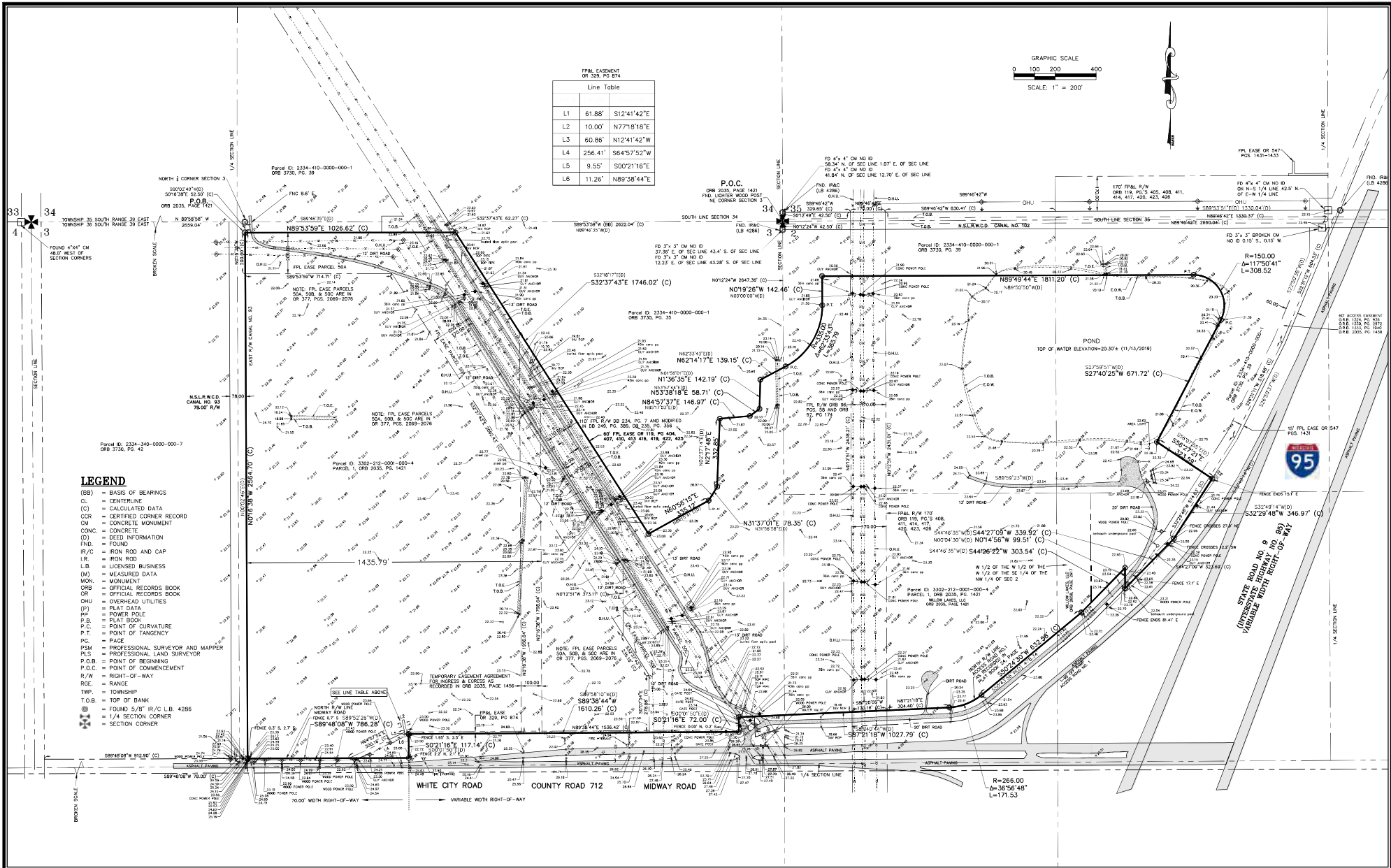


- REVISIONS -		BY	DATE

FIELD	BY	DATE
CAUSC	SG	11/13/19
DETAILED	BKH	12/03/19
CHECKED		
APPROVED		

Boundary & Topographic Survey
PREPARED FOR
CAPTEC Engineering, Inc.

DATE: 12/03/2019
HORIZ. SCALE: 1"=200'
VERT. SCALE: N/A
JOB No. 19-253
SHEET 1 of 2



FRAL EASEMENT OF 326 PG 874

Line Table	
L1	61.88' S12°41'42"E
L2	10.00' N77°18'18"E
L3	60.86' N12°41'42"W
L4	256.41' S64°57'52"W
L5	9.55' S00°21'16"E
L6	11.26' N89°38'44"E

LEGEND

- (BS) = BASIS OF BEARINGS
- CL = CENTERLINE
- (C) = CALCULATED DATA
- CCR = CERTIFIED CORNER RECORD
- CM = CONCRETE MONUMENT
- CONC. = CONCRETE
- (D) = DEED INFORMATION
- FND. = FOUND
- IR/C = IRON ROD AND CAP
- IR = IRON ROD
- L.B. = LICENSED BUSINESS
- (M) = MEASURED DATA
- MON. = MONUMENT
- OR = OFFICIAL RECORDS BOOK
- OR = OFFICIAL RECORDS BOOK
- (P) = PLAT DATA
- PF = POWER POLE
- P.B. = PLAT BOOK
- P.C. = POINT OF CURVATURE
- P.T. = POINT OF TANGENCY
- PG. = PAGE
- PSM = PROFESSIONAL SURVEYOR AND MAPPER
- PLS = PROFESSIONAL LAND SURVEYOR
- P.O.B. = POINT OF BEGINNING
- P.O.C. = POINT OF COMMENCEMENT
- R/W = RIGHT-OF-WAY
- RGE. = RANGE
- TWP. = TOWNSHIP
- T.O.B. = TOP OF BANK
- FOUND 5/8" IR/C L.B. 4286
- 1/4 SECTION CORNER
- SECTION CORNER

GRAPHICS

COMPUTER FILE REF.	FIELD Bk./PG.
19-253 Boundary & Topo	1706/54



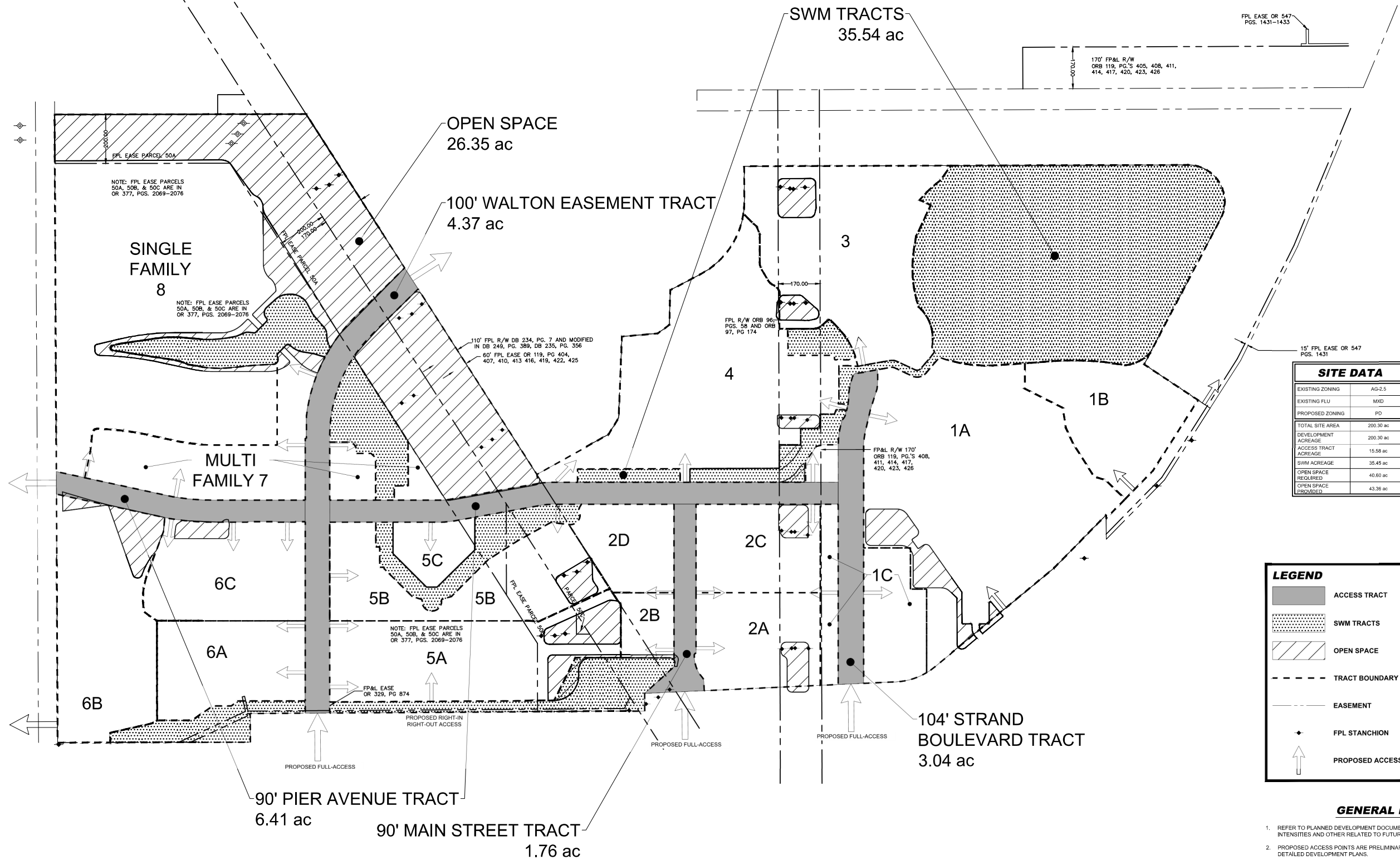
- REVISIONS -

BY	DATE

FIELD	BY	DATE
CAUS.	SG	11/13/19
DETAILED	BKH	12/03/19
CHECKED		
APPROVED		

Boundary & Topographic Survey
 PREPARED FOR
CAPTEC Engineering, Inc.

DATE: 12/03/2019
HORIZ. SCALE: 1" = 200'
VERT. SCALE: N/A
JOB No. 19-253
SHEET 2 of 2



FPL EASE OR 547
PGS. 1431-1433

170' F&M R/W
ORB 119, PG'S 405, 408, 411,
414, 417, 420, 423, 426

FPL EASE PARCEL 50A

NOTE: FPL EASE PARCELS
50A, 50B, & 50C ARE IN
OR 377, PGS. 2069-2076

SINGLE
FAMILY
8

NOTE: FPL EASE PARCELS
50A, 50B, & 50C ARE IN
OR 377, PGS. 2069-2076

OPEN SPACE
26.35 ac

100' WALTON EASEMENT TRACT
4.37 ac

SWM TRACTS
35.54 ac

110' FPL R/W DB 234, PG. 7 AND MODIFIED
IN DB 249, PG. 389, DB 235, PG. 356
60' FPL EASE OR 119, PG 404,
407, 410, 413 416, 419, 422, 425

FPL R/W ORB 96
PGS. 58 AND ORB
97, PG 174

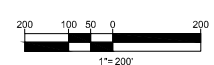
F&M R/W 170'
ORB 119, PG'S 408,
411, 414, 417,
420, 423, 426

SITE DATA	
EXISTING ZONING	AG-2.5
EXISTING FLU	MXD
PROPOSED ZONING	PD
TOTAL SITE AREA	200.30 ac
DEVELOPMENT ACREAGE	200.30 ac
ACCESS TRACT ACREAGE	15.58 ac
SWM ACREAGE	35.45 ac
OPEN SPACE REQUIRED	40.60 ac
OPEN SPACE PROVIDED	43.36 ac

LEGEND	
	ACCESS TRACT
	SWM TRACTS
	OPEN SPACE
	TRACT BOUNDARY
	EASEMENT
	FPL STANCHION
	PROPOSED ACCESS POINT

GENERAL NOTES

- REFER TO PLANNED DEVELOPMENT DOCUMENTS FOR PERMITTED USES AND INTENSITIES AND OTHER RELATED TO FUTURE DEVELOPMENT WITHIN TRACTS
- PROPOSED ACCESS POINTS ARE PRELIMINARY AND SUBJECT TO CHANGE BASED ON DETAILED DEVELOPMENT PLANS.



BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PLANNING SERVICES
TRANSPORTATION SERVICES

REVISIONS			
REV	DATE	COMMENT	DRAWN BY

811
Know what's below.
Call before you dig.
ALWAYS CALL 811
It's fast. It's free. It's the law.

FOR CONCEPT PURPOSES ONLY

THIS DRAWING IS INTENDED FOR MUNICIPAL AND/OR AGENCY REVIEW AND APPROVAL. IT IS NOT INTENDED AS A CONSTRUCTION DOCUMENT UNLESS INDICATED OTHERWISE.

PROJECT No.: CT191015
DRAWN BY: BTJ
CHECKED BY: GPF
DATE: 03/23/20
CAD I.D.: CT191015-CVL_0

PLANNED DEVELOPMENT PLAN DOCUMENTS

FOR
WILLOW LAKES, LLC

PROPOSED DEVELOPMENT
W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA
MAP ID: 33/02N

BOHLER
16 OLD FORGE ROAD, SUITE A
ROCKY HILL, CT 06067
Phone: (860) 333-9900
Fax: (860) 486-9980
2255 GLADES ROAD, SUITE 305E
BOCA RATON, FLORIDA 33431
Phone: (561) 571-6285
Fax: (561) 571-6281
www.BohlerEngineering.com

G.P. FITZGERALD

PROFESSIONAL ENGINEER

PLANNED DEVELOPMENT SITE PLAN

SHEET NUMBER:
PD-01

ORG. DATE: 03/23/20

P:\191015\191015\DRAWING\EXHIBITS\ROAD TRACT PLAN\CT191015-CVL_01-TRACT PLAN--LAYOUT-PD-01-PD PLAN

LANDSCAPING PLAN - N/A

WILLOW LAKES, LLC
PROJECT No. 1888

**CONCEPTUAL STORMWATER
MASTER PLAN**



PREPARED FOR:

CITY OF FORT PIERCE

PREPARED BY:



Engineering Business # EB-0007657

Joseph W. Capra, P.E.
Florida P.E. License # 37638

CAPTEC Engineering, Inc.
301 NW Flagler Avenue
Stuart, Florida 34994
(772) 692-4344

April 2, 2020





WILLOW LAKES, LLC
FORT PIERCE, FLORIDA



CONCEPTUAL STORMWATER MASTER PLAN

The purpose of this Report is to present the Conceptual Stormwater Master Plan design for the proposed ~200.30-acre project. The site is located on the northwest corner of the intersection of Midway Road (CR 712) and Interstate 95 in Sections 2 & 3, Township 36 South, Range 39 East, in the St Lucie County, Florida. The latitude of the project site is 27° 22' 36" North and the longitude is 80° 25' 00" West.

This Report is prepared to support the rezoning of the project site to the Planned Development (PD) zoning. The project will consist of residential, commercial, retail, restaurant, office, hotel, entertainment, and recreational uses, and will include buildings, recreational facilities, roadway, parking, walkways, preserve areas, and associated stormwater management, drainage, paving, grading, and utility improvements in accordance with Ft. Pierce land development regulations.

SECTION I: PRE – DEVELOPMENT CONDITIONS

The site is undeveloped and was previously used for cattle and agriculture; and contains existing drainage ditches, drainage canals, wetlands and natural vegetation. The site contains a large ~ 35.54-acre lake adjacent to Interstate I-95 that was excavated as a soil borrow area. The drainage ditches generally drain the site from the west to east and the site ranges in elevation from approximately 21 ft NAVD (in portions of the ditches) to approximately 24 ft NAVD (in the ridge areas). The average elevation of the site is predominately 22 ft NAVD. The on-site wetlands outfall through the site via the existing drainage ditches.

The project site is located in the North St. Lucie River Water Control District (NSLRWCD). Two (2) NSLRWCD Canals drain the site: Canal No. 93 borders the western boundary; and Canal 102 borders the northeast boundary.

The site was previously permitted with the Walton property to the north as The Provinces under SFWMD Conceptual Environmental Resource Permit (ERP) No. 56-02538-P. This permit provided for discharge into the NSLRWCD Canals noted above. The allowable discharge into NSLRWCD Canals is the volumetric equivalent of 2 inches per acre per day for the 10-year 3-day storm event. Please refer to the Conceptual Stormwater Master Plan (**Exhibit 1**) showing the discharge rate calculation and direction of flow for the project site.

SECTION II: POST – DEVELOPMENT CONDITIONS

Exhibit 1 depicts the proposed Stormwater Management (SWM) System layout which includes multiple wet detention ponds, canals, and lakes that will outfall into the existing lake adjacent to Interstate I-95. The conceptual SWM System plan design depicts the proposed basin boundaries, flow directions, and control elevation of the existing lake, and includes over 20% of the project site area for lakes, canals, and flow ways.

1. All storm drainage facilities shall conform to Chapters 17 and 18 of the Fort Pierce Code of Ordinances and the "Standard Specifications" adopted by the City Commission on February 13, 1973, as amended.

2. The proposed SWM System will be designed as a Flow Way to convey stormwater drainage runoff into the existing lake. The existing lake will be modified with littoral plantings and will outfall into the NSLRWCD Canal 102.
3. The SWM Flow Way will consist of stormwater piping, canals, ponds, and lakes that will be designed to provide an earthwork fill source for the development areas, and to minimize storm sewer piping and inlets.
4. The Flow Way and existing lake system will be designed to meet NSLRWCD flow capacity requirements and may be modified as part of the SWM System.
5. The Flow Way and existing lake will provide water quality treatment, nutrient reduction, and peak discharge attenuation for the proposed development using littoral plantings and deep cell areas in accordance with South Florida Water Management District (SFWMD) and NSLRWCD regulatory criteria and design requirements, prior to outfall into NSLRWCD Canal 102.
6. The SWM System will consist of storm sewer systems and canals in the developed areas to conduct the site runoff to the wet detention lakes and Flow Way System.
7. It is important to note that the Wavegarden Cove Surf Park will not be part of the stormwater management system. The Surf Park design contains its own water treatment system that will reuse and recirculate the surf lagoon water.

SECTION III: STORMWATER MANAGEMENT DESIGN FOR THE DEVELOPED AREAS

1. The SWM System for the developed areas will consist of a combination of storm sewer systems, canals, lakes and the Flow Way System to provide required water quality treatment, detention storage, conveyance and discharge attenuation in accordance with City of Fort Pierce, NSLRWCD and SFWMD development requirements and regulatory criteria.
2. Planted Stormwater Treatment Areas (STAs), littoral zones, meandering canals, and wet detention systems will be incorporated into the SWM System as part of the required water quality treatment, storage, conveyance and discharge attention system.
3. Treated stormwater will be used to maintain recommended wetland hydro-periods for all wetland areas to remain.
4. Normal water/control elevations, design storm peak stages (10 yr/25 yr/100 yr), and allowable discharge rates and volumes for the SWM System will be determined by detailed hydraulic and hydrologic modelling, based on City of Fort Pierce, NSLRWCD and SFWMD regulatory criteria.
5. Minimum Finished Floor elevations will be set by the 100 yr/3-day peak stage, perimeter berms and canal conveyance minimum elevations will be set by the 25 yr/3-day design stage, and minimum road grades and minimum parking area elevations will be set by the 10 yr/1-day peak stage.

SECTION IV: PERMITTING

The project will require stormwater management system construction permit approvals from:

- City of Ft. Pierce
- Army Corps of Engineers (ACOE)
- NSLRWCD
- SFWMD

Several Pre-Application Meetings were held with the City, NSLRWCD, and SFWMD. The project will require multiple SFWMD Environmental Resource Permits (ERP) depending on the project phasing:

- A Conceptual SFWMD Individual ERP is required for the total site development;
- A Construction SFWMD General ERP is required for the Phase 1 project development;
- Additional SFWMD General ERPs will be required for future development phases.

An ACOE master ERP will be required for the project and SFWMD construction dewatering and irrigation water use permits will also be required for each phase of development.

END OF CONCEPTUAL SURFACE WATER MASTER PLAN

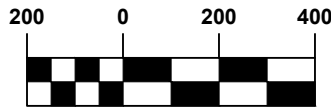
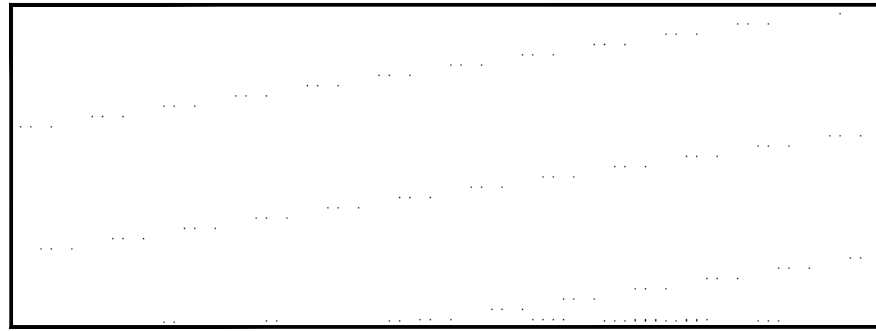
LEGEND

- C.E. = CONTROL ELEVATION
- CS = CONTROL STRUCTURE
- = DRAINAGE FLOW DIRECTION
- ▬▬▬ = BASIN BOUNDARY
- = DRAINAGE STRUCTURES AND PIPING
- ▨ = PROPOSED FLOW WAY / LAKE

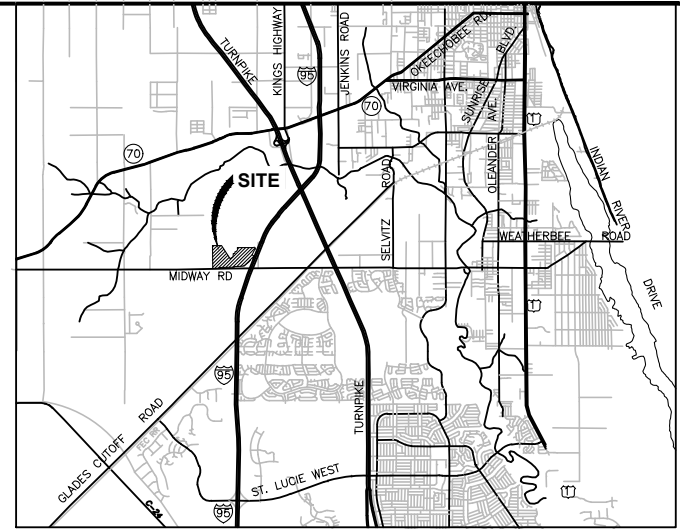
SITE DATA	
EXISTING ZONING	AG-2.5
EXISTING FLU	MXD
PROPOSED ZONING	PD
TOTAL SITE AREA	200.30 ac
DEVELOPMENT ACREAGE	200.30 ac
ACCESS TRACT ACREAGE	15.58 ac
SWMB ACREAGE	35.45 ac
OPEN SPACE REQUIRED	40.60 ac
OPEN SPACE PROVIDED	43.36 ac

NOTES:

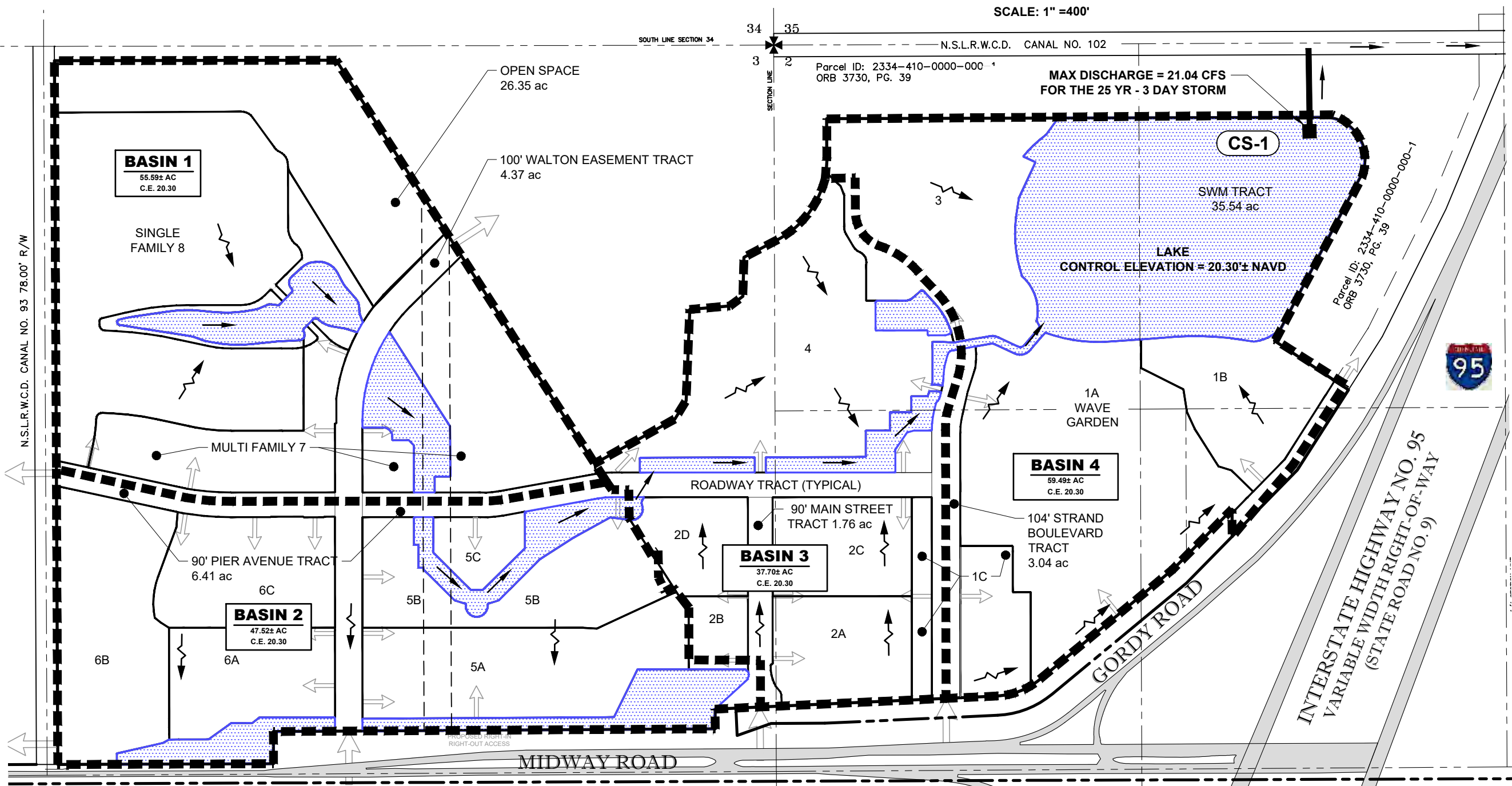
- ALL STORM DRAINAGE FACILITIES SHALL CONFORM TO CHAPTERS 17 AND 18 OF THE FORT PIERCE CODE OF ORDINANCES AND THE "STANDARD SPECIFICATIONS" ADOPTED BY THE CITY COMMISSION ON FEBRUARY 13, 1973, AS AMENDED.
- ALL ELEVATIONS SHOWN ARE IN N.A.V.D.



SCALE: 1" = 400'



LOCATION MAP



301 NW Flieger Ave
Stuart, Florida 34994
Phone: (772) 692-4344
Fax: (772) 692-4341

CAPTEC
Engineering, Inc.
Civil Engineering Professionals

DATE:	03/27/20
DRAWN BY:	MOB
DESIGNED BY:	SPH
CHECKED BY:	JWC
PROJECT NO.:	1888
HORIZ. SCALE:	1" = 400'
VERT. SCALE:	N/A
CADD FILE:	

NO.	DATE	BY	REVISIONS

SCALE VERIFICATION

1
0

SOLID BAR IS EQUAL TO ONE INCH ON ORIGINAL DRAWING. ADJUST ALL SCALED DIMENSIONS ACCORDINGLY.

WILLOW LAKES, LLC
CITY OF FT. PIERCE, FLORIDA

CONCEPTUAL STORMWATER MASTER PLAN

JOSEPH W. CAPRA
301 N.W. Flieger Ave.
Stuart, Florida 34994
P.E. No. 37638

EXHIBIT 1

EW Consultants, Inc.

Natural Resource Management, Wetland, and Environmental Permitting Services



ENVIRONMENTAL ASSESSMENT

WILLOW LAKES

FORT PIERCE, FLORIDA

Prepared for:

Willow Lakes, LLC

Prepared by:

EW Consultants, Inc.

March 2020

© 2020 EW Consultants, Inc.

I. INTRODUCTION –

This Environmental Assessment documents and summarizes the various natural resources and man-made alterations present on the property referred to as the Willow Lakes site. The project site, as shown on Figure 1, in Appendix A is ± 200.3 acres and is located at the northwest corner of I-95 and Midway Road (S.R. 709). The property lies within Sections 2 & 3, Township 36 South, Range 39 East in the City of Fort Pierce, St. Lucie County, Florida (see Figure 2, USGS Quadrangle Map in Appendix A).

II. GENERAL PROPERTY DESCRIPTION –

The property is bounded to the north and west by undeveloped lands, to the east by undeveloped land and the Gordy Road, and to the south by Midway Road (please refer to Figure 3, Aerial Photograph, in Appendix A for existing surrounding conditions). The property is undeveloped and is comprised of a combination of open and wooded pastures, areas dominated by exotic vegetation, man-made surface waters, and freshwater wetlands. Electrical transmission lines are present on the site, as well; one set in a south-to-north orientation and one in a southeast-to-northwest orientation. Detailed discussions of land cover types are described in subsequent sections of this report.

III. SOIL TYPES -

A Soils Report generated by the United States Department of Agriculture/Natural Resources Conservation Service is provided in Appendix B of this report. The soils report identifies mainly sand-based soils and open water throughout the project site.

IV. EXISTING LAND COVER TYPES –

The following is a summary of the land cover types and vegetative communities found on the subject site. Land cover and vegetation community classifications are mapped based on the Florida Land Use, Cover and Forms Classification System (FLUCFCS) developed by the Florida Department of Transportation. Field reconnaissance and aerial photograph interpretation were employed in the mapping of the vegetative communities on the subject property.

There are several different FLUCFCS classifications present on the site based on fieldwork conducted by EW Consultants, Inc. in February, 2020. They include Improved Pastures (211); Woodland Pastures (213); Pine Flatwoods (411); Brazilian Pepper (422); Reservoirs larger than 10 acres but less than 100 acres (533); and Freshwater Marshes (641). The Electrical Transmission Lines on-site (832) contain Improved Pasture (211), Woodland Pasture (213), and Freshwater Marsh (641) within their alignments. A graphic of the observed land cover types is included as Figure 4 in Appendix A of this report. The land cover types on the property are described as follows:

211 Improved Pastures

This is a sub-category of the FLUCFCS Agriculture classification and includes areas that contain a sparse tree canopy or no tree canopy at all. Dominant vegetation includes a variety of non-native grass species that have been introduced to the property as forage for livestock as well as naturally-occurring ruderal grasses and weeds. These species are typical of pasture lands in the region and includes, but is not limited to, smut grass, Bahia grass, torpedo grass, Caesar-weed, beggars ticks, and ragweed. Native canopy trees that are present within this land cover type include slash pine, cabbage palm, laurel oak, and live oak. Other native species were also observed in areas where native trees occur and include saw palmetto, gallberry, grape vine, smilax vine, poison ivy, and swamp fern.

213 Woodland Pastures

This classification and includes areas where woodlands are used for cattle grazing. While the vegetative understory layer has been cleared, native canopy trees remain and native grasses have partially regenerated. For the 213 areas on the subject site, the tree canopy is dominated by slash pine (*Pinus elliottii*), and can be found generally within the far western and far eastern edges of the site (small patches occur in the south-central portion of the site), typically surrounded by improved pasture. These areas have been impacted by years of cattle grazing activities. Slash pine and various broomsedge and bluestem grasses are the dominant plants species within this land cover category.

411 Pine Flatwoods

This is a sub-category of the FLUCFCS Upland Forests classification and includes areas where the tree canopy is dominated by slash pine (*Pinus elliottii*). The soil is typically poorly to moderately well-drained with occasional organic layers associated with the sandy layers. The native areas of pine flatwoods are generally found in the north-central portion of the site. While most of this habitat appears to be in good ecological condition, lack of regular land management activities such as burning and roller-chopping have allowed the understory plants to dominate thus restricting native grasses from spreading. Slash pine (*Pinus elliottii*), saw palmetto (*Serenoa repens*), and gallberry (*Ilex glabra*) are the dominant plants species within this land cover category.

422 Brazilian Pepper

These areas on-site are dominated by the exotic Brazilian pepper tree. This tree tends to dominate a landscape once present, shading out the forest floor and prohibiting desirable native species from establishing. Therefore, these areas provide very little wildlife habitat potential.

533 Reservoirs Larger Than 10 Acres/Less Than 100 Acres

A man-made reservoir exists within the northeastern portion of the site just west of I-95/Gordy Road. It is generally rectangular in shape, and its banks consist of cattails, Carolina willow, primrose willow, torpedo grass, and other weedy species.

641 Freshwater Marshes

This is a sub-category of the FLUCFCS wetlands classification and includes long-hydroperiod aquatic vegetation generally associated with depressional wetlands. These wetlands may contain water throughout the year, or go completely dry during prolonged drought periods. Such habitats provide a variety of wildlife with foraging and nesting opportunities. The marsh wetlands occur throughout the site within the pasture areas (both improved and woodland), and are generally in poor to fair ecological condition due to the historic agricultural use of the site as well as the routine maintenance of the powerline easements. The vegetation in these marshes predominantly includes the following species: chestnut sedge (*Fimbristylis spadicea*), seedbox (*Ludwigia alternifolia*), St. John's wort (*Hypericum brachyphyllum*), pickerelweed (*Pontederia cordata*), bladderwort (*Utricularia* spp.), maidencane (*Panicum hemitomon*), Tracy's beakrush (*Rhynchospora tracy*), spatterdock (*Nuphar* spp.), corkwood (*Stillingia aquatica*), and duck potato (*Sagittaria graminea*).

832 Electrical Transmission Lines

There are two sets of electrical transmission lines that are present within the project site; one aligned south-to-north within the eastern portion of the property and one aligned southeast-to-northwest located in the central and northwest portions of the project site. The land cover underneath the powerlines (and therefore within the easements of the powerlines) include Improved Pasture (211), woodland pasture (213), and Freshwater Marsh (641) as described above.

V. LISTED SPECIES DISCUSSION –

Because of the various types of land cover found on the property, the project site provides potential foraging and nesting habitat for a variety of state and federally listed wildlife species. In particular, the on-site water resources (wetlands and reservoir) could provide habitat for several listed species, including a myriad of wading birds such as wood stork, roseate spoonbill, sandhill cranes, as well as various ibis and herons. Protected avian species observed foraging on-site at the time of the site visits included the state threatened sandhill crane.

Listed species which may nest or forage within upland habitats on-site include the federally and state endangered red-cockaded woodpecker and the federally and state threatened crested caracara. The likely presence of the woodpecker is minimal due to its habitat preference for old longleaf pine trees with soft cores, which is lacking on-site. Caracara prefer open pasture with scattered and isolated cabbage palms, which does exist on the project site. However, recent caracara surveys performed on adjacent sites along Midway Road just west of I-95 revealed no nesting pairs in the area.

EW Consultants, Inc.

Natural Resource Management, Wetland, and Environmental Permitting Services

Upland areas, in particular the pine flatwoods and woodland pastures, serve as potential burrowing and foraging habitat for the state threatened gopher tortoise. During the recent site visits, several potentially occupied burrows of this species were observed within the project site's upland areas. A systematic gopher tortoise survey will be required within the entire development footprint's upland area of the site prior to new construction activities, and tortoises will have to be relocated to a state-approved receiver site per Florida Fish & Wildlife Conservation Commission (FFWCC) guidelines.

A search of the FFWCC water bird colonies database is shown on Figure 5 in Appendix A. The data reveal that numerous colonies within 20 miles of the project site have been documented, mainly along major waterways and wetland systems in the region. Since the foraging range of a wood stork is generally recognized as 18.6 miles from its colony, the project site is located within a wood stork foraging area. Therefore, aquatic features within the boundaries of the project site may be used as foraging areas by the wood stork as well as other wading birds.

Although the bald eagle has been removed from the Endangered Species Act list, it remains protected under the Bald and Golden Eagle Protection Act. The subject property contains mature slash pines that could provide potential nesting opportunities for bald eagles and is located within a few miles of major foraging areas, such as the St. Lucie River and Indian River Lagoon, and numerous regional and local waterways and lakes. Bald eagles have recently been observed in-flight in the immediate area. However, no bald eagle nests were observed on-site during the 2020 site visits. The closest recorded nests are located to the southwest (SL009) along S.R. 609 and northeast (SL006) along just east of I-95 at 10-Mile Creek. A map showing Florida Fish and Wildlife Conservation Commission documented bald eagle nests is attached as Figure 6 in Appendix A.

Non-listed species observed on-site during the recent site visits include: red-shouldered hawk, mourning dove, blue jay, mocking bird, gray cat-bird, pileated woodpecker, raccoon, wild turkey, feral hogs (tracks and scat), white-tailed deer (tracks), coyote (scat), among others.

APPENDIX A

Figure 1 – Location Map

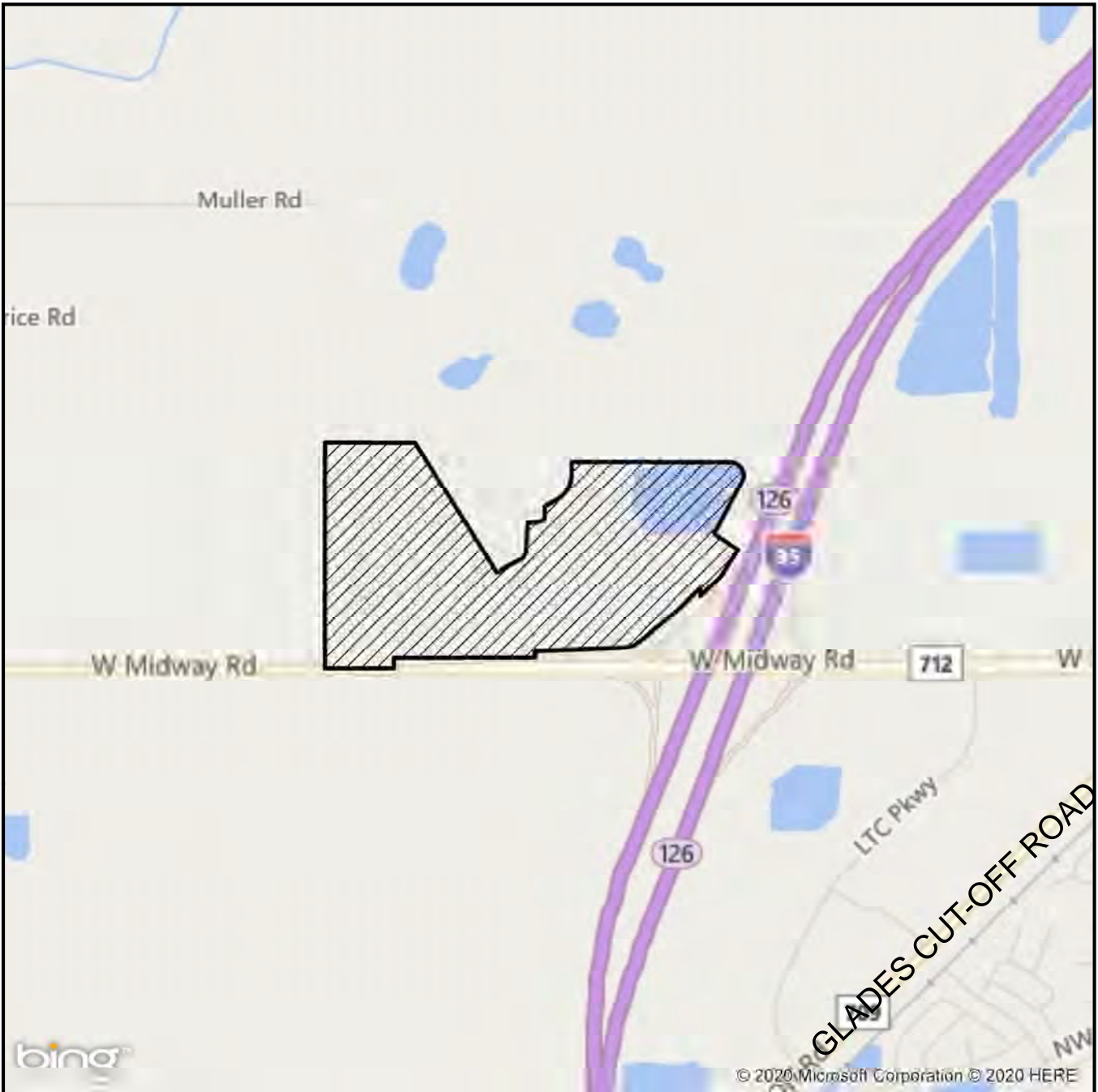
Figure 2 – USGS Quadrangle Map

Figure 3 – 2018 Aerial Photograph


Figure 4 – FLUCFCS/Land Cover Map

Figures 5 – FFWCC Wading Bird Colonies

Figure 6 – FFWCC Eagle Nest Locations



LEGEND

 - SITE (200.2+/- AC)

0 2,000 Feet

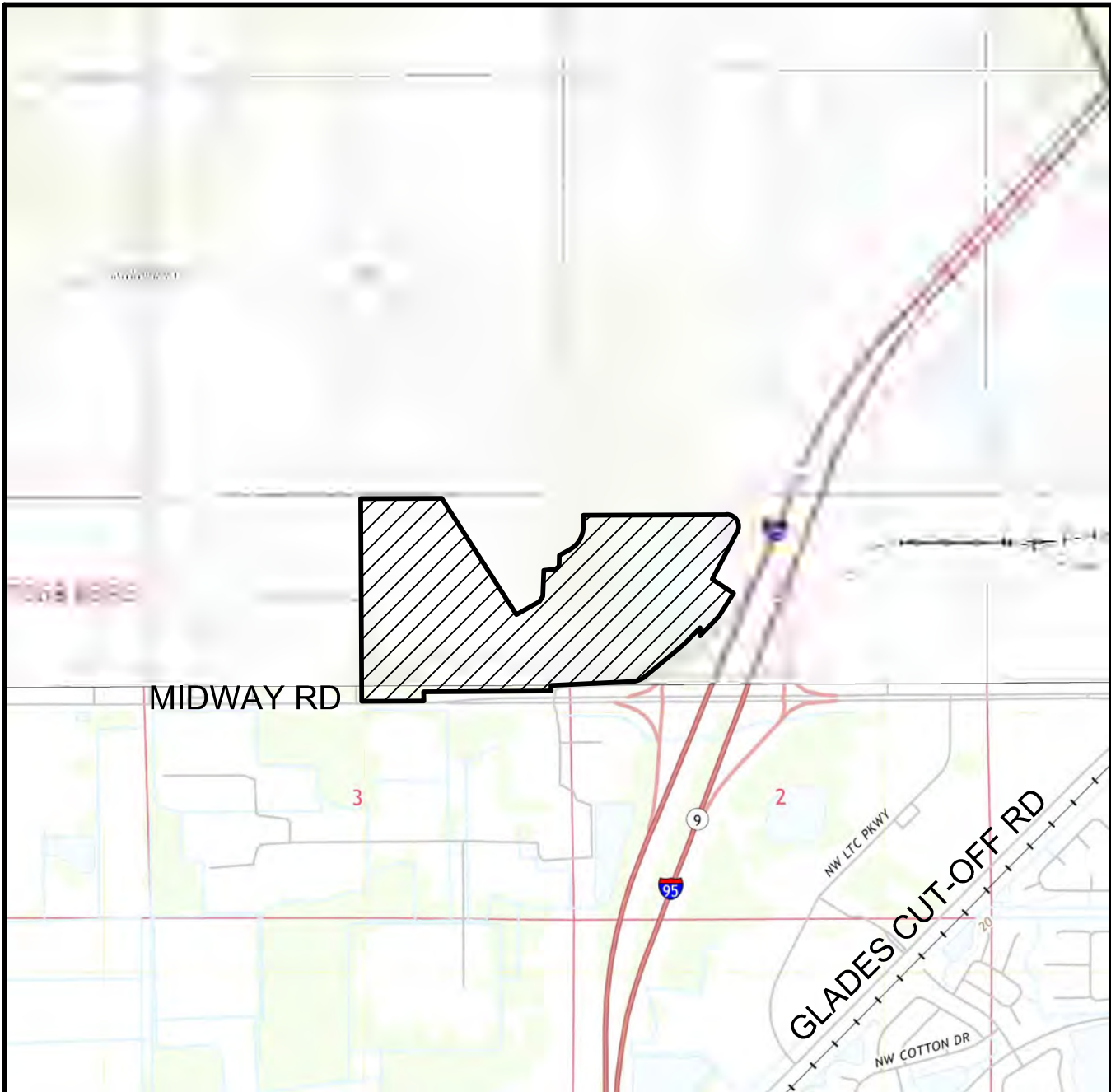


**WILLOW LAKES
LOCATION MAP**



EW CONSULTANTS, INC.
 1000 SE MONTEREY COMMONS BLVD., SUITE 208
 STUART, FL 34996
 772-287-8771 FAX 772-287-2988
 WWW.EWCONSULTANTS.COM

MAR 2020
 FIGURE
 1



USGS QUAD "FORT PIERCE NW", SECTIONS 2 & 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST, CITY OF FORT PIERCE, ST LUCIE COUNTY, FLORIDA, LATITUDE 27°22'35" LONGITUDE -80°25'04"

LEGEND

 - SITE (200.2± AC)



**WILLOW LAKES
QUAD**

Willow Lakes.dwg QUAD

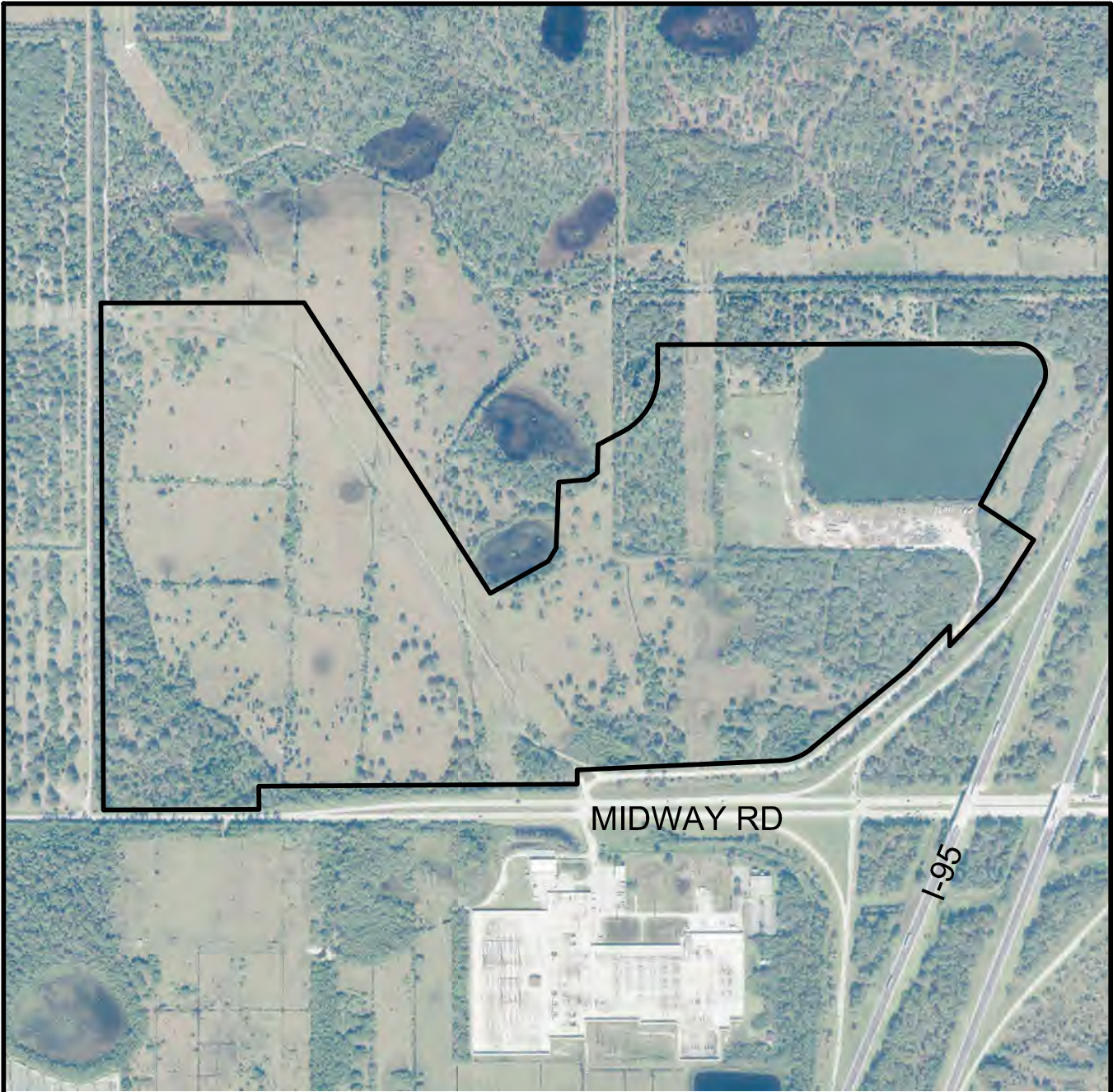


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STUART, FL 34996
772-287-8771 FAX 772-287-2988
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MAR 2020

FIGURE

2



FDOT AERIALS DATED 2018



WILLOW LAKES AERIAL

Willow_Lakes.dwg AERIAL

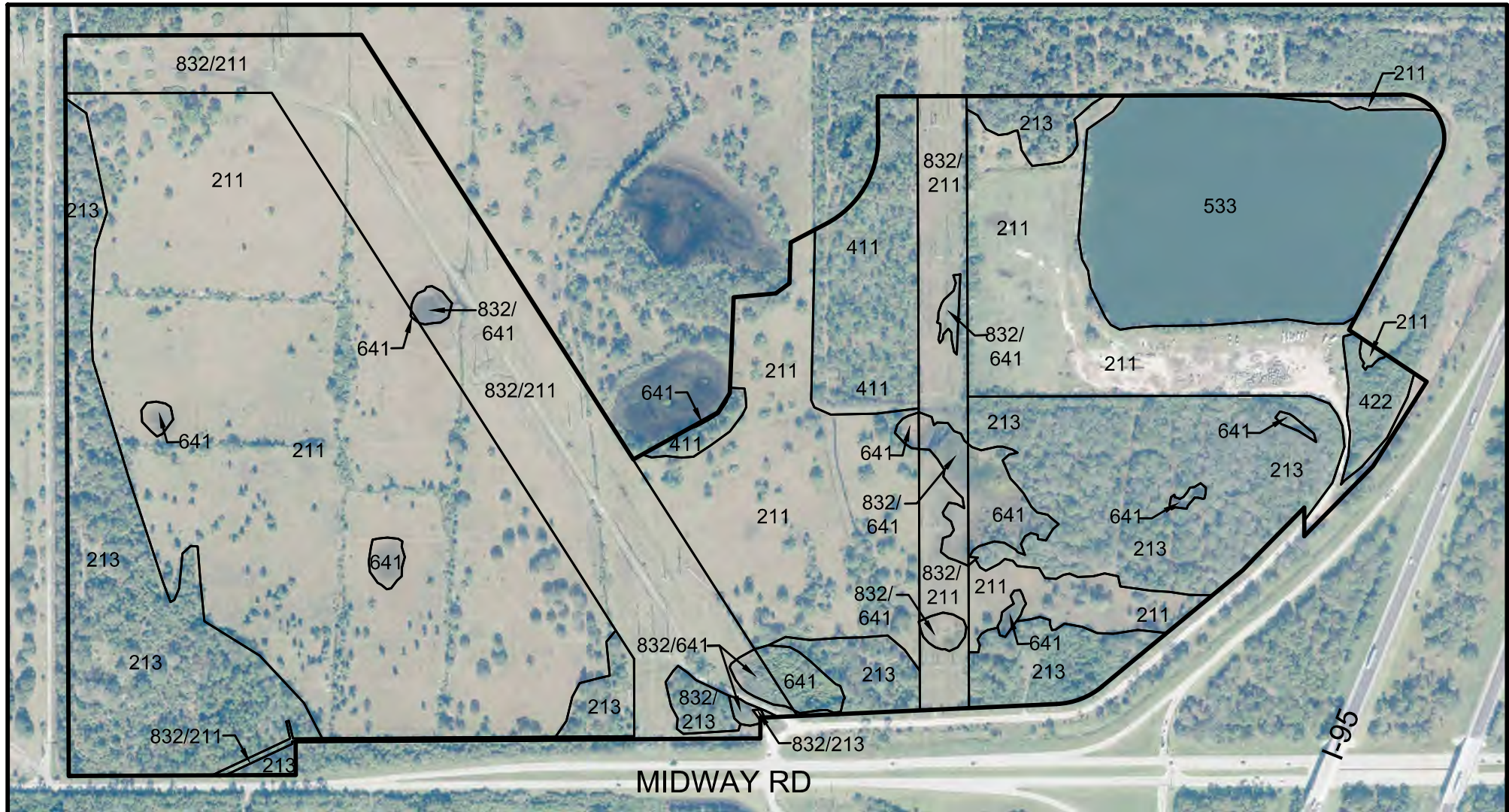


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FIGURE

3



FDOT AERIALS DATED 2018

LEGEND

- 211 - IMPROVED PASTURE (91.4± AC)
- 213 - WOODLAND PASTURES (39.6± AC)
- 411 - PINE FLATWOODS (7.9± AC)
- 422 - BRAZILIAN PEPPER (1.5± AC)
- 533 - RESERVOIRS MORE THAN 10ACS (19.6± AC)
- 641 - FRESHWATER MARSHES (3.7± AC)
- 832/211 - ELECTRICAL POWER TRANSMISSION LINE/IMPROVED PASTURE (33.1± AC)
- 832/213 - ELECTRICAL POWER TRANSMISSION LINE/WOODLAND PASTURES (0.8± AC)
- 832/641 - ELECTRICAL POWER TRANSMISSION LINE/FRESHWATER MARSHES (2.6± AC)
- TOTAL SITE (200.2± AC)**



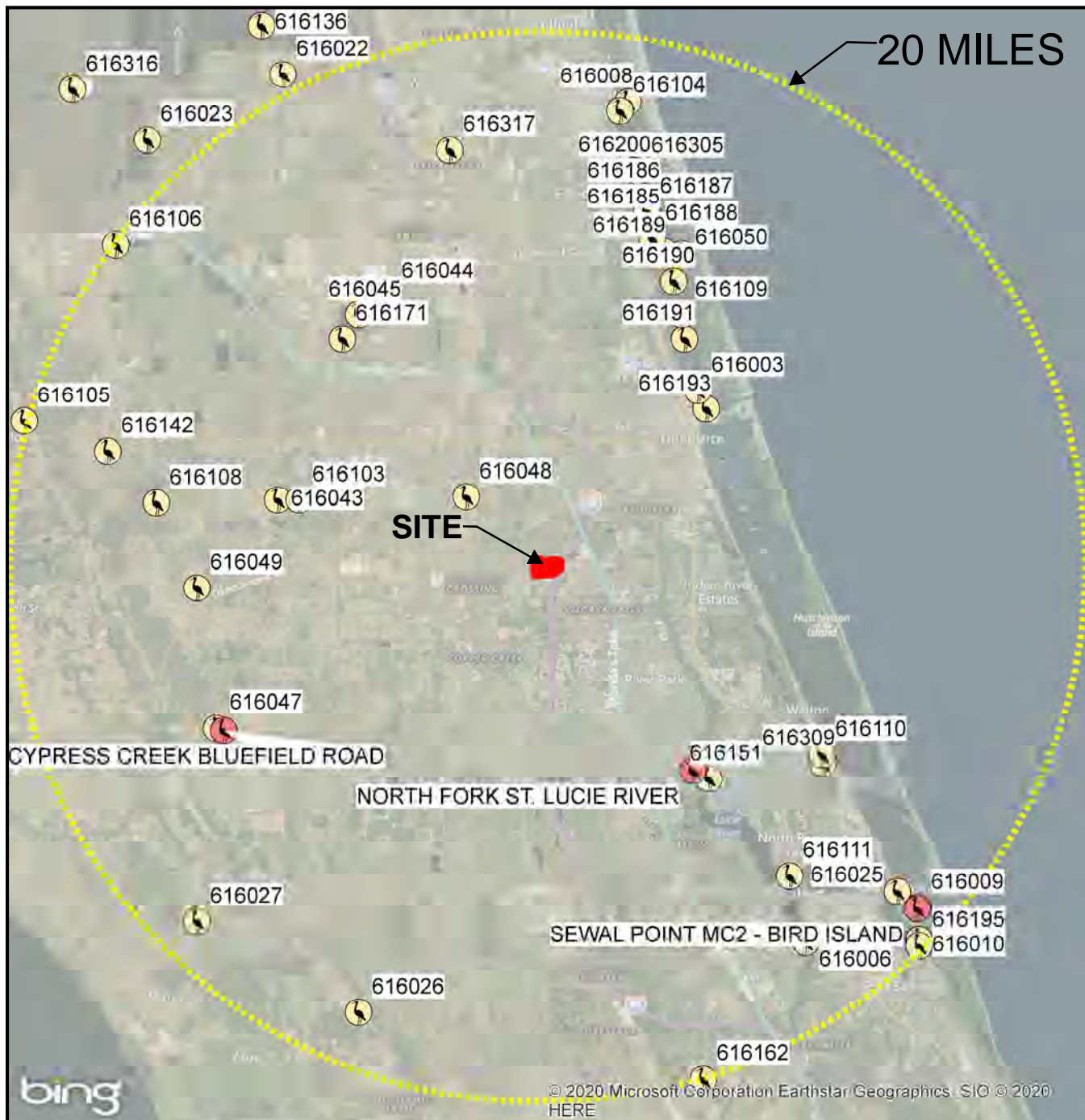
**WILLOW LAKES
FLUCCS**





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STUART, FL 34996
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FIGURE
4

Willow Lakes.dwg FLUCCS



LEGEND

-  USFWS MOST ACTIVE COLONIES 2009-2018
-  FWC WADING BIRD ROOKERIES 1999

0 7 Miles



WILLOW LAKES

FFWCC WADING BIRD COLONIES DATABASE

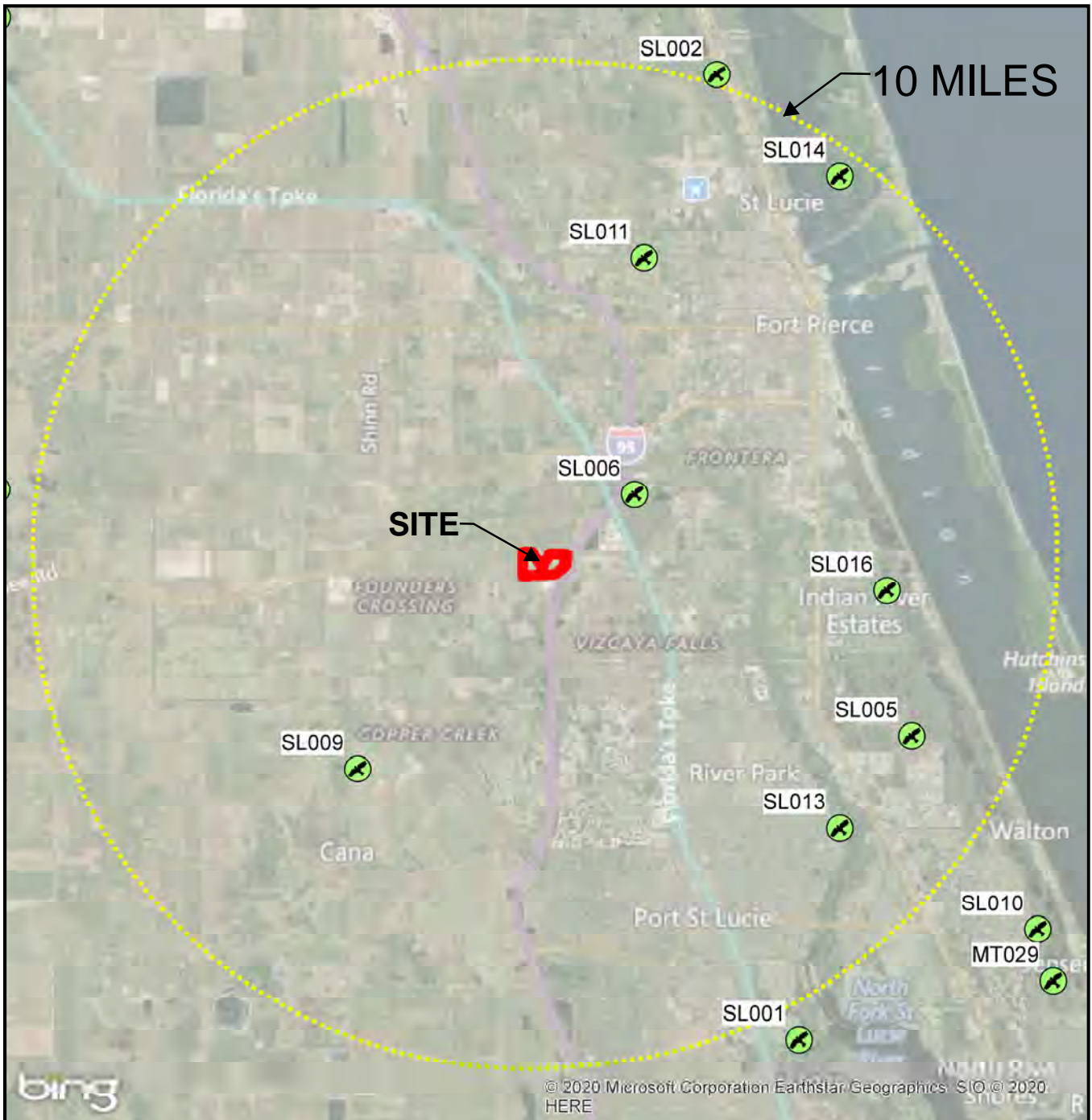


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FIGURE

5



LEGEND

 FWC EAGLE NESTING 2016 DATA



**WILLOW LAKES
FFWCC EAGLE NESTS**



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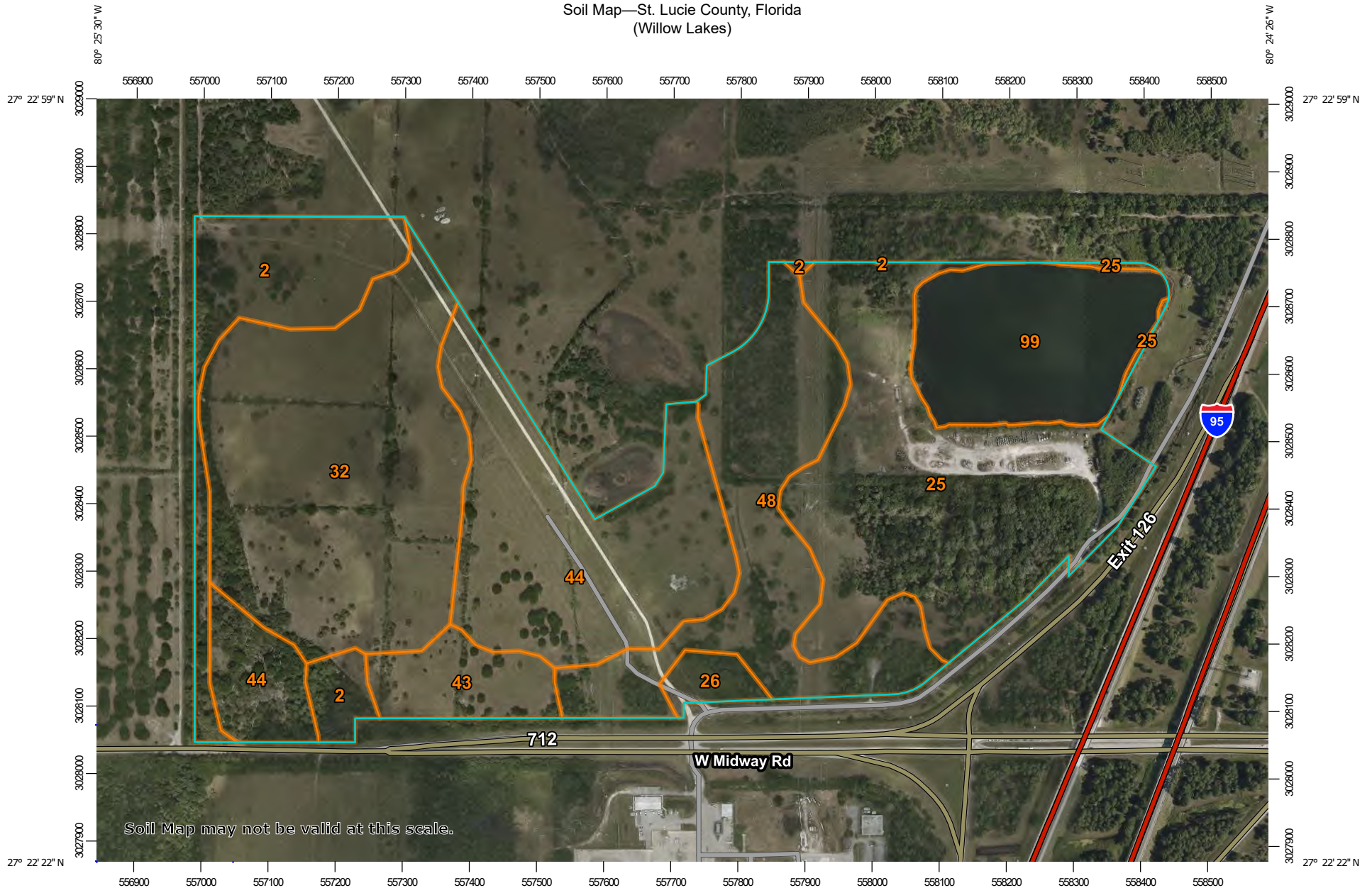
FIGURE

6

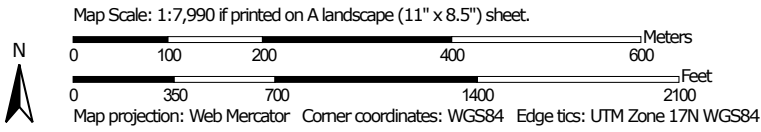
APPENDIX B

USDA/NRCS Soils Report

Soil Map—St. Lucie County, Florida
(Willow Lakes)




Soil Map may not be valid at this scale.




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: St. Lucie County, Florida

Survey Area Data: Version 13, Feb 3, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 6, 2019—Mar 23, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ankona and Farnton sands	17.6	8.8%
25	Nettles and Oldsmar sands	41.7	20.8%
26	Oldsmar sand, depressional	2.4	1.2%
32	Pineda sand, 0 to 2 percent slopes	45.6	22.8%
43	Susanna and Wauchula sands	7.2	3.6%
44	Tantile and Pomona sands	37.6	18.8%
48	Wabasso sand, 0 to 2 percent slopes	29.0	14.5%
99	Water	19.2	9.6%
Totals for Area of Interest		200.2	100.0%

BEACH/DUNE SYSTEM PROTECTION
PLAN - N/A

LIGHTING PLAN - N/A

DESIGN REVIEW SUBMITTALS - N/A

TRAFFIC IMPACT REPORT - PENDING



CONCURRENCY CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Vacant/Walton	MXD	PD
South	Vacant/LTC Ranch, FPL	CG/CH/ROI/CS (City of PSL) MXD and T/U (SL County)	TBD (City of PSL approved DRI) & PUD
East	Tropicana Mfg.	INST/IND	IL
West	Vacant/Walton	MXD	PD

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	MXD	Agriculture - 2.5 (AG2.5)	80 du's/1,306,800 s.f. (4,356,000 s.f. aquaculture)	200.3	X
**Proposed	MXD	Planned Development (PD)	1,000 du's / 675,000 s.f. / 700 hotel rooms	200.3	N/A

II. Public Facilities Information:

A. Potable Water: SEE ATTACHMENT	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day
**Proposed Zoning/FLU	Total gallons per day
**Change in Demand	Total gallons per day

B. Wastewater: SEE ATTACHMENT	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning/FLU	Total gallons per day
**Proposed Zoning/FLU	Total gallons per day
**Change in Demand	Total gallons per day

C. Parks and Recreation (Residential Classifications Only): (Du x 2.6 = persons + 44,227 = population /LOS)				
Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	888.7 ac.	936.54	+47.84
Urban District	5 acres per 1,000 people	222.18 ac.	234.14	+11.96
Community	2.5 acres per 1,000 people	111.09 ac.	117.07	+5.98
Neighborhood	1.36 acres per 1,000 people	60.43 ac.	63.68	+3.25

D. Public Schools (Residential Classifications Only):			CURRENT	PROPOSED
Single Family: (du x 0.405 = students/70% K-8/30% High)			Single Family (SF) = 80du	Single Family (SF) = 300du
Multi-family: (du x 0.207 = students/70% K-8/30% High)			Multi-family (MF) = N/A	Multi-family (MF) = 700du
			K-8	High
School Name			Samuel Gaines Academy	Fort Pierce Central
City			Fort Pierce	Fort Pierce
Distance			5 miles	5 miles
Current Zoning/FLU	Enrollment		80du x 0.405 = students x 0.7 = 23	80du x 0.405 = students x 0.3 = 10
**Proposed Zoning/FLU	Enrollment		SF = 300du x 0.405 = students x 0.7 = 85 MF = 700du x 0.207 = students x 0.7 = 101	SF = 300du x 0.405 = students x 0.3 = 36 MF = 700du x 0.207 = students x 0.3 = 44
**Change in Demand			+163	+70

E. Solid Waste: Residential (2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units)	
Demand Analysis	Maximum
Current Zoning/FLU	80 units = 11 yards (8 yards/60 units = 0.133 yards x 80 units = 11 yards)
**Proposed Zoning/FLU	1000 units = 133 yards (8 yards/60 units = 0.133 yards x 1000 units = 133 yards)
*Change in Demand	+122 yards

F. Stormwater:
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year – 1 day storm event)

Impact	See Exhibit 1 to Conceptual Stormwater Master Plan addressing allowable discharge
---------------	--

III. Transportation Analysis: Complete ITE Trip Generation Form (Attached)

G. Transportation Analysis: Complete ITE Trip Generation Data Form		
Most recent ITE Code for use; HCM Roadway Capacity		PENDING TRANSPORTATION IMPACT REPORT
	AADT	AM/PM Peak Hour Trips
Demand Analysis	Maximum	Maximum
Current Zoning/FLU		
**Proposed Zoning/FLU		
*Change in Demand	Trips	Trips
Impact to Capacity		

IV. Project Description

PHASING		
Is this project (phase) part of a larger project? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
If yes, enumerate each phase, the number of units or square footage in each phase and beginning/completion date.		
Total Project: Residential Units:	Single Family:	Multifamily:
Non-residential (square footage):		
Mixed-use (describe use):		
(If this is a single phase project, name it Phase I – Total)		

RESIDENTIAL DATA					
Type	Phase	Number of Units	Acres	Expected beginning date	Expected completion date
Single-family, detached	8	150			
Single-family, attached	8	150			
Multi-family	7	700			
Other (specify)					

NON-RESIDENTIAL DATA See Table 1.1 in the Planned Development Guidelines					
Type(s) specify	Phase	Square footage	Acres	Expecting beginning date	Expected completion date

A. Indicate whether the proposed project will be eliminating any existing recreational facilities. If yes, detail the number and type being eliminated. Yes No

- B. 1. Does this application involve demolition or re-use of any structure(s)? Yes No
If yes, what is the size of the structure(s) to be demolished or re-used? _____
2. What is the current use of the structure to be demolished or re-used? _____
3. Are you claiming trip credits for the demolition or re-use of a structure(s) at the site? Yes No
If yes, provide estimates of credits for each previous use at the site. (Attach sheet with calculations)

C. Exemptions Requested:

** Complete section if requesting a change in zoning, future land use, or expanding

A. POTABLE WATER

Current Zoning:

$$\begin{array}{rcl} 80 \text{ du} \times 2.6 \times 100 \text{ gpd} & = & 20,800 \text{ gpd} \\ \underline{4,356,000 \times 0.125} & = & \underline{544,500 \text{ gpd}} \\ & & 565,300 \text{ gpd} \end{array}$$

Proposed Zoning:

$$\begin{array}{rcl} 1000 \text{ du} \times 2.6 \times 100 \text{ gpd} & = & 260,000 \text{ gpd} \\ 675,000^* \text{ s.f.} \times 0.125 & = & 84,375 \text{ gpd} \\ 700 \text{ hotel rooms} \times 100^{**} \text{ gpd} & = & \underline{70,000 \text{ gpd}} \\ & & 414,375 \text{ gpd} \end{array}$$

Change in Demand: -150,925 gpd

*650,000 s.f. + 25,000 s.f. for Surf Pool and Outdoor Entertainment ancillary facilities

** Florida Administrative Code Section 64E-6.008 Table #1

B. WASTEWATER

Current Zoning:

$$\begin{array}{rcl} 80 \text{ du} \times 2.6 \times 100 \text{ gpd} & = & 20,800 \text{ gpd} \\ 4,356,000 \times 0.1 & = & \underline{435,600 \text{ gpd}} \\ & & 456,400 \text{ gpd} \end{array}$$

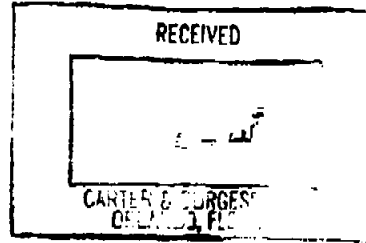
Proposed Zoning:

$$\begin{array}{rcl} 1000 \text{ du} \times 2.6 \times 100 \text{ gpd} & = & 260,000 \text{ gpd} \\ 675,000^* \text{ s.f.} \times 0.1 & = & 67,500 \text{ gpd} \\ 700 \text{ hotel rooms} \times 100^{**} \text{ gpd} & = & \underline{70,000 \text{ gpd}} \\ & & 397,500 \text{ gpd} \end{array}$$

$$\text{Change in Demand:} \quad \quad \quad \text{-58,900 gpd}$$

*650,000 s.f. + 25,000 s.f. for Surf Pool and Outdoor Entertainment ancillary facilities

** Florida Administrative Code Section 64E-6.008 Table #1



FLORIDA DEPARTMENT OF STATE
Sue M. Cobb
 Secretary of State
 DIVISION OF HISTORICAL RESOURCES

April 19, 2006

Mr. Rob Robbins
 South Florida Water Management District
 P.O. Box 24680
 West Palm Beach, Florida 33416-4680

Re: DHR No. 2006-2552B / Received by DHR: March 31, 2006
 Application No.: 060323-13
 Applicant: Midway Properties, LLC, Willow Lakes, LLC, & Res River, LLC
 Project: Provinces
 St. Lucie County

Dear Mr. Robbins:

Our office received and reviewed the referenced project in accordance with Chapters 267 and 373, *Florida Statutes*, Florida's Coastal Management Program, and implementing state regulations, for possible impact to historic properties listed, or eligible for listing, in the *National Register of Historic Places* (NRHP), or otherwise of historical, architectural or archaeological value. The State Historic Preservation Officer is to advise and assist state and federal agencies when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

Our review of the Florida Master Site File indicates that no significant archaeological or historical resources are recorded within the project area. This office is rescinding its previous letter dated April 11, 2006 and is no longer requesting a survey be conducted. It was brought to our attention, by Kim Mayer of Carter & Burgess, Inc., that the area has been subjected to a professional cultural resource assessment survey. Furthermore, due to the location and/or nature of the project it is unlikely that any such site will be affected.

If there are any questions concerning our comments or recommendations, please contact Scott Sorset, Historic Preservationist, by phone at (850)245-6333, or by electronic mail at srsorset@dos.state.fl.us. We appreciate your continued interest in protecting Florida's historic properties.

Sincerely,

Frederick P. Gaske, Director, and
 State Historic Preservation Officer

Xc: Pamela Miller, Carter and Burgess, Inc.

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

Director's Office
 (850) 245-6300 • FAX: 245-6435

Archaeological Research
 (850) 245-6444 • FAX: 245-6452

Historic Preservation
 (850) 245-6333 • FAX: 245-6437

Historical Museums
 (850) 245-6400 • FAX: 245-6433

Palm Beach Regional Office
 (561) 279-1475 • FAX: 279-1476

St. Augustine Regional Office
 (904) 825-5045 • FAX: 825-5044

Tampa Regional Office
 (813) 272-3843 • FAX: 272-2340



Application for Zoning Atlas Map Amendment

Application submission shall include the following:

- **TRC (*Initial Submission):** One (1) original and (8) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.
- **Planning Board:** One (1) original and (16) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.
- **City Commission:** One (1) original and (11) paper copies of the application and support documents and provide one (1) electronic copy of the application packet as described below.

In addition to a complete application, packets shall include:

- Warranty Deed & Legal Description
- St. Lucie County Property Record Card
- Statement of why there is a need for the proposed future land use map amendment and how the amendment will result in an orderly and logical development pattern; statements how amendment(s) are consistent with Comprehensive Plan; how future land use designation is compatible with future land use designations and existing land uses surrounding the amended lands; identify future land use designations and existing land uses within a ½ mile of the subject property that have the same or greater type of proposed future land use designation; data and analysis to support conclusions.
- Current Survey
- Environmental Study
- Traffic Impact Report
- *** Capacity Analysis-Separate Form
- Drainage Analysis
- Historical Report
- N/A 1 CD of all documents submitted in PDF
- Other _____

1. Property Address/Location: [TBD - General Location: Lying northwesterly of the interchange of W. Midway Road and I-95 \(Section 02 and 03, Township 36S, Range 39E\)](#) _____
2. Property Tax ID(s): [3302-212-0001-000-4](#) _____
3. Total Acreage: [200.3 acres](#) _____
4. Existing Future Land Use Designation: [MXD](#) _____
5. Existing Zoning Classification: [AG 2.5](#) _____
6. Proposed Zoning Classification: [PD](#) _____
7. Other applications being submitted concurrent with this application, if any: [Development Review Application and Concurrency Capacity Analysis](#)

- 8. Describe the existing uses, improvements and structures on the amendment lands: Vacant land under cattle lease
- 9. Are there any identified or possible historical structures on the amendment lands? No
- 10. The reason for making this request: Applicant intends to develop the property as a mixed-use project, as more specifically set forth in the Planned Development Guidelines submitted herewith.

11. CAPACITY ANALYSIS

I. Site Data:

	Existing Use	Future Land Use	Zoning
North	Vacant/Walton	MXD	PD
South	Vacant/LTC Ranch, FPL	CG/CH/ROI/CS (City of PSL) MXD and T/U (SL County)	TBD (City of PSL approved DRI) & PUD
East	Tropicana Mfg.	INST/IND	IL
West	Vacant/Walton	MXD	PD

	Future Land Use	Zoning Classification	Maximum Intensity Residential: Dwelling Units per Acre Other: Square Footage	Total Acreage	Flood Zone
Current	MXD	Agriculture - 2.5 (AG2.5)	80 du's/1,306,800 s.f. (4,356,000 s.f. aquaculture)	200.3	X
Proposed	MXD	Planned Development (PD)	1,000 du's / 675,000 s.f. / 700 hotel rooms	200.3	N/A

II. Public Facilities Information:

A. Potable Water: SEE ATTACHMENT	
Average Use	Residential: 100 gallons per day per person (du x 2.6 = persons x 100 gpd = demand) Other: 0.125 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day
Proposed Zoning	Total gallons per day
Change in Demand	Total gallons per day

B. Wastewater: SEE ATTACHMENT	
Average Use	Residential: 100 gallons per day per person (du x 2.6= persons x 100 gpd = demand) Other: 0.1 gallons per day per square foot
Demand Analysis	Maximum
Current Zoning	Total gallons per day
Proposed Zoning	Total gallons per day
Change in Demand	Total gallons per day

C. Parks and Recreation (Residential Classifications Only): (Du x 2.6 = persons + 44,227 = population /LOS)				
Park Type	LOS	Existing Population Park Demand	Proposed Population Park Demand	Change in Demand
Regional	20 acres per 1,000 people	888.7 ac.	936.54	+47.84
Urban District	5 acres per 1,000 people	222.18 ac.	234.14	+11.96
Community	2.5 acres per 1,000 people	111.09 ac.	117.07	+5.98
Neighborhood	1.36 acres per 1,000 people	60.43 ac.	63.68	+3.25

D. Public Schools (Residential Classifications Only):			CURRENT	PROPOSED
Single Family: (du x 0.405 = students/70% K-8/30% High)		Single Family (SF) = 80du	Single Family (SF) = 300du	
Multi-family: (du x 0.207 = students/70% K-8/30% High)		Multi-family (MF) = N/A	Multi-Family (MF) = 700du	
		K-8	High	
School Name		Samuel Gaines Academy	Fort Pierce Central	
City		Fort Pierce	Fort Pierce	
Distance		5 miles	5 miles	
Current Zoning Enrollment Demand		80du x 0.405 = students x 0.7 = 23	80du x 0.405 = students x 0.3 = 10	
Proposed Zoning Enrollment Demand		SF = 300du x 0.405 = students x 0.7 = 85 MF = 700du x 0.207 = students x 0.7 = 101	SF = 300du x 0.405 = students x 0.3 = 36 MF = 700 du x 0.207 = students x 0.3 = 44	
Change in Demand		+163	+70	

E. Solid Waste: 2 yard serves 15 units, 4 yard serves 30 units, 6 yard serves 45 units, 8 yard serves 60 units	
Demand Analysis	Maximum
Current Zoning	80 units = 11 yards (8 yards/60 units = 0.133 yards x 80 units = 11 yards)
Proposed Zoning	1000 units = 133 yards (8 yards/60units = 0.133 yards x 1000 units = 133 yards)
Change in Demand	+122 yards

F. Stormwater:
Potential increase in volume discharged due to increased impervious coverage, reduced groundwater seepage or loss of surface water storage impacting Adopted LOS of 25-year 3-day storm Pre vs. Post Runoff (Storm sewers to convey 5 year- 1 day storm event; Canals to convey 3 year - 1 day storm event)

Impact	See Exhibit 1 to Conceptual Stormwater Master Plan addressing allowable discharge
---------------	---

III. Transportation Analysis PENDING TRANSPORTATION IMPACT REPORT

G. Traffic		
Most recent ITE Code for use; HCM Roadway Capacity		
	AADT	AM/PM Peak Hour Trips
Demand Analysis	Maximum	Maximum
Current Zoning		
Proposed Zoning		
Change in Demand	Trips	Trips
Impact to Capacity		

12. Name of Owner(s): Willow Lakes, LLC
 Mailing Address: 433 S. Main St. Ste 300
 City West Hartford State CT Zip 06110
 Phone # 561-827-5742
 E-mail: clabonte@eaglebridgecapital.com

13. Name of Applicant: Willow Lakes, LLC
 Mailing Address: 433 S. Main St. Ste 300
 City West Hartford State CT Zip 06110
 Phone # 561-827-5742 Fax # _____
 E-mail: clabonte@eaglebridgecapital.com

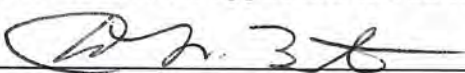
14. Name of Representative: Dean, Mead, Minton & Zwemer, Attorney W. Lee Dobbins
 Mailing Address: 1903 S. 25th Street Ste 200
 City Ft. Pierce State FL Zip 34947
 Phone # 772-464-7700 Fax # 772-464-7877
 E-mail: ldobbins@deanmead.com

15. Applicant Acknowledgements (Owner's signature must be notarized)

I certify that: (Check One)

I (we) do hereby certify that I (we) own in fee simple the above referenced described property for which a change in Zoning Classification is requested.

I (we) are not the owner of the above described property; however, the owners signature below authorizes the applicants the authority to act as agent for the owner(s) of record.


 Applicant's Signature

4/3/20
 Date

Address State Zip

Phone Fax E-mail Address

16. Property Owners Acknowledgements: - This application will not be considered complete without the signature of all property owners of record, which shall serve as an acknowledgement of the submission of this application for a change in zoning classification. The property owner's signature below shall also authorize the Applicant (if other than the property owner) and/or Agent to act in his/her behalf for the purposes of seeking this change to the City' Land Development Regulations for the property described herein.

Willow Lakes, LLC 561-827-5742
Property Owner's Name (Please Print) Phone

433 S. Main St Ste 300 West Hartford, CT 06110
Address State Zip

[Signature] 4/3/20
Property Owner's Signature Date

(NS) State of Connecticut
STATE OF FLORIDA
ST LUCIE COUNTY
(NS) Fairfield county

The foregoing instrument was acknowledged before me this 3 day of APRIL, 2020, by Chad Patrick Lobato who is personally known to me or has produced Driver license as ident

Signature of Notary (seal)

OFFICE USE:
DATE RECEIVED: Signed:
File Number: Check No: Receipt No:
TRC Review: Planning Board Review: City Commission:
Ordinance No: Date Approved:



STATEMENT OF NEED AND COMPATIBILITY

The applicant proposes to develop a mixed-use urban village, including residential, retail, restaurants, and other commercial uses, with a beach community theme, anchored by a world-class surf park. There is a need for the requested zoning atlas map amendment, changing the zoning of the property from the County Agricultural 2.5 (AG 2.5) zoning to the City Planned Development (PD) zoning, in order to execute this vision. The property has retained the County's AG 2.5 zoning designation from prior to the property's 2010 annexation into the City, and this zoning is both incompatible with the City Code and with any future development of the property. The PD zoning is the appropriate zoning category for the development of a mixed use project, because the PD zoning category is "intended to promote flexibility of design and permit planned diversification and integration of uses and structures, while at the same time granting the city commission the absolute authority to establish such limitations and regulations as it deems necessary . . ." (Section 22-40 of the City Code).

The proposed zoning amendment will result in an orderly and logical development pattern by insuring a well-designed and master-planned community, with uses that are compatible with each other and with the surrounding area. Furthermore, the project located adjacent to the subject property to both the north and west, and which will utilize shared access to Midway Road, is also zoned PD (The Village at Midway Planned Development). The subject property is bounded by Midway Road on the south, and on the south side of Midway Road is the west side of the LTC Ranch DRI, which is also approved for a mix of residential and commercial development. The subject property is bounded by I-95 on the east, and on the east side of I-95 is the Tropicana plant, which includes a large undeveloped parcel adjacent to I-95. The proposed Planned Development on the subject property has been designed to be compatible with these neighboring properties, and the applicant has had several meetings and conversations with the owners and developers of both The Village at Midway PD and the LTC Ranch DRI.

The proposed zoning amendment is consistent with the Goals, Objectives and Policies of the City's Comprehensive Plan. Objective 1.1 of the Future Land Use Element of the City's Comprehensive Plan states, "*The City shall adopt and implement the Future Land Use Map to designate future land uses that regulate uses, densities and intensities that enhance its neighborhoods and districts, stimulate tourism and the local economy, and are compatible with its small-town character.*" The proposed zoning change will achieve this goal by providing for the development of a master-planned residential and commercial development, with a walkable beach-town theme, anchored by a surf park, which will be a major tourist draw to the area, with the goal of providing a mix of complementary uses that feed off of that tourism.

The proposed zoning amendment is also consistent with Policy 1.1.4 of the Future Land Use Element of the City's Comprehensive Plan, which describes the purpose of the Mixed Use Development (MXD) future land use designation, as follows (in part): "*The MXD designation is intended to promote intensification, redevelopment, and revitalization of the areas targeted for live/work environments. This area is characterized by development that promotes the creation of well-planned centers designed to integrate a variety of complementary uses.*" The proposed zoning amendment and related Planned Development Guidelines and Master Plan will achieve the goals of the MXD future land use. The proposed Planned Development is also in compliance will all of the use, density and intensity requirements for MXD as set forth in the Comprehensive Plan.

DEAN MEAD

ATTORNEYS AT LAW

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Viera/Melbourne

W. LEE DOBBINS
LDobbins@deanmead.com

July 15, 2020

VIA EMAIL

Jennifer Hofmeister
Planning Director
City of Fort Pierce
100 N U.S. Highway 1
Fort Pierce, FL 34950

Re: Willow Lakes, LLC / Planned Development Rezoning

Dear Ms. Hofmeister:

On behalf of Willow Lakes, LLC, I am submitting the following items, which are attached hereto:

1. Revised Planned Development Guidelines; and
2. Supporting Documentation.

The attached Planned Development Guidelines and Supporting Documentation have been revised in order to address comments provided in the letter dated June 30, 2020, from Vennis Gilmore. Please see the following responses to the comments from Mr. Gilmore's letter in bold below:

1. Staff recommends dividing the subject document into a PD development regulations and other as supporting documentation to supplement the application.

Done. Documents have been divided into PD Regulations and Supporting Documentation as requested.

2. Page 11 states the surf park is 8 acres and the traffic study states the size as 9.5 acres. Please clarify.

The language in the PD Guidelines has been revised to reflect that the wave pool will be 9.5 acres, consistent with the traffic report. We anticipate that

.....
A Member of ALFA International - The Global Legal Network

the 9.5 acres will include the wave lagoon, perimeter deck and associated pools.

3. Please consider adding Vacation Rentals to the list of uses to avoid the need to go through the Conditional Use process.

Vacation rentals have been added to the list of permitted uses under Medium Density Residential and Residential-High Density/Mixed Use.

4. Please specify what agricultural uses are proposed before each tract of land is developed.

Description of permitted agricultural uses has been added.

5. If not proposing design review guidelines that exceed current City Code requirements, than City Code Section 22-59 shall apply.

Noted. References to City Code Section 22-59 have been deleted. Language has been added on page 11 providing for the submission of proposed design standards to the City with a later phase of the project.

6. Please consider removing the dates of construction phases and just have projected length of anticipated time necessary for each phase.

Done.

7. When is the anticipated time for Phase 1 submittal?

We anticipate filing the application for Phase 1 approximately six months after obtaining final approval of the Planned Development zoning.

Thank you again for the assistance from you and your staff in moving this project forward.

Best regards,



W. Lee Dobbins

WLD:sh

Enclosures

cc: Vennis Gilmore (via email)
Chad LaBonte (via email)
Roland LaBonte (via email)
Geoff Fitzgerald (via email)
Susan O'Rourke (via email)

Planned Development Guidelines

For

Willow Lakes

A PROPOSED

Resort Village and Community

*W. Midway Road
Fort Pierce, Florida
St. Lucie County*

Master Developer:
WILLOW LAKES, LLC

Prepared by:

BOHLER
16 Old Forge Road, Suite A
Rocky Hill, CT 06067
(860) 333-8900 TEL.

2255 Glades Road Suite 305E
Boca Raton, FL 33431
561-571-0280

BOHLER //

July 14, 2020
#CT191015

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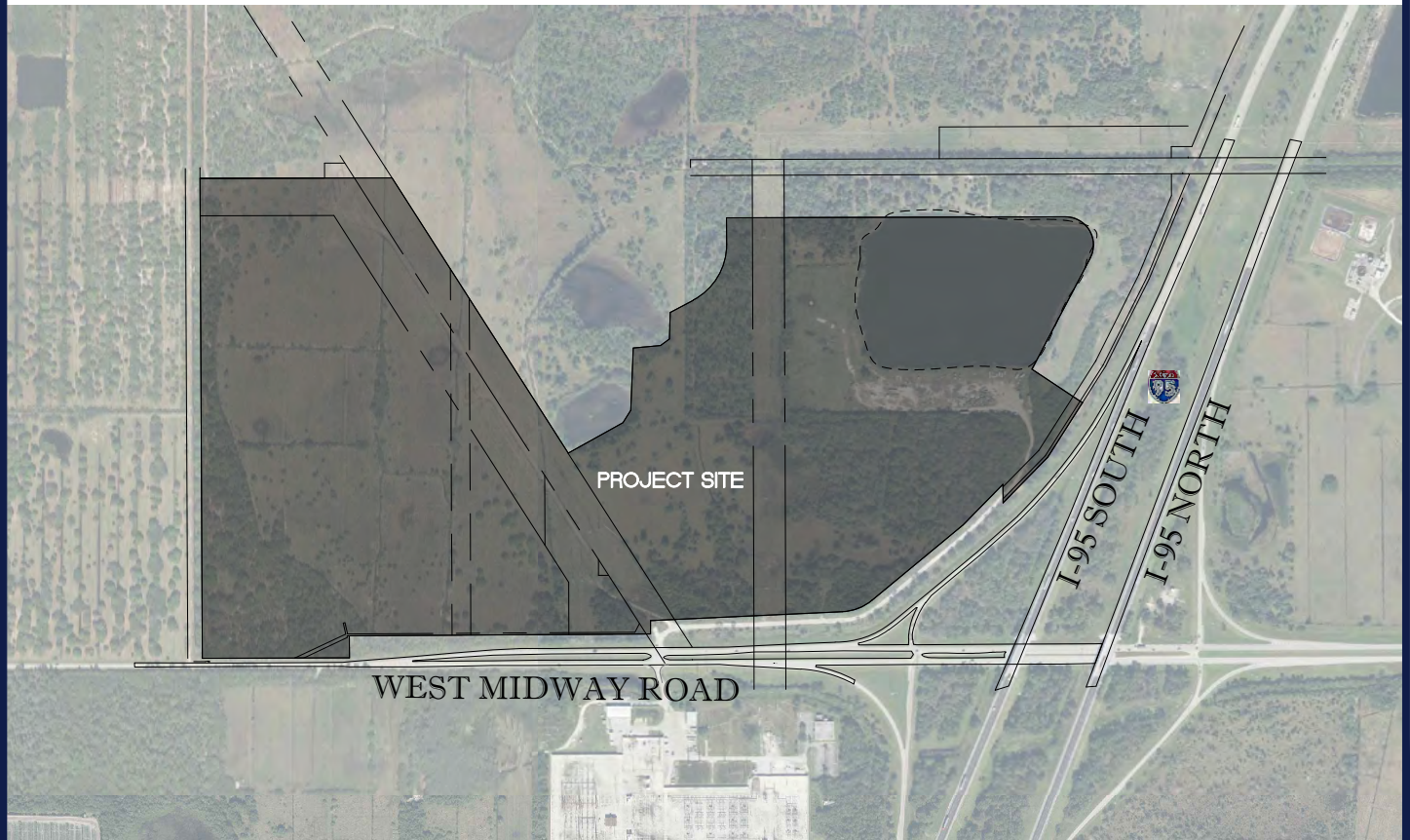
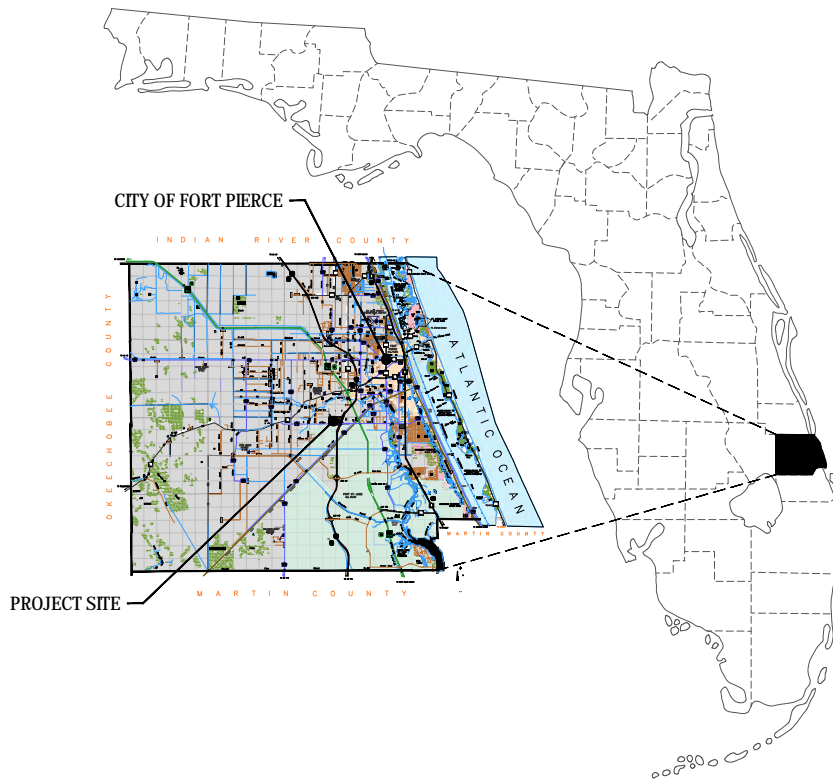
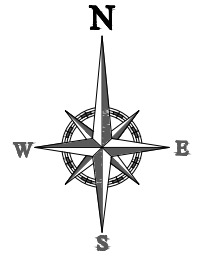
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APPENDICES

- APPENDIX A: PLANNED DEVELOPMENT SITE PLAN
- APPENDIX B: PLANNED DEVELOPMENT SITE PLAN OVERLAY
- APPENDIX C: ZONING EXHIBIT

I. LOCATION EXHIBIT

LOCATION EXHIBIT



WILLOW LAKES, LLC

LOCATION EXHIBIT

W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

SCALE: 1"=80,000' & 1,000' DATE: 01/20/2020

BOHLER 
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

THIS PLAN IS THE PROPERTY OF BOHLER & ASSOCIATES, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF BOHLER & ASSOCIATES, INC.

II. LEGAL DESCRIPTION

A PARCEL OF LAND LYING IN SECTIONS 2 AND 3, TOWNSHIP 36 SOUTH, RANGE 39 EAST IN ST. LUCIE COUNTY, FLORIDA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 3, THENCE N89°46'35"W ALONG THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 2622.04 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF N.S.L.R.W.C.D. CANAL NO. 93 (A 78 FEET WIDE RIGHT-OF-WAY); THENCE S00°02'49"W ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 52.50 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF A 200 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 377, PG. 2069-2076 AND BEING THE POINT OF BEGINNING OF THE FOLLOWING DESCRIBED PARCEL; THENCE S89°46'35"E ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING PARALLEL TO THE NORTH LINE OF SAID SECTION 3 A DISTANCE OF 1,026.62 FEET TO A POINT ON THE EAST RIGHT-OF-WAY LINE OF A 60 FEET WIDE FP&L EASEMENT AS RECORDED IN OR 119, PG. 404; THENCE S32°18'17"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID 60 FEET WIDE FP&L EASEMENT A DISTANCE OF 1,746.02 FEET; THENCE N61°15'41"E A DISTANCE OF 335.12 FEET; THENCE N31°56'28"E A DISTANCE OF 78.35 FEET; THENCE N02°37'14"E A DISTANCE OF 332.85 FEET; THENCE N85°17'03"E A DISTANCE OF 146.97 FEET; THENCE N53°57'44"E A DISTANCE OF 58.71 FEET; THENCE N01°56'01"E A DISTANCE OF 142.19 FEET; THENCE N62°33'43"E A DISTANCE OF 139.15 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTHWEST HAVING A RADIUS OF 335.00 FEET; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 365.79 FEET THROUGH A CENTRAL ANGLE OF 62°33'43"; THENCE N00°00'00"W A DISTANCE OF 142.46 FEET; THENCE S89°50'50"E A DISTANCE OF 1,811.20 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 150.00 FEET; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 308.52 FEET THROUGH A CENTRAL ANGLE OF 117°50'41"; THENCE S27°59'51"W A DISTANCE OF 671.72 FEET; THENCE S56°07'55"E A DISTANCE OF 323.59 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF STATE ROAD NO. 9 (INTERSTATE HIGHWAY NO. 95) (WIDTH VARIES); THENCE S32°49'14"W ALONG THE WEST RIGHT-OF-WAY OF SAID STATE ROAD NO. 9 A DISTANCE OF 346.97 FEET; THENCE S44°46'35"W ALONG THE WEST RIGHT-OF-WAY LINE OF SAID STATE ROAD NO. 9 A DISTANCE OF 339.92 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF A ACCESS ROAD NO. 1 AS RECORDED IN PB 24, PG. 4 J&K; THENCE N00°04'30"E A DISTANCE OF 99.51 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S44°46'35"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 236.51 FEET; THENCE DEPARTING SAID ACCESS ROAD NO. 1 N00°04'43"E A

DISTANCE OF 535.11 FEET; THENCE S89°59'23"W A DISTANCE OF 166.33 FEET; THENCE S00°04'55"W A DISTANCE OF 680.33 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1; THENCE S50°43'56"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 478.34 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE NORTH HAVING A RADIUS OF 266.00 FEET; THENCE WESTERLY ALONG THE ARC OF SAID CURVE A DISTANCE OF 171.53 FEET THROUGH A CENTRAL ANGLE OF 36°56'48"; THENCE S87°40'44"W ALONG THE NORTH RIGHT-OF-WAY LINE OF SAID ACCESS ROAD NO. 1 A DISTANCE OF 1,027.79 FEET; THENCE S00°01'50"E A DISTANCE OF 72.00 FEET; THENCE S89°58'10"W A DISTANCE OF 1,610.26 FEET; THENCE S00°01'50"E A DISTANCE OF 117.14 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF WHITE CITY ROAD (COUNTY ROAD 712) (A 70 FEET WIDE RIGHT-OF-WAY); THENCE N89°52'26"W ALONG THE NORTH RIGHT -OF-WAY OF SAID WHITE CITY ROAD (COUNTY ROAD 712) A DISTANCE OF 786.28 FEET TO A POINT ON THE EAST RIGHT-OF- WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93; THENCE N00°02'49"E ALONG THE EAST RIGHT-OF-WAY LINE OF SAID N.S.L.R.W.C.D. CANAL NO. 93 A DISTANCE OF 2,564.70 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF SAID 200 FEET WIDE FP&L EASEMENT AND BEING THE POINT OF BEGINNING.

CONTAINING 197.90 ACRES, MORE OR LESS

TOGETHER WITH;

THE WEST 1/2 OF THE WEST 1/2 OF THE WEST 1/2 OF THE SOUTHEAST 1/4 OF THE NORTHWEST 1/4 OF SECTION 2, TOWNSHIP 36 SOUTH, RANGE 39 EAST, LESS AND EXCEPT THAT PORTION OF THE PROPERTY WHICH WAS TAKEN FOR 1-95, OF THE PUBLIC RECORDS OF ST. LUCIE COUNTY, FLORIDA.

CONTAINING 2.33 ACRES, MORE OR LESS.

SURVEYED PARCEL CONTAINS A NET AREA OF 200.23 ACRES, MORE OR LESS.

III. GENERAL SITE DATA

Parcel ID Numbers: 3302-212-0001-000-4

General Location: Northwesterly of the interchange of W. Midway Rd. and I-95 lying in Section 02 and 03, Town 36S, Range 39E.

Overall Site Area: 200.3 acres

Existing Zoning: Agriculture – 2.5 (AG2.5)

Proposed Zoning: Planned Development (PD)

Future Land Use: Mixed Use (MXD)

Maximum Allowable Residential Density: 15 Dwelling Units per Acre Gross PD Area

Maximum Allowable Floor Area Ratio: 1.5 FAR

Surrounding Zoning, Future Land Use and Existing Use:

	<u>Zoning</u>	<u>Future Land Use</u>	<u>Existing Use</u>
<u>North</u>	PD	MXD	<u>Vacant/Walton</u>
<u>South</u>	TBD(City of PSL approved DRI) & PUD	CG/CH/ROI/CS (City of PSL) MXD & T/U (SL County)	<u>Vacant/LTC Ranch/FPL</u>
<u>East</u>	IL	INST/IND	<u>Tropicana Mfg.</u>
<u>West</u>	PD	MXD	<u>Vacant/Walton</u>

Table 1.0 – Surrounding Zoning, Future Land Use and Existing Use

IV. QUANTITATIVE DEVELOPMENT DATA

Development Data:

See attached Planned Development Conceptual Master Plan for development data relating to site area calculations.

Proposed Uses and Intensity Allocations:

Please refer to *Table 1.1 – Use and Intensity Allocation* for a list of general uses along with applicable intensities.

Table 1.1 – Use and Intensity Allocation		
General Use	Applicable Lot Type(s)	Intensity Allocation
Shopping Center	Commercial	250,000 SF
Entertainment (Indoor)	Commercial	100,000 SF
Neighborhood Bistro/Café/Restaurant/Bar	Commercial	100,000 SF
Fast Food/Coffee Shop	Commercial	25,000 SF
Convenience Store/Pharmacy	Commercial	25,000 SF
Office	Commercial	150,000 SF
Residential - Detached House	Single-Family Residential	150 Units
Residential - Townhouse	High-Density Residential	150 Units
Residential – Multifamily	High-Density Residential	700 Units
Hotel	Commercial	600 Rooms
Surf Park	Commercial	N/A (by total trips/use)
Entertainment (Outdoor)	Commercial	N/A (by total trips/use)

Uses and Intensities listed above in Table 1-1 are derived from the ITE Trip Generation Manual, which provide a baseline intensity by which traffic impacts are analyzed and mitigated for, if applicable. The uses listed in the General Uses column above are general in nature and account for similar uses contained within each general use category. Please refer to Table 1-2 for Lot Types accommodated by the Planned Development along with associated Lot and Dimensional Requirements and Permitted Uses allowed within each Lot Type.

The Traffic Impact Study for the project assumes that the Surf Park will include a 9.5-acre wave pool with ancillary facilities. The Surf Park and its ancillary facilities shall be allocated a Commercial Intensity Allocation of vehicle trips, as set forth in Table 1-1 above and as approved in the Master Traffic Impact Study. If the applicant applies for site plan approval for a Surf Park with a larger pool and facilities than that described in the Master Traffic Impact Report, then the City Planning Director may require an updated Traffic Impact Report and revised conditions of approval, if needed.

To provide flexibility in the build-out of the proposed development, Intensity Allocations provided above in Table 1.1 may be increased or decreased based on the Land Use Conversion Matrix on the following page.

Table 1.1a: Willow Lakes Land Use Conversion Matrix

Land Use	Peak Hr Rates	Land Use to Decrease									
		Single Family (1 Unit)	Apartment Low-Rise (1 unit)	Apartment Mid-Rise (1 unit)	Shopping Center (1,000 SF)	Pharmacy/Drugstore (1,000 SF)	Convenience Store (1,000 SF)	Fast Food Restaurant (1,000 SF)	High Turnover Restaurant (1,000 SF)	Hotel (1 room)	General Office (1,000 SF)
Land Use to Increase	Per Unit	0.427	0.28	0.187	0.956	1.8	13.2	9.32	3.21	0.278	0.79
Single Family (1 Unit)	0.427	1.000	1.525	2.283	0.447	0.237	0.046	0.133	1.536	0.541	
Apartment Low-Rise (1 unit)	0.28	0.656	1.000	1.457	0.293	0.156	0.030	0.087	1.007	0.354	
Apartment Mid-Rise (1 unit)	0.187	0.438	0.668	1.000	0.196	0.104	0.030	0.058	0.673	0.237	
Shopping Center (1,000 SF)	0.956	2.239	3.414	5.112	1.000	0.531	0.103	0.298	3.439	1.210	
Pharmacy/Drugstore (1,000 SF)	1.8	4.215	6.429	9.626	1.883	1.000	0.193	0.561	6.475	2.278	
Convenience Store (1,000 SF)	13.2	30.913	47.143	70.588	13.838	7.333	1.000	4.112	47.482	16.709	
Fast Food Restaurant (1,000 SF)	9.32	21.827	33.286	49.840	9.749	5.178	0.706	1.000	33.525	11.797	
High Turnover Restaurant (1,000 SF)	3.21	7.518	11.464	17.166	3.358	1.783	0.243	0.344	11.547	4.063	
Hotel (1 room)	0.278	0.651	0.993	1.487	0.291	0.154	0.021	0.030	1.000	0.352	
General Office (1,000 SF)	0.79	1.850	2.821	4.225	0.826	0.439	0.060	0.085	2.842	1.000	
Medical Office (1,000 SF)	1.8	4.215	6.429	9.626	1.883	1.000	0.136	0.193	6.475	2.278	
Golf Simulator (1 Tee/Hole)	1.553	3.637	5.546	8.305	1.624	0.863	0.118	0.167	5.586	1.966	
Water Slide Park (1 Acre)	13.263	31.061	47.368	70.925	13.873	7.368	1.005	1.423	47.709	16.789	
Recreational Facility (1,000 SF)	1.531	3.585	5.468	8.187	1.601	0.851	0.116	0.164	5.507	1.938	

*Rate is based on the highest resultant trip rates of either the AM or PM directional rate calculated as the highest directional trip divided by the units.

Example:

1. If you want to build an 3,000 SF Fast Food Restaurant by decreasing the number of Low-Rise Apartments, how many apartments would need to be cut?

Instruction= Multiply 3 by the number that connects the Fast Food Restaurant row with the Apartment Low-Rise column (33.286).

Result: 3*33.286

You will need to cut 100 Low-Rise Apartments

2. If you want to remove 100 MFDU and figure out how many square feet of Shopping center is left, you go to Shopping Center along the top of the columns and MFDU on the row to the left and get the cell with .293.

Multiply 100 x .293 = 29.3. You can do 29,300 square feet of Shopping center.

V. DESIGN AND DEVELOPMENT GUIDELINES

The following section will govern overall design and development guidelines for development occurring within the Planned Development. *Table 1.2 – Dimensional Requirements* provides dimensional requirements by lot type followed by applicable development standards relating to permitted and restricted uses.

Table 1.2 – Dimensional Requirements

Lot Type	Maximum Gross Density (DU/Ac.)	Min. Lot Size	Min. Lot Width	Min. Road Frontage	Minimum Yard				Max. Bldg. Height	Max. Lot Coverage by Bldg.
					Front	Rear	Side	Side Corner		
Commercial - General	N/A	10,000 sf	50	50'	0'	0'	0'	0'	65' (1)	none
Single-Family Attached Medium Density Residential	N/A (2)	2,500 sf	30'	30'	10'	5'	5'	10'	35'	none
Single-Family Detached Medium Density Residential	N/A (2)	2,500 sf	30'	30'	10'	5'	5'	10'	35'	none
Residential – High-Density/ Mixed Use	N/A (2)	1,500 sf	50	50	0'	10'	0'	0'	65' (1)	none

*

1. *Maximum height for hotel/lodging buildings shall be a maximum of one hundred (100) feet if adjacent to I-95. If not adjacent to I-95, the sixty-five (65) foot maximum height limit shall apply.*
2. *Maximum Residential Density shall be determined by the Future Land Use in accordance with the City Comprehensive Plan, 15 units/acre gross Planned Development Area, not restricted. Development may be clustered, so that individual parcels may exceed 15 units/acre, provided that the Planned Development Area in total shall not exceed 15 units /acre and shall not exceed the maximum number of units set forth in Table 1.1.*

Where more than one lot, or parts of more than one lot, are owned by a single owner and subjected to a unity of title, the setbacks between such lots and any platted easements along the lot lines dividing such lots, shall be disregarded, and such lots or parts of lots may be developed pursuant to single unified site plan. In such event, the setbacks and platted lot line easements shall only apply to the outside boundaries of the property subjected to the unity of title, as if it were a single platted lot.

Commercial – General: The purpose of the Commercial General Lot Type is to provide and protect an environment suitable for a wide variety of commercial uses intended to serve a population over a large market area. The following uses shall be permitted within the Commercial – General Lot Type:

Permitted Uses:

- a. Commercial – General and/or Neighborhood
- b. Commercial – Town Center
- c. Hotel (minimum 100 units)
- d. Office Uses – Professional and/or Medical
- e. Institutional

Residential – Medium Density Residential (10): The purpose of this district is to provide and protect an environment suitable for single-family, two-family, three-family, and multiple-family dwellings at a maximum density of ten (10) dwelling units per acre, together with such other uses as may be necessary for and compatible with moderate density residential surroundings. The following uses shall be permitted within the Residential – Medium Density Residential Lot Type:

Permitted Uses:

- a. Community residential homes
- b. Family day care homes
- c. Multiple-family dwellings (Four (4) or more units)
- d. Single-family detached dwellings
- e. Two-family (duplex) dwellings
- f. Three-family (triplex) dwellings
- g. Townhome attached dwellings
- h. Vacation Rentals

Residential – High-Density/Mixed Use: The purpose of this district is to provide and protect an environment suitable for a mix of compatible uses, including single-family, two-family, three-family, and multiple-family dwellings along with complementary commercial uses in a walkable, high-density residential and mixed-use village context, with specific building and neighborhood density limited only by building height and form, and by the maximum gross density permitted under the underlying land use in the Fort Pierce comprehensive plan of fifteen (15) dwelling units per acre of the gross Planned Development Area, together with such other uses as may be necessary for and compatible with high-density residential surroundings. The following uses shall be permitted within the Residential – High-Density/Mixed Use Lot Type:

Permitted Uses:

- a. Multiple-family dwellings (four (4) or more units)
- b. Single-family detached dwellings
- c. Two-family (duplex) dwellings
- d. Three-family (triplex) dwellings
- e. Townhome attached dwellings
- f. Multi-Family Apartments/Flats, with or without Commercial first-floor components.
- g. Commercial – General and/or Neighborhood
- h. Commercial – Town Center
- i. Hotel
- j. Vacation Rentals

Agricultural Use: For the purpose of this document, agricultural uses shall be limited to cultivated cropland and/or livestock. Agricultural uses of the property shall be allowed within any phase or phases of this planned development project at any time prior to the commencement of construction of such project phase. Upon commencement of construction of any project phase, agricultural use of such phase shall no longer be permitted.

Open Space: Pursuant to Section 22-40(b)(3) of the City of Fort Pierce Code of Ordinances, a minimum of 20% of the site area of this development is required to be set aside as Open Space (200.3 ac. x 0.2 = 40.06 ac.). Open Space shall be land devoid of any above-ground structures or buildings, except pergolas, gazebos, pavilions or other open-air structures; or landscape structures such as terraces, planters, walls or retaining walls. Open space may include natural areas, buffer areas, upland habitats, including those areas of on-site preservation required by the other provisions of the City of Fort Pierce Code of Ordinances; recreation areas, but not including swimming pools, tennis courts or other impervious activity areas; but may include parks, golf courses, sports fields; bicycle, pedestrian or equestrian paths and facilities; common open space, common landscaping or planting areas; stormwater detention and retention facilities providing that no more than thirty (30) per cent of the overall open space requirement shall be satisfied in this manner; water features, conservation areas or other areas intended for public purposes other than street or road rights-of-way, but shall exclude aquatic areas for conservation and development. This equates to 12.02 acres of the Open Space requirement to be satisfied by stormwater detention and retention facilities. As part of the development for Willow Lakes Resort Village and Community the Open Space requirement will be satisfied by a combination of open green space, streetscape/hardscape tree-lined pedestrian sidewalks, channelized waterways, and stormwater detention and retention. The calculations below delineate the areas associated with each category:

Open Space Provided:

Total SWM: 1,276,750 sf ~ 29.31 ac

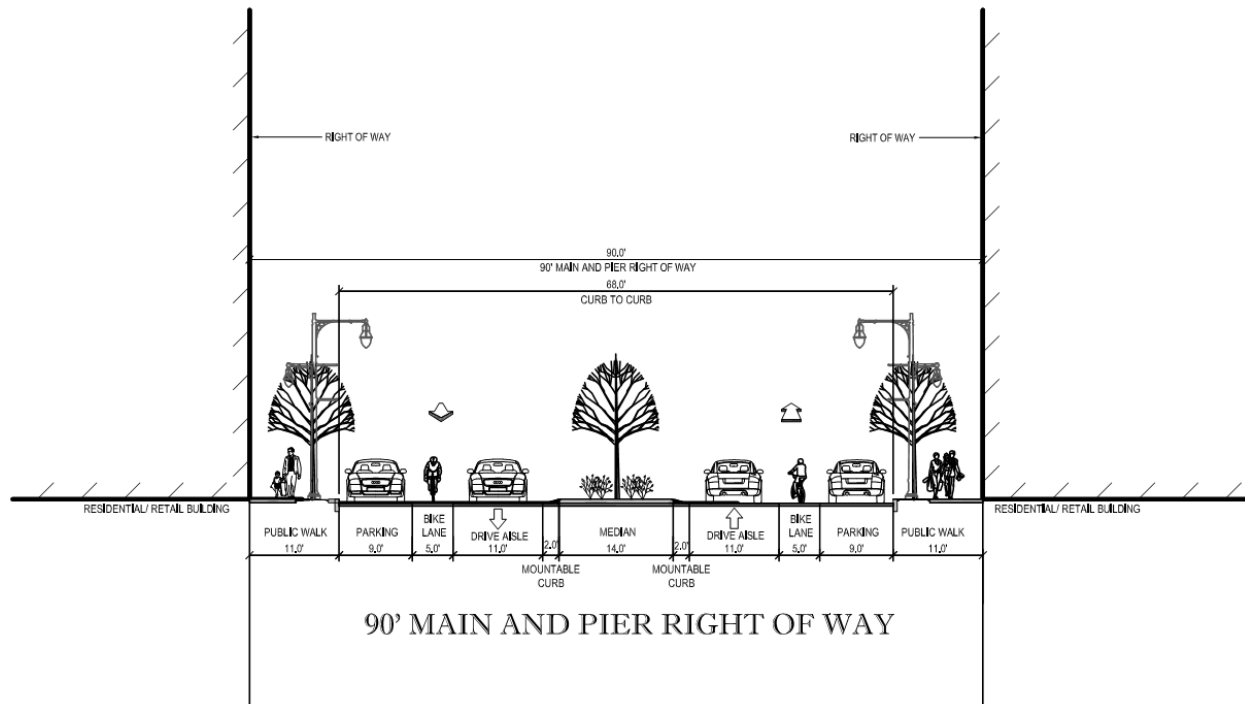
Open Green Space:	1,215,032 sf ~ 27.89 ac	
Channelized Waterways:	+150,139 sf ~ 3.45 ac	
Pedestrian-oriented Open Space/Facilities:		
Pier Avenue Pedestrian Walks:	119,189 sf ~ 2.73 ac	
Main Street Pedestrian Walks:	31,966 sf ~ 0.73 ac	
Strand Boulevard Pedestrian Walks:	53,934 sf ~ 1.24 ac	
Walton Pedestrian Walks:	<u>78,666 sf ~ 1.80 ac</u>	
Total Pedestrian-oriented Open Space/Facilities:	+283,755 sf	6.51 ac
30% SWM Facilities:		+12.02 ac
Open Space Provided:		=49.87 ac
> 40.06 ac Required		

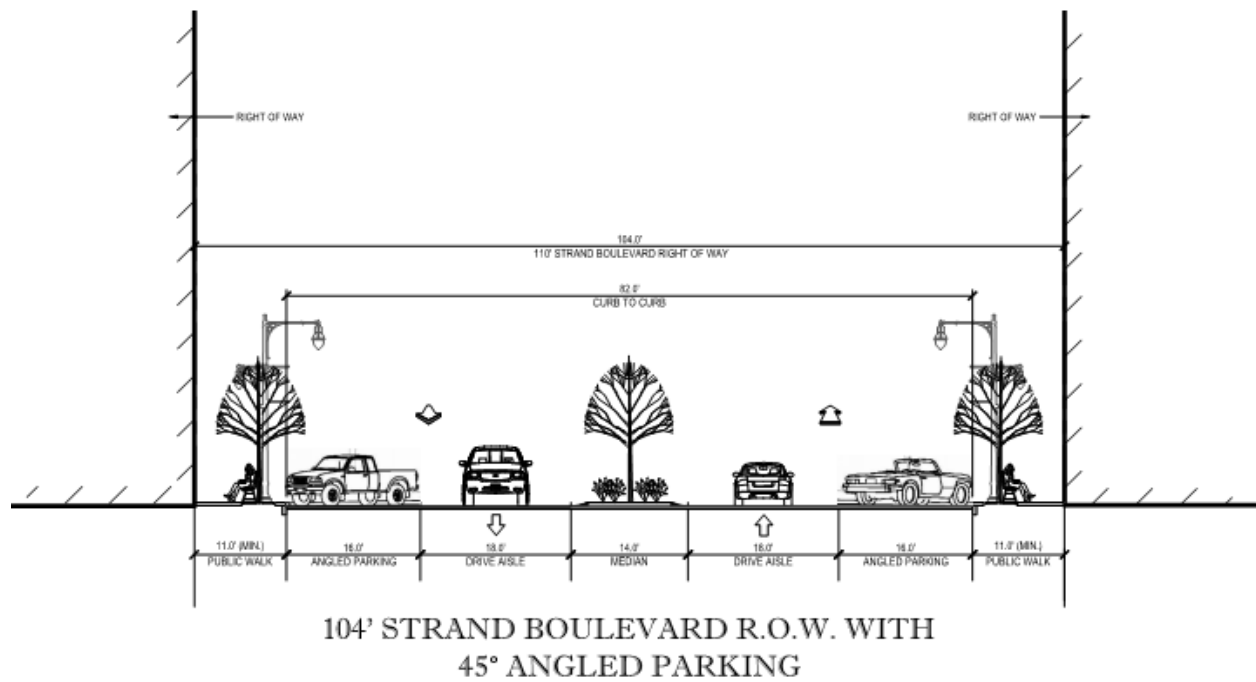
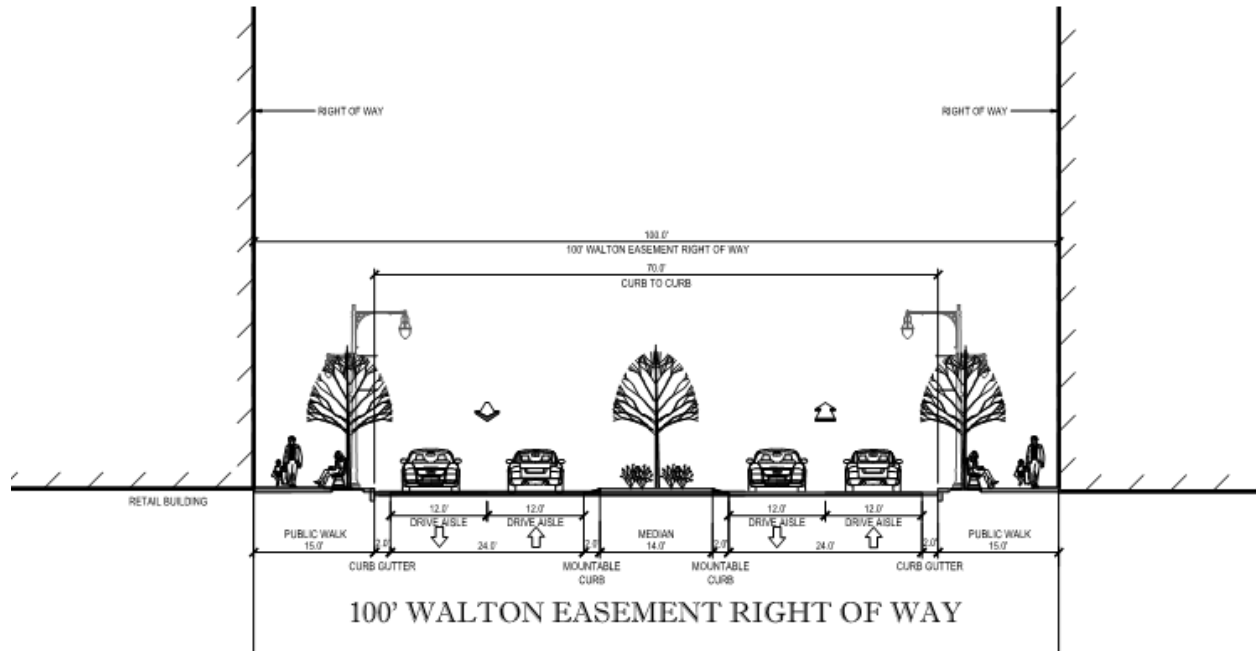
Site Plan Review: Development proposed on any one (1) or more lots within the Planned Development shall be reviewed in accordance with Section 22-58 – Site Plan Review.

Additional Documentation: Prior to the development of each phase, the applicant shall submit for review and approval all documentation then required by City Code to obtain City site plan approval for such phase, including the site plan, landscaping plan, tree mitigation plan, lighting plan, and master sign plan for such phase.

Design Review: The applicant may submit with a future phase of this project, proposed design standards to govern development within the Willow Lakes Resort Village and Community Planned Development. Such proposed design standards shall be subject to review and approval by the City in accordance with applicable City Code provisions at the time of submittal.

Private Access Tract Street Sections:





VI. HEALTH AND SAFETY REGULATION FOR SURF PARK

The applicant intends to develop a Surf Pool within Phase 1 of the Project. A “Surf Pool” means a pool that is designed to generate waves dedicated to the activity of surfing on a surfboard or an analogous surfing device commonly used in the ocean and intended for sport, as opposed to the general play intent of wave pools, other large-scale public swimming pools or other public bathing places. Pursuant to Florida Statute 514.0115, until such time as the Florida Department of Health adopts rules for the supervision and regulation of Surf Pools, the Surf Pool will be exempt from supervision or regulation under Florida Statutes Chapter 514, provided that the Surf Pool is larger than 4 acres, and is permitted by the City pursuant to a special use permit process in which the City asserts regulatory authority over the construction of the Surf Pool and, in consultation with the Florida Department of Health, establishes through the City’s special use permitting process the conditions for the Surf Pool’s operation, water quality and necessary lifesaving equipment. Therefore, if the Florida Department of Health has not yet adopted rules for the supervision or regulation of Surf Pools, then prior to the issuance of final site plan approval for any Surf Pool larger than 4 acres within the Project, special conditions regulating the construction and operation of the Surf Pool, including its water quality and lifesaving equipment, shall be reviewed and approved by the City, asserting its regulatory authority over the Surf Pool, and such conditions shall be deemed a part of, and incorporated into, these Planned Development Guidelines. The City shall consult with the Florida Department of Health, as required by Florida Statute 514.0115, in reviewing and approving such special conditions relating to the Surf Pool’s operation, water quality and necessary lifesaving equipment.

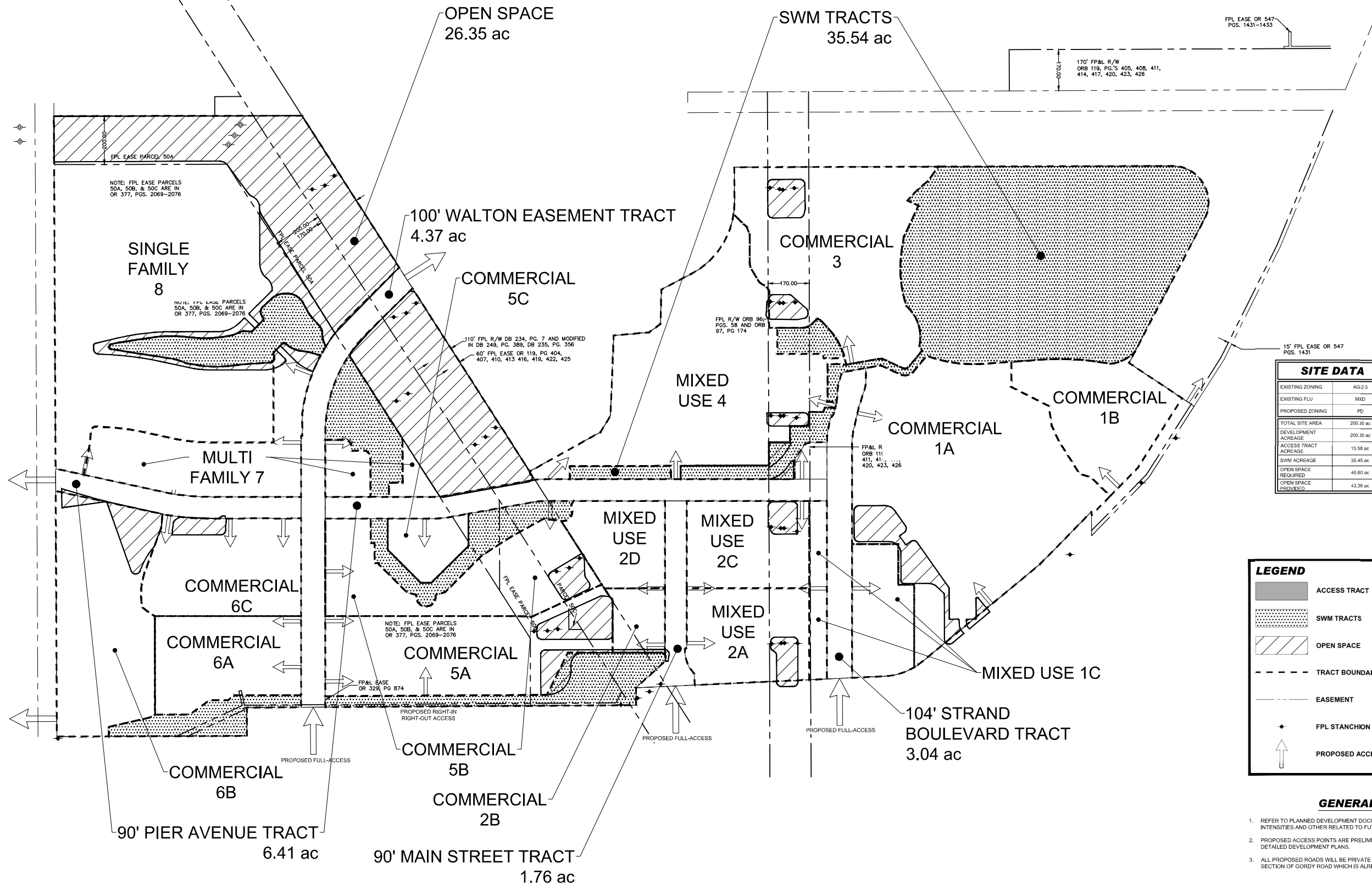
VII. ZONING ORDINANCE EXCEPTIONS

The following deviations from the current City of Fort Pierce Code of Ordinances are proposed within the Willow Lakes Resort Village and Community Planned Development.

Chapter 22- Zoning

- Hotels shall be permitted to be constructed to a height not to exceed one hundred (100) feet if constructed generally proximate or adjacent to the frontage of I-95, or situated on the lake adjacent to I-95. This 100' height allowance exceeds the sixty-five (65) foot height limit for Hotel uses found in Chapter 22 -Zoning, of the City of Fort Pierce Code of Ordinances.
- A list of permitted and conditional uses has been included herein, which shall govern use allowances within the Planned Development; such permitted and conditional uses included herein may or may not be found within Chapter 22 -Zoning.
- Sec. 22-194. - Tree protection and mitigation: Mitigation shall be provided pursuant to future site plan submittals in the form of excellence in urban village, pedestrian-oriented tree-lined streetscapes, in lieu of the mitigation requirements set forth in the City Code.

APPENDIX A: PLANNED DEVELOPMENT SITE PLAN



FPL EASE OR 547 PGS. 1431-1433

170' F&M R/W ORB 119, PG'S 405, 408, 411, 414, 417, 420, 423, 426

NOTE: FPL EASE PARCELS 50A, 50B, & 50C ARE IN OR 377, PGS. 2069-2076

NOTE: FPL EASE PARCELS 50A, 50B, & 50C ARE IN OR 377, PGS. 2069-2076

110' FPL R/W DB 234, PG. 7 AND MODIFIED IN DB 249, PG. 389, DB 235, PG. 356

60' FPL EASE OR 119, PG 404, 407, 410, 413 416, 419, 422, 425

NOTE: FPL EASE PARCELS 50A, 50B, & 50C ARE IN OR 377, PGS. 2069-2076

F&M BASE OR 329, PG 874

F&M R ORB 111 411, 41, 420, 423, 426

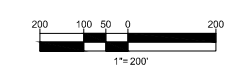
SITE DATA	
EXISTING ZONING	AG-2.5
EXISTING FLU	M2D
PROPOSED ZONING	PD
TOTAL SITE AREA	200.30 ac
DEVELOPMENT ACREAGE	200.30 ac
ACCESS TRACT ACREAGE	15.58 ac
SWM ACREAGE	35.54 ac
OPEN SPACE REQUIRED	40.80 ac
OPEN SPACE PROVIDED	43.38 ac

LEGEND

- ACCESS TRACT
- SWM TRACTS
- OPEN SPACE
- TRACT BOUNDARY
- EASEMENT
- FPL STANCHION
- PROPOSED ACCESS POINT

GENERAL NOTES

- REFER TO PLANNED DEVELOPMENT DOCUMENTS FOR PERMITTED USES AND INTENSITIES AND OTHER RELATED TO FUTURE DEVELOPMENT WITHIN TRACTS.
- PROPOSED ACCESS POINTS ARE PRELIMINARY AND SUBJECT TO CHANGE BASED ON DETAILED DEVELOPMENT PLANS.
- ALL PROPOSED ROADS WILL BE PRIVATE ROADS, WITH THE EXCEPTION OF THE SECTION OF GORDY ROAD WHICH IS ALREADY ST. LUCIE COUNTY ROAD ROW.



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REVISIONS

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PROJECT No.: CT191015
 DRAWN BY: BTJ
 CHECKED BY: GPF
 DATE: 06/18/20
 CAD I.D.: CT191015-CVL_0

PLANNED DEVELOPMENT PLAN DOCUMENTS

FOR

WILLOW LAKES, LLC

PROPOSED DEVELOPMENT
 W. MIDWAY ROAD
 CITY OF FORT PIERCE
 ST. LUCIE COUNTY, FLORIDA
 MAP ID: 31/02H

BOHLER

16 OLD FORGE ROAD, SUITE A
 ROCKY HILL, CT 06067
 Phone: (860) 333-8900
 Fax: (508) 450-9080

2255 GLADES ROAD, SUITE 305E
 BOCA RATON, FLORIDA 33431
 Phone: (561) 571-0280
 Fax: (561) 571-0281
 www.BohlerEngineering.com

G.P. FITZGERALD

PROFESSIONAL ENGINEER

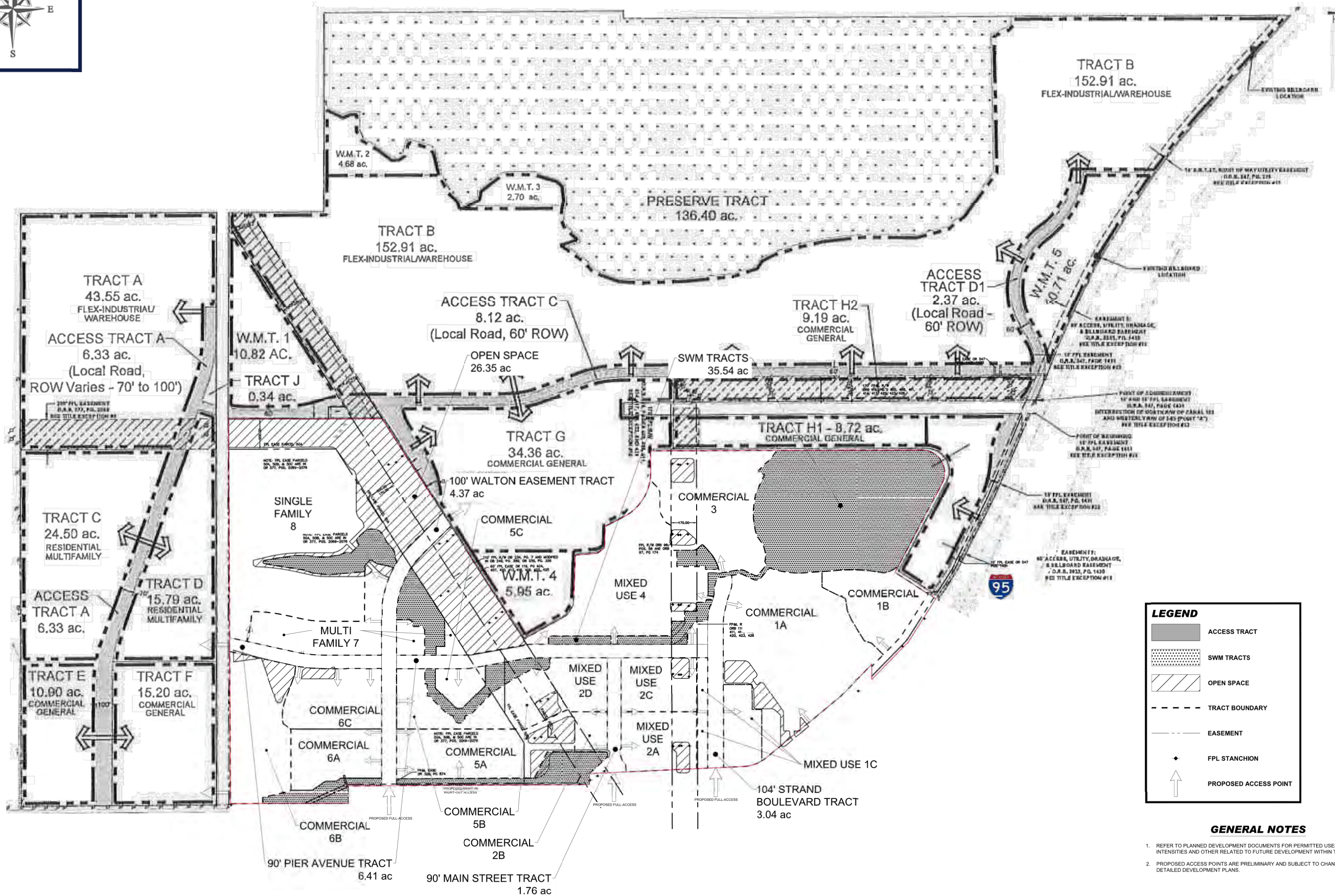
PLANNED DEVELOPMENT SITE PLAN

SHEET NUMBER:
PD-01

ORG. DATE - 06/18/20

P:\191015\191015\DRAWING\EXHIBITS\ROAD TRACT PLAN\CT191015\CVL_0\TRACT PLAN--LAYOUT-PD-01.PDF PLAN

APPENDIX B: PLANNED DEVELOPMENT SITE PLAN OVERLAY

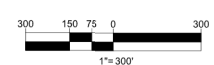


LEGEND

- ACCESS TRACT
- SWM TRACTS
- OPEN SPACE
- TRACT BOUNDARY
- EASEMENT
- FPL STANCHION
- PROPOSED ACCESS POINT

GENERAL NOTES

1. REFER TO PLANNED DEVELOPMENT DOCUMENTS FOR PERMITTED USES AND INTENSITIES AND OTHER RELATED TO FUTURE DEVELOPMENT WITHIN TRACTS.
2. PROPOSED ACCESS POINTS ARE PRELIMINARY AND SUBJECT TO CHANGE BASED ON DETAILED DEVELOPMENT PLANS.



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 CHECKED BY: GPF
 DATE: 06/18/20
 CAD I.D.: CT191015-CVL-0

PLANNED DEVELOPMENT PLAN DOCUMENTS

FOR
WILLOW LAKES, LLC

PROPOSED DEVELOPMENT
 W. MIDWAY ROAD
 CITY OF FORT PIERCE
 ST. LUCIE COUNTY, FLORIDA
 MAP ID: 31/02N

BOHLER
 16 OLD FORGE ROAD, SUITE A
 ROCKY HILL, CT 06067
 Phone: (860) 333-8900
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 Phone: (561) 571-0280
 Fax: (561) 571-0281
 www.BohlerEngineering.com

G.P. FITZGERALD
 PROFESSIONAL ENGINEER

SHEET TITLE:
PLANNED DEVELOPMENT SITE PLAN OVERLAY

SHEET NUMBER:
PD-02

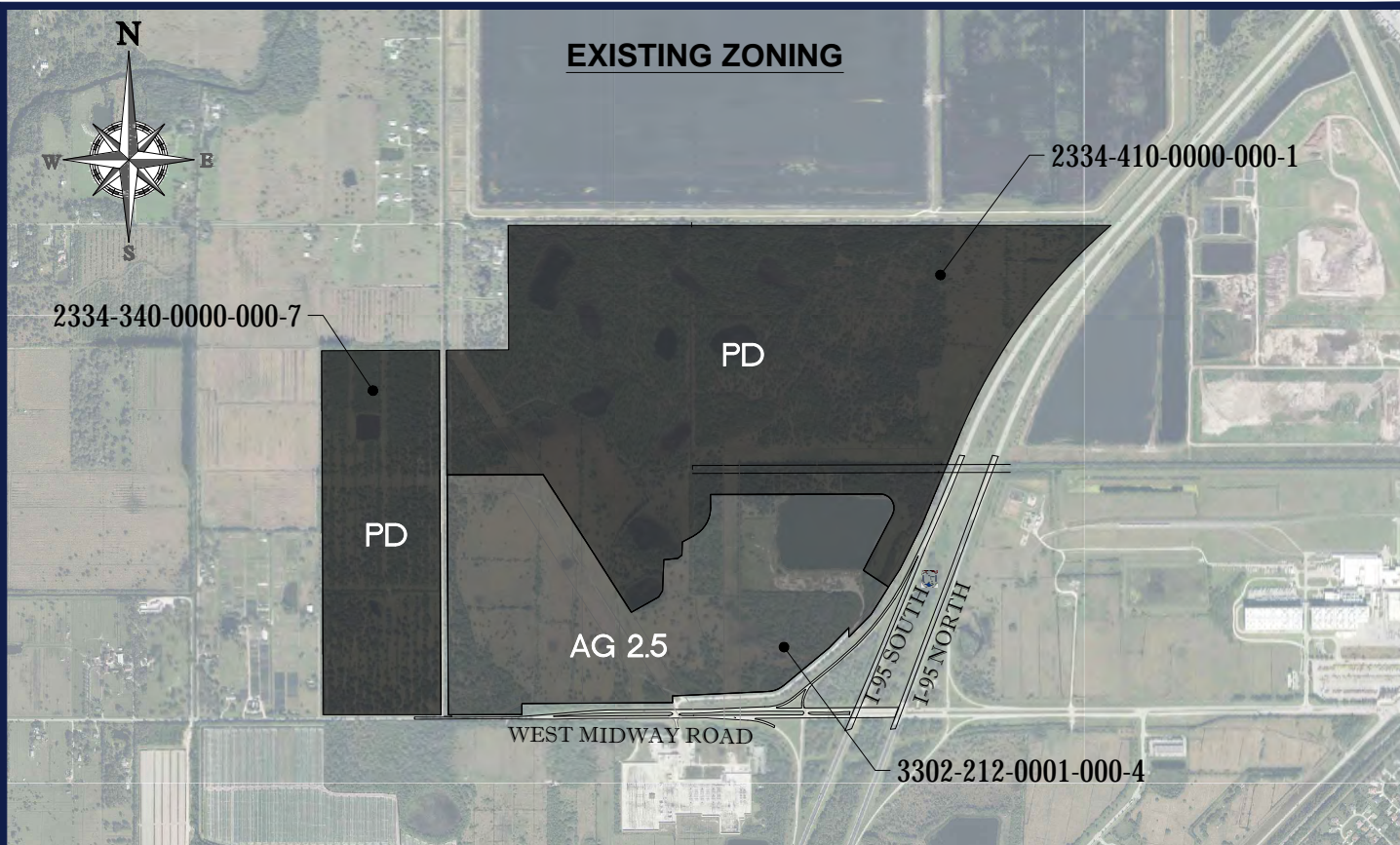
ORG. DATE - 06/18/20

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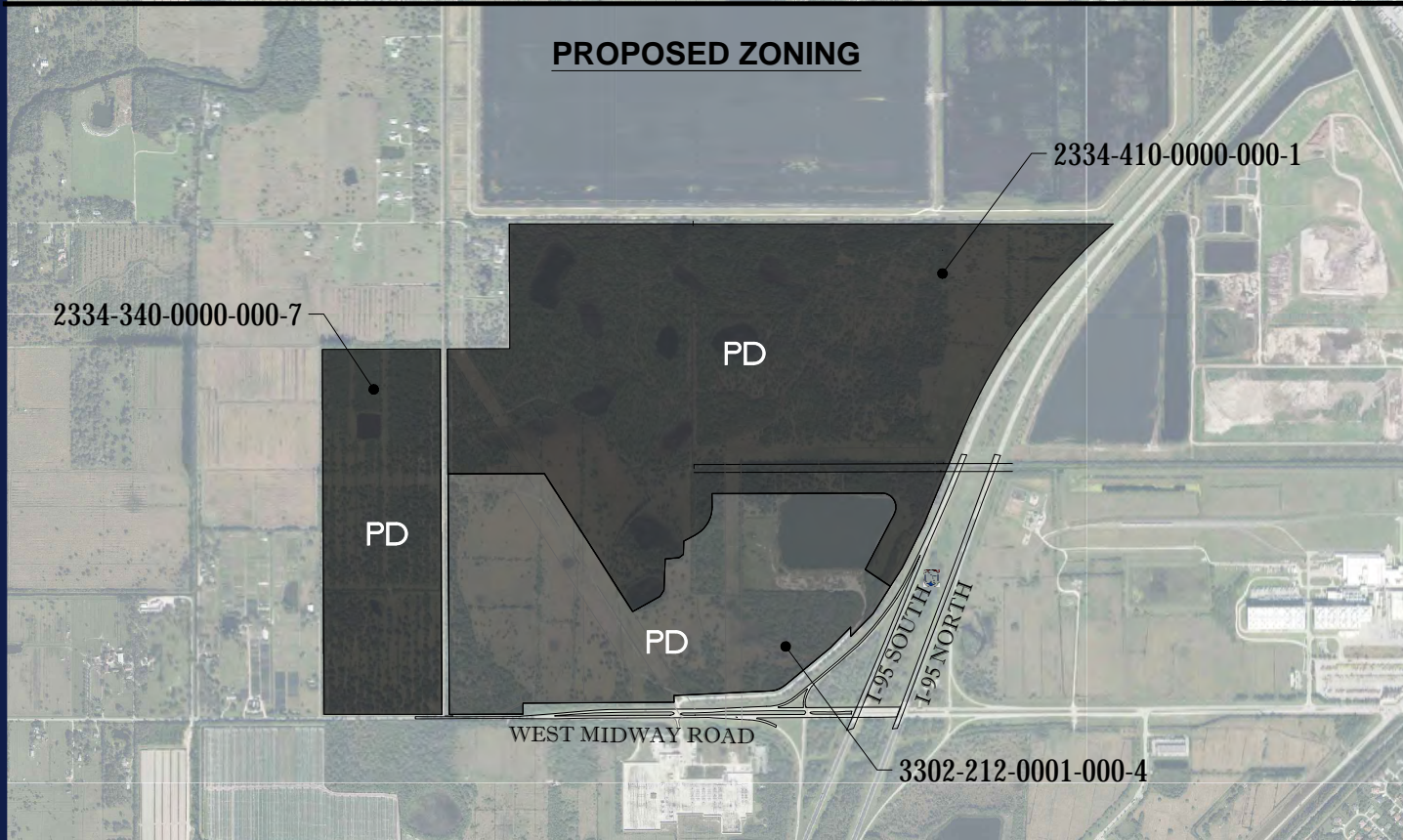
APPENDIX C: ZONING EXHIBIT



EXISTING ZONING



PROPOSED ZONING



WILLOW LAKES, LLC

ZONING EXHIBIT

W. MIDWAY ROAD
CITY OF FORT PIERCE
ST. LUCIE COUNTY, FLORIDA

SCALE: 1"=2,000' DATE: 01/20/2020

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FOR INFORMATION ONLY: THIS EXHIBIT IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A CONTRACT. THE CONTRACT SHALL BE USED FOR CONTRACT ADMINISTRATION.

Planned Development Guidelines
SUPPORTING DOCUMENTATION

For

Willow Lakes

A PROPOSED

Resort Village and Community

W. Midway Road
Fort Pierce, Florida
St. Lucie County

Master Developer:
WILLOW LAKES, LLC

Prepared by:

BOHLER
16 Old Forge Road, Suite A
Rocky Hill, CT 06067
(860) 333-8900 TEL.

2255 Glades Road Suite 305E
Boca Raton, FL 33431
561-571-0280

BOHLER //

July 14, 2020
#CT191015

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I. PROJECT NARRATIVE

Jennifer Hofmeister, AICP, LCAM
Planning Director
City of Fort Pierce
W. Midway Road
Fort Pierce, FL 34950

Re: Proposed Resort Village and Community

Dear Mrs. Hofmeister,

Willow Lakes Resort Village and Community is envisioned as a vibrant, mixed-use urban village at the crossroads of Florida's Turnpike, Interstate 95, and the City of Fort Pierce. Situated on 200.23 acres of land lying immediately north of Midway Road and west of I-95 within the City of Fort Pierce, Willow Lakes will be an east coast destination that will bring together local residents and regional, national and international visitors in a lively, pedestrian-oriented, and healthy environment of inviting public spaces, walkable streets, and authentic neighborhoods in which to live, work, play and learn.

The vision is that of a typical beach community that celebrates outdoor activity and a healthy lifestyle. A place where residential, retail, and commercial uses will be combined to provide a critical mass of activity that will bring year-round life to the Village. Yet, this community will be one of a kind in Florida, situated not on a lone beach, but around the newest and largest world-class surf park in the country. A joy to simply relax and watch, and a thrill to experience, the Wavegarden at Willow Lakes will deliver high quality waves and authentic surfing experiences year-round for new and existing surfers of all ages, experience and ability. Beyond the Wavegarden, the Village will be comprised of several distinct neighborhoods, knit together by a network of walkable, pedestrian-oriented streets, and navigable flowways designed for maximum environmental and recreational purposes. The result will be a natural, honest and inclusive environment where memorable experiences are created daily, and where visitors, residents, and professionals have fun, keep fit and feel part of a community that shares their passion and respect for surfing, the ocean, others and our planet.

Neighborhoods are the traditional building blocks of villages, towns and cities. They provide an organic, localized sense of place, identity and community within the larger fabric of a town. Willow Lakes Resort Village and Community is conceived as a series of small, local places organized in a framework of larger neighborhood types or areas. The primary neighborhoods that make up Willow Lakes will include the Wavegarden surf resort village and hotels, the mixed-use main and village streets immediately surrounding it, a town center plaza, an entertainment retail zone, and two residential areas, accompanied by adjacent undeveloped open space/conservation area. Within the larger, primary areas will be the smaller commercial and residential places that create variety, scale, local identity, and texture. The concentration of this series of neighborhoods will facilitate shared pedestrian accessibility to the many activities and residential options, the creation of vibrant commercial areas, and the simultaneous introduction of a system of recreational flowways linking the natural spring-fed lake in the heart of the project to the neighborhoods and open space conservation areas throughout.

The street system proposed in this plan emphasizes connectivity and the importance of the streetscape as a place of value to the community. Where vehicle traffic is envisioned, parking is planned as an essential part of the project and will be encouraged on the streets, contributing to the availability of convenient parking spaces and to a sense of traffic-calming in pedestrian-oriented areas that have concentrated street-front commercial activity. Streets and parking facilities will be designed to support single-trip

visits to Willow Lakes for multiple activities. While the basic accommodation of cars is essential to the life of the project, and any similar project in Florida, Willow Lakes is fundamentally a place for people. The design of all streets and the associated public realm reflects a focus on pedestrians, accommodations for bicycles, and the enduring qualities of livable, active public spaces for human interaction.

The intent of this guideline is to provide flexible development options for the variety of uses proposed by utilizing the Planned Development Zoning District as outlined in Section 22-40 of the City of Fort Pierce Code of Ordinances. As proposed, approval of an overall Planned Development site plan and preliminary plat, along with Planned Development guidelines, will provide the foundation for future tenants to submit detailed development plan proposals for review and approval by the City. This affords all involved, including the City, the master developer and potential tenants a clear, approved plan to provide for the most efficient and flexible development of the overall project.

Design and development parameters by lot type, including, but not limited to: permitted and prohibited uses, applicable setbacks; allowable building area; street cross sections; landscaping, irrigation and signage standards have been provided for. A master Property Owners Association (POA) will be created to provide for continued and long-term maintenance of common areas, such as plazas, flowways, open spaces and preserve areas, as well as the master stormwater system, master irrigation system, common area signage, street lighting, and other common improvements and services. If you have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

BOHLER

Geoffrey P. Fitzgerald, PE, AICP, Branch Manager

II. PROJECT PHASING

As proposed, initial infrastructure improvements will be constructed by the developer, which include excavation of the storm water management flowways and ponds within the Storm Water Management Tracts; clearing and rough grading development tracts; construction of certain roads or segments thereof, and placement of structural fill where deemed necessary or desirable. Installation of common utilities such as water and wastewater lines, fiber optics and telecom among other general infrastructure improvements is yet to be determined. To provide for as much flexibility as possible in accommodating potential end-users, the developer reserves the right to implement construction on any one (1) or more phases at any such time it is deemed appropriate; i.e. based on market demand or other metrics utilized by the developer.

The Phase Schedule below provides for a general outline of the Phases of infrastructure construction. Please note that the timelines provided are estimates only and are subject to market conditions and approval timelines. It is anticipated that a Phase 1 submittal will be made within a year.

<u>PHASE SCHEDULE</u>	
Estimated Duration of Construction of Phase	General Description of Improvements
Phase 1A (18 months)*	<ul style="list-style-type: none"> • Roadwork consisting of a full access signalized intersection at Midway Road and Gordy Road, Gordy Road Improvements, including roundabout at new Main Street. • Construction of pavement and landscaped median for Strand Boulevard Tract, and Main Street Tract from Gordy Road north to the intersection of Pier Avenue Tract. • Drainage associated with roadwork. • Construction of potable water and wastewater service mains and stub-outs for future phases; • Electric and telecom services and stub outs for future phases; • Construction of Pier Avenue subgrade for use as on-site construction haul road. • Rough site grading and excavation of Storm Water Management flowways and ponds. • Placement of fill and preparation of subgrade on Wavegarden Surf Park parcel 1A. • Construction of Wavegarden Surf Park and associated commercial buildings, parking, drives, facilities, walks, landscaping and amenities. • Sidewalks and Street lighting along upper Strand Boulevard.
Phase 1B (8 months)*	<ul style="list-style-type: none"> • General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 1B commercial development.

	<ul style="list-style-type: none"> • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities.
Phase 1C (12 months)*	<ul style="list-style-type: none"> • General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 1C commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Strand Boulevard. • Street Trees and Lighting along Strand Boulevard
Phase 2A (12 months)*	<ul style="list-style-type: none"> • General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 2A commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2A
Phase 2B (18 months)*	<ul style="list-style-type: none"> • General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 2B commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2B
Phase 2C (12 months)*	<ul style="list-style-type: none"> • General earthwork, including placement of fill and preparation of subgrade and associated sitework for parcel 2C mixed-use development. • Construction of mixed-use development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2C

<p>Phase 2D (12 months)*</p>	<ul style="list-style-type: none"> • General earthwork, including placement of fill and preparation of subgrade and associated sitework for Phase 2D mixed-use development. • Construction of mixed-use development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Sidewalks along Frontage of Phase 2D
<p>Phase 3 (12 months)*</p>	<ul style="list-style-type: none"> • General earthwork, including placement of fill and preparation of subgrade and associated sitework for Phase 3 commercial development. • Construction of commercial development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities. • Improvements along lakefront and shoreline, and completion of eastern floway system. • Completion of Phase 3 and Phase 4 private roads and drives.
<p>Phase 4 (12 months)*</p>	<ul style="list-style-type: none"> • Construction of Multifamily Residential development and associated buildings, parking, drives, utility and storm water infrastructure, facilities, walks, landscaping, lighting and amenities.
<p>Future Phases TBD*</p>	<ul style="list-style-type: none"> • Roadwork consisting of a full access signalized intersection at Midway Road and Walton Easement Road, and remaining Pier Avenue Improvements to western limits of Willow Lakes property. • Construction of pavement and landscaped median for Walton Easement Tract, and Pier Avenue Tract. • Completion of western side floway system. • Drainage associated with roadwork. • Construction of potable water and wastewater service mains and stub-outs for future phases; • Electric and telecom services and stub outs for future phases; • Construction of commercial tracts in Phase 5 and 6, and residential tracts in Phases 7 and 8. See PD Conceptual Site Plan.

* Subject to market conditions

III. TRAFFIC CONCURRENCY (O'Rourke Engineering and Planning)

Trip Generation – The project will generate an estimated 37,297 daily trips, 2,381 AM peak hour trips and 2,486 PM peak hour trips.

Analysis/Needs – A detailed analysis of the intersections and link generally within a 5-mile radius that were significantly impacted by the project was conducted. As a result of the analysis, a series of prop share payments were estimated. The total prop share estimate is \$7,358,178. These payments, which are creditable against impact fees, as well as additional impact fees collected, would be used to make improvements in the Midway corridor. The impact fees are estimated as \$8,696,883, exclusive of the golf and Wave Garden facilities.

Those improvements include widening Midway Road to six lanes from Arterial A through to the northbound on ramps at I-95. Extensive turn lanes would also be required at the driveways along Midway Road. The construction along Midway Road will be coordinated with the developers of LTC Ranch and the Village at Midway, where appropriate.

Test Mix of Land Uses

WILLOW LAKES IMPACT FEES

Land Use	ITE Code	Intensity	St. Lucie County Road Impact fees	Total Fee
Residential Single-Family	210	150 DU	5015	752,250
Multifamily (Low-Rise)	220	150 DU	3875	581,250
Multifamily (High-Rise)	221	700 DU	2874	2,011,800
General Office	710	100,000 SF	3634	363,400
Medical Office	720	50,000 SF	3634	181,700
Commercial/ Retail	820	395,000 SF	7553	2,983,435
Gas Station with Convenience Market 3k+	820	16 Pumps	9852	157,632
Movie Theater	760	1,000 Seats	338	338,000
Rec. Facility	710	19,600 SF	1233	24,167
Hotel	310	600 Rooms	2172	1,303,200
TOTAL				\$8,696,834

Note: This total does not include the Wave Garden or Top Golf facilities



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TRAFFIC ANALYSIS

FOR

Willow Lakes

Prepared for:

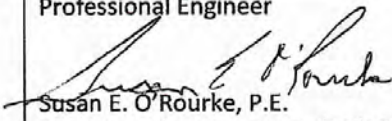
Willow Lakes, LLC

Prepared by

O'Rourke Engineering & Planning
22 SE Seminole Street
Stuart, Florida 34994
772-781-7918

May 4, 2020
Revised July 22, 2020

SR19101.0

<p>Prepared by: O'Rourke Engineering & Planning Certificate of Authorization: #26869 22 SE Seminole Street Stuart, Florida 34994 772-781-7918</p>	<p>Professional Engineer  Susan E. O'Rourke, P.E. Date signed and sealed: 7/22/2020 License #: 42684</p>
---	--



O'ROURKE
ENGINEERING & PLANNING

May 4, 2020

Mr. Chad LaBonte
Willow Lakes, LLC
433 S. Main Street
Suite 218
West Hartford, CT 06110

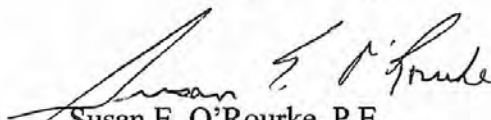
Re: Willow Lakes

Dear Mr. LaBonte:

O'Rourke Engineering & Planning has completed the analysis of the proposed mixed-use development with Wave Park project located generally north of Midway Road and west of the Interstate 95 freeway in St. Lucie County, Florida. The steps in the analysis and the ensuing results are presented herein.

It has been a pleasure working with you. If you have any questions or comments, please give me a call.

Respectfully submitted,
O'Rourke Engineering & Planning


Susan E. O'Rourke, P.E.
Registered Civil Engineer – Traffic

C6 – WillowLakes.text.5.4.2020

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INTRODUCTION

O'Rourke Engineering & Planning was retained to prepare a traffic analysis for a mixed-use urban village, including residential, retail, restaurants, and other commercial uses, with a beach community theme, anchored by a world-class surf park. The development allows for uses to develop within a program identified in the planned development agreement. For trip generation, we have defined land uses to calculate trips based on the following specific uses: 150 single family dwelling units; 850 multifamily dwelling units; 100,000 square feet of office; 50,000 square feet of medical office; 250,000 square feet of retail; a 5,000 square foot convenience store with 16 pumps; a 5,000 square foot convenience market; 15,000 square feet of pharmacy without drive-thru; 25,000 square feet of fast food restaurant with drive-thru; 100,000 square feet of high turnover sit down restaurant; a 9.5 acre water park; 19,600 square feet of recreational facilities; a 42,500 square foot movie theater; a Top Golf golfing simulator facility; and a 600 room hotel.

The purpose of this report is to determine the impact of the proposed project on the surrounding roadway system in accordance with the City of Ft. Pierce Transportation Element comprehensive plan policies and F.S. 163.3180(5)(b)4. To that end, the following analytical steps were taken:

- ◆summary of the project,
- ◆summary of existing lane geometrics-links,
- ◆summary of network and service volumes,
- ◆assessment of project traffic,
- ◆determination of study area,
- ◆summary of cumulative traffic volumes-links,
- ◆comparison of volumes to allowable levels of service,
- ◆development of future intersection volume,
- ◆development of project related improvements
- ◆analysis of intersections

Each of these steps is outlined herein.

PROJECT DESCRIPTION

The proposed development involves a parcel of land located generally north of Midway Road and west of I-95 in Ft. Pierce, Florida. **Figure 1** shows the project location.

As noted above, the proposal is to develop a mix of uses. **Figure 2** illustrates a concept of how the site could develop.



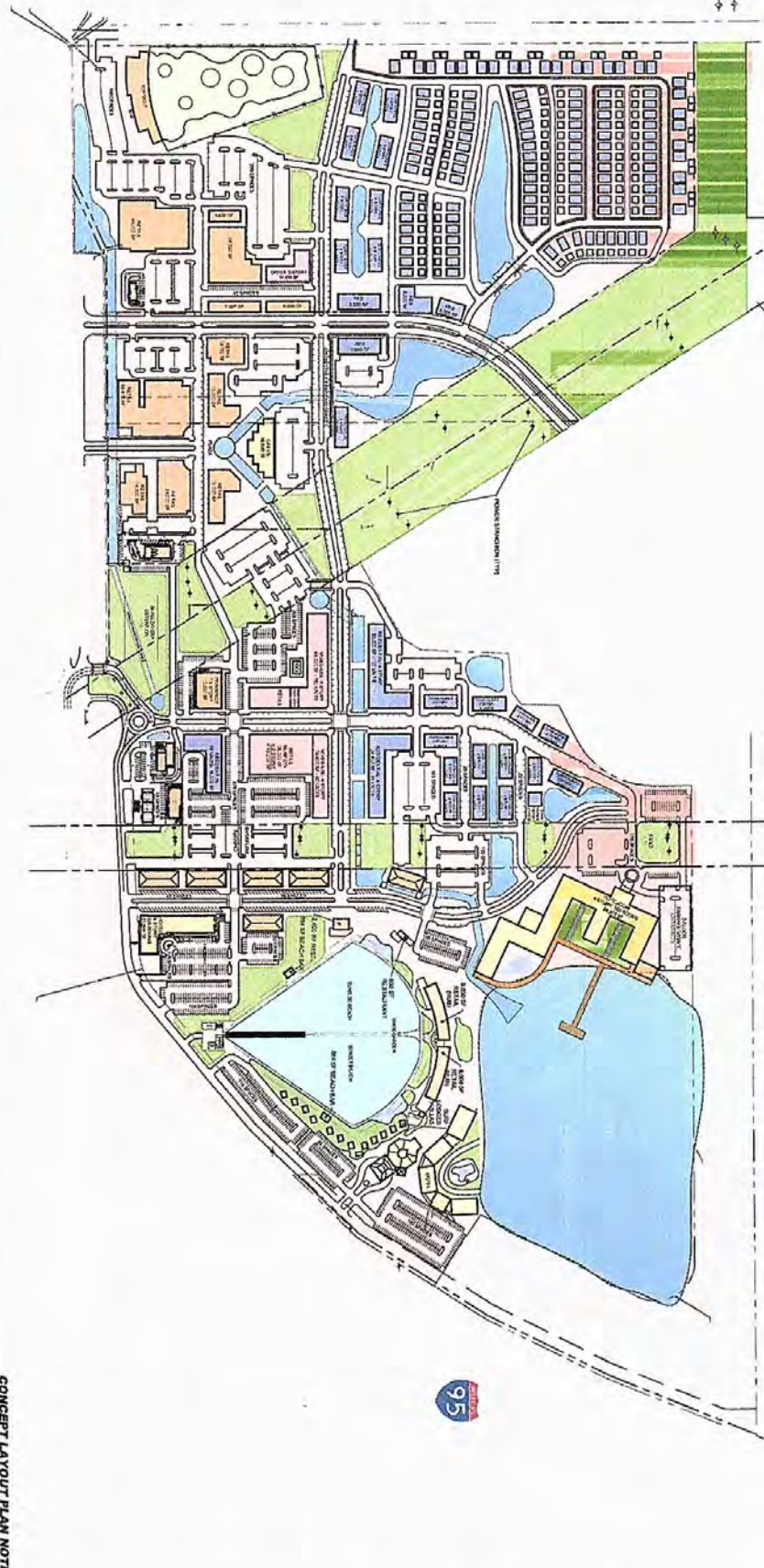
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 Stuart, Florida 34994

FIGURE 1
 PROJECT LOCATION
 Willow Lakes

Figure 2



CONCEPT LAYOUT PLAN NOTES

1. THIS PLAN IS A CONCEPTUAL PLAN AND IS NOT TO BE USED FOR CONSTRUCTION.
2. THIS PLAN IS A CONCEPTUAL PLAN AND IS NOT TO BE USED FOR CONSTRUCTION.
3. THIS PLAN IS A CONCEPTUAL PLAN AND IS NOT TO BE USED FOR CONSTRUCTION.
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FOR CONCEPT PURPOSES ONLY

PLANNED DEVELOPMENT PLAN DOCUMENTS

WILLOW LAKES, LLC

PROPOSED DEVELOPMENT
 W. BOWEN ROAD
 CITY OF FORT PIERCE
 FT. PIERCE, FLORIDA 34946
 MAP NO. 2020004

BOHLER //

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 WWW.BOHLERENGINEERING.COM

CONCEPTUAL LAYOUT PLAN

CA-01

DATE: 04/15/2015

EXISTING ROADWAY CONDITIONS

The study area is defined as the roadways upon which the project has an impact of 1% of the level of service capacity of the adjacent roadway link, 3% on the balance of the arterial and collector roadways within two miles, and 5% on arterials and collectors beyond two miles and on all freeway links. Once the project traffic was assigned, the study area was refined based on the impact percentages.

The study area roadways were defined in terms of existing plus committed lane geometrics and existing traffic volumes.

Lane Geometrics

The study area was reviewed to determine the existing number and type of lanes along the roadway. In addition, improvements outlined in City, County or FDOT Five Year Programs were included. Roadway Improvements included in the 5-year Road Program are:

- Midway Road from Selvitz Road to 25th Street, 2L to 4LD, Under Construction
- Midway Road from 25th Street to US 1, 2L to 4LD, under construction
- Kings Highway from south of Okeechobee Road to north of Picos Road, 2L to 4LD, FY 2024
- Kings Highway from north of Picos Road to north of I-95 overpass, 2L to 4LD, FY 2024
- St Lucie West Boulevard from I-95 southbound exit to I-95 northbound exit, 2L to 4LD, FY 2022

Key roadways are described below.

Midway Road is a two-lane arterial with an east/west alignment west of the project. It is a four - lane roadway from just west of I-95 to East Torino Parkway. The portion from 25th Street to US-1 is currently under construction with a completion date year of 2024. Both LTC Ranch and Village at Midway have commitments to widen Midway Road or contribute to its widening.

Glades Cut-Off Road is two lane arterial with a general northeast to southwest alignment.

I-95 is included in the St. Lucie County Needs Plan to widen with auxiliary lanes. A PDE is funded beginning year 2024.

Figure 3 illustrates the existing lanes plus committed roadway network and signalized intersections within the general study area.

Existing Traffic Counts/Service Volumes

Existing traffic counts/service volumes were taken from the St. Lucie County Transportation Planning Organization (TPO) and from counts made in 2020. The peak direction and the D-factor were calculated from existing turning movement counts for significant links. This information was used to calculate the off-peak volumes.

Table 1 Summarizes the existing lanes and the relationship to the standardized capacity for each roadway link in the initial study area.

Existing count data, network, and D-factor data are provided in **Appendix A**.



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LEGEND

- *Committed Lanes - Year
- = 2 LANE ARTERIAL
- = 4 LANE ARTERIAL
- = 6 LANE ARTERIAL
- ||||||| = 8 LANE ARTERIAL
- = 4 LANE EXPRESSWAY
- = 6 LANE EXPRESSWAY
- = SIGNALIZED INTERSECTION

FIGURE 3

EXISTING + COMMITTED
 ROADWAY NETWORK

WILLOW LAKES

February 2020

Table 1: Existing Traffic Counts and Service Volume

Segment	From	To	Direction	Federal Functional Classification (1)	Existing / Committed Capacity	2019 AM Peak Hour Volume	2019 PM Peak Hour Volume	
Midway Rd	Okeechobee Rd	Shinn Rd	EB	Rural Principal Arterial-uf	760	272	376	
	Okeechobee Rd	Shinn Rd	WB	Rural Principal Arterial-uf	760	295	347	
	Shinn Rd	McCarty Rd	EB	Rural Principal Arterial-uf	630	272	376	
	Shinn Rd	McCarty Rd	WB	Rural Principal Arterial-uf	630	295	347	
	McCarty Rd	11 Mile Rd	EB	Urban Principal Arterial-uf	700	295	347	
	McCarty Rd	11 Mile Rd	WB	Urban Principal Arterial-uf	700	272	376	
	11 Mile Rd	Arterial A	EB	Urban Principal Arterial-uf	700	285	347	
	11 Mile Rd	Arterial A	WB	Urban Principal Arterial-uf	700	272	376	
	Arterial A	95	EB	Urban Principal Arterial-uf	2100	295	347	
	Arterial A	95	WB	Urban Principal Arterial-uf	2100	272	376	
	95	Glades Cut off Rd	EB	Urban Principal Arterial-CI	2100	758	911	
	95	Glades Cut off Rd	WB	Urban Principal Arterial-CI	2100	926	1,027	
	Glades Cut off Rd	NW East Torino Pkwy	EB	Urban Principal Arterial-CI	2100	1,178	1,281	
	Glades Cut off Rd	NW East Torino Pkwy	WB	Urban Principal Arterial-CI	2100	1,226	890	
	NW East Torino Pkwy	Florida's Turnpike	EB	Urban Principal Arterial-CI	920	2,216	1,253	
	NW East Torino Pkwy	Florida's Turnpike	WB	Urban Principal Arterial-CI	920	995	1,304	
	Florida's Turnpike	NW Corporate Way	EB	Urban Principal Arterial-CI	920	1,216	1,253	
	Florida's Turnpike	NW Corporate Way	WB	Urban Principal Arterial-CI	920	995	1,304	
	NW Corporate Way	S Jenkins Rd	EB	Urban Principal Arterial-CI	920	1,216	1,204	
	NW Corporate Way	S Jenkins Rd	WB	Urban Principal Arterial-CI	920	1,036	1,304	
	S Jenkins Rd	Selvitz Rd	EB	Urban Principal Arterial-CI	920	1,216	1,204	
	S Jenkins Rd	Selvitz Rd	WB	Urban Principal Arterial-CI	920	1,078	1,304	
	Selvitz Rd (3)	S 25th St	EB	Urban Principal Arterial-CI	2100	973	940	
	Selvitz Rd	S 25th St	WB	Urban Principal Arterial-CI	2100	973	801	
	S 25th St (4)	Oleander	EB	Urban Principal Arterial-CI	2100	1,025	942	
	S 25th St	Oleander	WB	Urban Principal Arterial-CI	2100	805	802	
	Oleander	US-1	EB	Urban Principal Arterial-CI	2100	635	654	
	Oleander	US-1	WB	Urban Principal Arterial-CI	2100	808	800	
	Okeechobee Rd	McCarty Rd	Florida's Turnpike	EB	Urban Principal Arterial-CI	1810	378	391
		McCarty Rd	Florida's Turnpike	WB	Urban Principal Arterial-CI	1810	378	391
		Florida's Turnpike	S King's Hwy	EB	Urban Principal Arterial-CI	2010	378	391
		Florida's Turnpike	S King's Hwy	WB	Urban Principal Arterial-CI	2010	378	391
		S King's Hwy	Crossroads Pkwy	EB	Urban Principal Arterial-CI	4170	960	1,013
		S King's Hwy	Crossroads Pkwy	WB	Urban Principal Arterial-CI	4170	960	1,013
Crossroads Pkwy		95	EB	Urban Principal Arterial-CI	4170	1,063	1,086	
Crossroads Pkwy		95	WB	Urban Principal Arterial-CI	4170	1,063	1,086	
95		Jenkins Rd	EB	Urban Principal Arterial-CI	4240	1,976	1,578	
95		Jenkins Rd	WB	Urban Principal Arterial-CI	4240	1,112	1,709	
Jenkins Rd		McNeil Rd	EB	Urban Principal Arterial-CI	4040	1,976	1,516	
Jenkins Rd		McNeil Rd	WB	Urban Principal Arterial-CI	4040	1,018	1,709	
McNeil Rd		Virginia Ave	EB	Urban Principal Arterial-CI	3170	1,580	1,322	
McNeil Rd		Virginia Ave	WB	Urban Principal Arterial-CI	3170	851	1,649	
Virginia Ave	35th St	EB	Urban Principal Arterial-CI	2100	687	727		
Virginia Ave	35th St	WB	Urban Principal Arterial-CI	2100	687	727		
I-95	Orange Ave	Okeechobee Rd	NB	Interstate	7300	1,822	1,894	
	Orange Ave	Okeechobee Rd	SB	Interstate	7300	1,822	1,894	
	Okeechobee Rd	Midway Rd	NB	Interstate	4580	4,578	3,717	
	Okeechobee Rd	Midway Rd	SB	Interstate	4580	3,181	3,717	
	W Midway Rd	St Lucie West Blvd	NB	Interstate	4580	3,571	3,079	
	W Midway Rd	St Lucie West Blvd	SB	Interstate	4580	3,571	3,079	
	St Lucie West Blvd	Crossroads Pkwy	NB	Interstate	4580	4,048	3,657	
	St Lucie West Blvd	Crossroads Pkwy	SB	Interstate	4580	4,048	3,657	
Glades Cut off Rd	Range Line Rd	Reserve Blvd	NB	Urban Minor Arterial-UF	1070	200	252	
	Range Line Rd	Reserve Blvd	SB	Urban Minor Arterial-UF	1070	164	233	
	Reserve Blvd	Commerce Centre Dr	NB	Urban Minor Arterial-UF	1070	332	332	
	Reserve Blvd	Commerce Centre Dr	SB	Urban Minor Arterial-UF	1070	272	306	
	Commerce Centre Dr	W Midway Rd	NB	Urban Minor Arterial-CI	920	210	192	
	Commerce Centre Dr	W Midway Rd	SB	Urban Minor Arterial-CI	920	202	151	
	W Midway Rd	S Jenkins Road	NB	Urban Minor Arterial-CI	790	669	421	
	W Midway Rd	S Jenkins Road	SB	Urban Minor Arterial-CI	790	626	687	
	S Jenkins Rd	Selvitz Rd	NB	Urban Minor Arterial-CI	830	370	236	
	S Jenkins Rd	Selvitz Rd	SB	Urban Minor Arterial-CI	830	291	385	
SW Saint Lucie West Blvd	95	California Blvd	EB	Other Principal Arterial	2100	1,722	1,670	
	95	California Blvd	WB	Other Principal Arterial	2100	1,722	1,670	
	California Blvd	Country Club Dr	EB	Other Principal Arterial	2100	1,722	1,670	
	California Blvd	Country Club Dr	WB	Other Principal Arterial	2100	1,722	1,670	
	Country Club Dr	Cashmere Blvd	EB	Other Principal Arterial	2100	1,722	1,670	
	Country Club Dr	Cashmere Blvd	WB	Other Principal Arterial	2100	1,722	1,670	
	Cashmere Blvd	Florida's Turnpike	EB	Other Principal Arterial	2170	2,446	2,308	
	Cashmere Blvd	Florida's Turnpike	WB	Other Principal Arterial	2170	2,446	2,308	
	Florida's Turnpike	Bayshore Blvd	EB	Other Principal Arterial	2170	2,446	2,308	
	Florida's Turnpike	Bayshore Blvd	WB	Other Principal Arterial	2170	2,446	2,308	
Jenkins Rd	Edwards Rd	Okeechobee Rd	NB	Urban Minor Arterial	880	468	471	
	Edwards Rd	Okeechobee Rd	SB	Urban Minor Arterial	880	549	558	
	Okeechobee Rd	Orange Ave	NB	Urban Minor Arterial	920	485	525	
25th St	Okeechobee Rd	Orange Ave	SB	Urban Minor Arterial	920	593	569	
	Midway Rd	Edwards Rd	NB	Urban Principal Arterial-CI	2100	1,310	749	
St James	Midway Rd	Edwards Rd	SB	Urban Principal Arterial-CI	2100	838	1,222	
	Bayshore Blvd	Midway Rd	NB	Urban Principal Arterial	2100	1,188	689	
Virginia Ave	Bayshore Blvd	Midway Rd	SB	Urban Principal Arterial	2100	559	1,173	
	Okeechobee Rd	25th St	EB	Urban Principal Arterial	3020	1,159	1,126	
Prima Vista Blvd	Okeechobee Rd	25th St	WB	Urban Principal Arterial	3020	1,169	1,126	
	Bayshore Blvd	Alonso Blvd	EB	Urban Principal Arterial	2100	944	1,005	
	Bayshore Blvd	Alonso Blvd	WB	Urban Principal Arterial	2100	944	1,005	
	Alonso Blvd	US 1	EB	Urban Principal Arterial	2100	1,171	1,097	
Selvitz Rd	Alonso Blvd	US 1	WB	Urban Principal Arterial	2100	1,171	1,097	
	Bayshore Blvd	Midway Rd	NB	Minor Arterial	750	426	240	
	Bayshore Blvd	Midway Rd	SB	Minor Arterial	750	200	426	
	Midway Rd	Glades Cut Off Rd	NB	Minor Arterial	700	696	537	
East Torino Pkwy	Midway Rd	Glades Cut Off Rd	SB	Minor Arterial	700	359	644	
	Midway Rd	Turtle Dove Ln	NB	Urban Minor Arterial	830	1,030	625	
	Midway Rd	Turtle Dove Ln	SB	Urban Minor Arterial	880	555	978	

Source: St. Lucie TPO Traffic Counts and Level of Service Report Fall/Winter 2019/2020
 Note: Peak Direction Volumes from St. Lucie County Traffic Counts and LOS Report Fall/Winter 2019/2020
 Links analyzed in tables 4a and 4b include the off-peak volumes calculated using D factors in Appendix E.
 * TPO Value

- (1) St. Lucie County Comprehensive Plan
- (2) 2 lane portion falls with background traffic, and conditioned for improvement
- (3) Selvitz to Christensen Rd/ Christensen to 25th St all one capacity
- (4) 25th to Survite and Survite to Oleander same volume and capacity

TRIP GENERATION

To estimate the project traffic for this project various ITE Trip Generation, 10th edition rates were applied. The total trip generation will act as a “bank” of trips. As site plans are submitted, the trips will be calculated and draw down from the bank. The project has two unique uses; Topgolf and the Wave Garden. For Topgolf, 10,000 square feet of restaurant, 20 tees of golf, and 18 holes of golf were used to estimate trips. For the Wave Garden, 9.5 acres of a water slide park and 7,500 square feet of retail and restaurant, plus a 19,600 square foot recreation area were included to estimate trips. When the Wave Garden comes in for site plan, the quantity of uses will result in the trip calculation to be drawn from the overall pool of trips. No similar prototypes are operating currently in the US. Similar uses were used to estimate those uses as specific ITE and use codes for these uses do not exist. **Tables 2a, 2b, and 2c** provide the daily, AM, and PM trip generation for the proposed development. The project yields a high internal capture rate based on ITE internal capture pairings. The pairings were reduced in some cases to achieve an overall internal capture rate in line for projects of this size and with a complete mix of uses. **Appendix B** includes the details of the trip generation and internal capture for the Daily, AM and PM peak hours.

As shown, the project will generate 37,828 daily trips, 2,420 AM peak hour trips with 1,355 entering and 1,065 exiting, and 2,486 PM peak hour trips with 1,450 entering and 1,036 exiting.

PROJECT ASSIGNMENT

The project traffic was distributed using a select zone run from the 2040 Greater Treasure Coast Model. The assignment was run with and without the link to Arterial A in place. The resultant assignment from the 2040 Model is shown in **Appendix C**. The project percent assignment derived from that model assignment is shown in **Figure 4**.

STUDY AREA/ PROJECT IMPACT

Based on the project assignment and the impact to the network, the study area was refined.

Tables 3a and 3b summarize the project impact on the area network for the AM and PM Peak hour; respectively. As shown several links are significantly impacted by the project and required analysis.

FUTURE TRAFFIC LINKS

The project is expected to build out in 2035. To estimate future 2035 volumes the existing (2019/2020) traffic volumes were increased by a 0.5% growth rate. Traffic from 12 approved developments, including Village at Midway and LTC Ranch, was also added to create 2035 volumes without project. In no case was the resultant background growth less than 1%. In other words, if the background plus 0.5% per year plus committed traffic resulted in a volume that was less than existing plus 1% per year, the background traffic was adjusted up to the minimum 1%. The project traffic was then added to estimate the 2035 Total Traffic volumes with project. The Total Traffic volumes were then compared to the acceptable threshold on each link.

Tables 4a and 4b show the volumes and the relationship to adopted thresholds for the AM and PM Peak hours, respectively.

Appendix D includes the details regarding other approved projects.

Table 2 - Trip Generation

Table 2a: Daily

Table with 23 columns: Land Use, ITE Code, Intensity, Units, Trip Generation Rate, Directional Split (In, Out), Gross Trips (In, Out, Total), Internalization Trips (In, Out, Total, %), Net External Trips (In, Out, Total), Pass-by Trips (In, Out, Total, %), and Net New Trips (In, Out, Total). Rows include various land uses like Single Family Detached, Multifamily Housing, Medical Office, etc., ending with a TOTALS row.

Table 2b: AM Peak Hour

Table with 23 columns: Land Use, ITE Code, Intensity, Units, Trip Generation Rate, Directional Split (In, Out), Gross Trips (In, Out, Total), Internalization Trips (In, Out, Total, %), Net External Trips (In, Out, Total), Pass-by Trips (In, Out, Total, %), and Net New Trips (In, Out, Total). Rows include various land uses like Single Family Detached, Multifamily Housing, Medical Office, etc., ending with a TOTALS row.

Table 2c: PM Peak Hour

Table with 23 columns: Land Use, ITE Code, Intensity, Units, Trip Generation Rate, Directional Split (In, Out), Gross Trips (In, Out, Total), Internalization Trips (In, Out, Total, %), Net External Trips (In, Out, Total), Pass-by Trips (In, Out, Total, %), and Net New Trips (In, Out, Total). Rows include various land uses like Single Family Detached, Multifamily Housing, Medical Office, etc., ending with a TOTALS row.

Source: ITE 10th Edition Trip Generation Rates



O'Rourke Engineering & Planning



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FIGURE 4

PROJECT % ASSIGNMENT
 Main Table

WILLOW LAKES

April 2020

Table 3a: AM Project Significance

Segment	From	To	Existing + Committed (C) Lanes	Direction	Federal Functional Classification	Existing / Committed Capacity (2012 Directional FDOT LOS D)	In/Out	Project Volume Peak	%Project of Capacity Peak Direction	Project Percent Assignment	3% or Greater < 2 Miles 5% or Greater > 5 Miles	
Midway Rd	Okeechobee Rd	Shlins Rd	2	EB	Rural Principal Arterial-uf	760	In	27	3.57%	2%	NO	
	Okeechobee Rd	Shlins Rd	2	WB	Rural Principal Arterial-uf	760	Out	21	2.80%	2%	NO	
	Shlins Rd	McCarty Rd	2	EB	Rural Principal Arterial-uf	630	In	27	4.30%	2%	YES	
	Shlins Rd	McCarty Rd	2	WB	Rural Principal Arterial-uf	630	Out	21	3.38%	2%	YES	
	McCarty Rd	11 Mile Rd	2	EB	Urban Principal Arterial-uf	700	In	27	3.87%	2%	YES	
	McCarty Rd	11 Mile Rd	2	WB	Urban Principal Arterial-uf	700	Out	21	3.04%	2%	YES	
	11 Mile Rd	Arterial A	2	EB	Urban Principal Arterial-uf	700	In	27	3.87%	2%	YES	
	11 Mile Rd	Arterial A	2	WB	Urban Principal Arterial-uf	700	Out	21	3.04%	2%	YES	
	Arterial A	95	4D(C)	EB	Urban Principal Arterial-uf	2100	Out	1022	48.69%	96%	YES	
	Arterial A	95	4D(C)	WB	Urban Principal Arterial-uf	2100	In	1301	61.94%	96%	YES	
	95	Glades Cut off Rd	4D	EB	Urban Principal Arterial-CI	2100	Out	330	15.72%	31%	YES	
	95	Glades Cut off Rd	4D	WB	Urban Principal Arterial-CI	2100	In	420	20.00%	31%	YES	
	Glades Cut off Rd	NW East Torino Pkwy	4D	EB	Urban Principal Arterial-CI	2100	Out	266	12.68%	25%	YES	
	Glades Cut off Rd	NW East Torino Pkwy	4D	WB	Urban Principal Arterial-CI	2100	In	399	16.13%	25%	YES	
	NW East Torino Pkwy	Florida's Turnpike	2L	EB	Urban Principal Arterial-CI	920	Out	245	26.63%	23%	YES	
	NW East Torino Pkwy	Florida's Turnpike	2L	WB	Urban Principal Arterial-CI	920	In	312	33.88%	23%	YES	
	Florida's Turnpike	NW Corporate Way	2L	EB	Urban Principal Arterial-CI	920	Out	245	26.63%	23%	YES	
	Florida's Turnpike	NW Corporate Way	2L	WB	Urban Principal Arterial-CI	920	In	312	33.88%	23%	YES	
	NW Corporate Way	S Jenkins Rd	2L	EB	Urban Principal Arterial-CI	920	Out	245	26.63%	23%	YES	
	NW Corporate Way	S Jenkins Rd	2L	WB	Urban Principal Arterial-CI	920	In	312	33.88%	23%	YES	
	S Jenkins Rd	Selwitz Rd	2L	EB	Urban Principal Arterial-CI	920	Out	245	26.63%	23%	YES	
	S Jenkins Rd	Selwitz Rd	2L	WB	Urban Principal Arterial-CI	920	In	312	33.88%	23%	YES	
	Selwitz Rd	S 25th St	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	402	9.64%	19%	YES	
	Selwitz Rd	S 25th St	4D(C)	WB	Urban Principal Arterial-CI	2100	In	257	12.26%	19%	YES	
	S 25th St	Oleander	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	170	8.11%	16%	YES	
	S 25th St	Oleander	4D(C)	WB	Urban Principal Arterial-CI	2100	In	217	10.32%	16%	YES	
	Oleander	US-1	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	170	8.11%	16%	YES	
	Oleander	US-1	4D(C)	WB	Urban Principal Arterial-CI	2100	In	217	10.32%	16%	YES	
	Okeechobee Rd	Florida's Turnpike	S King's Hwy	4LD	EB	Urban Principal Arterial-CI	2010	In	14	0.67%	1%	NO
		Florida's Turnpike	S King's Hwy	4LD	WB	Urban Principal Arterial-CI	2010	Out	11	0.53%	1%	NO
S King's Hwy		Crossroads Pkwy	6LD	EB	Urban Principal Arterial-CI	4170	In	14	0.32%	1%	NO	
S King's Hwy		Crossroads Pkwy	6LD	WB	Urban Principal Arterial-CI	4170	Out	11	0.26%	1%	NO	
Crossroads Pkwy		95	6LD	EB	Urban Principal Arterial-CI	4170	In	14	0.32%	1%	NO	
Crossroads Pkwy		95	6LD	WB	Urban Principal Arterial-CI	4170	Out	11	0.26%	1%	NO	
95		Jenkins Rd	6LD	EB	Urban Principal Arterial-CI	4240	Out	298	7.03%	28%	YES	
95		Jenkins Rd	6LD	WB	Urban Principal Arterial-CI	4240	In	379	8.95%	28%	YES	
Jenkins Rd		McNeil Rd	6LD	EB	Urban Principal Arterial-CI	4040	Out	277	6.85%	26%	YES	
Jenkins Rd		McNeil Rd	6LD	WB	Urban Principal Arterial-CI	4040	In	352	8.72%	26%	YES	
McNeil Rd		Virginia Ave	6LD	EB	Urban Principal Arterial-CI	3170	Out	277	8.74%	26%	YES	
McNeil Rd	Virginia Ave	6LD	WB	Urban Principal Arterial-CI	3170	In	352	11.11%	26%	YES		
Virginia Ave	35th St	6LD	EB	Urban Principal Arterial-CI	2100	Out	75	3.55%	7%	NO		
Virginia Ave	35th St	6LD	WB	Urban Principal Arterial-CI	2100	In	95	4.52%	7%	NO		
I-95	Orange Ave	Okeechobee Rd	6LD	NB	Interstate	7320	Out	149	2.04%	14%	NO	
	Orange Ave	Okeechobee Rd	6LD	SB	Interstate	7320	In	190	2.59%	14%	NO	
	Okeechobee Rd	Midway Rd	6LD	NB	Interstate	4580	Out	490	10.70%	46%	YES	
	Okeechobee Rd	Midway Rd	6LD	SB	Interstate	4580	In	623	13.61%	46%	YES	
	W Midway Rd	St Lucie West Blvd	6LD	NB	Interstate	4580	In	257	5.62%	19%	YES	
	W Midway Rd	St Lucie West Blvd	6LD	SB	Interstate	4580	Out	202	4.42%	19%	NO	
	St Lucie West Blvd	Crosstown Pkwy	6LD	NB	Interstate	4580	In	244	5.33%	18%	YES	
	St Lucie West Blvd	Crosstown Pkwy	6LD	SB	Interstate	4580	Out	192	4.19%	18%	NO	
Glades Cut off Rd	Range Line Rd	Reserve Blvd	2	NB	Urban Minor Arterial-UF	1070	In	27	2.53%	2%	NO	
	Range Line Rd	Reserve Blvd	2	SB	Urban Minor Arterial-UF	1070	Out	21	1.99%	2%	NO	
	Reserve Blvd	Commerce Centre Dr	2	NB	Urban Minor Arterial-UF	1070	In	27	2.53%	2%	NO	
	Reserve Blvd	Commerce Centre Dr	2	SB	Urban Minor Arterial-UF	1070	Out	21	1.99%	2%	NO	
	W Midway Rd	Florida's Turnpike	2	NB	Urban Minor Arterial-CI	790	Out	64	8.09%	6%	YES	
	W Midway Rd	Florida's Turnpike	2	SB	Urban Minor Arterial-CI	790	In	81	10.29%	6%	YES	
	Florida's Turnpike	S Jenkins Rd	2	NB	Urban Minor Arterial-CI	790	Out	64	8.09%	6%	YES	
	Florida's Turnpike	S Jenkins Rd	2	SB	Urban Minor Arterial-CI	790	In	81	10.29%	6%	YES	
	S Jenkins Rd	Selwitz Rd	2	NB	Urban Minor Arterial-CI	830	Out	64	7.70%	6%	YES	
	S Jenkins Rd	Selwitz Rd	2	SB	Urban Minor Arterial-CI	830	In	81	9.80%	6%	YES	
SW Saint Lucie West Blvd	95	California Blvd	4LD	EB	Other Principal Arterial	2100	Out	11	0.51%	1%	NO	
	95	California Blvd	4LD	WB	Other Principal Arterial	2100	In	14	0.65%	1%	NO	
	California Blvd	Country Club Dr	4LD	EB	Other Principal Arterial	2100	Out	11	0.51%	1%	NO	
	California Blvd	Country Club Dr	4LD	WB	Other Principal Arterial	2100	In	14	0.65%	1%	NO	
	Country Club Dr	Cashmere Blvd	4LD	EB	Other Principal Arterial	2100	Out	11	0.51%	1%	NO	
	Country Club Dr	Cashmere Blvd	4LD	WB	Other Principal Arterial	2100	In	14	0.65%	1%	NO	
	Cashmere Blvd	Florida's Turnpike	6LD	EB	Other Principal Arterial	3170	Out	11	0.34%	1%	NO	
	Cashmere Blvd	Florida's Turnpike	6LD	WB	Other Principal Arterial	3170	In	14	0.43%	1%	NO	
	Florida's Turnpike	Bayshore Blvd	6LD	EB	Other Principal Arterial	3170	Out	11	0.34%	1%	NO	
Florida's Turnpike	Bayshore Blvd	6LD	WB	Other Principal Arterial	3170	In	14	0.43%	1%	NO		
Jenkins Rd	Edwards Rd	Okeechobee Rd	2L	NB	Urban Minor Arterial-CI	880	In	14	1.54%	1%	NO	
	Edwards Rd	Okeechobee Rd	2L	SB	Urban Minor Arterial-CI	880	Out	11	1.23%	1%	NO	
	Okeechobee Rd	Orange Ave	2L	NB	Urban Minor Arterial-CI	920	Out	11	1.15%	1%	NO	
	Okeechobee Rd	Orange Ave	2L	SB	Urban Minor Arterial-CI	920	In	14	1.47%	1%	NO	
25th St	Midway Rd	Edwards Rd	4LD	NB	Urban Principal Arterial-CI	2100	Out	21	1.01%	2%	NO	
	Midway Rd	Edwards Rd	4LD	SB	Urban Principal Arterial-CI	2100	In	27	1.29%	2%	NO	
St James	Bayshore Blvd	Midway Rd	4LD	NB	Urban Principal Arterial-CI	2100	In	14	0.65%	1%	NO	
	Bayshore Blvd	Midway Rd	4LD	SB	Urban Principal Arterial-CI	2100	Out	11	0.51%	1%	NO	
Virginia Ave	Okeechobee Rd	25th St	6LD	EB	Urban Principal Arterial-CI	3020	Out	170	5.64%	16%	YES	
	Okeechobee Rd	25th St	6LD	WB	Urban Principal Arterial-CI	3020	In	217	7.18%	16%	YES	
Prima Vista Blvd	Bayshore Blvd	Alrosa Blvd	4LD	EB	Urban Principal Arterial-CI	2100	Out	11	0.51%	1%	NO	
	Bayshore Blvd	Alrosa Blvd	4LD	WB	Urban Principal Arterial-CI	2100	In	14	0.65%	1%	NO	
	Alrosa Blvd	US 1	4LD	EB	Urban Principal Arterial-CI	2100	Out	11	0.51%	1%	NO	
	Alrosa Blvd	US 1	4LD	WB	Urban Principal Arterial-CI	2100	In	14	0.65%	1%	NO	
Selwitz Rd	Bayshore Blvd	Midway Rd	2	NB	Minor Arterial	750	In	41	5.42%	3%	YES	
	Bayshore Blvd	Midway Rd	2	SB	Minor Arterial	750	Out	32	4.26%	3%	NO	
	Midway Rd	Glades Cut off Rd	2	NB	Minor Arterial	700	Out	11	1.52%	1%	NO	
	Midway Rd	Glades Cut off Rd	2	SB	Minor Arterial	700	In	14	1.94%	1%	NO	
East Torino Pkwy	Midway Rd	Turtle Dove Ln	2	NB	Urban Minor Arterial-CI	880	In	27	3.08%	2%	YES	
	Midway Rd	Turtle Dove Ln	2	SB	Urban Minor Arterial-CI	880	Out	21	2.42%	2%	NO	
Arterial A	Midway Rd	EW 5	6LD	NB	Urban Major Arterial - CI	3020	In	27	0.90%	2%	NO	
	Midway Rd	EW 5	6LD	SB	Urban Major Arterial - CI	3020	Out	21	0.71%	2%	NO	
	EW 5	Glades Cut off Rd	6LD	NB	Urban Major Arterial - CI	3020	In	27	0.90%	2%	NO	
	EW 5	Glades Cut off Rd	6LD	SB	Urban Major Arterial - CI	3020	Out	21	0.71%	2%	NO	

Source of Functional Classification: St. Lucie County Comprehensive Plan
= 5%

(2) 2 lane partition falls with background traffic, and conditioned for improvement

Trips In	1355
Trips Out	1065
Total	2420

Table 3b: PM Project Significance

Segment	From	To	Existing + Committed (C) Lanes	Direction	Federal Functional Classification	Existing/Committed Capacity (2012 Directional FOOT LOS D)	In/Out	Project Volume Peak Direction	% Project of Capacity Peak Direction	Project Percent Assignment	3% or Greater < 2 Miles 5% or Greater 2-5 Miles	
Midway Rd	Okeechobee Rd	Shinn Rd	2	EB	Rural Principal Arterial-uf	760	In	29	3.82%	2%	NO	
	Okeechobee Rd	Shinn Rd	2	WB	Rural Principal Arterial-uf	760	Out	21	2.73%	2%	NO	
	Shinn Rd	McCarty Rd	2	EB	Rural Principal Arterial-uf	630	In	29	4.60%	2%	YES	
	Shinn Rd	McCarty Rd	2	WB	Rural Principal Arterial-uf	630	Out	21	3.29%	2%	YES	
	McCarty Rd	11 Mile Rd	2	EB	Urban Principal Arterial-uf	700	In	29	4.14%	2%	YES	
	McCarty Rd	11 Mile Rd	2	WB	Urban Principal Arterial-uf	700	Out	21	2.96%	2%	NO	
	11 Mile Rd	Arterial A	2	EB	Urban Principal Arterial-uf	700	In	29	4.14%	2%	YES	
	11 Mile Rd	Arterial A	2	WB	Urban Principal Arterial-uf	700	Out	21	2.96%	2%	NO	
	Arterial A	195	4D(C)	EB	Urban Principal Arterial-uf	2100	Out	995	47.36%	96%	YES	
	Arterial A	195	4D(C)	WB	Urban Principal Arterial-uf	2100	In	1302	66.29%	96%	YES	
	195	Glades Cut off Rd	4D	EB	Urban Principal Arterial-CI	2100	Out	321	15.29%	31%	YES	
	195	Glades Cut off Rd	4D	WB	Urban Principal Arterial-CI	2100	In	450	21.40%	31%	YES	
	Glades Cut off Rd	NW East Torino Pkwy	4D	EB	Urban Principal Arterial-CI	2100	Out	259	12.33%	25%	YES	
	Glades Cut off Rd	NW East Torino Pkwy	4D	WB	Urban Principal Arterial-CI	2100	In	363	17.26%	25%	YES	
	NW East Torino Pkwy	Florida's Turnpike	2L	EB	Urban Principal Arterial-CI	920	Out	238	25.90%	23%	YES	
	NW East Torino Pkwy	Florida's Turnpike	2L	WB	Urban Principal Arterial-CI	920	In	334	36.25%	23%	YES	
	Florida's Turnpike	NW Corporate Way	2L	EB	Urban Principal Arterial-CI	920	Out	238	25.90%	23%	YES	
	Florida's Turnpike	NW Corporate Way	2L	WB	Urban Principal Arterial-CI	920	In	334	36.25%	23%	YES	
	NW Corporate Way	S Jenkins Rd	2L	EB	Urban Principal Arterial-CI	920	Out	238	25.90%	23%	YES	
	NW Corporate Way	S Jenkins Rd	2L	WB	Urban Principal Arterial-CI	920	In	334	36.25%	23%	YES	
	S Jenkins Rd	Selvitz Rd	2L	EB	Urban Principal Arterial-CI	920	Out	238	25.90%	23%	YES	
	S Jenkins Rd	Selvitz Rd	2L	WB	Urban Principal Arterial-CI	920	In	334	36.25%	23%	YES	
	Selvitz Rd	S 25th St	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	197	9.37%	19%	YES	
	Selvitz Rd	S 25th St	4D(C)	WB	Urban Principal Arterial-CI	2100	In	276	13.12%	19%	YES	
	S 25th St	Oleander	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	166	7.89%	16%	YES	
	S 25th St	Oleander	4D(C)	WB	Urban Principal Arterial-CI	2100	In	232	11.05%	16%	YES	
	Oleander	US-1	4D(C)	EB	Urban Principal Arterial-CI	2100	Out	166	7.89%	16%	YES	
	Oleander	US-1	4D(C)	WB	Urban Principal Arterial-CI	2100	In	232	11.05%	16%	YES	
	Okeechobee Rd	McCarty Rd	Florida's Turnpike	4LD	EB	Urban Principal Arterial-CI	1810	In	0	0.00%	0%	NO
		McCarty Rd	Florida's Turnpike	4LD	WB	Urban Principal Arterial-CI	1810	Out	0	0.00%	0%	NO
		Florida's Turnpike	S King's Hwy	4LD	EB	Urban Principal Arterial-CI	2010	In	15	0.72%	1%	NO
		Florida's Turnpike	S King's Hwy	4LD	WB	Urban Principal Arterial-CI	2010	Out	10	0.52%	1%	NO
		S King's Hwy	Crossroads Pkwy	6LD	EB	Urban Principal Arterial-CI	4170	In	15	0.35%	1%	NO
S King's Hwy		Crossroads Pkwy	6LD	WB	Urban Principal Arterial-CI	4170	Out	10	0.25%	1%	NO	
Crossroads Pkwy		195	6LD	EB	Urban Principal Arterial-CI	4170	In	15	0.35%	1%	NO	
Crossroads Pkwy		195	6LD	WB	Urban Principal Arterial-CI	4170	Out	10	0.25%	1%	NO	
195		Jenkins Rd	6LD	EB	Urban Principal Arterial-CI	4240	In	290	6.84%	28%	YES	
195		Jenkins Rd	6LD	WB	Urban Principal Arterial-CI	4240	Out	406	9.58%	28%	YES	
Jenkins Rd		McNeill Rd	6LD	EB	Urban Principal Arterial-CI	4040	In	269	6.67%	26%	YES	
Jenkins Rd		McNeill Rd	6LD	WB	Urban Principal Arterial-CI	4040	Out	377	9.33%	26%	YES	
McNeill Rd		Virginia Ave	6LD	EB	Urban Principal Arterial-CI	3170	In	289	8.50%	26%	YES	
McNeill Rd	Virginia Ave	6LD	WB	Urban Principal Arterial-CI	3170	Out	377	11.89%	26%	YES		
Virginia Ave	35th St	6LD	EB	Urban Principal Arterial-CI	2100	Out	73	3.45%	7%	NO		
Virginia Ave	35th St	6LD	WB	Urban Principal Arterial-CI	2100	In	102	4.83%	7%	NO		
I-95	Orange Ave	Okeechobee Rd	6LD	NB	Interstate	7320	Out	145	1.98%	14%	NO	
	Orange Ave	Okeechobee Rd	6LD	SB	Interstate	7320	In	203	2.77%	14%	NO	
	Okeechobee Rd	Midway Rd	6LD	NB	Interstate	4580	Out	477	10.41%	46%	YES	
	Okeechobee Rd	Midway Rd	6LD	SB	Interstate	4580	In	667	14.56%	46%	YES	
	W Midway Rd	St Lucie West Blvd	6LD	NB	Interstate	4580	In	276	6.02%	19%	YES	
	W Midway Rd	St Lucie West Blvd	6LD	SB	Interstate	4580	Out	197	4.30%	19%	NO	
	St Lucie West Blvd	Croxtown Pkwy	6LD	NB	Interstate	4580	Out	261	5.70%	18%	YES	
	St Lucie West Blvd	Croxtown Pkwy	6LD	SB	Interstate	4580	Out	186	4.07%	18%	NO	
Glades Cut off Rd	Range Line Rd	Reserve Blvd	2	NB	Urban Minor Arterial-UF	1070	In	29	2.71%	2%	NO	
	Range Line Rd	Reserve Blvd	2	SB	Urban Minor Arterial-UF	1070	Out	21	1.94%	2%	NO	
	Reserve Blvd	Commerce Centre Dr	2	NB	Urban Minor Arterial-UF	1070	In	29	2.71%	2%	NO	
	Reserve Blvd	Commerce Centre Dr	2	SB	Urban Minor Arterial-UF	1070	Out	21	1.94%	2%	NO	
	W Midway Rd	Florida's Turnpike	2	NB	Urban Minor Arterial-CI	790	Out	62	7.87%	6%	YES	
	W Midway Rd	Florida's Turnpike	2	SB	Urban Minor Arterial-CI	790	In	87	11.01%	6%	YES	
	Florida's Turnpike	S Jenkins Rd	2	NB	Urban Minor Arterial-CI	790	Out	62	7.87%	6%	YES	
	Florida's Turnpike	S Jenkins Rd	2	SB	Urban Minor Arterial-CI	790	In	87	11.01%	6%	YES	
SW Saint Lucie West Blvd	S Jenkins Rd	Selvitz Rd	2	NB	Urban Minor Arterial-CI	830	Out	62	7.48%	6%	YES	
	S Jenkins Rd	Selvitz Rd	2	SB	Urban Minor Arterial-CI	830	In	87	10.48%	6%	YES	
	195	California Blvd	4LD	EB	Other Principal Arterial	2100	Out	10	0.49%	1%	NO	
	195	California Blvd	4LD	WB	Other Principal Arterial	2100	In	15	0.69%	1%	NO	
	California Blvd	Country Club Dr	4LD	EB	Other Principal Arterial	2100	Out	10	0.49%	1%	NO	
	California Blvd	Country Club Dr	4LD	WB	Other Principal Arterial	2100	In	15	0.69%	1%	NO	
	Country Club Dr	Cashmere Blvd	4LD	EB	Other Principal Arterial	2100	Out	10	0.49%	1%	NO	
	Country Club Dr	Cashmere Blvd	4LD	WB	Other Principal Arterial	2100	In	15	0.69%	1%	NO	
	Cashmere Blvd	Florida's Turnpike	6LD	EB	Other Principal Arterial	3170	Out	10	0.33%	1%	NO	
	Cashmere Blvd	Florida's Turnpike	6LD	WB	Other Principal Arterial	3170	In	15	0.46%	1%	NO	
Jenkins Rd	Florida's Turnpike	Baysore Blvd	6LD	EB	Other Principal Arterial	3170	Out	10	0.33%	1%	NO	
	Florida's Turnpike	Baysore Blvd	6LD	WB	Other Principal Arterial	3170	In	15	0.46%	1%	NO	
25th St	Edwards Rd	Okeechobee Rd	2L	NB	Urban Minor Arterial-CI	880	In	15	1.65%	1%	NO	
	Edwards Rd	Okeechobee Rd	2L	SB	Urban Minor Arterial-CI	880	Out	10	1.18%	1%	NO	
St James	Okeechobee Rd	Orange Ave	2L	NB	Urban Minor Arterial-CI	920	Out	10	1.13%	1%	NO	
	Okeechobee Rd	Orange Ave	2L	SB	Urban Minor Arterial-CI	920	In	15	1.58%	1%	NO	
Virginia Ave	Midway Rd	Edwards Rd	4LD	NB	Urban Principal Arterial-CI	2100	Out	21	0.99%	2%	NO	
	Midway Rd	Edwards Rd	4LD	SB	Urban Principal Arterial-CI	2100	In	29	1.38%	2%	NO	
Prima Vista Blvd	Baysore Blvd	Midway Rd	4LD	NB	Urban Principal Arterial-CI	2100	In	15	0.69%	1%	NO	
	Baysore Blvd	Midway Rd	4LD	SB	Urban Principal Arterial-CI	2100	Out	10	0.49%	1%	NO	
Selvitz Rd	Okeechobee Rd	25th St	6LD	EB	Urban Principal Arterial-CI	3020	Out	166	5.49%	16%	YES	
	Okeechobee Rd	25th St	6LD	WB	Urban Principal Arterial-CI	3020	In	232	7.68%	16%	YES	
Arterial A	Baysore Blvd	Alonso Blvd	4LD	EB	Urban Principal Arterial-CI	2100	Out	10	0.49%	1%	NO	
	Baysore Blvd	Alonso Blvd	4LD	WB	Urban Principal Arterial-CI	2100	In	15	0.69%	1%	NO	
Selvitz Rd	Alonso Blvd	US 1	4LD	EB	Urban Principal Arterial-CI	2100	Out	10	0.49%	1%	NO	
	Alonso Blvd	US 1	4LD	WB	Urban Principal Arterial-CI	2100	In	15	0.69%	1%	NO	
Arterial A	Baysore Blvd	Midway Rd	2	NB	Minor Arterial	750	In	44	5.80%	3%	YES	
	Baysore Blvd	Midway Rd	2	SB	Minor Arterial	750	Out	31	4.14%	3%	NO	
Arterial A	Midway Rd	Glades Cut off Rd	2	NB	Minor Arterial	700	Out	10	1.43%	1%	NO	
	Midway Rd	Glades Cut off Rd	2	SB	Minor Arterial	700	In	15	2.07%	1%	NO	
Arterial A	Midway Rd	EW 5	6LD	NB	Urban Major Arterial - CI	3020	In	29	0.96%	2%	NO	
	Midway Rd	EW 5	6LD	SB	Urban Major Arterial - CI	3020	Out	21	0.69%	2%	NO	
Arterial A	EW 5	Glades Cut off Rd	6LD	NB	Urban Major Arterial - CI	3020	In	29	0.96%	2%	NO	
	EW 5	Glades Cut off Rd	6LD	SB	Urban Major Arterial - CI	3020	Out	21	0.69%	2%	NO	

Source of Functional Classification: St. Lucie County Comprehensive Plan
 = 5%
 (2) 2 lane portion falls with background traffic, and conditioned for improvement

Trips In	1450
Trips Out	1036
Total	2486

Table 48: 2035 Link Analysis - AM Peak Hour

Segment	From	To	Existing + Committed (C) Lanes	Direction	Federal Functional Classification	2013 Volume	Existing/Committed Capacity (2012 Directional FOOT LOS D)	AM Approved Projects	2035 AM Total Traffic w/o Project	Calculated Growth	Minimum Existing + 1% Growth per Year	2035 AM Total Traffic w/ Project	In/Out	Project Volume Peak Direction	% Project of Capacity Peak Direction	Project Percent Assignment	3% (PS) or Greater	Satisfies Criteria w/o Project	Satisfies Criteria w/ Project	Improvement	Proposed Capacity	Satisfies Criteria with Expanded Capacity
Midway Rd	Shaw Rd	McCarty Rd	2	EB	Rural Principal Arterial/Urban Principal Arterial-CA	272	620	33	260	575	4.33%	542	In	27	4.30%	2%	YES	YES	N/A		Yes	
	Shaw Rd	McCarty Rd	2	WB	Rural Principal Arterial/Urban Principal Arterial-CA	255	620	35	282	522	3.38%	523	Out	21	3.38%	2%	YES	YES	N/A		Yes	
	McCarty Rd	11 Mile Rd	2	WB	Urban Principal Arterial-CA	255	700	35	308	538	3.58%	545	In	27	3.87%	2%	YES	YES	N/A		Yes	
	McCarty Rd	11 Mile Rd	2	WB	Urban Principal Arterial-CA	272	700	23	339	434	2.95%	455	Out	21	3.87%	2%	YES	YES	N/A		Yes	
	11 Mile Rd	Arterial A	2	EB	Urban Principal Arterial-CA	255	700	35	287	507	4.39%	614	In	27	3.87%	2%	YES	YES	N/A		Yes	
	11 Mile Rd	Arterial A	2	WB	Urban Principal Arterial-CA	255	700	35	287	507	4.39%	614	Out	21	3.87%	2%	YES	YES	N/A		Yes	
	Arterial A	55	2 ALG(2)	EB	Urban Principal Arterial-CA	255	1100	35	366	1156	8.69%	3209	In	102	48.69%	50%	YES	YES	6LD	3000	Yes	
	Arterial A	55	2 ALG(2)	WB	Urban Principal Arterial-CA	272	1100	33	374	1269	8.46%	3359	In	102	48.69%	50%	YES	YES	6LD	4000	Yes	
	55	Glades Out off Rd	4D	EB	Urban Principal Arterial-CA	758	2100	63	1,754	2069	13.44%	1554	Out	308	15.27%	31%	YES	YES	N/A		Yes	
	55	Glades Out off Rd	4D	WB	Urban Principal Arterial-CA	935	2100	77	573	1576	3.89%	1896	In	420	20.00%	31%	YES	YES	N/A		Yes	
Midway Rd	Glades Out off Rd	NW East Torino Hwy	4D	EB	Urban Principal Arterial-CA	1,176	2100	54	703	1999	3.30%	2245	Out	346	11.60%	20%	YES	YES	N/A		3000	Yes
	Glades Out off Rd	NW East Torino Hwy	4D	WB	Urban Principal Arterial-CA	1,176	2100	50	721	2157	3.49%	2551	Out	338	12.85%	20%	YES	YES	N/A		3000	Yes
	NW East Torino Hwy	NW Corporate Way	2	WB	Urban Principal Arterial-CA	995	900	83	822	2000	4.69%	2312	In	312	33.88%	20%	YES	No	6LD	3000	Yes	
	NW East Torino Hwy	NW Corporate Way	2	WB	Urban Principal Arterial-CA	1,216	900	101	922	1889	2.62%	2084	Out	245	20.67%	20%	YES	No	6LD	2100	Yes	
	NW Corporate Way	5 Jenkins Rd	2	WB	Urban Principal Arterial-CA	1,086	900	85	621	1774	3.27%	2035	In	312	31.88%	20%	YES	No	6LD	2100	Yes	
	5 Jenkins Rd	Scholar Rd	2	WB	Urban Principal Arterial-CA	1,216	900	101	627	1794	2.42%	2029	Out	245	20.67%	20%	YES	No	6LD	2100	Yes	
	Scholar Rd	55	2	WB	Urban Principal Arterial-CA	1,038	900	90	540	1718	2.92%	2023	In	312	31.88%	20%	YES	No	6LD	2100	Yes	
	Scholar Rd	55	2	WB	Urban Principal Arterial-CA	1,216	900	101	627	1794	2.42%	2029	Out	245	20.67%	20%	YES	No	6LD	2100	Yes	
	Scholar Rd	55	2	WB	Urban Principal Arterial-CA	1,038	900	90	540	1718	2.92%	2023	In	312	31.88%	20%	YES	No	6LD	2100	Yes	
	Scholar Rd	55	2	WB	Urban Principal Arterial-CA	1,216	900	101	627	1794	2.42%	2029	Out	245	20.67%	20%	YES	No	6LD	2100	Yes	
Okeechobee Rd	525th St	Okeechobee	40(C)	EB	Urban Principal Arterial-CA	1,005	2100	67	448	1309	3.14%	1651	In	170	8.11%	20%	YES	YES	N/A		Yes	
	525th St	Okeechobee	40(C)	WB	Urban Principal Arterial-CA	865	2100	53	401	1089	3.43%	1929	Out	170	10.31%	20%	YES	YES	N/A		Yes	
	Okeechobee	US-1	40(C)	WB	Urban Principal Arterial-CA	853	2100	52	448	1333	3.13%	1649	In	170	8.09%	20%	YES	YES	N/A		Yes	
	Okeechobee	US-1	40(C)	WB	Urban Principal Arterial-CA	1,112	2100	59	317	1114	1.14%	1919	In	328	8.99%	20%	YES	YES	N/A		Yes	
	Jenkins Rd	McCarty Rd	80D	EB	Urban Principal Arterial-CA	1,497	600	164	338	1278	0.89%	2555	Out	277	6.85%	20%	YES	YES	N/A		Yes	
	Jenkins Rd	McCarty Rd	80D	WB	Urban Principal Arterial-CA	1,603	600	165	70	1717	0.57%	1194	Out	352	8.74%	20%	YES	YES	N/A		Yes	
	McCarty Rd	Virginia Ave	60D	EB	Urban Principal Arterial-CA	1,580	3170	131	6	930	0.59%	1853	Out	372	11.31%	20%	YES	YES	N/A		Yes	
	McCarty Rd	Virginia Ave	60D	WB	Urban Principal Arterial-CA	853	3170	71	8	930	0.59%	1853	Out	372	11.31%	20%	YES	YES	N/A		Yes	
	Okeechobee Rd	Midway Rd	60D	EB	Urban Principal Arterial-CA	4778	6500	390	759	5717	1.40%	6207	Out	490	10.70%	40%	YES	No	6LD	7200	Yes	
	Okeechobee Rd	Midway Rd	60D	WB	Urban Principal Arterial-CA	4778	6500	390	759	5717	1.40%	6207	Out	490	10.70%	40%	YES	No	6LD	7200	Yes	
I-95	Okeechobee Rd	US-1	60D	EB	Urban Principal Arterial-CA	317	4500	135	1,137	1,454	2.13%	1,922	In	244	5.42%	10%	YES	No	6LD	7200	Yes	
	Okeechobee Rd	US-1	60D	WB	Urban Principal Arterial-CA	317	4500	135	1,137	1,454	2.13%	1,922	Out	244	5.42%	10%	YES	No	6LD	7200	Yes	
	US-1	US-1	60D	EB	Urban Principal Arterial-CA	4048	4500	135	1,297	5651	2.14%	5,015	In	244	5.31%	18%	YES	No	6LD	7200	Yes	
	US-1	US-1	60D	WB	Urban Principal Arterial-CA	4048	4500	135	1,297	5651	2.14%	5,015	Out	244	5.31%	18%	YES	No	6LD	7200	Yes	
	US-1	US-1	60D	EB	Urban Minor Arterial-CA	609	790	56	133	858	1.57%	912	Out	64	8.07%	6%	YES	No	6LD	2000	Yes	
	US-1	US-1	60D	WB	Urban Minor Arterial-CA	536	790	44	137	797	1.87%	788	In	81	10.37%	6%	YES	No	6LD	2000	Yes	
	Glades Out Off Rd	5 Jenkins Rd	2	EB	Urban Minor Arterial-CA	310	810	31	335	515	2.84%	600	Out	64	2.79%	6%	YES	YES	N/A		Yes	
	Glades Out Off Rd	5 Jenkins Rd	2	WB	Urban Minor Arterial-CA	310	810	31	335	515	2.84%	600	Out	64	2.79%	6%	YES	YES	N/A		Yes	
	5 Jenkins Rd	Scholar Rd	2	EB	Urban Minor Arterial-CA	779	810	24	40	735	0.89%	1,171	Out	81	5.89%	18%	YES	YES	N/A		Yes	
	5 Jenkins Rd	Scholar Rd	2	WB	Urban Minor Arterial-CA	779	810	24	40	735	0.89%	1,171	Out	81	5.89%	18%	YES	YES	N/A		Yes	
Virginia Ave	Okeechobee Rd	60D	WB	Urban Principal Arterial-CA	1159	3000	57	54	1380	0.76%	1,311	In	217	2.18%	18%	YES	YES	N/A		Yes		
Scholar Rd	Midway Rd	60D	WB	Urban Principal Arterial-CA	416	750	35	50	511	1.14%	1,145	In	61	5.47%	3%	YES	YES	N/A		Yes		
East Torino Hwy	Midway Rd	2	WB	Urban Minor Arterial-CA	1,010	850	85	29	1145	0.66%	1,208	In	27	3.05%	2%	YES	No	6LD	2000	Yes		

Total In	1372
Total Out	1205
Total	2,577
From Growth	16

Source of Functional Classification: St. Lucie County Comprehensive Plan
 170+ 2019 Traffic Volume
 (1) Shaded areas indicate project with the biggest unit needed for background
 (2) Highway from Arterial A to I-95 requires 4D for Background Traffic, Developer funded

Table 4b: 2035 Link Analysis - PM Peak Hour

Segment	From	To	Existing + Committed (C) Lanes	Direction	Federal Functional Classification	2019 Volume	Existing/Committed Capacity (2012 Equivalent FTOT Lanes D)	% Growth	PM Approved Projects	2035 PM Total Traffic w/o Project	Calculated Growth	Minimum Exceeds + 3% Growth per Year	2035 PM Traffic w/ Project	In/Dist	Project Volume Peak Direction	% of Project Capacity Peak Direction	Project Percent Assignment	3% (2.5%) or Greater	Substitutes Criteria w/o Project	Satisfies Criteria w/ Project	Improvement	Proposed Capacity	Satisfies Criteria with Expanded Capacity	
Midway Rd	Shannon Rd	McCombs Rd	3	EB	Urban Principal Arterial-CI	315	650	31%	261	658	3.48%	272	377	In	39	4.09%	3%	155	No	No	4RD	2000	Yes	
	McCombs Rd	Midway Rd	3	WB	Urban Principal Arterial-CI	347	650	31%	261	723	5.31%	272	377	Out	21	1.59%	2%	155	No	No	4RD	2000	Yes	
	McCombs Rd	31 Miles Rd	2	EB	Urban Principal Arterial-CI	347	700	29%	255	611	3.65%	700	849	In	29	4.14%	2%	155	Yes	Yes	N/A	N/A	Yes	
	31 Miles Rd	Arrestee A	2	EB	Urban Principal Arterial-CI	347	700	29%	255	650	4.00%	700	879	In	29	4.14%	2%	155	Yes	Yes	N/A	N/A	Yes	
	Arrestee A	Arrestee A	2	WB	Urban Principal Arterial-CI	347	2100	29%	2147	2123	13.30%	2100	3118	Out	995	47.36%	50%	4000	No at, No EL	No at, No EL	RD+	4000	Yes	
	Arrestee A	055	2/(4)Dist	EB	Urban Principal Arterial-CI	347	2100	29%	2147	1845	4.33%	2100	2513	In	379	4.59%	2%	155	Yes	Yes	N/A	N/A	Yes	
	055	Glades Cut-off Rd	2/(4)Dist	WB	Urban Principal Arterial-CI	347	2100	29%	2147	1845	4.33%	2100	2513	Out	379	4.59%	2%	155	Yes	Yes	N/A	N/A	Yes	
	Glades Cut-off Rd	055	4D	WB	Urban Principal Arterial-CI	1,022	2100	85%	518	1550	3.01%	2100	2100	In	410	21.40%	31%	155	Yes	Yes	N/A	N/A	Yes	
	Glades Cut-off Rd	NW East Torino Hwy	4D	EB	Urban Principal Arterial-CI	1,481	2100	106%	1,315	2362	4.27%	2100	2761	Out	259	12.33%	23%	155	Yes	Yes	6RD	3010	Yes	
	NW East Torino Hwy	Florida's Turnpike	4D	WB	Urban Principal Arterial-CI	890	2100	74%	915	8273	4.25%	2100	2242	In	363	17.10%	23%	155	Yes	Yes	6RD	3010	Yes	
	Florida's Turnpike	055	2L	EB	Urban Principal Arterial-CI	1,333	930	104%	1,414	2791	5.31%	930	2079	Out	238	25.50%	23%	155	No	No	6RD	3010	No	
	055	055	2L	WB	Urban Principal Arterial-CI	1,333	930	104%	1,414	2791	5.31%	930	2079	Out	238	25.50%	23%	155	No	No	6RD	3010	No	
	055	055	2L	EB	Urban Principal Arterial-CI	1,333	930	104%	1,414	2791	5.31%	930	2079	Out	238	25.50%	23%	155	No	No	6RD	3010	No	
	055	055	2L	WB	Urban Principal Arterial-CI	1,333	930	104%	1,414	2791	5.31%	930	2079	Out	238	25.50%	23%	155	No	No	6RD	3010	No	
	055	NW Corporate Way	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes	
	NW Corporate Way	S Jettison Rd	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes	
	S Jettison Rd	S Jettison Rd	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes	
	S Jettison Rd	S Jettison Rd	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes	
	S Jettison Rd	S Jettison Rd	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes	
	S Jettison Rd	S Jettison Rd	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes	
	S Jettison Rd	S Jettison Rd	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes	
	S Jettison Rd	S Jettison Rd	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes	
S Jettison Rd	S Jettison Rd	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes		
S Jettison Rd	S Jettison Rd	2L	WB	Urban Principal Arterial-CI	1,304	930	100%	1,075	2485	4.13%	930	2872	Out	314	24.52%	23%	155	No	No	6RD	3010	Yes		
Okeechobee Rd	S Jettison Rd	US-1	4/DCI	WB	Urban Principal Arterial-CI	942	2100	67%	541	1409	3.05%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	US-1	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	942	2100	67%	541	1409	3.05%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	S Jettison Rd	S Jettison Rd	4/DCI	WB	Urban Principal Arterial-CI	840	2100	79%	668	1706	3.67%	2100	1503	Out	197	9.37%	12%	155	Yes	Yes	N/A	N/A	Yes	
	1-95	Okeechobee Rd	Midway Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes
		Midway Rd	Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes
Okeechobee Rd		Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes	
Okeechobee Rd		Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes	
Okeechobee Rd		Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes	
Okeechobee Rd		Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes	
Okeechobee Rd		Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes	
Okeechobee Rd		Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes	
Okeechobee Rd		Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes	
Okeechobee Rd		Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes	
Okeechobee Rd	Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	1,789	4240	144%	247	2058	1.25%	4240	2054	Out	790	5.64%	20%	155	Yes	Yes	N/A	N/A	Yes		
Glades Cut off Rd	Okeechobee Rd	Midway Rd	6/D	WB	Urban Principal Arterial-CI	3641	4580	253%	1,448	1,874	2.95%	4580	3,518	Out	477	10.43%	40%	155	No	No	6RD	2100	Yes	
	Midway Rd	Okeechobee Rd	6/D	WB	Urban Principal Arterial-CI	3641	4580	253%																

ROADWAY NEEDS - LINKS

Based on the total traffic volumes, several roadways exceed capacity.

The project proposes to mitigate its impact by use of proportionate share. Florida Statutes state that if any road is determined to be transportation deficient without the project traffic under review, the costs of correcting that deficiency shall be removed from the project's proportionate-share calculation and the necessary transportation improvements to correct that deficiency shall be considered to be in place for purposes of the proportionate-share calculation. **Figure 5** illustrates the roadway improvements to which the project will provide a proportionate share contribution.

Table 5 summarizes the proportionate share by improvement for those improvements not needed by background traffic. As shown, the project's share is \$7,506,123. That cost includes the roadway links and one intersection described in an upcoming section on intersection analysis. Long Range planning estimates from FDOT were applied to develop the construction costs. And additional 30% was added for design and contingency. Right-of-way costs based on a 20% increase over assessed values was included as well.

The applicant will pay its proportionate share as follows:

- + The applicant shall pay \$5,843,946 to widen or the applicant shall cause to widen Midway Road from Arterial A to I-95 as a six-lane divided roadway with extended turn lanes, prior to pulling building permits that generate more than 805 AM inbound trips, or 873 AM outbound trips,
- + The applicant shall pay \$806,463 to widen Midway Road from Glades Cut-off to NW East Torino Parkway as a six-lane divided arterial prior to pulling building permits that generate 920 AM outbound trips,
- + The applicant shall pay \$132,932 to widen Midway Road from I-95 to Glades Cut-Off prior to pulling building permits that generate more than 1005 PM outbound trips, and
- + The applicant shall pay \$722,782 to widen Midway Road from Jenkins Road to Selvitz. prior to pulling building permits that generate more than 1077 PM inbound trips.

DRIVEWAY ANALYSIS

There are three project driveways on Midway Road; Gordy Road (Main Street/Driveway 1), Driveway 2 (Right-in/Right-out), and Pier Avenue (Driveway 3) (Full Access). When the project Village at Midway extends Arterial A, Willow Lakes will connect to Arterial A at Driveway 4.

Figure 6 summarizes the driveway volumes. The top half shows the volumes with Village at Midway and the Arterial A Extension in place. The bottom half illustrates the volumes without the Arterial A Extension and without the Village at Midway traffic volumes. This scenario is included to establish the turn lanes at the project driveways without the connection to Arterial A.



O'Rourke Engineering & Planning



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 Stuart, Florida 34994

- = 2L to 4L
- = 2L to 6L
- = 4L to 6L
- = 4L to 6L+

 = Intersection Improvements

FIGURE 5

Road Improvements
 to be Prop Shared

WILLOW LAKES

February 2020

TABLE 5a: Prop Share - 2035 - AM

Segment	From	To	Direction	2035 Assignment	Existing 2019 Volume (a)	2035 AM Peak Hour, Direct. Volume	Generalized Service Capacity (b)	Total Cumulative Project Volume-Peak Direction	Total Traffic Peak Direction (2035) (c)	Existing Number of Lanes	Proposed Number of Lanes	Proposed Capacity	Length in Miles	FOOT Unit Cost	Construction Cost	Design/CEI/Contingency 30%(1)	Right of Way Cost	Total Cost of Improvement	Project Trips adjusted for remaining capacity	Project % of New Capacity	Project Share of Cost	Payment Due (2)
Michery Road	Arroyal A	I-95	EB	96.0%	285	1,186	2,100	1022	2208	4D	6D	3000	1.32	4,915,750	3,144,995	973,319	0	4,217,714	108	11.2%	426,937	N/A
	Arroyal A	I-95	WB	96.0%	272	2,059	2,100	1301	3550	4D	6D+	4600	1.387	6,749,490	4,005,774	1,201,732	17,818	5,215,524	1,250	64.9%	3,168,394	892,160
	Glades Cnt Off	I-95	EB	25.0%	1178	1,979	2,100	246	2445	4D	6D	3000	0.28	4,915,750	688,205	256,462	0	894,667	145	18.0%	161,250	500,160
	Glades Cnt Off	I-95	WB	25.0%	2128	2,082	2,100	339	2401	4D	6D	3000	0.28	4,915,750	1,152,695	468,722	3,774	2,014,981	301	32.9%	665,233	1508,160

(1) Adjustment for Design/CEI/Contingency 0.3

(d) IN 3925 OUT 3865

(Does not include "yellow" higher value included in PM)

Sub Total 4,172,337

TABLE 5b: Prop Share - 2035 - PM

Segment	From	To	Direction	2035 Assignment	Existing 2019 Volume (a)	2035 PM Peak Hour, Direct. Volume	Generalized Service Capacity (b)	Total Cumulative Project Volume-Peak Direction	Total Traffic Peak Direction (2035) (c)	Existing Number of Lanes	Proposed Number of Lanes	Proposed Capacity	Length in Miles	FOOT Unit Cost	Construction Cost	Design/CEI/Contingency 30%(1)	Right of Way Cost	Total Cost of Improvement	Project Trips adjusted	Project % of New Capacity	Project Share of Cost	Payment Due (2)
Michery Road	Arroyal A	I-95	EB	96.0%	347	2,523	3,020	995	3518	6D	6D+	6000	1	7,786,716	1,897,158	1,164,070	17,818	5,078,196	478	48.8%	2,477,622	873,160
	Arroyal A	I-95	WB	96.0%	376	1,641	2,100	1392	3033	4D	6D	6000	1.187	4,915,750	2,977,917	895,249	17,818	3,810,984	915	63.3%	1,921,656	N/A
	Glades Cnt Off	I-95	EB	25.0%	911	1,818	2,100	321	2137	4D	6D	3000	1.03	4,915,750	2,311,611	799,483	0	3,291,094	37	4.0%	132,932	1005,160
	Glades Cnt Off	I-95	WB	25.0%	890	1,879	2,100	365	2242	4D	6D	3000	0.28	4,915,750	888,105	206,462	3,774	898,441	142	15.4%	138,184	N/A
	Arroyal A	I-95	WB	23.0%	1304	2,042	2,100	334	2376	4D	6D	3000	0.75	4,915,750	1,881,496	553,022	17,219	2,413,647	276	29.0%	722,482	1077,160

(1) Adjustment for Design/CEI/Contingency

(d) IN 1450 OUT 1036

(Does not include "yellow" higher value included in AM)

Sub Total: 3,833,366

Total: \$7,906,133

Upgrade Type	Cost
20 to 4D	\$4,337,764.63
4D to 6D	\$4,545,248.60
6D to 8D	\$5,533,076.42
New 2 Lane Roadway	\$1,333,659.75
Bridge Section	\$4,894,101.57
Bridge Section	\$1557, Square foot

Section	Right of Way Cost Calculation			
	Land Area (Sq)	Land Value	Cost/Ft	Total Cost
Arroyal A to I-95 (WB)	5,029,537	\$1,174,564	60.23	\$17,888
Glades Cnt Off to I-95 (WB)	807,188	\$205,760	60.25	\$1,724
Arroyal A to I-95 (EB)	776,276	\$901,800	51.04	\$12,219

Total Links + Intersections Prop Share

(2) Extremum Data Calculated As: The Available Capacity Divided by the Increase in Trips Multiplied by the Directional Project Trips.

- Threshold (a) = (b-a)/(c-d)*100
- a = Existing Capacity
- b = Existing Capacity
- c = 2035 Total Traffic Volume - 2019 Existing Volume
- d = Directional Project Trips at Buildout
- * 75% Threshold

	IN	OUT
AM	1,562	1,670
PM	1,946	1,533

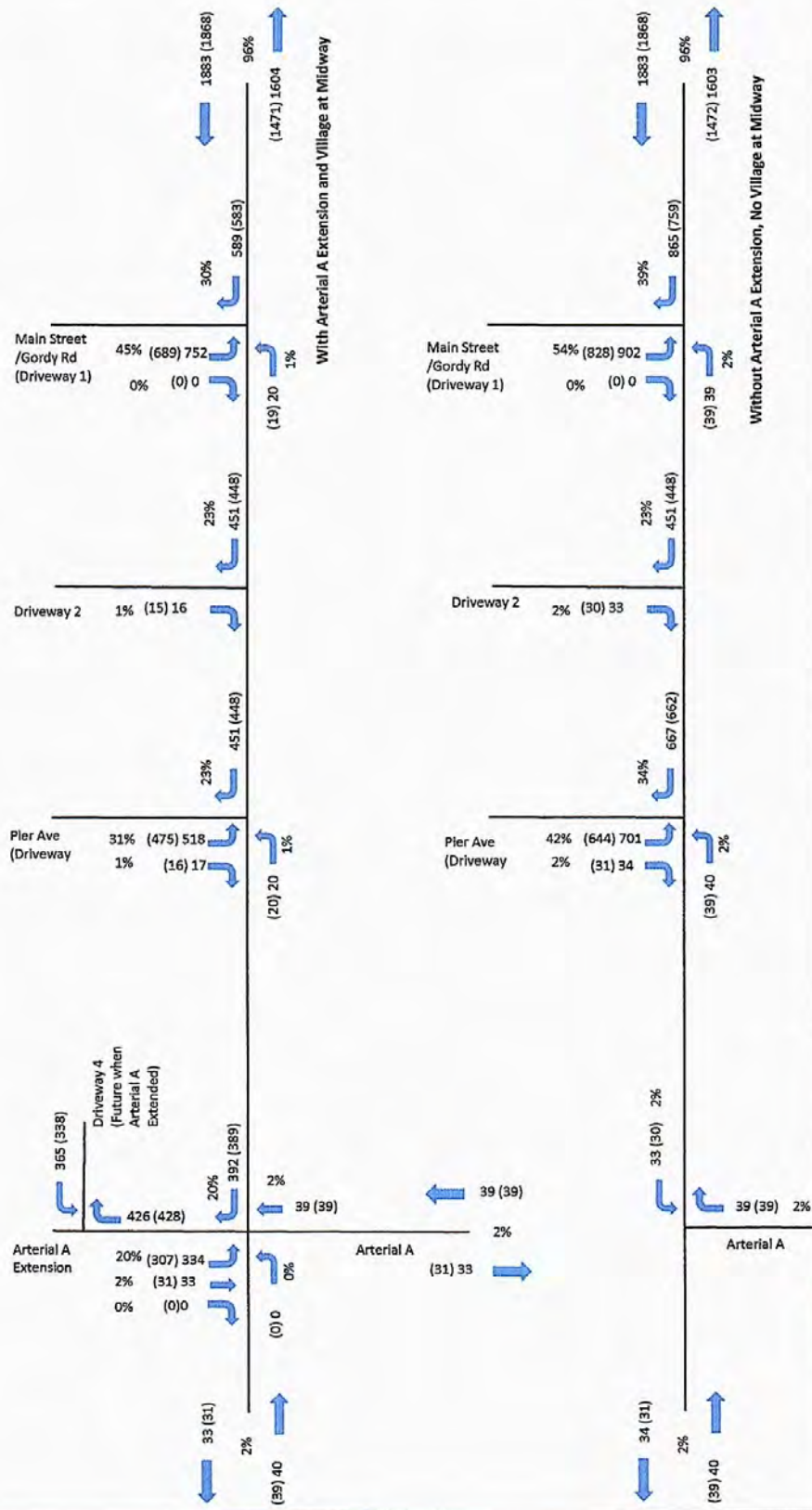


Figure 6
Willow Lakes Driveway Volumes

Legend
XX (XX) = AM (PM)

OROURKE
ENGINEERING & PLANNING
969 SE Federal Hwy, Suite 402
Stuart, FL 34994

NTS
Job Number: _____
Date: _____

Figure 7 illustrates the turn lanes needed at each driveway. These turn lanes will support the traffic with or without Arterial A. The applicant will coordinate with the property owners of Village at Midway and LTC Ranch as appropriate on shared or proximate driveways along Midway Road.

Appendix E Provides the driveway turning movements and the Highway Capacity Manual analysis.

INTERSECTION ANALYSIS/IMPROVEMENTS

Ten intersections were analyzed to determine their operating level of service for the following scenarios; existing, 2035 without project, and 2035 with project traffic. The intersections were analyzed for the AM and PM peak hour using Highway Capacity Manual (HCM) based software as appropriate. **Table 6** summarizes the results of the intersection analysis. As shown, improvements will be needed at several intersections.

Table 7 shows the existing and proposed lanes for the subject intersections. As shown, most of the improvements that are needed will be needed to support background traffic. Therefore, the improvements do not need to be prop shared. The intersection of I-95 Northbound and Midway requires a third westbound through lane. That additional lane is address in the link improvement, so it is not included as an intersection cost.

Appendix F includes the intersection analyses, signal timing worksheet and resultant data.

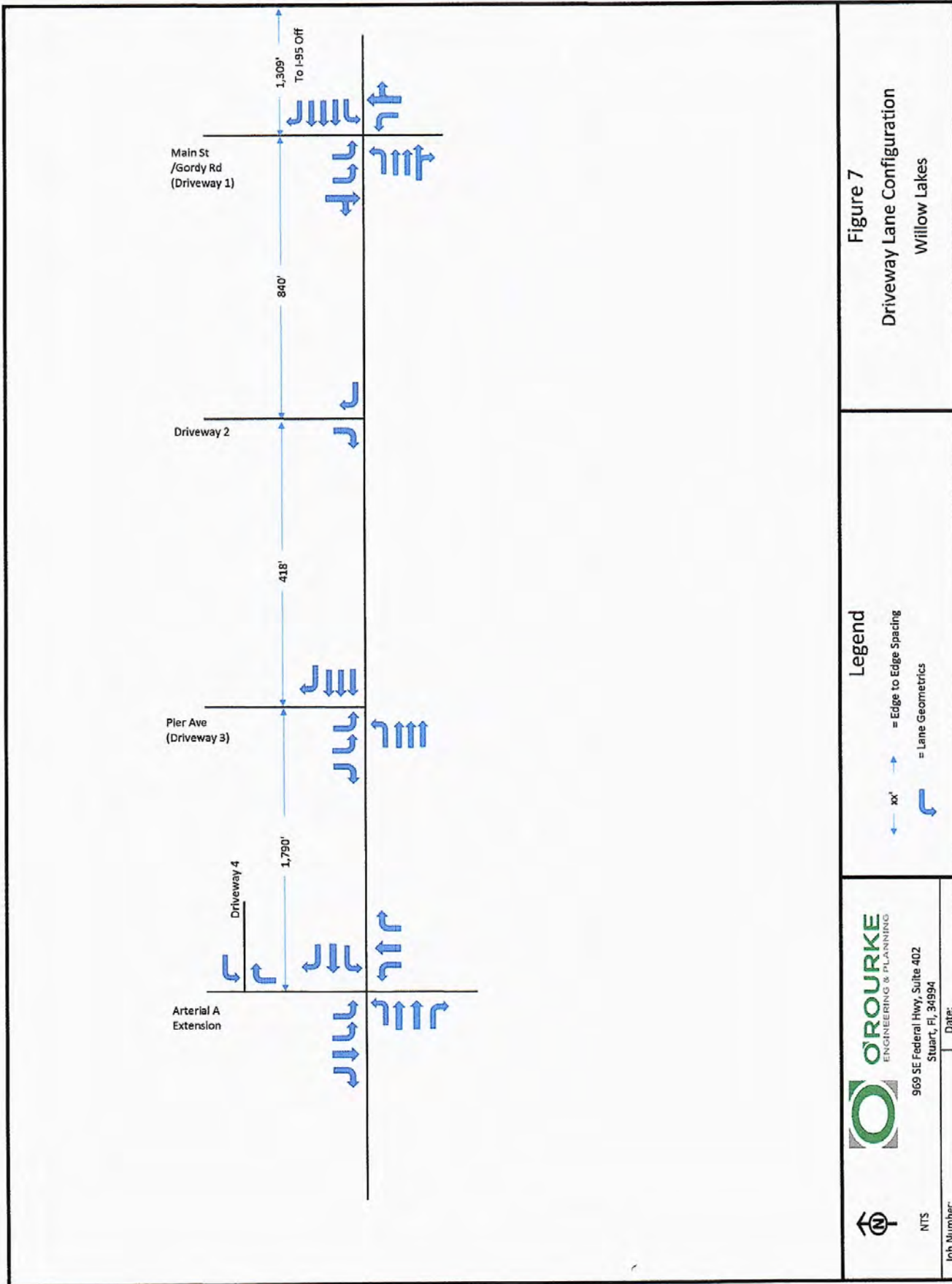
CONCLUSION

Willow Lakes will generate 37,828 daily trips; 2,420 AM Peak Hour trips and 2,486 PM Peak Hour trips. The project will provide sufficient access to the site and make proportionate share payments to mitigate offsite improvements. Improvements along Midway Road are required by multiple developers. The applicant will coordinate relative to the driveways and other construction projects.

The applicant will pay its proportionate share as follows:

- + The applicant shall pay \$5,843,946 to widen or the applicant shall cause to widen Midway Road from Arterial A to I-95 as a six-lane divided roadway with extended turn lanes, prior to pulling building permits that generate more than 805 AM inbound trips, or 873 AM outbound trips,
- + The applicant shall pay \$806,463 to widen Midway Road from Glades Cut-off to NW East Torino Parkway as a six-lane divided arterial prior to pulling building permits that generate 920 AM outbound trips,
- + The applicant shall pay \$132,932 to widen Midway Road from I-95 to Glades Cut-Off prior to pulling building permits that generate more than 1005 PM outbound trips, and
- + The applicant shall pay \$722,782 to widen Midway Road from Jenkins Road to Selvitz. prior to pulling building permits that generate more than 1077 PM inbound trips.

The total applicant prop share amount is \$7,506,123. With the driveway construction along Midway and the proportionate share payments, concurrency will be satisfied for Willow Lakes. As each site plan is submitted, a trip generation calculation, and an analysis of internal components within that phase of development will be provided.



969 SE Federal Hwy, Suite 402
Stuart, FL, 34994

Job Number: _____ Date: _____



NTS

Table 6a: Intersection Analysis with Existing Committed Lanes

Intersection	Existing				2035 Background				2035 with Project			
	AM		PM		AM		PM		AM		PM	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
1 Midway Rd & Okeechobee Rd	13.6	B	14.9	B	16.3	C	20.5	C	17.5	C	22.2	C
2 I-95 SB Ramp & Midway Rd	15.4	B	15.3	B	29.5	D	142.4	F	57.4	F	134.9	F
3 I-95 NB Ramp & Midway Rd	11.2	B	11.6	B	11	E	114.2	F	97.6	F	112.9	F
4 LTC Pkwy & Midway Rd (unsignalized)	11.5	B	19.7	C	876.3	F	1761.9	F	1545.3	F	2906.5	F
5 Glades Cut Off Rd & Midway Rd	39.8	D	28.7	C	85.2	F	96.7	F	78.9	F	101.3	F
6 Midway Rd & Torino Pkwy	45.2	D	84.2	C	127.8	F	148.5	F	131	F	147.8	F
7 Selvitz Rd & Midway Rd	35.3	D	29.6	C	47.2	D	45.3	D	48.1	D	51.6	D
8 25th St & Midway Rd	23.1	C	22.7	C	41.2	D	46.2	D	47.8	D	53.7	D
9 Jenkins Rd & Okeechobee Rd	32.2	C	31.1	C	42	D	43.1	D	41.8	D	43.5	D
10 Glades Cut Off Rd & Commerce Centre Dr (unsignalized)	17.2	C	11.7	B	N/A	F	N/A	F	N/A	F	N/A	F

Table 6b: Intersection Analysis with Improvements

Intersection	Existing + Improvements				2035 Background + Improvements				2035 with Project + Improvements			
	AM		PM		AM		PM		AM		PM	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
1 Midway Rd & Okeechobee Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2 I-95 SB Ramp & Midway Rd	N/A	N/A	N/A	N/A	21.2	D	53.1	D	25.7	D	41.9	D
3 I-95 NB Ramp & Midway Rd	N/A	N/A	N/A	N/A	33.5	C	30.6	C	51.4	D	52.4	D
4 LTC Pkwy & Midway Rd	N/A	N/A	N/A	N/A	29.2	C	36.7	D	29.7	C	47.8	D
5 Glades Cut Off Rd & Midway Rd	N/A	N/A	N/A	N/A	46.9	D	50.4	D	39.7	D	43.6	D
6 Midway Rd & Torino Pkwy	N/A	N/A	N/A	N/A	54.2	D	51.5	D	49.4	D	38.6	D
7 Selvitz Rd & Midway Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8 25th St & Midway Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9 Jenkins Rd & Okeechobee Rd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10 Glades Cut Off Rd & Commerce Centre Dr	N/A	N/A	N/A	N/A	42.2	D	49.7	D	38.4	D	53.8	D

Note: The HCS may include analyses with subsets of the final improvements to ensure that the background traffic could not operate with fewer improvements than the "with project" scenario

TABLE 7: Intersection Geometrics

Intersection #	Intersection	Existing + Committed (C)	Needs for Existing (N)	Needs for Background (B)	Needs for Project (P)
1	Midway Rd & Okeechobee Rd		N/A	N/A	N/A
2	I-95 SB & Midway Rd		N/A		
3	I-95 NB & Midway Rd		N/A		
4	LTC Parkway & Midway Rd		N/A		
5	Glades Cut Off Rd & Midway Rd		N/A		
6	Midway Rd & Torino Parkway		N/A		
7	Selvitz Rd & Midway Rd		N/A		
8	25th St & Midway Rd		N/A		
9	Jenkins Rd & Okeechobee Rd		N/A	N/A	N/A
10	Glades Cut Off Rd & Commerce Centre Dr		N/A		

- (1) ● = Signalized Intersection
- (2) N = Needed for Existing Conditions
- (3) B = Needed for 2035 Background Conditions
- (4) P = Needed for Project
- (5) C = Committed Improvement
- * = Free Flow

APPENDIX i
Methodology Letter

seourourke@comcast.net

From: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>
Sent: Monday, February 24, 2020 4:17 PM
To: seourourke@comcast.net
Cc: John Andrews
Subject: FW: Willow Lakes Traffic Methodology - SLC

Please see County comments below. Should you contact the County directly, please include Jack and I in the conversation so that we are all on the same page.

Thanks Susan.

Jennifer Hofmeister, AICP, LCAM | Planning Director | City of Fort Pierce

Planning Department

Phone: 772.467.3730 Fax: 772.466-5808 100 North U.S. 1 Fort Pierce, FL 34950

[Website](#) | [Facebook](#) | [Survey](#)



From: Kori Benton <bentonk@stlucieco.org>
Sent: Monday, February 24, 2020 3:13 PM
To: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>
Subject: Willow Lakes Traffic Methodology - SLC

SECURITY WARNING: This email originated outside of the City of Fort Pierce systems. Please use caution when clicking links or opening attachments. For questions or concerns please contact IT immediately. .

Good afternoon Jennifer,

Our team is continuing coordination with Susan O'Rourke and Alex Memering of Kimley-Horn (at this time) to pinpoint the Traffic Methodology for the Willow Lakes Impact Report.

Our Public Works Department & Planning Division support the following:

- Please analyze roadways that are impacted by 3% or greater due to project traffic within a 2-mile radius
- For roadways that are impacted by 5% or greater due to project traffic outside of the 2-mile radius, please continue to study the impacted segments until below the 5% impact threshold. *Maximum radius of 5 miles.*

Supplemental Methodology comments include:

- Please provide a background traffic growth calculation for each studied link to show the resultant annual growth rate considering committed traffic. A minimum growth rate of 1% should be applied.
- Please provide a turn lane analysis for each driveway connection on Midway Road based on information found within the FDOT Access Management Guidebook (November 2019) and NCHRP Report 457.



From: Kori Benton <bentonk@stlucieco.org>
Sent: Monday, February 24, 2020 3:13 PM
To: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>
Subject: Willow Lakes Traffic Methodology - SLC

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Supplemental Methodology comments include:

- Please provide a background traffic growth calculation for each studied link to show the resultant annual growth rate considering committed traffic. A minimum growth rate of 1% should be applied.
- Please provide a turn lane analysis for each driveway connection on Midway Road based on information found within the FDOT Access Management Guidebook (November 2019) and NCHRP Report 457.
- Based on discussions within the methodology meeting on February 12, 2019, a 15-year buildout timeframe is proposed. Due the potential impacts to roadways and intersections within the potential study area, please provide a supplementary analysis to determine the timeframe when recommended improvements are required within the 15-year buildout timeframe.
- Please explain where Daily and AM peak hour rates were found for ITE 435 Multipurpose Recreational Facility as there is no Daily or AM peak hour of adjacent street rates for this land use within the ITE Trip Generation Manual, 10th Edition.
- Please check directional splits within the trip generation tables for all land uses and correct accordingly.
- Please use pass-by percentages for ITE 945 Gasoline/Service Station with Convenience Market within the ITE Trip Generation Handbook, 3rd Edition as this is the most similar use to ITE 960 Super Convenience Market/Gas Station.

The County reserves the right to request any other specific area of impact based on a study. Further, we will reserve input on the project traffic distribution until the 2040 Greater Treasure Coast Model is performed.

Unless the City has a Traffic Consultant in place for evaluation of the project, Galvin, Giordano & Associates appears to be our next-in-line for the actual TIR review. We hope to discuss further after evaluation of the proposed Methodology.

Kind regards,
Kori

seourke@comcast.net

From: seourke@comcast.net
Sent: Friday, February 28, 2020 12:11 PM
To: 'Jennifer Hofmeister'
Cc: 'John Andrews'
Subject: RE: Willow Lakes Traffic Methodology - SLC

Jennifer,

We are OK with all of these comments and will incorporate the comments into the finalized methodology. We won't be doing some of those items now, such as demonstrating the resultant growth rate, we will include that calculation within the traffic study.

I will update and circulate with the assignment plots attached.

Thanks.

Susan.

Susan E. O'Rourke, P.E.
President

O'Rourke Engineering & Planning
969 SE Federal Highway, Suite 402
Stuart, FL 34994
772 781 7918 o
561 350 8738 c
www.ORourkeEngineering.com

From: Jennifer Hofmeister <jhofmeister@cityoffortpierce.com>
Sent: Monday, February 24, 2020 4:17 PM
To: seourke@comcast.net
Cc: John Andrews <jandrews@cityoffortpierce.com>
Subject: FW: Willow Lakes Traffic Methodology - SLC

Please see County comments below. Should you contact the County directly, please include Jack and I in the conversation so that we are all on the same page.

Thanks Susan.

Jennifer Hofmeister, AICP, LCAM | Planning Director | City of Fort Pierce
Planning Department
Phone: 772.467.3730 Fax: 772.466-5808 100 North U.S. 1 Fort Pierce, FL 34950

[Website](#) | [Facebook](#) | [Survey](#)

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Kind regards,
Kori

Please Note: Florida has very broad public records laws. Most written communications to or from County officials regarding County business are public records available to the public and media upon request. It is the policy of St. Lucie County that all County records shall be open for personal inspection, examination and / or copying. Your e-mail communications will be subject to public disclosure unless an exemption applies to the communication. If you received this email in error, please notify the sender by reply e-mail and delete all materials from all computers.



February 12, 2020

Methodology for Willow Lakes

A. The traffic analysis will be prepared in accordance with the **Draft TIS Guidelines prepared for the St. Lucie County TPO** and augmented based on discussion between the City of Ft. Pierce and St. Lucie County. The document reflects 5% on links and adjacent link of 1%. **Attachment A** includes the TIS Guideline.

B. Trip Generation for the site is based on ITE rates most closely related to the use. **Attachment B** summarizes the project trip generation and the internal capture. The use of ITE internal capture rates results in internal capture rates that are too high. So, the internal capture rates between certain pairings have been reduced. Those changes are shown in the attachments.

Pass-by will be limited to 10% of adjacent street and pass-by traffic shown separately for distribution and assignment.

Impact Area

According to the Guidelines, the adjacent link should be addressed if it has a one percent impact and the surrounding network should be addressed if the project has an impact of 5% or more.

If the project has 200 or more peak hour trips on a freeway ramp, a merge and weave analysis may be required for FDOT.

Attachment C shows the general study area. **Attachment D** shows the existing roadway geometrics in the study area.

We are in the process of running the 2040 Greater Treasure Coast Model. In the mean time we have presented the assignment for Village at Midway. The results are shown in **Attachment E**. We will run the assignment with and without Village at Midway and the extension of Arterial A.

Background traffic -- Will be determined based on existing counts plus historic growth not to exceed .5% and "other approved projects. We will include the approved DRIs. KHA or the City will provide the data that they have prepared. If other agencies have data, they should provide it as soon as possible.

Analysis

The Links will be analyzed in tabular format using the TPO capacities. If we feel those capacities are not appropriate we will review them with KHA prior to making adjustments.

Detailed arterial analysis may be used to demonstrate that operational level of service is different than the “theoretical” capacity

Intersections will be analyzed using the Highway Capacity Software by McTrans.

Other

Non-motorized transportation features and transit availability will be summarized for roadways within the study area.

Rights of way will be outlined for all roadways where mitigation is proposed.

Driveways

The project will have two full access driveways and one right-in/right-out driveway.

ATTACHMENT A

TIS Guideline

STANDARDIZED TRAFFIC IMPACT STUDIES (TIS) METHODOLOGY AND PROCEDURES

- **ST. LUCIE COUNTY**
- **CITY OF FORT PIERCE**
- **CITY OF PORT ST. LUCIE**

January 2014

APPENDIX A

Existing Traffic Counts and Network Data

D Factor and Off-Peak Volume Calculations

Segment	From	To	Direction	Count Location	2020 TMC Count AM	2020 TMC Count PM	D Factor AM	D Factor PM	2019 AM Peak Hour Volume	2019 PM Peak Hour Volume
Midway Rd	Okeechobee Rd	Shinn Rd	EB	Okeechobee & Midway	172	225	0.48	0.52	272	376
	Okeechobee Rd	Shinn Rd	WB	Okeechobee & Midway	183	207	0.52	0.48	295	347
	Shinn Rd	McCarty Rd	EB	Okeechobee & Midway	172	225	0.48	0.52	272	376
	Shinn Rd	McCarty Rd	WB	Okeechobee & Midway	183	207	0.52	0.48	295	347
	McCarty Rd	11 Mile Rd	EB	I-95 SB & Midway	256	278	0.52	0.48	295	347
	McCarty Rd	11 Mile Rd	WB	I-95 SB & Midway	241	302	0.48	0.52	272	376
	11 Mile Rd	Arterial A	EB	I-95 SB & Midway	256	278	0.52	0.48	295	347
	11 Mile Rd	Arterial A	WB	I-95 SB & Midway	241	302	0.48	0.52	272	376
	Arterial A	I95	EB	I-95 SB & Midway	256	278	0.52	0.48	295	347
	Arterial A	I95	WB	I-95 SB & Midway	241	302	0.48	0.52	272	376
	I95	Glades Cut off Rd	EB	I-95 NB & Midway	918	830	0.45	0.47	738	911
	I95	Glades Cut off Rd	WB	I-95 NB & Midway	1131	910	0.55	0.53	926	1,027
	Glades Cut off Rd	NW East Torino Pkwy	EB	Glades Cut-Off & Midway	921	915	0.49	0.59	1,178	1,281
	Glades Cut off Rd	NW East Torino Pkwy	WB	Glades Cut-Off & Midway	959	641	0.51	0.41	1,226	890
	NW East Torino Pkwy	Florida's Turnpike	EB	Torino & Midway	1030	823	0.55	0.49	1,216	1,253
	NW East Torino Pkwy	Florida's Turnpike	WB	Torino & Midway	841	865	0.45	0.51	995	1,304
	Florida's Turnpike	NW Corporate Way	EB	Torino & Midway	1030	823	0.55	0.49	1,216	1,253
	Florida's Turnpike	NW Corporate Way	WB	Torino & Midway	841	865	0.45	0.51	995	1,304
	NW Corporate Way	S Jenkins Rd	EB	Jenkins & Midway	1004	812	0.54	0.48	1,216	1,204
	NW Corporate Way	S Jenkins Rd	WB	Jenkins & Midway	855	879	0.46	0.52	1,036	1,304
	S Jenkins Rd	Selvitz Rd	EB	Jenkins & Midway	982	822	0.53	0.48	1,216	1,204
	S Jenkins Rd	Selvitz Rd	WB	Jenkins & Midway	863	875	0.47	0.52	1,078	1,304
	Selvitz Rd (3)	S 25th St	EB	25th & Midway	712	786	0.50	0.54	973	940
	Selvitz Rd	S 25th St	WB	25th & Midway	718	670	0.50	0.48	973	801
	S 25th St (4)	Oleander	EB	25th & Midway	680	760	0.56	0.54	1,025	942
	S 25th St	Oleander	WB	25th & Midway	533	656	0.44	0.46	805	802
	Oleander	US-1	EB						635	654
	Oleander	US-1	WB						808	800
	Okeechobee Rd	McCarty Rd	Florida's Turnpike	EB					378	391
		McCarty Rd	Florida's Turnpike	WB					378	391
		Florida's Turnpike	S King's Hwy	EB					378	391
		Florida's Turnpike	S King's Hwy	WB					378	391
S King's Hwy		Crossroads Pkwy	EB					960	1,013	
S King's Hwy		Crossroads Pkwy	WB					960	1,013	
Crossroads Pkwy		I95	EB					1,063	1,086	
Crossroads Pkwy		I95	WB					1,063	1,086	
I95		Jenkins Rd	EB	Jenkins & Okeechobee	1450	1183	0.64	0.48	1,976	1,578
I95		Jenkins Rd	WB	Jenkins & Okeechobee	810	1304	0.36	0.52	1,112	1,709
Jenkins Rd		McNeil Rd	EB	Jenkins & Okeechobee	1349	1136	0.66	0.47	1,926	1,516
Jenkins Rd		McNeil Rd	WB	Jenkins & Okeechobee	689	1271	0.34	0.53	1,018	1,709
McNeil Rd		Virginia Ave	EB						1,580	1,522
McNeil Rd		Virginia Ave	WB						851	1,649
Virginia Ave	35th St	EB						687	727	
Virginia Ave	35th St	WB						687	727	
I-95	Orange Ave	Okeechobee Rd	NB					1,822	1,894	
	Orange Ave	Okeechobee Rd	SB					1,802	1,894	
	Okeechobee Rd	Midway Rd	NB					4,578	3,717	
	Okeechobee Rd	Midway Rd	SB					3,181	3,717	
	W Midway Rd	St Lucie West Blvd	NB					3,571	3,079	
	W Midway Rd	St Lucie West Blvd	SB					3,571	3,079	
	St Lucie West Blvd	Crosstown Pkwy	NB					4,048	3,657	
St Lucie West Blvd	Crosstown Pkwy	SB					4,048	3,657		
Glades Cut off Rd	Ranga Line Rd	Reserve Blvd	NB	Glades Cut-Off & Commerce	450	268	0.55	0.52	200	252
	Ranga Line Rd	Reserve Blvd	SB	Glades Cut-Off & Commerce	375	244	0.45	0.48	164	233
	Reserve Blvd	Commerce Centre Dr	NB	Glades Cut-Off & Commerce	450	268	0.55	0.52	332	332
	Reserve Blvd	Commerce Centre Dr	SB	Glades Cut-Off & Commerce	375	244	0.45	0.48	272	306
	Commerce Centre Dr	W Midway Rd	NB	Glades Cut-Off & Commerce	272	177	0.51	0.56	210	192
	Commerce Centre Dr	W Midway Rd	SB	Glades Cut-Off & Commerce	262	140	0.49	0.44	202	151
	W Midway Rd	S. Jenkins Road	NB	Glades Cut-Off & Midway	374	261	0.56	0.38	669	421
	W Midway Rd	S. Jenkins Road	SB	Glades Cut-Off & Midway	296	432	0.44	0.62	526	687
	S Jenkins Rd	Selvitz Rd	NB	Glades Cut-Off & Midway	374	261	0.56	0.38	370	236
	S Jenkins Rd	Selvitz Rd	SB	Glades Cut-Off & Midway	296	432	0.44	0.62	291	585
SW Saint Lucie West Blvd	I95	California Blvd	EB					1,722	1,670	
	I95	California Blvd	WB					1,722	1,670	
	California Blvd	Country Club Dr	EB					1,722	1,670	
	California Blvd	Country Club Dr	WB					1,722	1,670	
	Country Club Dr	Cashmere Blvd	EB					1,722	1,670	
	Country Club Dr	Cashmere Blvd	WB					1,722	1,670	
	Cashmere Blvd	Florida's Turnpike	EB					2,446	2,308	
	Cashmere Blvd	Florida's Turnpike	WB					2,446	2,308	
	Florida's Turnpike	Bayshore Blvd	EB					2,446	2,308	
Florida's Turnpike	Bayshore Blvd	WB					2,446	2,308		
Jenkins Rd	Edwards Rd	Okeechobee Rd	NB	Jenkins & Okeechobee	315	294	0.46	0.46	468	471
	Edwards Rd	Okeechobee Rd	SB	Jenkins & Okeechobee	364	349	0.54	0.54	549	553
	Okeechobee Rd	Orange Ave	NB	Jenkins & Okeechobee	328	355	0.45	0.48	485	525
	Okeechobee Rd	Orange Ave	SB	Jenkins & Okeechobee	397	425	0.55	0.52	559	569
25th St	Midway Rd	Edwards Rd	NB	25th & Midway	1122	681	0.61	0.38	1,310	749
	Midway Rd	Edwards Rd	SB	25th & Midway	730	1095	0.39	0.62	838	1,222
St James	Bayshore Blvd	Midway Rd	NB	25th & Midway	1032	615	0.68	0.37	1,185	689
	Bayshore Blvd	Midway Rd	SB	25th & Midway	487	1041	0.32	0.63	559	1,173
Virginia Ave	Okeechobee Rd	25th St	EB					1,169	1,126	
	Okeechobee Rd	25th St	WB					1,169	1,126	
Prima Vista Blvd	Bayshore Blvd	Alrosa Blvd	EB					944	1,005	
	Bayshore Blvd	Alrosa Blvd	WB					944	1,005	
	Alrosa Blvd	US 1	EB					1,171	1,097	
Alrosa Blvd	US 1	WB					1,171	1,097		
Selvitz Rd	Bayshore Blvd	Midway Rd	NB	Selvitz & Midway	742	419	0.68	0.36	426	240
	Bayshore Blvd	Midway Rd	SB	Selvitz & Midway	355	745	0.32	0.64	200	426
	Midway Rd	Glades Cut Off Rd	NB	Selvitz & Midway	677	389	0.66	0.45	696	527
	Midway Rd	Glades Cut Off Rd	SB	Selvitz & Midway	353	483	0.34	0.55	359	644
East Torino Pkwy	Midway Rd	Turtle Dove Ln	NB	Torino & Midway	966	502	0.65	0.39	1,030	625
	Midway Rd	Turtle Dove Ln	SB	Torino & Midway	515	784	0.35	0.61	555	978

Source: St. Lucie TPO Traffic Counts and Level of Service Report Fall/Winter 2019/2020
 (1) St. Lucie County Comprehensive Plan
 (2) 2 lane portion falls with background traffic, and conditioned for improvement
 Note: Peak Direction Volumes from St. Lucie County Traffic Counts and LOS Report Fall/Winter 2019/2020
 Links analyzed in tables 4a and 4b include the off peak volumes calculated using D factors in Appendix C.
 (3) Selvitz to Christensen Rd/ Christensen to 25th St all one capacity
 (4) 25th to Sunrise and Sunrise to Oleander same volume and capacity



**Traffic Counts and Level of Service Report
Fall/Winter 2019/2020**

Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
2ND ST	CITRUS AVE to ORANGE AVE	601	2,167	2017	540	190	C	0.704	161	C	0.596
2ND ST	ORANGE AVE to AVENUE A	602	2,217	2017	540	142	C	0.526	133	C	0.493
7TH ST	SUNRISE BLVD to GEORGIA AVE	519	1,022	2019	600	67	C	0.223	75	C	0.250
7TH ST	GEORGIA AVE to DELAWARE AVE	517	1,680	2019	790	101	C	0.259	106	C	0.272
7TH ST	DELAWARE AVE to CITRUS AVE	515	2,567	2019	790	155	C	0.397	153	C	0.392
7TH ST	CITRUS AVE to ORANGE AVE	515	2,567	2019	750	155	C	0.419	153	C	0.414
7TH ST	ORANGE AVE to AVENUE C	603	2,979	2016	750	204	C	0.551	225	C	0.608
7TH ST	AVENUE C to AE BACKUS AVE	603	2,979	2016	540	204	C	0.756	225	C	0.833
7TH ST	AE BACKUS AVE to AVENUE D	603	2,979	2016	750	204	C	0.551	225	C	0.608
7TH ST	AVENUE D to AVENUE H	604	1,767	2017	750	116	C	0.314	113	C	0.305
10TH ST	DELAWARE AVE to ORANGE AVE	605	233	2017	600	25	C	0.083	24	C	0.080
10TH ST	ORANGE AVE to AVENUE C	605	233	2017	600	25	C	0.083	24	C	0.080
10TH ST	AVENUE C to AVENUE D	605	233	2017	540	25	C	0.093	24	C	0.089
13TH ST	VIRGINIA AVE to NEBRASKA AVE	527	6,500	2020	750	401	D	0.535	420	D	0.560
13TH ST	NEBRASKA AVE to GEORGIA AVE	527	6,500	2020	790	401	D	0.508	420	D	0.532
13TH ST	GEORGIA AVE to DELAWARE AVE	525	4,746	2017	750	275	C	0.743	260	C	0.703
13TH ST	DELAWARE AVE to ORANGE AVE	523	3,886	2017	750	256	C	0.692	239	C	0.646
13TH ST	ORANGE AVE to AVENUE B	521	2,776	2017	750	164	C	0.443	160	C	0.432
13TH ST	AVENUE B to AVENUE D	521	2,776	2017	750	164	C	0.443	160	C	0.432
13TH ST	AVENUE D to AVENUE H	165	2,728	2017	750	163	C	0.441	151	C	0.408
13TH ST	AVENUE H to AVENUE I	165	2,728	2017	540	163	C	0.604	151	C	0.559
13TH ST	AVENUE I to AVENUE O	165	2,728	2017	540	163	C	0.604	151	C	0.559
13TH ST	AVENUE O to AVENUE Q	165	2,728	2017	540	163	C	0.604	151	C	0.559
17TH ST	GEORGIA AVE to DELAWARE AVE	606	3,233	2016	600	179	C	0.597	179	C	0.597
17TH ST	DELAWARE AVE to ORANGE AVE	607	6,200	2020	790	294	C	0.754	283	C	0.726

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
17TH ST	ORANGE AVE to AVENUE D	608	4,033	2016	750	236	C	0.638	225	C	0.608
17TH ST	AVENUE D to AVENUE O	608	4,033	2016	750	236	C	0.638	225	C	0.608
25TH ST	MIDWAY RD to BELL AVE	940016	18,275	2017	2,100	1,310	C	0.652	1,222	C	0.608
25TH ST	BELL AVE to EDWARDS RD	159	19,040	2019	2,100	1,056	C	0.525	1,053	C	0.524
25TH ST	EDWARDS RD to CORTEZ BLVD	940021	22,049	2017	2,000	1,405	C	0.736	1,401	C	0.734
25TH ST	CORTEZ BLVD to VIRGINIA AVE	529	21,000	2020	2,000	1,182	C	0.619	1,261	C	0.660
25TH ST	VIRGINIA AVE to NEBRASKA AVE	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	NEBRASKA AVE to OKEECHOBEE RD	940015	20,801	2017	2,000	1,193	C	0.625	1,069	C	0.560
25TH ST	OKEECHOBEE RD to GEORGIA AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	GEORGIA AVE to DELAWARE AVE	609	23,000	2020	1,630	1,196	D	0.734	1,159	D	0.711
25TH ST	DELAWARE AVE to ORANGE AVE	940014	19,612	2017	1,630	1,021	D	0.626	1,015	D	0.623
25TH ST	ORANGE AVE to AVENUE D	610	19,000	2020	1,630	877	D	0.538	904	D	0.555
25TH ST	AVENUE D to AVENUE O	940050	15,331	2017	1,630	807	D	0.495	784	D	0.481
25TH ST	AVENUE O to JUANITA AVE	945152	13,301	2017	2,000	752	C	0.394	689	C	0.361
25TH ST	JUANITA AVE to ST LUCIE BLVD	940791	14,647	2013	2,100	794	C	0.395	745	C	0.371
25TH ST	ST LUCIE BLVD to US 1	945165	5,924	2017	2,100	340	C	0.169	380	C	0.189
33RD ST	OKEECHOBEE RD to DELAWARE AVE	611	7,000	2020	750	419	D	0.559	368	C	0.995
33RD ST	DELAWARE AVE to ORANGE AVE	948507	4,991	2017	790	230	C	0.622	230	C	0.622
35TH ST	KIRBY LOOP RD to CORTEZ BLVD	612	6,300	2020	540	497	D	0.920	406	D	0.752
35TH ST	CORTEZ BLVD to VIRGINIA AVE	612	6,300	2020	790	497	D	0.629	406	D	0.514
35TH ST	VIRGINIA AVE to OKEECHOBEE RD	613	4,600	2016	750	279	C	0.754	280	C	0.757
53RD ST	ANGLE RD to JUANITA AVE	614	2,767	2016	540	148	C	0.548	163	C	0.604
AE BACKUS AVE	7TH ST to US 1	632	1,033	2017	750	70	C	0.189	81	C	0.219
AIROSO BLVD	PORT ST LUCIE BLVD to THORNHILL DR	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423
AIROSO BLVD	THORNHILL DR to CROSSTOWN PKWY	303	15,500	2019	2,100	1,011	C	0.503	851	C	0.423

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**Traffic Counts and Level of Service Report
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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
AIROSO BLVD	CROSTOWN PKWY to PRIMA VISTA BLVD	243	15,827	2017	2,100	789	C	0.393	807	C	0.401
AIROSO BLVD	PRIMA VISTA BLVD to FLORESTA DR	101	14,344	2017	2,000	751	C	0.393	760	C	0.398
AIROSO BLVD	FLORESTA DR to ST JAMES DR	301	21,000	2019	2,100	1,114	C	0.554	1,130	C	0.562
ANGLE RD	ORANGE AVE to AVENUE D	100	10,000	2020	790	513	D	0.649	490	D	0.620
ANGLE RD	AVENUE D to AVENUE Q	100	10,000	2020	540	513	D	0.950	490	D	0.907
ANGLE RD	AVENUE Q to 53RD ST	615	8,600	2020	600	508	D	0.847	521	D	0.868
ANGLE RD	53RD ST to KEEN RD	616	6,000	2020	630	319	C	0.532	357	C	0.595
ANGLE RD	KEEN RD to KINGS HWY	616	6,000	2020	880	319	C	0.384	357	C	0.430
ANGLE RD	KINGS HWY to JOHNSTON RD	617	3,267	2016	1,070	201	B	0.529	195	B	0.513
ANGLE RD	JOHNSTON RD to FLORIDA'S TURNPIKE	948505	707	2017	1,070	37	B	0.088	37	B	0.088
AVENUE A	7TH ST to US 1	945034	1,189	2017	790	136	C	0.349	136	C	0.349
AVENUE A	US 1 to INDIAN RIVER DR	945033	2,200	2017	600	147	C	0.490	136	C	0.453
AVENUE D	ANGLE RD to 29TH ST	164	3,683	2016	600	209	C	0.697	205	C	0.683
AVENUE D	29TH ST to 25TH ST	164	3,683	2016	790	209	C	0.536	205	C	0.526
AVENUE D	25TH ST to 17TH ST	163	4,289	2016	750	241	C	0.651	227	C	0.614
AVENUE D	17TH ST to 13TH ST	162	3,711	2016	750	171	C	0.462	185	C	0.500
AVENUE D	13TH ST to 10TH ST	161	2,118	2016	750	100	C	0.270	112	C	0.303
AVENUE D	10TH ST to 7TH ST	160	2,383	2016	750	119	C	0.322	129	C	0.349
AVENUE D	7TH ST to US 1	160	2,383	2016	750	119	C	0.322	129	C	0.349
AVENUE I	25TH ST to 17TH ST	620	2,533	2016	750	218	C	0.589	171	C	0.462
AVENUE I	17TH ST to 13TH ST	620	2,533	2016	750	218	C	0.589	171	C	0.462
AVENUE H	13TH ST to 7TH ST	618	1,583	2017	540	92	C	0.341	99	C	0.367
AVENUE H	7TH ST to US 1	619	1,233	2017	750	67	C	0.181	66	C	0.178
AVENUE Q	ANGLE RD to 25TH ST	700	5,700	2020	750	301	C	0.814	289	C	0.781
AVENUE Q	25TH ST to 17TH ST	701	3,937	2016	750	281	C	0.759	314	C	0.849

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
AVENUE O	17TH ST to 13TH ST	701	3,937	2016	540	281	D	0.520	314	D	0.581
AVENUE O	13TH ST to US 1	685	1,867	2017	540	105	C	0.389	108	C	0.400
AVENUE C	10TH ST to 7TH ST	631	350	2017	540	20	C	0.074	21	C	0.078
BAYSHORE BLVD	MOUNTWELL ST to PORT ST LUCIE BLVD	621	6,000	2019	830	373	C	0.478	324	C	0.415
BAYSHORE BLVD	PORT ST LUCIE BLVD to THORNHILL DR	309	28,260	2018	2,100	1,335	C	0.664	1,297	C	0.645
BAYSHORE BLVD	THORNHILL DR to CROSSTOWN PKWY	948508	22,081	2017	2,100	1,019	C	0.534	1,019	C	0.534
BAYSHORE BLVD	CROSSTOWN PKWY to PRIMA VISTA BLVD	307	27,000	2019	2,100	1,394	C	0.694	1,356	C	0.675
BAYSHORE BLVD	PRIMA VISTA BLVD to FLORESTA DR	305	17,500	2019	920	829	C	0.953	858	C	0.986
BAYSHORE BLVD	FLORESTA DR to SELVITZ RD	622	13,000	2019	790	707	C	0.943	623	C	0.831
BAYSHORE BLVD	SELVITZ RD to 25TH ST	622	13,000	2019	750	707	D	0.943	623	D	0.831
BEACH AVE	OLEANDER AVE to RIO MAR DR	623	3,500	2017	540	247	C	0.915	211	C	0.781
BECKER RD	VILLAGE PKWY to I-95	624	2,500	2017	3,170	196	C	0.063	178	C	0.058
BECKER RD	I-95 to SAVONA BLVD	625	21,000	2019	2,000	1,809	C	0.947	1,616	C	0.846
BECKER RD	SAVONA BLVD to PORT ST LUCIE BLVD	626	18,000	2019	2,100	1,142	C	0.568	1,083	C	0.539
BECKER RD	ALBACORE ST to DARWIN BLVD	302	13,500	2019	1,500	863	C	0.603	842	C	0.589
BECKER RD	PORT ST LUCIE BLVD to ALBACORE ST	302	13,500	2019	2,100	863	C	0.429	842	C	0.419
BECKER RD	ATHENA DR to FLORIDA'S TURNPIKE	627	15,000	2019	1,500	1,320	C	0.923	1,244	C	0.870
BECKER RD	DARWIN BLVD to ATHENA DR	627	15,000	2019	2,000	1,320	C	0.691	1,244	C	0.651
BECKER RD	FLORIDA'S TURNPIKE to SOUTHBEND BLVD	628	20,000	2019	2,100	1,333	C	0.663	1,657	C	0.824
BECKER RD	SOUTHBEND BLVD to GILSON RD	629	15,000	2019	920	956	F	1.039	1,182	F	1.285
BELL AVE	25TH ST to SUNRISE BLVD	104	4,758	2019	790	313	C	0.803	326	C	0.836
BELL AVE	SUNRISE BLVD to OLEANDER AVE	102	3,854	2019	600	217	C	0.723	223	C	0.743
CASHMERE BLVD	PEACOCK BLVD to TORINO PKWY	676	10,159	2018	630	714	F	1.133	589	C	0.982
CALIFORNIA BLVD	CAMEO BLVD to DEL RIO BLVD	633	7,813	2018	750	503	D	0.671	429	D	0.572
CALIFORNIA BLVD	DEL RIO BLVD to SAVONA BLVD	634	14,000	2019	920	774	C	0.890	771	C	0.886

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
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CALIFORNIA BLVD	SAVONA BLVD to DEL RIO BLVD	635	12,500	2019	920	800	C	0.920	788	C	0.906
CALIFORNIA BLVD	DEL RIO BLVD to CROSSTOWN PKWY	636	15,000	2019	920	946	F	1.028	952	F	1.035
CALIFORNIA BLVD	CROSSTOWN PKWY to HEATHERWOOD BLVD	234	19,500	2019	920	962	F	1.046	1,085	F	1.179
CALIFORNIA BLVD	HEATHERWOOD BLVD to ST LUCIE WEST BLVD	234	19,500	2019	920	962	F	1.046	1,085	F	1.179
CALIFORNIA BLVD	ST LUCIE WEST BLVD to COUNTRY CLUB DR	233	9,100	2019	920	488	C	0.561	484	C	0.556
CALIFORNIA BLVD	COUNTRY CLUB DR to UNIVERSITY BLVD	724	7,800	2019	790	531	C	0.708	466	C	0.621
CALIFORNIA BLVD	UNIVERSITY BLVD to PEACOCK BLVD	724	7,800	2019	630	531	C	0.885	466	C	0.777
CALIFORNIA BLVD	PEACOCK BLVD to TORINO PKWY	637	13,000	2019	630	968	F	1.537	821	F	1.303
CASHMERE BLVD	DEL RIO BLVD to CROSSTOWN PKWY	642	10,021	2018	920	698	C	0.802	627	C	0.721
CASHMERE BLVD	CROSSTOWN PKWY to HEATHERWOOD BLVD	232	13,000	2019	920	749	C	0.861	666	C	0.766
CASHMERE BLVD	HEATHERWOOD BLVD to ST LUCIE WEST BLVD	232	13,000	2019	920	749	C	0.861	666	C	0.766
CASHMERE BLVD	ST LUCIE WEST BLVD to PEACOCK BLVD	231	14,000	2019	920	1,141	F	1.240	1,099	F	1.195
CARLTON RD	CARLTON RD (S) to OKEECHOBEE RD	641	392	2017	390	34	B	0.155	31	B	0.141
CAMEO BLVD	PORT ST LUCIE BLVD to CALIFORNIA BLVD	638	4,600	2019	750	376	D	0.501	281	C	0.759
CAMEO BLVD	CALIFORNIA BLVD to CROSSTOWN PKWY	639	9,319	2018	790	673	D	0.852	536	D	0.678
CAMPBELL RD	PICOS RD to ORANGE AVE	640	533	2017	540	44	C	0.163	43	C	0.159
CANE SLOUGH RD	US 1 to LENNARD RD	167	9,772	2016	1,710	535	C	0.695	545	C	0.708
CITRUS AVE	7TH ST to US 1	643	1,083	2019	750	150	C	0.405	150	C	0.405
CITRUS AVE	US 1 to 2ND ST	940160	4,131	2017	790	246	C	0.631	251	C	0.644
CITRUS AVE	2ND ST to INDIAN RIVER DR	644	4,276	2016	540	261	C	0.967	263	C	0.974
COMMUNITY BLVD	WESTCLIFFE LN to TRADITION PKWY	647	5,317	2017	1,470	362	C	0.548	336	C	0.509
COMMERCE CENTER DR	CROSSTOWN PKWY to ST LUCIE WEST BLVD	645	5,819	2017	1,710	363	C	0.471	390	C	0.506
COMMERCE CENTER DR	ST LUCIE WEST BLVD to GLADES CUT-OFF RD	646	7,500	2019	540	400	D	0.741	460	D	0.852
CORTEZ BLVD	35TH ST to 25TH ST	948500	2,171	2017	750	105	C	0.284	105	C	0.284
CORTEZ BLVD	25TH ST to SUNRISE BLVD	648	2,950	2019	750	211	C	0.570	193	C	0.522

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COUNTRY CLUB DR	ST LUCIE WEST BLVD to CALIFORNIA BLVD	725	8,300	2019	1,710	535	C	0.695	489	C	0.635
CROSSTOWN PKWY	COMMERCE CENTER DR to I-95	650	16,233	2016	3,170	1,008	C	0.326	865	C	0.280
CROSSTOWN PKWY	I-95 to CALIFORNIA BLVD	651	24,500	2020	3,170	1,290	C	0.417	1,244	C	0.403
CROSSTOWN PKWY	CALIFORNIA BLVD to CASHMERE BLVD	652	25,000	2020	3,170	1,299	C	0.420	1,395	C	0.451
CROSSTOWN PKWY	CASHMERE BLVD to CAMEO BLVD	653	26,500	2019	3,170	1,256	C	0.406	1,307	C	0.423
CROSSTOWN PKWY	CAMEO BLVD to BAYSHORE BLVD	654	30,500	2019	3,170	1,502	C	0.486	1,556	C	0.504
CROSSTOWN PKWY	BAYSHORE BLVD to AIROSO BLVD	655	25,000	2020	3,170	1,320	C	0.427	1,384	C	0.448
CROSSTOWN PKWY	AIROSO BLVD to SANDIA DR	656	5,400	2016	3,170	348	C	0.118	297	C	0.101
CROSSTOWN PKWY	SANDIA DR to MANTH LN	657	6,400	2016	3,170	344	C	0.117	360	C	0.122
CROSSTOWN PKWY	FLORESTA DR to US 1	658	19,000	2020	3,170	1,019	C	0.347	1,124	C	0.382
CROSSROADS PKWY	OKEECHOBEE RD to KINGS HWY	649	2,142	2017	790	108	C	0.277	107	C	0.274
DARWIN BLVD	BECKER RD to PAAR DR	235	7,298	2018	630	728	F	1.156	642	F	1.019
DARWIN BLVD	PAAR DR to TULIP BLVD	235	7,298	2018	920	728	C	0.837	642	C	0.738
DARWIN BLVD	TULIP BLVD to PORT ST LUCIE BLVD	659	13,500	2019	920	673	C	0.774	708	C	0.814
DEL RIO BLVD	PORT ST LUCIE BLVD to CALIFORNIA BLVD	311	8,100	2019	920	633	C	0.728	570	C	0.655
DEL RIO BLVD	CALIFORNIA BLVD to CASHMERE BLVD	660	8,400	2019	880	512	C	0.617	508	C	0.612
DEL RIO BLVD	CASHMERE BLVD to CALIFORNIA BLVD	661	4,800	2017	880	281	C	0.339	294	C	0.354
DELAWARE AVE	HARTMAN RD to 33RD ST	662	1,667	2016	600	259	C	0.863	208	C	0.693
DELAWARE AVE	33RD ST to 25TH ST	500	3,118	2017	1,710	207	C	0.269	237	C	0.308
DELAWARE AVE	25TH ST to OKEECHOBEE RD	948526	3,122	2017	1,220	144	C	0.197	144	C	0.197
DELAWARE AVE	OKEECHOBEE RD to 13TH ST	663	12,000	2020	790	657	D	0.832	611	D	0.773
DELAWARE AVE	13TH ST to 10TH ST	664	7,402	2017	750	497	D	0.663	411	D	0.548
DELAWARE AVE	10TH ST to 7TH ST	664	7,402	2017	600	497	D	0.828	411	D	0.685
DELAWARE AVE	7TH ST to US 1	665	7,200	2020	750	390	D	0.520	402	D	0.536
EAST TORINO PKWY	CASHMERE BLVD to TORINO PKWY	710	11,500	2020	830	716	C	0.918	653	C	0.837

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EAST TORINO PKWY	TORINO PKWY to MIDWAY RD	237	14,500	2020	880	1,030	F	1.170	978	F	1.111
EASY ST	US 1 to BUCHANAN DR	106	8,029	2018	750	601	D	0.801	483	D	0.644
EASY ST	BUCHANAN DR to YUCCA DR	106	8,029	2018	540	601	F	1.036	483	D	0.894
EDWARDS RD	JENKINS RD to MCNEIL RD	174	11,500	2020	630	573	C	0.955	594	C	0.990
EDWARDS RD	MCNEIL RD to SELVITZ RD	174	11,500	2020	700	573	C	0.868	594	C	0.900
EDWARDS RD	SELVITZ RD to 25TH ST	110	15,000	2020	880	755	C	0.910	771	C	0.929
EDWARDS RD	25TH ST to SUNRISE BLVD	108	16,697	2019	1,630	877	D	0.538	867	D	0.532
EDWARDS RD	SUNRISE BLVD to OLEANDER AVE	502	15,207	2019	1,630	754	D	0.463	735	D	0.451
EDWARDS RD	OLEANDER AVE to US 1	173	9,581	2019	1,630	527	C	0.722	460	C	0.630
FARMER'S MARKET RD	OLEANDER AVE to US 1	112	1,876	2019	750	130	C	0.351	127	C	0.343
FLORESTA DR	OAKLYN ST to PORT ST LUCIE BLVD	317	13,000	2019	920	900	D	0.978	687	C	0.790
FLORESTA DR	THORNHILL DR to CROSSTOWN PKWY	315	12,500	2019	880	810	C	0.976	738	C	0.889
FLORESTA DR	PORT ST LUCIE BLVD to THORNHILL DR	315	12,500	2019	880	810	C	0.976	738	C	0.889
FLORESTA DR	CROSSTOWN PKWY to PRIMA VISTA BLVD	109	11,000	2019	920	671	C	0.771	576	C	0.662
FLORESTA DR	PRIMA VISTA BLVD to AIROSO BLVD	107	9,600	2019	920	559	C	0.643	601	C	0.691
FLORESTA DR	SELVITZ RD to BAYSHORE BLVD	313	4,467	2018	630	349	C	0.582	365	C	0.608
FLORESTA DR	AIROSO BLVD to SELVITZ RD	313	4,467	2018	880	349	C	0.420	365	C	0.440
FT PIERCE BLVD	INDRIO RD to EMERSON AVE	226	3,555	2019	540	267	C	0.989	273	D	0.506
GARDENIA AVE	OLEANDER AVE to US 1	666	2,817	2017	750	188	C	0.508	200	C	0.541
GATLIN BLVD	W OF I-95 to E OF I-95	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	E OF I-95 to SAVAGE BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	SAVAGE BLVD to ROSSER BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	ROSSER BLVD to SAVONA BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GATLIN BLVD	SAVONA BLVD to PORT ST LUCIE BLVD	945075	40,641	2017	3,170	3,058	C	0.990	2,493	C	0.807
GEORGIA AVE	25TH ST to OKEECHOBEE RD	667	4,700	2020	600	290	C	0.967	262	C	0.873

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Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
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GEORGIA AVE	OKEECHOBEE RD to 17TH ST	667	4,700	2020	750	290	C	0.784	262	C	0.708
GEORGIA AVE	17TH ST to 13TH ST	508	4,733	2019	600	264	C	0.880	268	C	0.893
GEORGIA AVE	13TH ST to 7TH ST	506	2,169	2019	600	134	C	0.447	137	C	0.457
GEORGIA AVE	7TH ST to US 1	504	1,938	2019	600	122	C	0.407	135	C	0.450
GILSON RD	MARTIN C.L. to BECKER RD	111	11,000	2019	710	949	F	1.249	954	F	1.255
GILSON RD	BECKER RD to LAKERIDGE DR	111	11,000	2019	540	949	F	1.636	954	F	1.645
GLADES CUT-OFF RD	RANGE LINE RD to RESERVE BLVD	668	2,833	2017	1,070	200	B	0.526	252	B	0.663
GLADES CUT-OFF RD	RESERVE BLVD to COMMERCE CENTER DR	119	3,585	2016	1,070	332	B	0.874	332	B	0.874
GLADES CUT-OFF RD	CARLTON RD to RANGE LINE RD	668	2,833	2017	390	200	B	0.909	252	C	0.646
GLADES CUT-OFF RD	COMMERCE CENTER DR to MIDWAY RD	940279	2,770	2017	920	210	C	0.241	192	C	0.221
GLADES CUT-OFF RD	MIDWAY RD to JENKINS RD	115	12,500	2020	790	669	D	0.847	687	D	0.870
GLADES CUT-OFF RD	JENKINS RD to SELVITZ RD	113	6,600	2020	830	370	C	0.474	385	C	0.494
GRAHAM RD	KINGS HWY to JENKINS RD	669	3,733	2017	630	255	C	0.425	243	C	0.405
GREEN RIVER PKWY	MARTIN C.L. to CHARLESTON DR	319	4,759	2018	1,070	337	B	0.887	332	B	0.874
GREEN RIVER PKWY	CHARLESTON DR to MELALEUCA BLVD	319	4,759	2018	1,070	337	B	0.887	332	B	0.874
GREEN RIVER PKWY	MELALEUCA BLVD to WALTON RD	319	4,759	2018	1,070	337	B	0.887	332	B	0.874
HARTMAN RD	OKEECHOBEE RD to PETERSON RD	670	5,867	2017	750	388	D	0.517	357	C	0.965
HARTMAN RD	PETERSON RD to DELAWARE AVE	670	5,867	2017	540	388	D	0.719	357	D	0.661
HARTMAN RD	DELAWARE AVE to ORANGE AVE	670	5,867	2017	790	388	C	0.995	357	C	0.915
HEADER CANAL RD	OKEECHOBEE RD to ORANGE AVE	121	560	2019	670	46	B	0.209	56	B	0.255
HILLMOOR DR	US 1 to LENNARD RD	671	5,900	2019	790	306	C	0.785	389	C	0.997
I-95	GATLIN BLVD to ST LUCIE WEST BLVD	941901	79,065	2017	4,580	4,048	C	0.884	3,657	C	0.798
I-95	ST LUCIE WEST BLVD to MIDWAY RD	941904	63,486	2017	4,580	3,571	C	0.780	3,079	B	0.916
I-95	MIDWAY RD to OKEECHOBEE RD	941902	75,846	2017	4,580	4,578	C	10	3,717	C	0.812
I-95	OKEECHOBEE RD to ORANGE AVE	941903	45,500	2009	7,320	1,822	B	0.405	1,894	B	0.421

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I-95	ORANGE AVE to INDRIIO RD	941905	43,452	2017	7,320	2,090	B	0.464	1,924	B	0.428
INDIAN RIVER DR	CITRUS AVE to ORANGE AVE	945029	5,228	2017	750	311	C	0.841	356	C	0.962
INDIAN RIVER DR	ORANGE AVE to AVENUE A	940003	5,888	2017	750	344	C	0.930	335	C	0.905
INDIAN RIVER DR	AVENUE D to SEAWAY DR	940004	5,971	2017	790	349	C	0.895	411	D	0.520
INDIAN RIVER DR	AVENUE A to AVENUE D	940004	5,971	2017	540	349	D	0.646	411	D	0.761
INDRIIO RD	PRIVATE RD to I-95 W RAMP	940128	951	2017	1,080	69	B	0.168	75	B	0.183
INDRIIO RD	I-95 W RAMP to I-95 E RAMP	940128	951	2017	3,240	69	B	0.038	75	B	0.041
INDRIIO RD	I-95 E RAMP to KOBLEGARD RD	940038	10,455	2017	3,240	598	B	0.330	629	B	0.348
INDRIIO RD	KOBLEGARD RD to JOHNSTON RD	940038	10,455	2017	700	598	C	0.906	629	C	0.953
INDRIIO RD	JOHNSTON RD to EMERSON AVE	940038	10,455	2017	880	598	C	0.720	629	C	0.758
INDRIIO RD	EMERSON RD to SEMINOLE RD	940281	9,876	2017	920	595	C	0.684	501	C	0.576
INDRIIO RD	SEMINOLE RD to KINGS HWY	940281	9,876	2017	790	595	D	0.753	501	D	0.634
INDRIIO RD	KINGS HWY to SLASH PINE TRL	114	6,600	2020	790	422	D	0.534	413	D	0.523
INDRIIO RD	SLASH PINE TRL to US 1	114	6,600	2020	920	422	C	0.485	413	C	0.475
INDRIIO RD	US 1 to OLD DIXIE HWY	672	917	2016	750	64	C	0.173	86	C	0.232
JENNINGS RD	US 1 to LENNARD RD	673	4,600	2016	2,100	304	C	0.151	248	C	0.123
JENKINS RD	EDWARDS RD to OKFECHOBEE RD	133	10,500	2020	880	549	C	0.661	553	C	0.666
JENKINS RD	OKFECHOBEE RD to GRAHAM RD	131	10,500	2020	920	593	C	0.682	569	C	0.654
JENKINS RD	GRAHAM RD to PETERSON RD	131	10,500	2020	630	593	C	0.988	569	C	0.948
JENKINS RD	PETERSON RD to ORANGE AVE	131	10,500	2020	920	593	C	0.682	569	C	0.654
JOHNSTON RD	ANGLE RD to L20	674	2,600	2016	1,070	176	B	0.463	171	B	0.450
JOHNSTON RD	L20 to MEADOWOOD DR	675	2,233	2017	1,070	142	B	0.374	138	B	0.363
JOHNSTON RD	MEADOWOOD DR to OLD JOHNSTON RD	675	2,233	2017	1,070	142	B	0.374	138	B	0.363
JOHNSTON RD	OLD JOHNSTON RD to INDRIIO RD	675	2,233	2017	1,070	142	B	0.374	138	B	0.363
JOHNSTON RD	INDRIIO RD to RUSSOS RD	135	9,600	2020	1,070	544	C	0.716	545	C	0.717

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JOHNSTON RD	RUSSOS RD to INDIAN RIVER C.J.	135	9,600	2020	1,070	544	C	0.716	545	C	0.717
JUANITA AVE	53RD ST to 25TH ST	122	2,432	2017	750	157	C	0.424	143	C	0.386
JUANITA AVE	25TH ST to US 1	120	3,321	2017	750	185	C	0.500	182	C	0.492
KEEN RD	ANGLE RD to JUANITA AVE	129	2,885	2019	630	174	C	0.290	203	C	0.338
KEEN RD	JUANITA AVE to ST LUCIE BLVD	129	2,885	2019	630	174	C	0.290	203	C	0.338
KINGS HWY	OKEECHOBEE RD to CROSSROADS PKWY	940757	8,234	2017	830	361	C	0.435	369	C	0.445
KINGS HWY	CROSSROADS PKWY to GRAHAM RD	940757	8,234	2017	660	361	C	0.547	369	C	0.559
KINGS HWY	GRAHAM RD to PICOS RD	940076	8,216	2017	660	405	C	0.614	389	C	0.589
KINGS HWY	PICOS RD to ORANGE AVE	940076	8,216	2017	830	405	C	0.488	389	C	0.469
KINGS HWY	ORANGE AVE to ANGLE RD	940077	16,792	2017	870	885	D	0.962	890	D	0.967
KINGS HWY	ANGLE RD to ST LUCIE BLVD	940751	11,394	2017	830	627	C	0.755	630	C	0.759
KINGS HWY	ST LUCIE BLVD to INDRIO RD	940006	13,481	2017	830	836	D	0.950	786	C	0.947
KITTERMAN RD	OLEANDER AVE to US 1	124	3,402	2018	750	224	C	0.605	203	C	0.549
KITTERMAN RD	US 1 to LENNARD EXT	678	2,250	2017	750	128	C	0.346	130	C	0.351
KIRBY LOOP RD	EDWARDS RD to 35TH ST	677	4,479	2016	630	296	C	0.493	362	C	0.603
LENNARD RD	US 1 to MARIPOSA AVE	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	MARIPOSA AVE to MELALEUCA BLVD	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	MELALEUCA BLVD to JENNINGS RD	325	18,500	2019	1,630	953	D	0.585	984	D	0.604
LENNARD RD	JENNINGS RD to HILLMOOR DR	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	HILLMOOR DR to TIFFANY AVE	325	18,500	2019	1,710	953	D	0.557	984	D	0.575
LENNARD RD	TIFFANY AVE to WALTON RD	323	5,765	2016	1,710	301	C	0.391	305	C	0.396
LENNARD RD	WALTON RD to S OF SAVANNA CLUB BLVD	679	4,455	2016	790	390	C	10	381	C	0.977
LYNGATE DR	VETERANS MEMORIAL PKWY to MORNINGSIDE BLVD	306	9,400	2020	920	588	C	0.676	626	C	0.720
LYNGATE DR	MORNINGSIDE BLVD to US 1	306	9,400	2020	920	588	C	0.676	626	C	0.720
MARIPOSA AVE	LENNARD RD to HALLAHAN ST	166	6,400	2019	880	485	C	0.584	686	C	0.827

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
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MCNEIL RD	OKEECHOBEE RD to KIRBY LOOP RD	682	4,600	2020	790	281	C	0.721	280	C	0.718
MCNEIL RD	KIRBY LOOP RD to EDWARDS RD	682	4,600	2020	540	281	D	0.520	280	D	0.519
MCCARTY RD	WILLIAMS RD to MIDWAY RD	680	375	2017	540	33	C	0.122	35	C	0.130
MCCARTY RD	MIDWAY RD to OKEECHOBEE RD	681	400	2020	540	34	C	0.126	35	C	0.130
MELALEUCA BLVD	LENNARD RD to GREEN RIVER PKWY	683	9,804	2018	920	648	C	0.745	584	C	0.671
MIDWAY RD	EAST TORINO PKWY to MILNER DR	134	22,500	2020	880	1,216	F	1.382	1,304	F	1.482
MIDWAY RD	MILNER DR to W OF SELVITZ RD	134	22,500	2020	790	1,216	F	1.539	1,304	F	1.651
MIDWAY RD	OKEECHOBEE RD to SHINN RD	940732	5,118	2017	760	295	C	0.440	376	C	0.561
MIDWAY RD	SHINN RD to MCCARTY RD	940732	5,118	2017	630	295	C	0.492	376	C	0.627
MIDWAY RD	MCCARTY RD to I-95	940732	5,118	2017	700	295	C	0.447	376	C	0.570
MIDWAY RD	I-95 to GLADES CUT-OFF RD	945140	16,655	2017	2,100	926	C	0.461	1,027	C	0.511
MIDWAY RD	GLADES CUT-OFF RD to EAST TORINO PKWY	228	21,500	2020	2,100	1,226	C	0.610	1,281	C	0.637
MIDWAY RD	W OF SELVITZ RD to SELVITZ RD	134	22,500	2020	920	1,216	F	1.322	1,304	F	1.417
MIDWAY RD	SELVITZ RD to CHRISTENSEN RD	132	18,500	2020	920	973	F	1.058	940	F	1.022
MIDWAY RD	CHRISTENSEN RD to 25TH ST	132	18,500	2020	790	973	F	1.158	940	F	1.119
MIDWAY RD	25TH ST to SUNRISE BLVD	130	18,791	2016	790	1,025	F	1.220	942	F	1.121
MIDWAY RD	SUNRISE BLVD to OLEANDER AVE	130	18,791	2016	790	1,025	F	1.220	942	F	1.121
MIDWAY RD	OLEANDER AVE to US 1	242	15,309	2016	790	808	E	0.962	800	E	0.952
MIDWAY RD	US 1 to WALLACE ST	940023	3,709	2017	790	287	C	0.736	317	C	0.813
MIDWAY RD	WALLACE ST to WEATHERBEE RD	940023	3,709	2017	920	287	C	0.330	317	C	0.364
MIDWAY RD	WEATHERBEE RD to INDIAN RIVER DR	940023	3,709	2017	630	287	C	0.478	317	C	0.528
MORNINGSIDE BLVD	WESTMORELAND BLVD to PORT ST LUCIE BLVD	333	2,654	2017	920	159	C	0.183	152	C	0.175
MORNINGSIDE BLVD	PORT ST LUCIE BLVD to LYNNGATE DR	331	2,900	2020	880	230	C	0.277	244	C	0.294
NEBRASKA AVE	25TH ST to 13TH ST	684	3,767	2017	1,710	234	C	0.304	197	C	0.256
OAKRIDGE DR	MOUNTWELL ST to OAKLYN ST	621	6,000	2019	700	373	C	0.565	324	C	0.491

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
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OHIO AVE	SUNRISE BLVD to COLONIAL RD	686	4,250	2017	540	252	C	0.933	246	C	0.911
OHIO AVE	COLONIAL RD to US 1	686	4,250	2017	750	252	C	0.681	246	C	0.665
OKEECHOBEE RD	OKEECHOBEE C.L. to BLUEFIELD RD	687	10,500	2020	1,010	540	B	0.535	528	B	0.523
OKEECHOBEE RD	BLUEFIELD RD to CARLTON RD	687	10,500	2020	1,270	540	B	0.425	528	B	0.416
OKEECHOBEE RD	CARLTON RD to SNEED RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	IDEAL HOLDING RD to HEADER CANAL RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	SNEED RD to IDEAL HOLDING RD	940039	6,541	2017	1,340	348	B	0.260	340	B	0.254
OKEECHOBEE RD	HEADER CANAL RD to MIDWAY RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	MIDWAY RD to SHINN RD	940039	6,541	2017	1,740	348	B	0.200	340	B	0.195
OKEECHOBEE RD	SHINN RD to MCCARTY RD	940195	6,025	2017	1,810	327	B	0.181	327	B	0.181
OKEECHOBEE RD	MCCARTY RD to FLORIDA'S TURNPIKE	940025	7,551	2017	1,810	378	B	0.209	391	B	0.216
OKEECHOBEE RD	FLORIDA'S TURNPIKE to KINGS HWY	940025	7,551	2017	2,010	378	C	0.188	391	C	0.195
OKEECHOBEE RD	KINGS HWY to CROSSROADS PKWY	940748	21,250	2017	4,170	960	C	0.230	1,013	C	0.243
OKEECHOBEE RD	CROSSROADS PKWY to I-95	940106	24,585	2017	4,170	1,063	C	0.255	1,086	C	0.260
OKEECHOBEE RD	I-95 to JENKINS RD	940029	30,244	2017	4,240	1,976	C	0.474	1,709	C	0.410
OKEECHOBEE RD	JENKINS RD to MCNEIL RD	940029	30,244	2017	4,040	1,976	C	0.498	1,709	C	0.430
OKEECHOBEE RD	MCNEIL RD to VIRGINIA AVE	940742	28,870	2017	3,170	1,580	C	0.511	1,649	C	0.534
OKEECHOBEE RD	VIRGINIA AVE to HARTMAN RD	688	12,500	2020	2,100	687	C	0.342	727	C	0.362
OKEECHOBEE RD	HARTMAN RD to 35TH ST	688	12,500	2020	1,630	687	C	0.941	727	C	0.996
OKEECHOBEE RD	35TH ST to 33RD ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	33RD ST to 25TH ST	689	17,000	2020	1,630	922	D	0.566	902	D	0.553
OKEECHOBEE RD	25TH ST to GEORGIA AVE	690	13,500	2020	1,630	777	D	0.477	738	D	0.453
OKEECHOBEE RD	GEORGIA AVE to DELAWARE AVE	690	13,500	2020	1,710	777	D	0.454	738	C	0.958
OLD DIXIE HWY	US 1 to SR A1A NORTH	691	5,150	2017	790	400	D	0.506	363	C	0.931
OLD DIXIE HWY	SR A1A NORTH to ST LUCIE BLVD	948521	1,383	2017	750	65	C	0.176	65	C	0.176

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
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OLD DIXIE HWY	ST LUCIE BLVD to INDRIQ RD	227	2,041	2016	790	150	C	0.385	116	C	0.297
OLD DIXIE HWY	INDRIQ RD to INDIAN RIVER C.L.	948523	1,227	2017	870	57	C	0.069	57	C	0.069
OLEANDER AVE	BEACH AVE to KITTERMAN RD	692	2,900	2017	540	175	C	0.648	193	C	0.715
OLEANDER AVE	KITTERMAN RD to MIDWAY RD	141	6,498	2017	750	406	D	0.541	426	D	0.568
OLEANDER AVE	MIDWAY RD to WEATHERBEE RD	139	7,100	2020	750	388	D	0.517	421	D	0.561
OLEANDER AVE	WEATHERBEE RD to BELL AVE	139	7,100	2020	540	388	D	0.719	421	D	0.780
OLEANDER AVE	BELL AVE to FARMER'S MARKET RD	240	12,500	2020	540	671	F	1.157	647	F	1.116
OLEANDER AVE	FARMER'S MARKET RD to EDWARDS RD	240	12,500	2020	750	671	D	0.895	647	D	0.863
OLEANDER AVE	EDWARDS RD to WISTERIA AVE	505	10,000	2020	750	611	D	0.815	554	D	0.739
OLEANDER AVE	WISTERIA AVE to GARDENIA AVE	505	10,000	2020	540	611	F	1.053	554	E	0.955
OLEANDER AVE	GARDENIA AVE to VIRGINIA AVE	505	10,000	2020	790	611	D	0.773	554	D	0.701
OLEANDER AVE	VIRGINIA AVE to SUNRISE BLVD	503	4,561	2019	600	259	C	0.863	270	C	0.900
ORANGE AVE	OKEECHOBEE C.L. to SNEED RD	144	4,780	2019	390	300	C	0.769	293	C	0.751
ORANGE AVE	SNEED RD to HEADER CANAL RD	144	4,780	2019	390	300	C	0.769	293	C	0.751
ORANGE AVE	SHINN RD to CAMPBELL RD	940144	2,722	2017	380	149	B	0.355	149	B	0.355
ORANGE AVE	CAMPBELL RD to KINGS HWY	940144	2,722	2017	1,070	149	B	0.355	149	B	0.355
ORANGE AVE	KINGS HWY to I-95	940041	18,112	2017	2,000	780	C	0.388	786	C	0.391
ORANGE AVE	I-95 to JENKINS RD	940035	14,009	2017	2,000	962	C	0.479	905	C	0.450
ORANGE AVE	JENKINS RD to HARTMAN RD	940028	14,189	2017	2,000	764	C	0.380	710	C	0.353
ORANGE AVE	HARTMAN RD to ANGLE RD	940028	14,189	2017	2,000	764	C	0.380	710	C	0.353
ORANGE AVE	ANGLE RD to 25TH ST	940151	10,749	2013	1,710	847	D	0.495	985	D	0.576
ORANGE AVE	25TH ST to 17TH ST	945040	13,196	2017	1,630	690	C	0.945	757	D	0.464
ORANGE AVE	17TH ST to 13TH ST	945040	13,196	2017	1,710	690	C	0.896	757	C	0.983
ORANGE AVE	13TH ST to 10TH ST	945040	13,196	2017	370	690	D	0.920	757	E	0.946
ORANGE AVE	10TH ST to 7TH ST	940155	8,760	2017	300	443	D	0.738	509	D	0.848

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ORANGE AVE	7TH ST to US 1	945134	7,219	2017	300	460	D	0.767	409	D	0.682
ORANGE AVE	US 1 to 2ND ST	945133	3,645	2017	300	232	C	0.773	227	C	0.757
ORANGE AVE	2ND ST to INDIAN RIVER DR	945133	3,645	2017	370	232	C	0.627	227	C	0.614
PARR DR	PORT ST LUCIE BLVD to DARWIN BLVD	209	1,108	2016	700	81	C	0.123	71	C	0.108
PARR DR	DARWIN BLVD to TULIP BLVD	723	1,900	2019	540	167	C	0.619	126	C	0.467
PARR DR	SAVONA BLVD to PORT ST LUCIE BLVD	209	1,108	2016	700	81	C	0.123	71	C	0.108
PARR DR	ROSSER BLVD to SAVONA BLVD	209	1,108	2016	630	81	C	0.135	71	C	0.118
PEACOCK BLVD	CALIFORNIA BLVD to CASHMERE BLVD	693	4,717	2017	630	408	C	0.680	340	C	0.567
PEACOCK BLVD	UNIVERSITY BLVD to CALIFORNIA BLVD	694	10,000	2019	920	746	C	0.857	634	C	0.729
PEACOCK BLVD	ST LUCIE WEST BLVD to UNIVERSITY BLVD	948514	15,534	2017	2,100	717	C	0.375	717	C	0.375
PETERSON RD	BENT CREEK DR to HARTMAN RD	695	1,183	2017	540	94	C	0.348	80	C	0.296
PICOS RD	CAMPBELL RD to KINGS HWY	696	1,333	2017	540	92	C	0.341	86	C	0.319
PORT ST LUCIE BLVD	MARTIN C.L. to BECKER RD	948519	15,868	2017	920	732	C	0.882	732	C	0.882
PORT ST LUCIE BLVD	BECKER RD to PAAR DR	948519	15,868	2017	920	732	C	0.882	732	C	0.882
PORT ST LUCIE BLVD	PAAR DR to TULIP BLVD	948519	15,868	2017	700	732	C	0.882	732	C	0.882
PORT ST LUCIE BLVD	TULIP BLVD to DARWIN BLVD	948519	15,868	2017	920	732	C	0.882	732	C	0.882
PORT ST LUCIE BLVD	DARWIN BLVD to GATLIN BLVD	697	32,000	2019	3,020	1,720	C	0.585	1,731	C	0.589
PORT ST LUCIE BLVD	GATLIN BLVD to DEL RIO BLVD	698	38,000	2019	3,170	2,215	C	0.717	1,957	C	0.633
PORT ST LUCIE BLVD	DEL RIO BLVD to CAMEO BLVD	945074	47,644	2017	3,170	3,186	F	1.01	2,892	C	0.936
PORT ST LUCIE BLVD	CAMEO BLVD to FLORIDA'S TURNPIKE	945074	47,644	2017	3,020	3,186	F	1.055	2,892	C	0.984
PORT ST LUCIE BLVD	FLORIDA'S TURNPIKE to BAYSHORE BLVD	945074	47,644	2017	3,170	3,186	F	1.01	2,892	C	0.936
PORT ST LUCIE BLVD	BAYSHORE BLVD to AIROSO BLVD	945073	48,955	2017	3,020	3,094	F	1.025	3,065	F	1.015
PORT ST LUCIE BLVD	AIROSO BLVD to FLORESTA DR	940780	49,175	2017	3,020	3,027	F	1	2,653	C	0.902
PORT ST LUCIE BLVD	FLORESTA DR to VETERANS MEMORIAL PKWY	940778	61,616	2017	3,020	4,415	F	1.462	3,293	F	1.090
PORT ST LUCIE BLVD	VETERANS MEMORIAL PKWY to MORNINGSIDE BLVD	940776	41,526	2017	3,020	2,499	C	0.850	2,217	C	0.754

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PORT ST LUCIE BLVD	MORNINGSIDE BLVD to US 1	945072	40,456	2017	3,170	3,072	C	0.994	1,916	C	0.620
PRIMA VISTA BLVD	BAYSHORE BLVD to AIROSO BLVD	314	21,500	2020	2,100	944	C	0.470	1,005	C	0.500
PRIMA VISTA BLVD	AIROSO BLVD to FLORESTA DR	150	25,425	2018	2,100	1,171	C	0.583	1,097	C	0.546
PRIMA VISTA BLVD	FLORESTA DR to NARANJA AVE	148	26,500	2019	2,100	1,514	C	0.753	1,408	C	0.700
PRIMA VISTA BLVD	NARANJA AVE to RIO MAR DR	148	26,500	2019	2,000	1,514	C	0.793	1,408	C	0.737
PRIMA VISTA BLVD	RIO MAR DR to US 1	146	26,283	2018	2,100	1,278	C	0.636	1,165	C	0.580
PRIMA VISTA BLVD	US 1 to LENNARD RD	699	7,400	2017	1,710	449	C	0.583	452	C	0.587
RANGE LINE RD	MARTIN C.L. to BECKER RD	145	1,780	2019	1,080	119	B	0.290	119	B	0.290
RANGE LINE RD	BECKER RD to 2 MI S OF GLADES CUT-OFF RD	145	1,780	2019	1,080	119	B	0.290	119	B	0.290
RANGE LINE RD	2 MI S OF GLADES CUT-OFF RD to GLADES CUT-OFF...	145	1,780	2019	1,080	119	B	0.290	119	B	0.290
RIO MAR DR	PRIMA VISTA BLVD to BEACH AVE	147	6,600	2020	750	408	D	0.544	429	D	0.572
RIO MAR DR	BEACH AVE to US 1	147	6,600	2020	790	408	D	0.516	429	D	0.543
ROSSER BLVD	APRICOT RD to GATLIN BLVD	948510	3,425	2017	920	158	C	0.19	158	C	0.19
ROSSER BLVD	PAAR DR to APRICOT RD	948510	3,425	2017	1,070	158	B	0.376	158	B	0.376
SAVONA BLVD	BECKER RD to PAAR DR	236	9,800	2019	790	893	F	1.063	796	E	0.948
SAVONA BLVD	PAAR DR to GATLIN BLVD	236	9,800	2019	750	893	F	1.116	796	E	0.995
SAVONA BLVD	GATLIN BLVD to CALIFORNIA BLVD	702	14,500	2019	790	787	D	0.996	732	D	0.927
SAVAGE BLVD	GATLIN BLVD to GALIANO RD	168	3,922	2018	920	258	C	0.297	208	C	0.239
SAVANNAH RD	US 1 to INDIAN RIVER DR	514	2,188	2019	540	155	C	0.574	153	C	0.567
SELVITZ RD	BAYSHORE BLVD to ST JAMES BLVD	948501	8,756	2017	750	426	D	0.568	426	D	0.568
SELVITZ RD	ST JAMES BLVD to MIDWAY RD	948501	8,756	2017	750	426	D	0.568	426	D	0.568
SELVITZ RD	MIDWAY RD to GLADES CUT-OFF RD	703	10,400	2019	700	696	D	0.994	644	C	0.976
SELVITZ RD	GLADES CUT-OFF RD to EDWARDS RD	704	14,000	2020	790	787	D	0.996	752	D	0.952
SHINN RD	MIDWAY RD to OKEECHOBEE RD	705	775	2017	580	51	C	0.100	49	C	0.096
SHINN RD	OKEECHOBEE RD to ORANGE AVE	149	819	2019	1,080	62	B	0.151	62	B	0.151

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Coco Vista Centre
466 SW Port St. Lucie Blvd, Suite 111
Port St. Lucie, FL 34953
772-462-1593 www.stlucietpo.org

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
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SNEED RD	OKFEECHOBEE RD to ORANGE AVE	151	1,079	2019	670	68	B	0.309	83	B	0.377
SOUTHBEND BLVD	BECKER RD to FLORESTA DR	337	16,000	2019	790	931	F	1.108	971	F	1.156
SR A1A NORTH	US 1 to OLD DIXIE HWY	940709	6,370	2017	920	430	C	0.494	430	C	0.494
SR A1A NORTH	OLD DIXIE HWY to N HWY A1A	706	10,500	2020	2,000	558	C	0.641	621	C	0.714
SR A1A NORTH	SHOREWINDS DR to INDIAN RIVER C.L.	940114	8,090	2017	920	435	C	0.500	477	C	0.548
SR A1A SOUTH	NETTLES ISLAND to FPL PLANT	940719	5,507	2017	920	337	C	0.387	302	C	0.347
SR A1A SOUTH	FPL PLANT to BLUE HERON BLVD	940116	3,825	2017	700	457	C	0.692	367	C	0.556
SR A1A SOUTH	BLUE HERON BLVD to SEAWAY DR	945016	7,908	2017	600	427	D	0.712	511	D	0.852
SR A1A SOUTH	OCEAN DR to BINNEY DR	940115	13,023	2017	600	648	F	1.012	678	F	1.059
SR A1A SOUTH	BINNEY DR to S CAUSEWAY PARK	940115	13,023	2017	790	648	D	0.820	678	D	0.858
SR A1A SOUTH	S CAUSEWAY PARK to INDIAN RIVER DR	940711	11,974	2017	1,550	659	C	0.955	596	C	0.864
SR A1A SOUTH	INDIAN RIVER DR to US 1	940711	11,974	2017	1,710	659	C	0.856	596	C	0.774
ST JAMES DR	AIROSO BLVD to ST JAMES BLVD	172	16,500	2020	2,100	1,129	C	0.562	1,088	C	0.541
ST JAMES DR	ST JAMES BLVD to PEACHTREE BLVD	239	19,000	2020	2,100	1,345	C	0.669	1,301	C	0.647
ST JAMES DR	PEACHTREE BLVD to TELFORD AVE	172	16,500	2020	1,800	1,129	C	0.656	1,088	C	0.633
ST JAMES DR	TELFORD AVE to MIDWAY RD	345	19,500	2020	2,100	1,188	C	0.591	1,173	C	0.584
ST JAMES BLVD	SELVITZ RD to ST JAMES DR	707	4,750	2017	790	279	C	0.715	275	C	0.705
ST LUCIE BLVD	KINGS HWY to KEEN RD	156	5,710	2019	880	310	C	0.373	407	C	0.490
ST LUCIE BLVD	KEEN RD to 25TH ST	156	5,710	2019	880	310	C	0.373	407	C	0.490
ST LUCIE BLVD	25TH ST to SENECA AVE	940270	3,819	2017	750	195	C	0.527	199	C	0.538
ST LUCIE BLVD	SENECA AVE to US 1	940270	3,819	2017	790	195	C	0.500	199	C	0.510
ST LUCIE WEST BLVD	COMMERCE CENTER DR to W OF I-95	152	13,500	2019	700	662	D	0.946	683	D	0.976
ST LUCIE WEST BLVD	I-95 to CALIFORNIA BLVD	318	36,000	2019	2,100	1,722	C	0.857	1,670	C	0.831
ST LUCIE WEST BLVD	CALIFORNIA BLVD to COUNTRY CLUB DR	318	36,000	2019	2,100	1,722	C	0.857	1,670	C	0.831
ST LUCIE WEST BLVD	COUNTRY CLUB DR to CASHMERE BLVD	318	36,000	2019	2,100	1,722	C	0.857	1,670	C	0.831

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**Traffic Counts and Level of Service Report
 Fall/Winter 2019/2020**

Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
ST LUCIE WEST BLVD	CASHMERE BLVD to BAYSHORE BLVD	316	46,000	2019	3,170	2,446	C	0.792	2,308	C	0.747
SUNRISE BLVD	MIDWAY RD to BELL AVE	155	3,590	2016	540	249	C	0.922	233	C	0.863
SUNRISE BLVD	BELL AVE to EDWARDS RD	153	3,814	2016	750	253	C	0.684	286	C	0.773
SUNRISE BLVD	EDWARDS RD to CORTEZ BLVD	511	7,300	2020	600	647	F	1.011	515	D	0.858
SUNRISE BLVD	CORTEZ BLVD to VIRGINIA AVE	511	7,300	2020	750	647	D	0.863	515	D	0.687
SUNRISE BLVD	VIRGINIA AVE to OLEANDER AVE	509	5,300	2020	750	417	D	0.556	411	D	0.548
SUNRISE BLVD	OLEANDER AVE to 7TH ST	708	3,900	2017	1,540	243	C	0.352	282	C	0.409
SUNRISE BLVD	7TH ST to US 1	708	3,900	2017	1,710	243	C	0.316	282	C	0.366
TIFFANY AVE	US 1 to HILLMOOR DR	322	15,000	2019	2,100	855	C	0.425	862	C	0.429
TIFFANY AVE	HILLMOOR DR to VILLAGE GREEN DR	322	15,000	2019	2,100	855	C	0.425	862	C	0.429
TIFFANY AVE	VILLAGE GREEN DR to LENNARD RD	320	4,666	2017	2,100	242	C	0.120	261	C	0.130
TORINO PKWY	CASHMERE BLVD to CALIFORNIA BLVD	709	7,800	2018	630	404	C	0.673	443	C	0.738
TORINO PKWY	CALIFORNIA BLVD to EAST TORINO PKWY	238	4,314	2018	630	255	C	0.425	223	C	0.372
TRADITION PKWY	COMMUNITY BLVD to VILLAGE PKWY	711	8,367	2018	1,710	996	D	0.582	1,144	D	0.669
TRADITION PKWY	VILLAGE PKWY to W OF I-95	712	36,500	2019	3,170	2,021	C	0.654	1,924	C	0.623
TULIP BLVD	DARWIN BLVD to PORT ST LUCIE BLVD	713	8,200	2019	790	524	D	0.663	456	D	0.577
TULIP BLVD	PORT ST LUCIE BLVD to PAAR DR	714	9,133	2018	790	639	D	0.809	493	D	0.624
TULIP BLVD	PAAR DR to DARWIN BLVD	714	9,133	2018	790	639	D	0.809	493	D	0.624
TURNPIKE FEEDER RD	TURNPIKE FEEDER RD SB RAMP to US 1	940078	4,989	2015	660	653	C	0.989	653	C	0.989
TURNPIKE FEEDER RD	INDIAN PINES BLVD to TURNPIKE FEEDER RD SB R...	940269	10,253	2017	870	676	C	0.777	620	C	0.713
TURNPIKE FEEDER RD	INDRIO RD to INDIAN PINES BLVD	940745	12,876	2017	870	696	C	0.800	732	C	0.841
US 1	MARTIN C.L. to LENNARD RD	945071	41,817	2017	4,240	1,904	C	0.457	2,239	C	0.537
US 1	LENNARD RD to PORT ST LUCIE BLVD	945071	41,817	2017	4,040	1,904	C	0.480	2,239	C	0.564
US 1	PORT ST LUCIE BLVD to JENNINGS RD	945070	31,458	2017	3,020	1,510	C	0.514	1,603	C	0.545
US 1	JENNINGS RD to TIFFANY AVE	945070	31,458	2017	3,020	1,510	C	0.514	1,603	C	0.545

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
US 1	TIFFANY AVE to WALTON RD	945070	31,458	2017	3,020	1,510	C	0.514	1,603	C	0.545
US 1	WALTON RD to VILLAGE GREEN DR	945150	43,634	2017	3,020	2,364	C	0.804	2,119	C	0.721
US 1	VILLAGE GREEN DR to SPANISH LAKES BLVD	940265	47,369	2017	3,170	2,516	C	0.814	2,356	C	0.762
US 1	SPANISH LAKES BLVD to PRIMA VISTA BLVD	940265	47,369	2017	3,170	2,516	C	0.814	2,356	C	0.762
US 1	PRIMA VISTA BLVD to RIO MAR DR	940264	36,624	2017	3,170	1,694	C	0.548	1,667	C	0.539
US 1	RIO MAR DR to KITTERMAN RD	940266	30,753	2017	3,170	1,503	C	0.486	1,361	C	0.440
US 1	KITTERMAN RD to S OF SAEGER AVE	940266	30,753	2017	3,020	1,503	C	0.511	1,361	C	0.463
US 1	S OF SAEGER AVE to EASY ST	940266	30,753	2017	3,170	1,503	C	0.486	1,361	C	0.440
US 1	EASY ST to MIDWAY RD	945156	29,579	2017	3,170	1,379	C	0.446	1,340	C	0.434
US 1	MIDWAY RD to WEATHERBEE RD	940012	27,675	2017	2,100	1,300	C	0.647	1,316	C	0.655
US 1	WEATHERBEE RD to FARMER'S MARKET RD	940012	27,675	2017	2,000	1,300	C	0.681	1,316	C	0.689
US 1	FARMER'S MARKET RD to EDWARDS RD	940012	27,675	2017	2,000	1,300	C	0.681	1,316	C	0.689
US 1	EDWARDS RD to SAVANNAH RD	945002	26,196	2017	2,000	1,200	C	0.628	1,177	C	0.616
US 1	GARDENIA AVE to VIRGINIA AVE	945002	26,196	2017	2,000	1,200	C	0.628	1,177	C	0.616
US 1	SAVANNAH RD to GARDENIA AVE	945002	26,196	2017	2,000	1,200	C	0.628	1,177	C	0.616
US 1	VIRGINIA AVE to OHIO AVE	945003	23,845	2017	2,000	1,148	C	0.601	1,157	C	0.606
US 1	OHIO AVE to GEORGIA AVE	945003	23,845	2017	1,630	1,148	D	0.704	1,157	D	0.710
US 1	GEORGIA AVE to DELAWARE AVE	945008	21,107	2017	1,630	1,088	D	0.667	1,040	D	0.638
US 1	DELAWARE AVE to CITRUS AVE	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	CITRUS AVE to ORANGE AVE	940118	20,283	2017	1,630	1,009	D	0.619	910	D	0.558
US 1	ORANGE AVE to AVENUE A	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	AVENUE A to AE BACKUS AVE	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	AE BACKUS AVE to AVENUE D	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	AVENUE D to SR A1A SOUTH	945014	24,706	2017	1,630	1,252	D	0.768	1,220	D	0.748
US 1	SR A1A SOUTH to AVENUE H	715	33,500	2020	2,100	1,766	C	0.879	1,742	C	0.867

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
US 1	AVENUE H to OLD DIXIE HWY	715	33,500	2020	2,000	1,766	C	0.925	1,742	C	0.912
US 1	OLD DIXIE HWY to AVENUE O	940123	22,051	2017	2,000	1,530	C	0.801	1,196	C	0.626
US 1	AVENUE O to SR A1A NORTH	940123	22,051	2017	2,100	1,530	C	0.761	1,196	C	0.595
US 1	SR A1A NORTH to JUANITA AVE	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	JUANITA AVE to ST LUCIE BLVD	940010	17,583	2017	2,100	1,055	C	0.525	845	C	0.420
US 1	ST LUCIE BLVD to 25TH ST	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	25TH ST to INDRIQ RD	940009	17,126	2017	2,100	1,020	C	0.507	978	C	0.487
US 1	INDRIQ RD to TURNPIKE FEEDER RD	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
US 1	TURNPIKE FEEDER RD to INDIAN RIVER C.L.	940107	20,188	2017	2,100	1,099	C	0.547	1,092	C	0.543
VETERANS MEMORIAL PKWY	PORT ST LUCIE BLVD to LYNGATE DR	329	14,500	2019	2,100	779	C	0.388	817	C	0.406
VETERANS MEMORIAL PKWY	LYNGATE DR to US 1	327	14,911	2017	2,100	756	C	0.376	804	C	0.400
VILLAGE GREEN DR	US 1 to WALTON RD	716	9,600	2017	2,100	619	C	0.308	575	C	0.286
VILLAGE GREEN DR	WALTON RD to TIFFANY AVE	717	4,633	2017	920	249	C	0.286	235	C	0.270
VIRGINIA AVE	35TH ST to 25TH ST	940032	21,557	2017	3,020	1,111	C	0.378	1,083	C	0.368
VIRGINIA AVE	OKEECHOBEE RD to HARTMAN RD	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	HARTMAN RD to 35TH ST	940030	22,011	2017	3,020	1,169	C	0.398	1,126	C	0.383
VIRGINIA AVE	25TH ST to 13TH ST	940033	20,913	2017	3,020	1,093	C	0.372	1,164	C	0.396
VIRGINIA AVE	13TH ST to 11TH ST	940794	22,873	2017	3,020	1,101	C	0.374	1,101	C	0.374
VIRGINIA AVE	11TH ST to SUNRISE BLVD	940794	22,873	2017	3,170	1,101	C	0.356	1,101	C	0.356
VIRGINIA AVE	SUNRISE BLVD to OLEANDER AVE	940792	19,519	2017	3,020	1,063	C	0.362	992	C	0.337
VIRGINIA AVE	OLEANDER AVE to COLONIAL RD	940034	18,483	2017	3,170	1,043	C	0.338	1,020	C	0.330
VIRGINIA AVE	COLONIAL RD to US 1	940034	18,483	2017	3,020	1,043	C	0.355	1,020	C	0.347
VILLAGE PKWY	DISCOVERY WAY to TRADITION PKWY	718	14,000	2019	2,650	732	C	0.595	797	C	0.648
VILLAGE PKWY	BECKER RD to DISCOVERY WAY	718	14,000	2019	1,710	732	C	0.951	797	D	0.466
VILLAGE PKWY	TRADITION PKWY to WESTCLIFFE LN	719	23,000	2019	1,710	1,208	D	0.706	1,265	D	0.740

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Roadway Name	Location	STATION ID	AADT	Last Count Year	Pk Hr Service Capacity	AM Pk Hr Pk Dir			PM Pk Hr Pk Dir		
						Volume	LOS	V/C	Volume	LOS	V/C
VILLAGE PKWY	WESTCLIFFE LN to CROSSROADS PKWY	720	12,000	2019	1,540	640	C	0.928	634	C	0.919
WALTON RD	US 1 to VILLAGE GREEN DR	330	15,156	2019	1,710	915	D	0.535	841	D	0.492
WALTON RD	VILLAGE GREEN DR to LENNARD RD	328	13,000	2019	1,710	690	C	0.896	684	C	0.888
WALTON RD	LENNARD RD to GREEN RIVER PKWY	326	9,382	2018	880	569	C	0.686	627	C	0.755
WALTON RD	GREEN RIVER PKWY to INDIAN RIVER DR	324	5,402	2018	630	416	C	0.693	430	C	0.717
WESTCLIFFE LN	TREMONTE AVE to VILLAGE PKWY	722	6,267	2018	1,470	439	C	0.665	338	C	0.512
WEATHERBEE RD	OLEANDER AVE to US 1	721	3,574	2019	750	265	C	0.716	242	C	0.654
WEATHERBEE RD	US 1 to MIDWAY RD	158	6,300	2020	750	431	D	0.575	461	D	0.615
WESTMORELAND BLVD	MORNINGSIDE BLVD to PORT ST LUCIE BLVD	339	13,000	2019	920	685	C	0.787	729	C	0.838
WESTMORELAND BLVD	MARTIN C.L. to MORNINGSIDE BLVD	245	9,700	2019	920	540	C	0.621	598	C	0.687

Countywide Performance

Weighted V/C = **0.69**

% VMT below Standard = **8.04%**

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MIDWAY ROAD FROM GLADES CUT OFF ROAD TO SELVITZ ROAD - RESERVE

4385431 Non-SIS



Project Description: FUNDING ACTION
Extra Description: 2019 TPO PRIORITY #2 RESERVE FOR FM 231440-3
Lead Agency: MANAGED BY FDOT
Length: 0
Phase Group: CONSTRUCTION
From: GLADES CUT OFF ROAD
To: SELVITZ ROAD

Phase	Fund Code	2020	2021	2022	2023	2024	Total
CST	SA	0	0	0	0	1,000,000	1,000,000
CST	SU	0	0	0	0	1,000,000	1,000,000
						2,000,000	2,000,000

Map data ©2019 Google
 Prior Year Cost: 0
 Future Year Cost: 0
 Total Project Cost: 2,000,000
 L RTP: Page 6-5

Notes

**I-95 NORTHBOUND AND SOUTHBOUND OFF-RAMPS AT MIDWAY ROAD
4397541 SIS**



Project Description: INTERCHANGE - ADD LANES
Extra Description: MIDWAY ROAD AT I-95 NB & SB OFF-RAMP INTERSECTION SHORT TERM IMPROVEMENTS; A)ADD SECOND LEFT TURN LANES TO BOTH NB AND SB OFF-RAMPS
Lead Agency: MANAGED BY FDOT **From:** OFF-RAMPS
Length: 0.775 **To:** MIDWAY RD
Phase Group: PRELIMINARY ENGINEERING, RAILROAD & UTILITIES, CONSTRUCTION, ENVIRONMENTAL

Phase	Fund Code	2020	2021	2022	2023	2024	Total
PE	DIH	20,000	0	0	0	0	20,000
PE	DS	230,000	0	0	0	0	230,000
RRU	DS	10,000	0	0	0	0	10,000
CST	DIH	0	0	57,472	0	0	57,472
CST	DS	0	0	1,468,717	0	0	1,468,717
ENV	DS	10,000	30,000	0	0	0	40,000
		270,000	30,000	1,526,189			1,826,189

Prior Year Cost: 0
Future Year Cost: 0
Total Project Cost: 1,826,189
LRTP: Page 6-2

Notes

I-95 @ ST LUCIE WEST BLVD
4353371 SIS



Map data ©2019 Google

Prior Year Cost: **1,196,654**

Future Year Cost: **0**

Total Project Cost: **17,818,063**

L RTP: Page 6-2

Project Description: INTERCHANGE - ADD LANES

Extra Description: 2017 TPO PRIORITY #5 FROM COMMERCE CENTER DRIVE TO PEACOCK BLVD., WIDENING OF ROADWAY TO ACCOMMODATE THREE EB LANES AND TWO WB LANES ACROSS THE BRIDGE OVER I-95 AND BUILD A NEW EB BRIDGE. WIDENING THE SOUTHBOUND OFF RAMP INTERSECTION TO PROVIDE TWO LEFT TURN LANES AND ONE RIGHT TURN LANE. WIDENING THE...

Lead Agency: MANAGED BY FDOT

From: SR-9/I-95

Length: 1.814

To: ST LUCIE WEST BLVD

Phase Group: PRELIMINARY ENGINEERING, RAILROAD & UTILITIES, CONSTRUCTION, CONTRACT INCENTIVES, ENVIRONMENTAL

Phase Fund Code	2020	2021	2022	2023	2024	Total
RRU DDR	0	400,000	0	0	0	400,000
CST LF	0	0	3,100,000	0	0	3,100,000
CST DDR	0	0	10,153,103	0	0	10,153,103
CST DIH	0	0	108,786	0	0	108,786
CST TRIP	0	0	2,113,636	0	0	2,113,636
CST TRWR	0	0	565,884	0	0	565,884
INC DDR	0	0	150,000	0	0	150,000
ENV DDR	30,000	0	0	0	0	30,000
	30,000	400,000	16,191,409	0	0	16,621,409

Notes

I-95 FROM MARTIN/ST. LUCIE COUNTY LINE TO OKEECHOBEE ROAD
4226816 SIS

Project Description: PD&E/EMO STUDY
Lead Agency: MANAGED BY FDOT
Length: 15.499
Phase Group: P D & E

From: MARTIN/ST. LUCIE COUNTY LINE
To: OKEECHOBEE ROAD



Prior Year Cost: 2,536,059
Future Year Cost: 2,110,000
Total Project Cost: 11,992,052
LRTP: Page 7-1

Phase	Fund Code	2020	2021	2022	2023	2024	Total
PDE	ACNP	0	0	0	0	550,000	550,000
						550,000	550,000

Notes

APPENDIX B

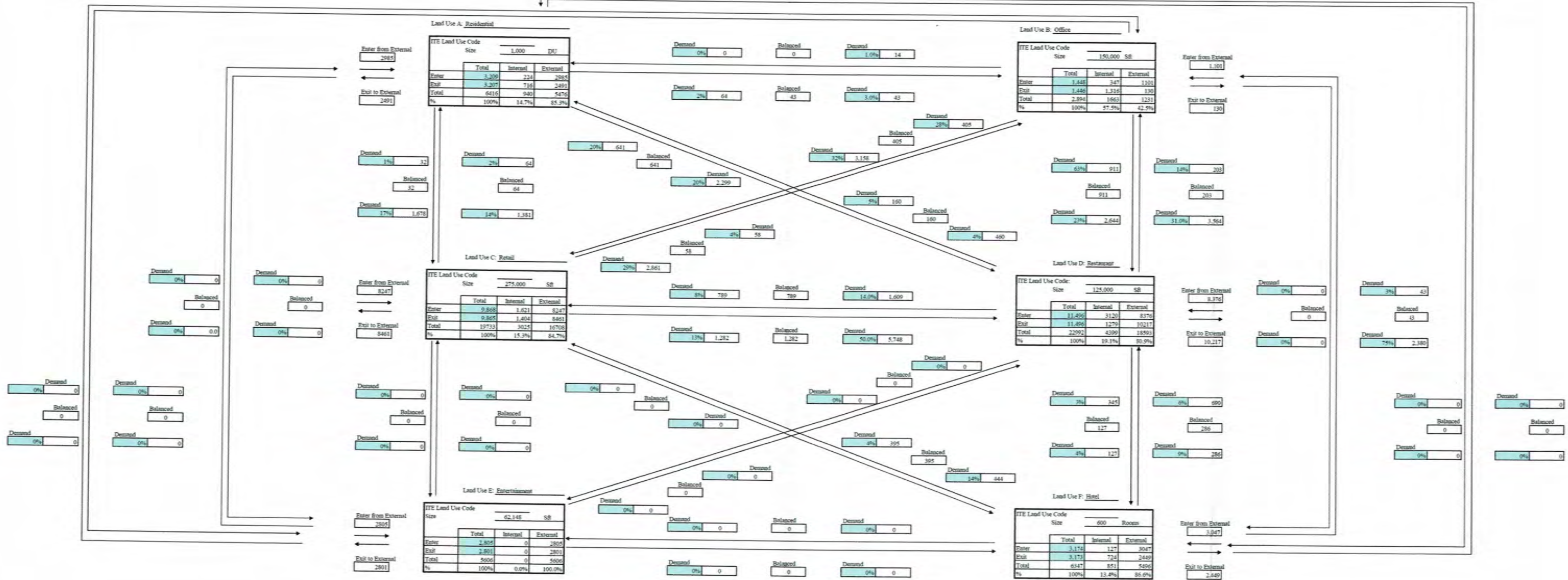
**AM and PM Trip Generation
Proposed Future Land Use**

Attachment B: Daily Internal Traffic

Analyst: James Kemp
Date: Feb-20

PROJECT
TRIP INTERNALIZATION - Daily

Name of Desktop: Willow Lakes
Time Period: Daily Peak Hour



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total
Enter	2985	1031	8247	8176	2805	3047	26561
Exit	2491	139	8463	10217	2801	2449	26549
Total	5476	1231	16708	18593	5606	5496	53110
Single-Use Trip Generation	6416	2994	19733	22992	5606	6347	63988
Internal Capture							17.0%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Legend

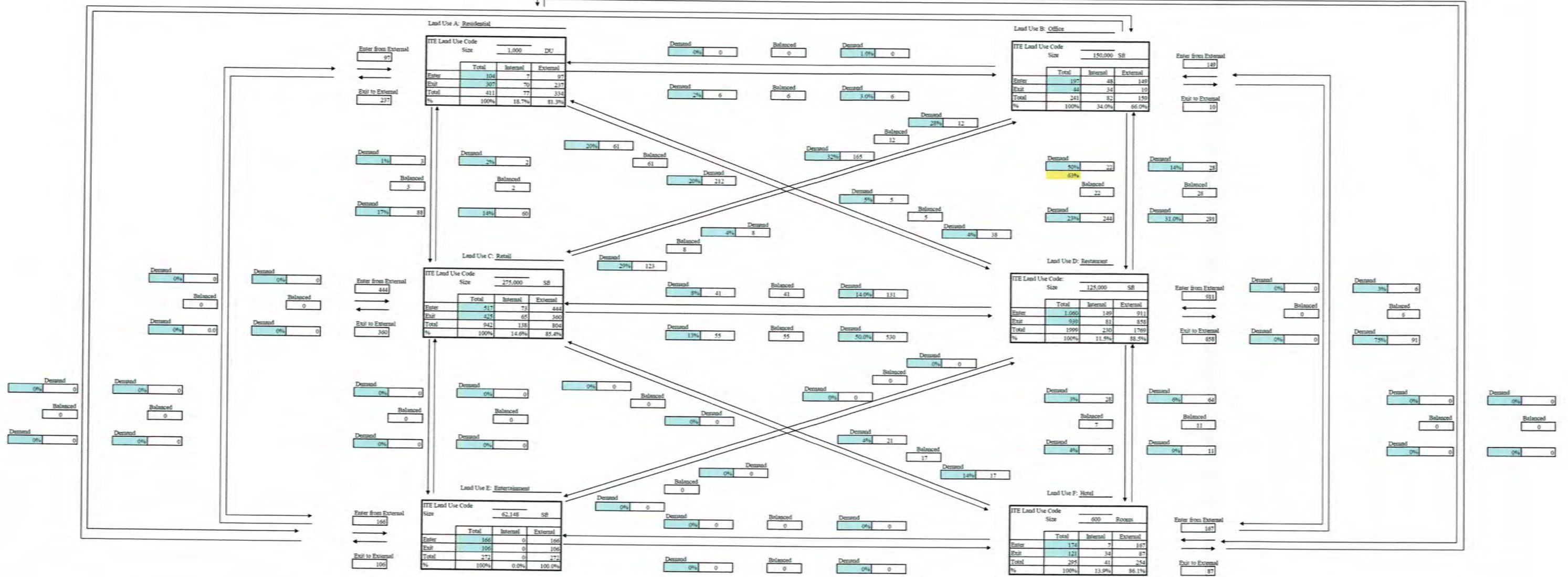
- X% Denotes % Used
- X% Denotes ITE Value if different from % Used
- Balanced Denotes Internal Trips Computed

Attachment B: AM Internal Traffic - Phase 1

Analyst: James Kemp
Date: Feb-20

PROJECT
TRIP INTERNALIZATION - AM

Name of Development: Willow Lakes
Time Period: AM Peak Hour



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total
Enter	97	149	444	911	166	167	1934
Exit	237	10	360	858	106	87	1658
Total	334	159	804	1769	272	254	3592
Single-Use Trip One Estimate	411	241	942	1999	272	294	4160
							Internal Capture 13.7%

Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Legend

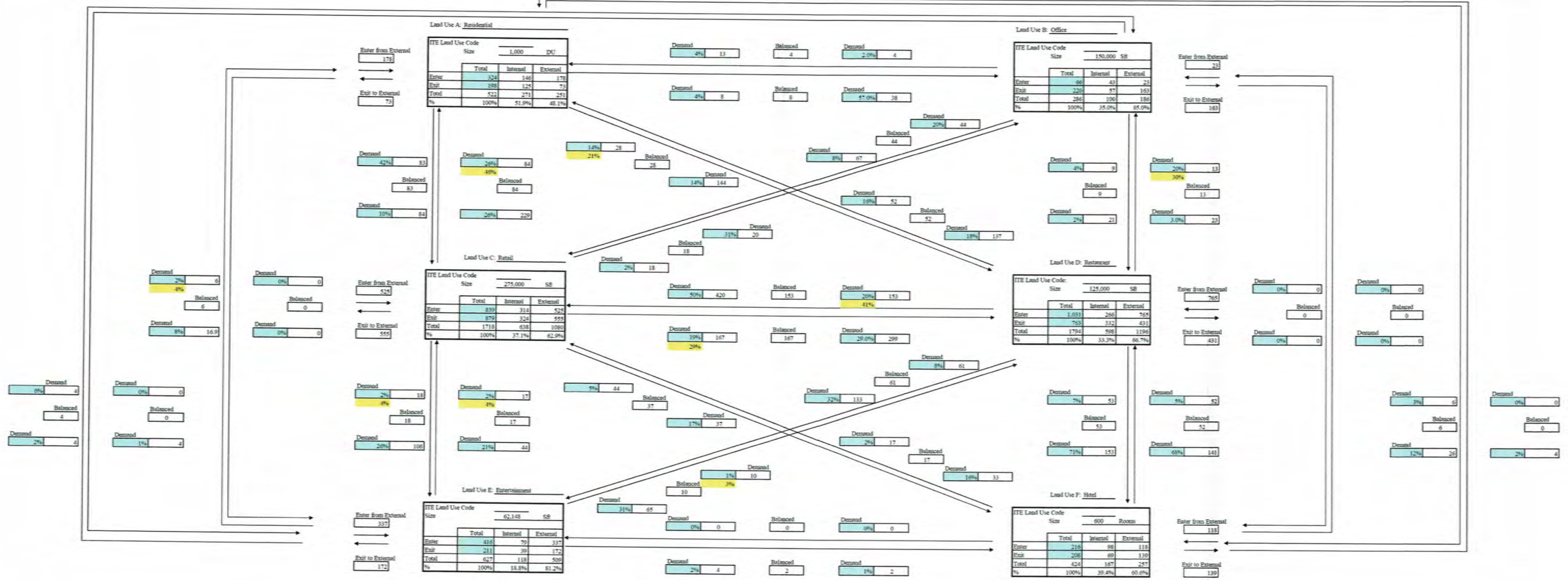
- X% Denotes % Used
- X% Denotes ITE Value if different from % Used
- Balanced Denotes Internal Trips Computed

Attachment B: PM Internal Traffic

Analyst: Jason Kemp
Date: Feb-20

PROJECT
TRIP INTERNALIZATION - PM

Name of Developer: Wilbur Smith
Time Period: PM Peak Hour



Net External Trips for Multi-Use Development

	Land Use A	Land Use B	Land Use C	Land Use D	Land Use E	Land Use F	Total
Enter	178	23	524	765	337	118	1946
Exit	73	163	554	431	172	139	1533
Total	251	186	1078	1196	509	257	3479
Single-Use Trip Generation	522	286	1718	1794	627	424	5371

Internal Capture: 35.2%

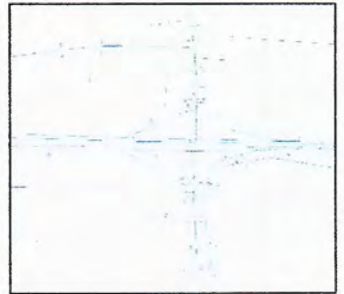
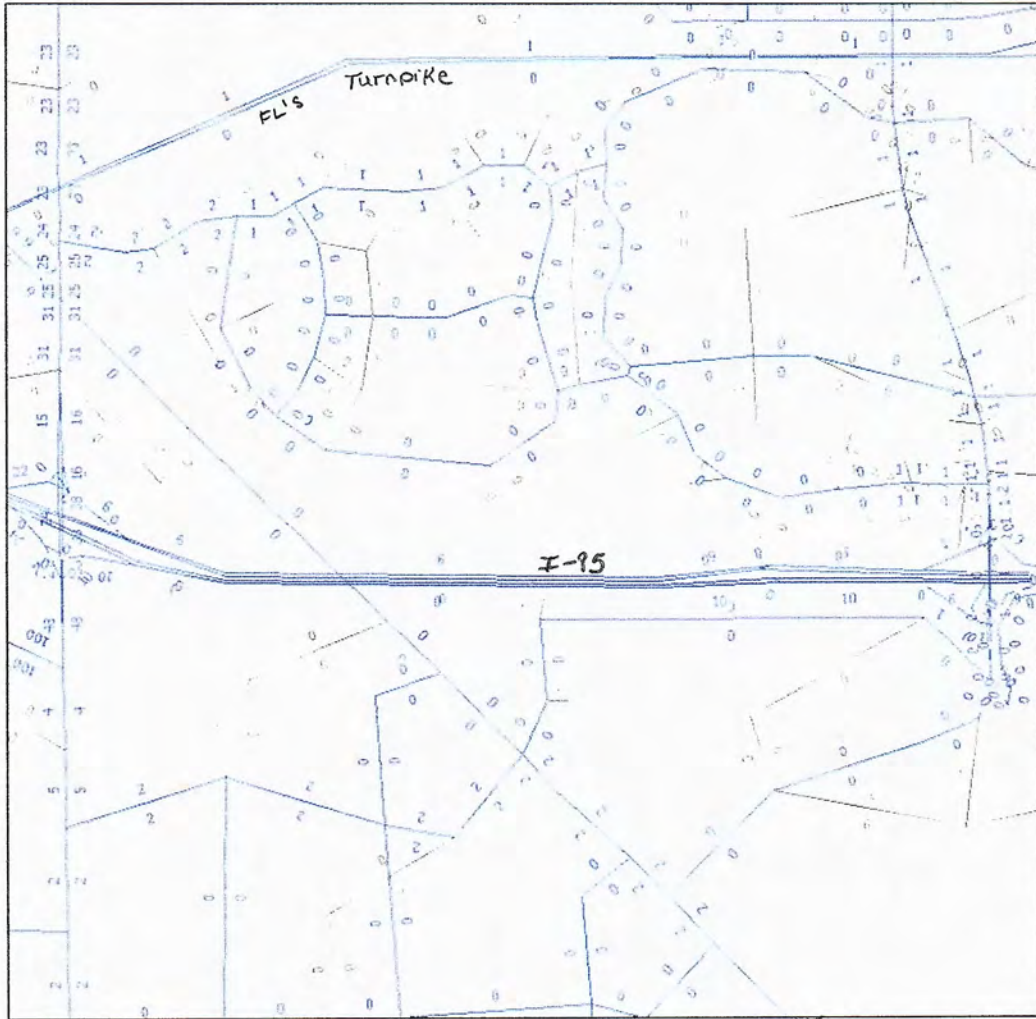
Source: based on procedures from the ITE Trip Generation Handbook, Chapter 7, March 2001

Legend

- X% Denotes % Used
- X% Denotes ITE Value if different from % Used
- Balanced Denotes Internal Trips Computed

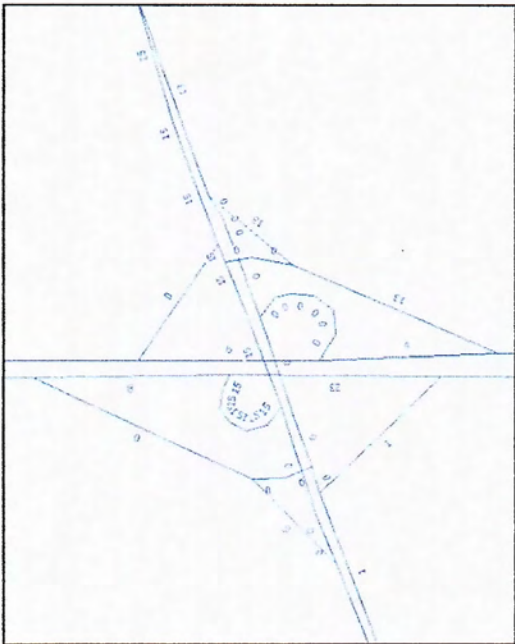
APPENDIX C
Model Assignment

Southern Assignment

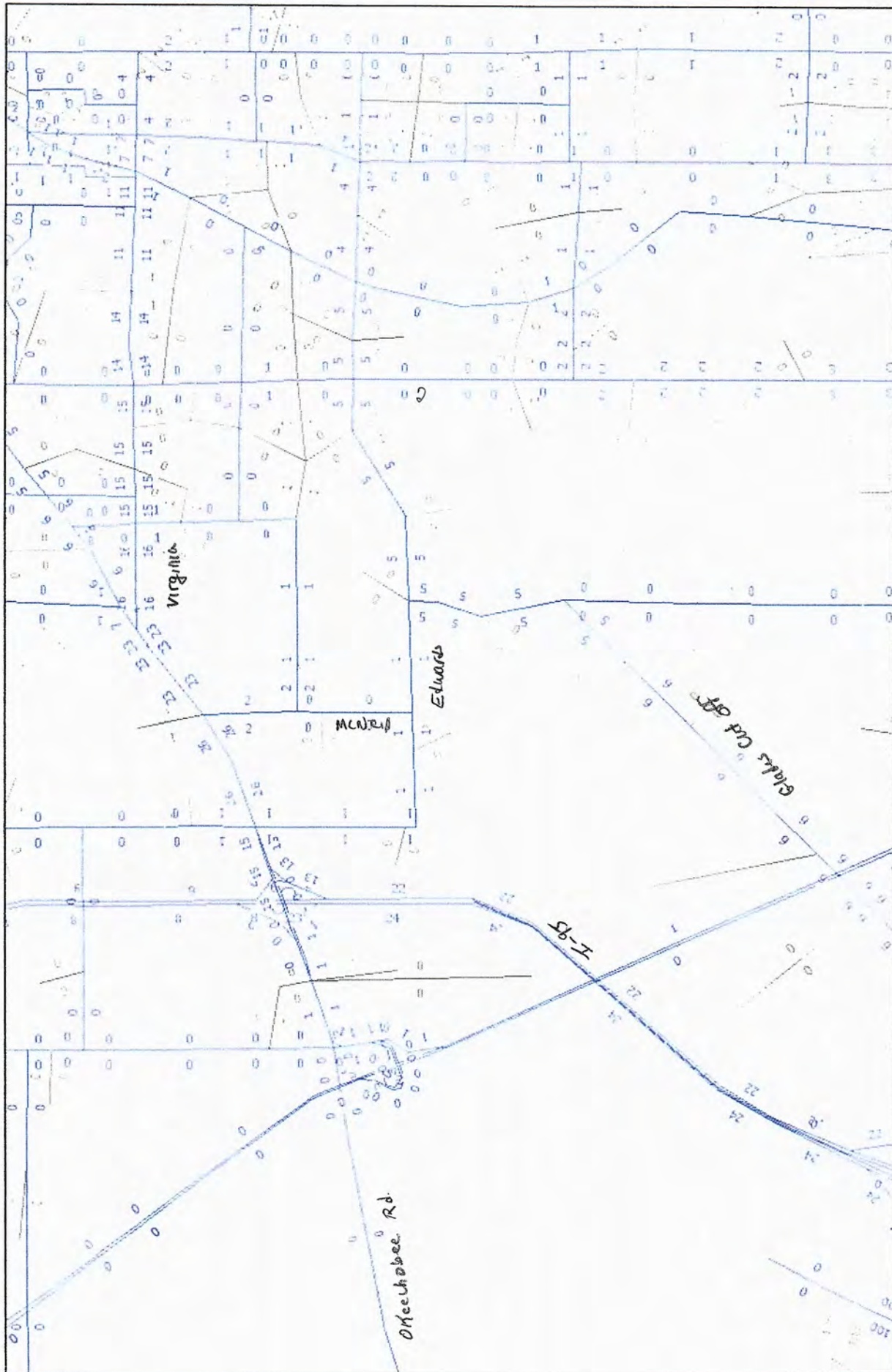


Midway Rd.

Class 5 (K-9)

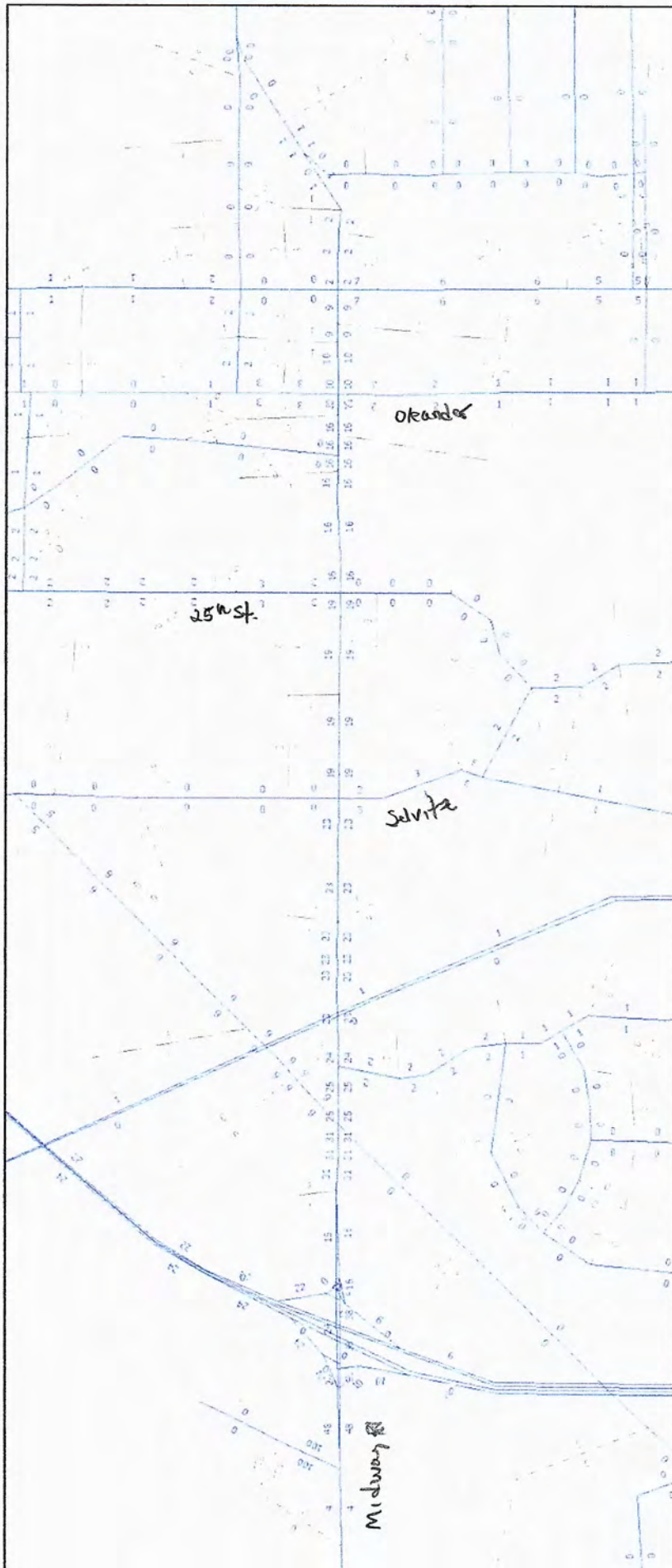


Northern Assignment



No SAM

Eastern Assignment



APPENDIX D

2035 Background Traffic Data

Other Projects

The Village at Midway

Whispering Oaks

Shinn Road

Rio Lago

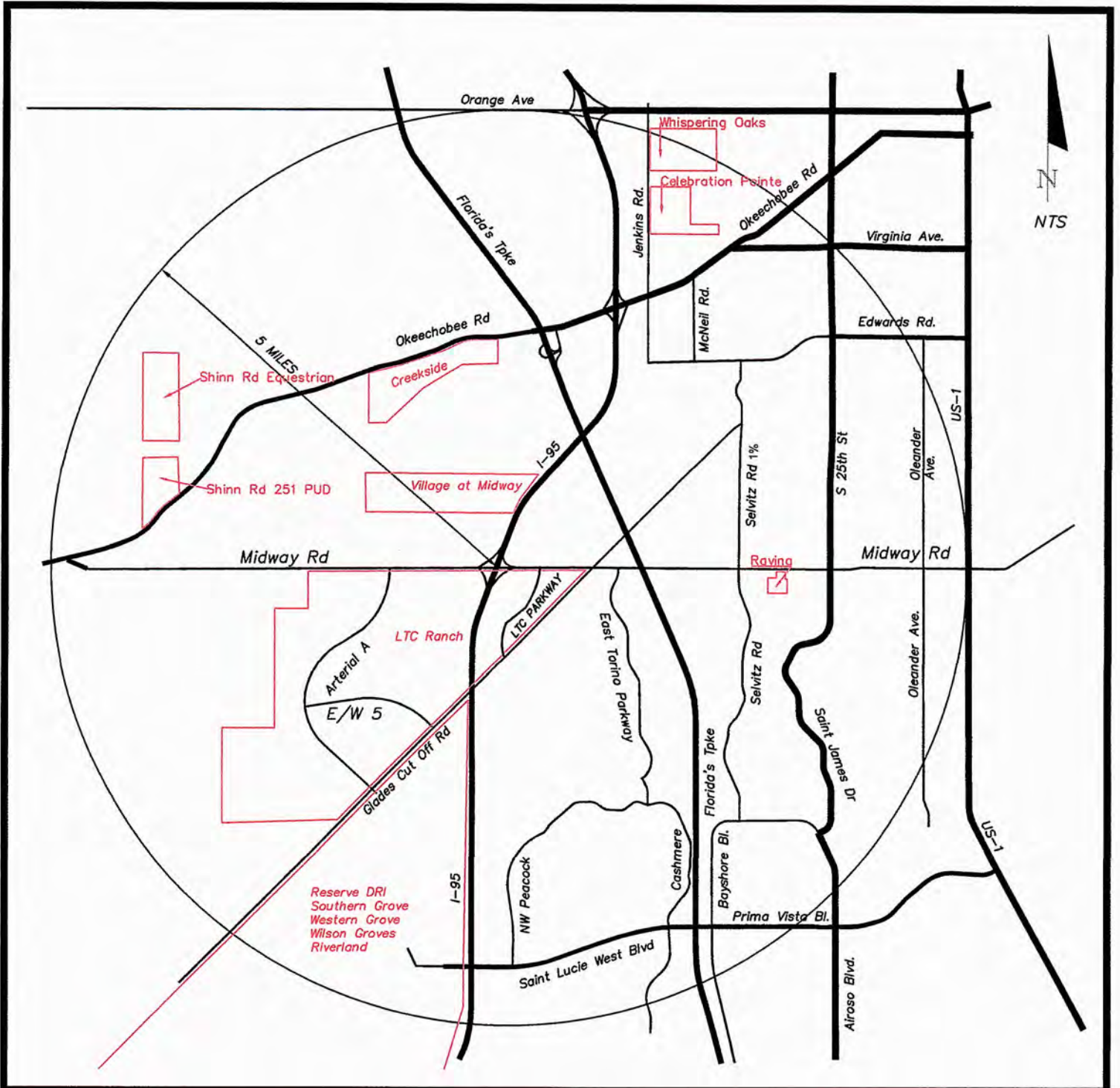
Ravinia

Creekside

Western Annexation: Western Grove, Southern Grove, Riverland, Wilson Grove

Village of Sunset Lake

LTC Ranch



O'Rourke Engineering & Planning



772-781-7918
969 SE Federal Highway Suite 402
Stuart, Florida 34994

Approved Project Locations

WILLOW LAKES

February 2020

THE VILLAGE AT MIDWAY

Table 2a Trip Generation - Daily

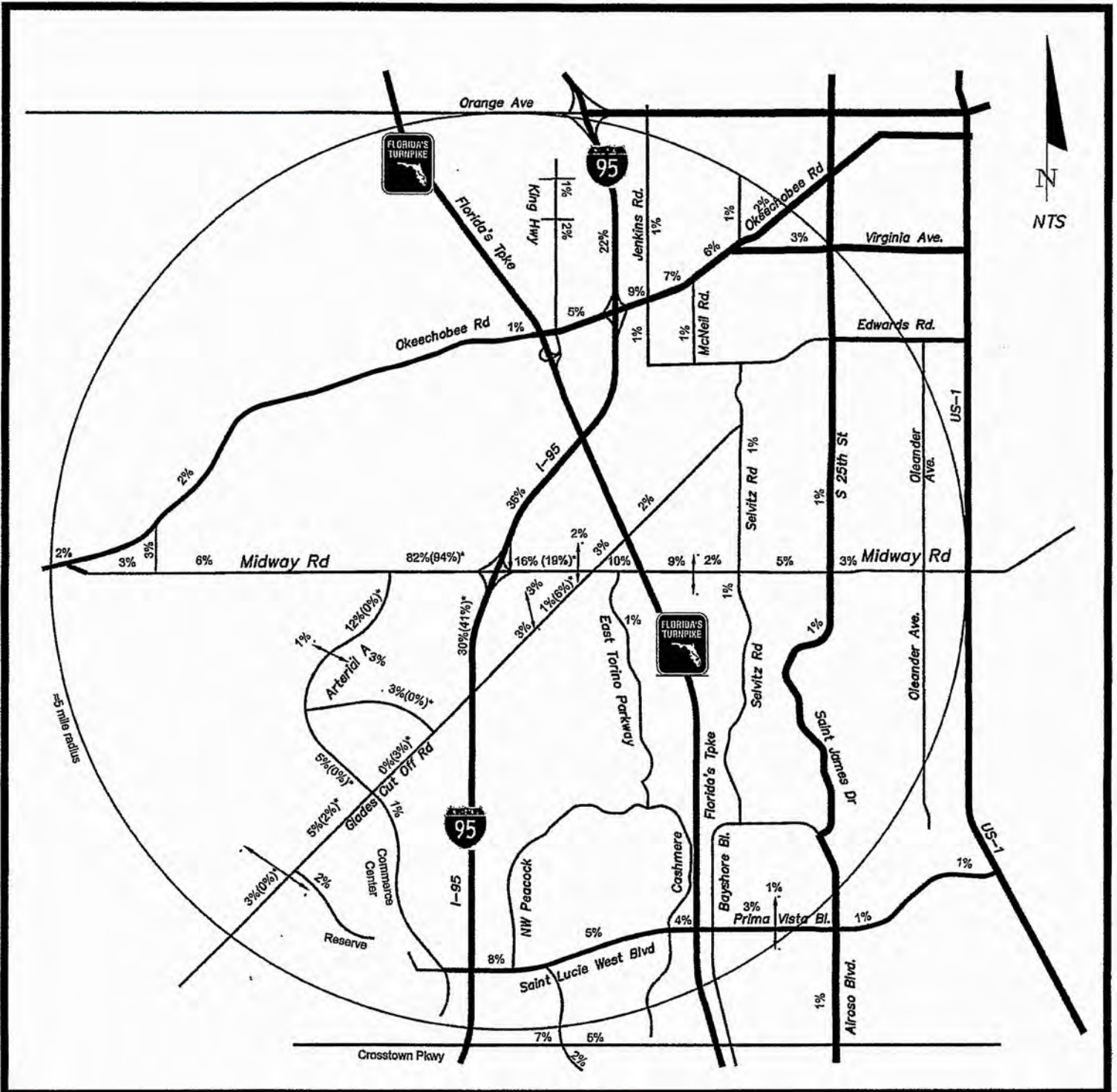
Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Directional Split			Gross Trips			Internalization Trips (2)			Net External Trips			Pass-by Trips			Net New Trips		
				% In	% Out	% Split	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	In	Out
Warehouse	150	1,500,000 SF	$L=0.85 \times (1.24)$	50%	50%	2,431	2,430	5,061	144	131	275	5.1%	2,387	2,399	4,786	479	10.0%	2,154	2,153	4,307	
Apartment	220	650 DU	$T=0.06 \times (123.56)$	50%	50%	2,032	2,031	4,063	793	709	1,502	37.0%	1,239	1,322	2,561	0	0.0%	1,281	1,280	2,561	
Shopping Center	820	160,000 SF	$L=0.65 \times (15.83)$	50%	50%	4,609	4,609	9,218	706	792	1,498	16.3%	3,903	3,817	7,720	2625	34.00%	2,548	2,547	5,095	
General Light Industrial	110	1,200,000 SF	$T=7.47 \times (101.92)$	50%	50%	4,431	4,431	8,862	253	229	482	5.6%	4,178	4,202	8,380	888	10.0%	3,771	3,771	7,542	
Convenience Store	851	5,000 SF	$T=737.99 \times (3)$	50%	50%	1,845	1,845	3,690	282	317	599	16.2%	1,563	1,528	3,091	1886	61.0%	603	602	1,205	
Fast Food Restaurant	984	10,000 SF	$T=496.12 \times (3)$	50%	50%	2,481	2,480	4,961	508	508	1,016	20.5%	1,973	1,972	3,945	1903	49.0%	1,006	1,006	2,012	
High Turnover Restaurant	932	25,000 SF	$T=127.15 \times (3)$	50%	50%	1,590	1,589	3,179	326	326	652	20.5%	1,264	1,263	2,527	1097	43.0%	720	720	1,440	
TOTAL						19,519	19,515	39,034	3,012	3,012	6,024	15.4%	16,507	16,503	33,010	3848	26.8%	12,083	12,079	24,162	

Table 2b Trip Generation - AM

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Directional Split			Gross Trips			Internalization Trips (2)			Net External Trips			Pass-by Trips			Net New Trips		
				% In	% Out	% Split	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	In	Out
Warehouse	150	1,500,000 SF	$L=0.85 \times (1.88)$	79%	21%	289	77	366	24	22	46	12.6%	265	55	320	32	10.0%	228	60	288	
Apartment	220	650 DU	$T=0.49 \times (133.73)$	20%	80%	64	258	322	4	60	64	19.9%	60	198	258	0	0.0%	52	206	258	
Shopping Center	820	160,000 SF	$L=0.61 \times (124.24)$	62%	38%	129	79	208	35	28	63	30.3%	94	51	145	49	34.00%	60	36	96	
General Light Industrial	110	1,200,000 SF	$T=1.18 \times (89.28)$	88%	12%	1,168	159	1,327	86	78	164	12.4%	1,082	81	1,163	116	10.0%	921	126	1,047	
Convenience Store	851	5,000 SF	$T=67.02 \times (3)$	50%	50%	1,68	167	335	46	59	105	31.3%	122	108	230	140	61.0%	45	45	90	
Fast Food Restaurant	984	10,000 SF	$T=45.42 \times (3)$	51%	49%	232	222	454	82	49	131	28.9%	150	173	323	158	49.0%	84	81	165	
High Turnover Restaurant	932	25,000 SF	$T=103.1 \times (3)$	55%	45%	149	121	270	48	29	77	28.9%	101	92	193	83	43.0%	61	49	110	
TOTAL						2,199	1,083	3,282	325	325	650	19.9%	1,874	768	2,642	378	21.0%	1,451	603	2,054	

Table 2c Trip Generation - PM

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Directional Split			Gross Trips			Internalization Trips (2)			Net External Trips			Pass-by Trips			Net New Trips		
				% In	% Out	% Split	In	Out	Total	In	Out	Total	%	In	Out	Total	In	Out	Total	In	Out
Warehouse	150	1,500,000 SF	$L=0.64 \times (114)$	25%	75%	84	253	337	4	10	14	4.2%	80	245	323	32	10.0%	78	218	291	
Apartment	220	650 DU	$T=0.55 \times (17.65)$	65%	35%	244	131	375	86	61	147	39.2%	158	70	228	0	0.0%	148	80	228	
Shopping Center	820	160,000 SF	$L=0.67 \times (133.31)$	48%	52%	394	427	821	100	88	188	22.9%	294	359	653	215	34.00%	201	217	418	
General Light Industrial	110	1,200,000 SF	$T=1.43 \times (157.36)$	12%	88%	187	1,372	1,559	20	48	68	4.4%	167	1,394	1,491	149	10.0%	161	1,181	1,342	
Convenience Store	851	5,000 SF	$T=52.4 \times (3)$	51%	49%	134	128	262	34	27	61	23.3%	100	101	201	123	61.0%	40	38	78	
Fast Food Restaurant	984	10,000 SF	$T=52.65 \times (3)$	52%	48%	170	157	327	58	63	121	37.0%	112	94	206	101	49.0%	55	50	105	
High Turnover Restaurant	932	25,000 SF	$T=9.85 \times (3)$	55%	45%	135	111	246	43	48	91	37.0%	92	63	155	67	43.0%	48	40	88	
TOTAL						1,348	2,579	3,927	345	345	690	17.6%	1,003	2,234	3,237	687	21.2%	726	1,824	2,550	



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 Stuart, Florida 34994

LEGEND
 xx% - Assignment w/ Arterial A
 (xx%)* - Assignment w/out Arterial A

FIGURE 4
PROJECT % ASSIGNMENT
THE VILLAGE AT MIDWAY

PROJECT TRAFFIC

To estimate traffic generated by the Whispering Oaks Development, the ITE Trip Generation, 7th Edition trip rates were applied. These calculations provide an estimate of the typical generation. Trip generation for the project is shown in Table 2.

TABLE 2: Project Trip Generation

Land Use	Units	ITE Land Use Code	Daily Trip Equation (Trips)	PM Peak Hour Trip Equation (Trips)	%In/ %Out (trips in/trip out)
Town Home	231	230	$\text{Ln}(T) = 0.85\text{Ln}(x) + 2.55(1308)$	$\text{Ln}(T) = 0.82\text{Ln}(x) + 0.32(119)$	67%/ 33% (80/39)
Single Family	145	210	$\text{Ln}(T) = 0.92\text{Ln}(x) + 2.71(1464)$	$\text{Ln}(T) = 0.90\text{Ln}(x) + 0.53(150)$	63/37 (94/55)
	376		2772	269	174/ 95

The PM peak hour total trips would be 269 with 174 entering and 95 exiting the project.

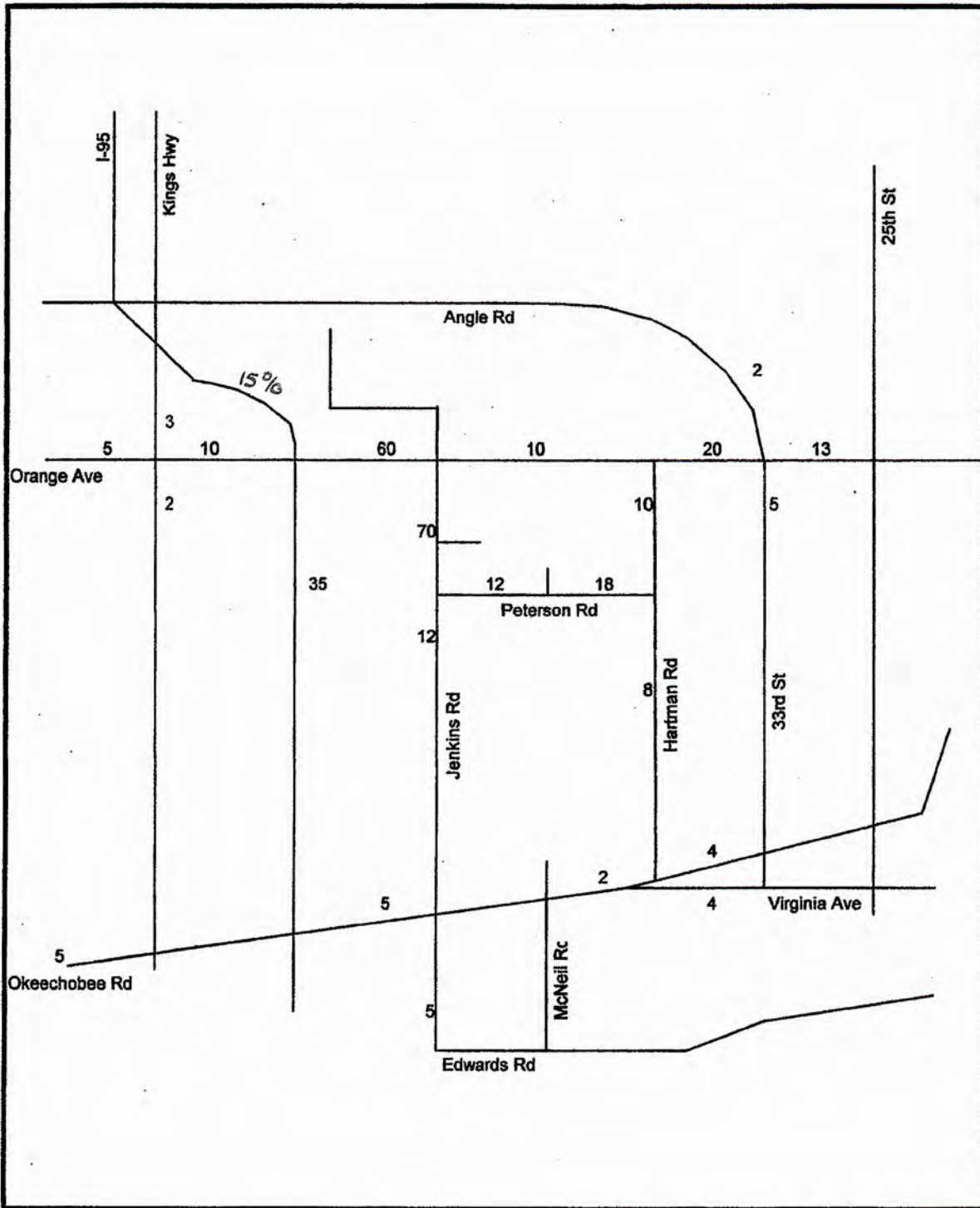
PROJECT DISTRIBUTION / ASSIGNMENT/ IMPACT

The project traffic was distributed by general geographic direction and then assigned to the roadway network.

Distribution -- The project general geographic traffic distribution was estimated as 15% north, 45% south, 25% east and 15% west.

Assignment -- This general distribution led to an assignment of external, new trips to the roadway network. Figure 2 illustrates the trip assignment and resultant trips.

The project provided a connection to Peterson Road to enhance the distribution of traffic. Additionally, the project will provide right-of-way on Jenkins Road for possible future widening.



↑
North
 not to scale

Figure 2
Project Percent Assignment
Whispering Oaks

Exhibit 2
Shinn Road 251 PUD
Trip Generation

DAILY

Land Use	Intensity	Trip Generation Rate (1)	Total Trips		Internal Trips		External Trips		Pass-by Trips (1)	New External Trips	
			In	Out	In	Out	In	Out		In	Out
High Turnover Restaurant	10,000 SF	$127.15 / 1,000 \text{ SF}$	1,272	25	2.0%	1,247	312	25.0%	935		
Retail	85,000 SF	$\text{Ln}(T) = 0.65 \text{Ln}(X) + 5.83$	6,110	61	1.0%	6,049	1,512	25.0%	4,537		
Residential-Single Family	50 DUs	$\text{Ln}(T) = 0.92 \text{Ln}(X) + 2.71$	550	110	20.0%	440	-	0.0%	440		
Drive-In Bank	5,000 SF	$246.49 / 1000 \text{ SF}$	1,232	37	3.0%	1,195	359	30.0%	836		
TOTALS			9,164	233	2.5%	8,931	2,183		6,748		

AM PEAK HOUR

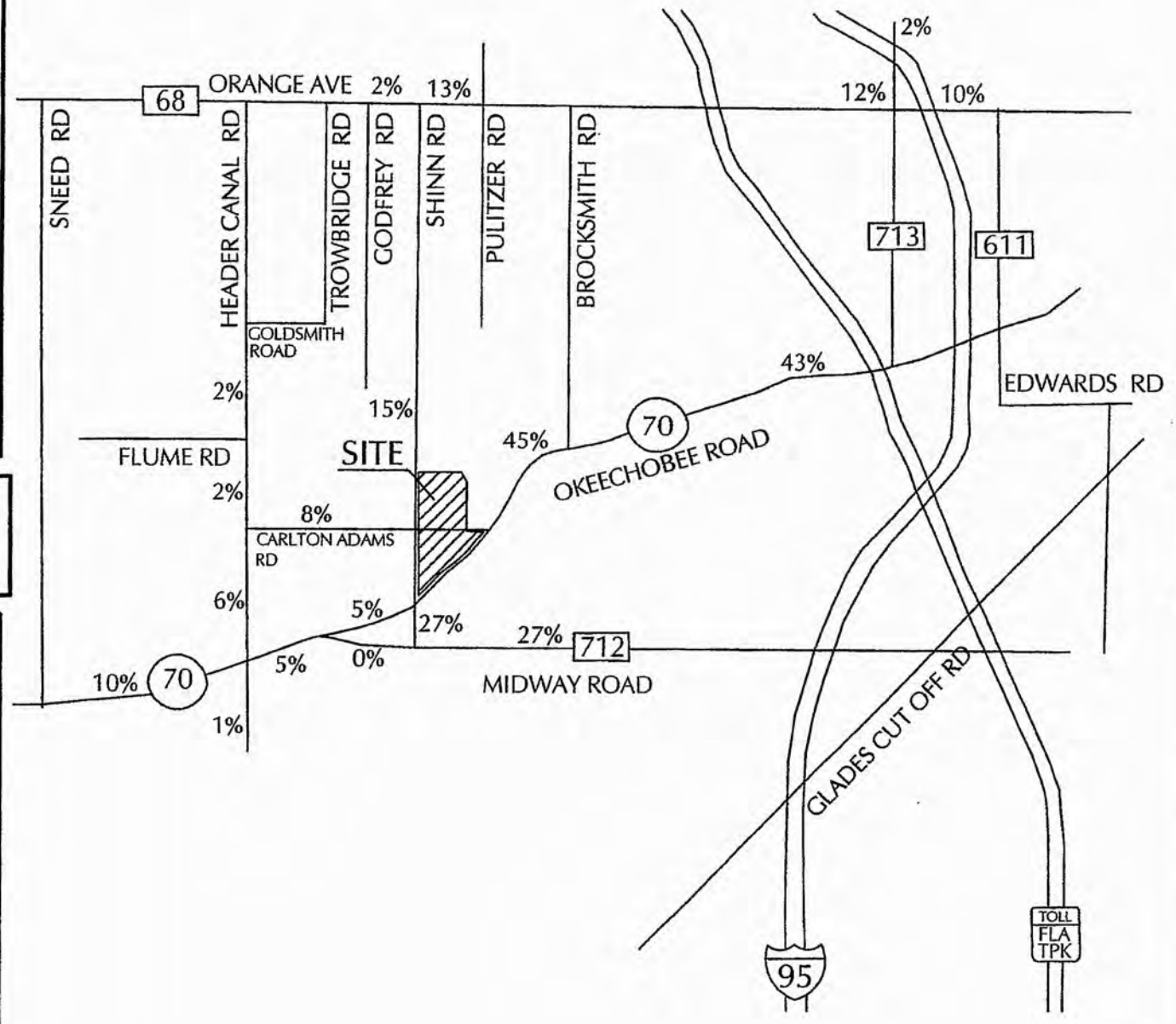
Land Use	Intensity	Trip Generation Rate (1)	Total Trips		Internal Trips		External Trips		Pass-by Trips (1)	New Trips	
			In	Out	In	Out	In	Out			
High Turnover Restaurant	10,000 SF	$11.52 / 1,000 \text{ SF} (52/48)$	60	55	4.0%	57	53	110	28	25.0%	42
Retail	85,000 SF	$1.03 / 1,000 \text{ SF} (61/39)$	54	34	3.0%	52	33	85	21	25.0%	39
Residential-Single Family	50 DUs	$T = 0.70(X) + 9.43(25/75)$	11	33	44	9	26	35	-	0.0%	9
Drive-In Bank	5,000 SF	$12.34 / 1,000 \text{ SF} (56/44)$	35	27	62	33	26	59	18	30.0%	23
TOTALS			160	149	309	20	6.5%	151	289	67	113

PM PEAK HOUR

Land Use	Intensity	Trip Generation Rate (1)	Total Trips		Internal Trips		External Trips		Pass-by Trips (1)	New Trips	
			In	Out	In	Out	In	Out			
High Turnover Restaurant	10,000 SF	$10.92 / 1,000 \text{ SF} (61/39)$	66	43	109	5	5.0%	63	41	104	46
Retail	85,000 SF	$\text{Ln}(T) = 0.660 \text{Ln}(X) + 3.40(48/52)$	270	292	562	6	1.0%	267	289	556	200
Residential-Single Family	50 DUs	$\text{Ln}(T) = 0.90 \text{Ln}(X) + 0.53(63/37)$	36	21	57	11	20.0%	29	17	46	29
Drive-In Bank	5,000 SF	$45.74 / 1,000 \text{ SF} (50/50)$	115	115	229	9	4.0%	109	110	220	76
TOTALS			487	471	957	31	3.2%	468	457	926	351

(1) Source: Institute of Transportation Engineers (ITE), Trip Generation, 7th Edition.

Not to Scale



6-16-09
05-195

SHINN ROAD
251 PUD

EXHIBIT 3A
PROJECT TRAFFIC DISTRIBUTION

PTC

Exhibit 3
Shinn Road Equestrian Estates
Trip Generation

DAILY

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips
Residential Single Family	210	106 Dus	$Ln(T) = 0.920Ln(X) + 2.71$	1,097
TOTAL		106 Dus		1,097

AM PEAK HOUR

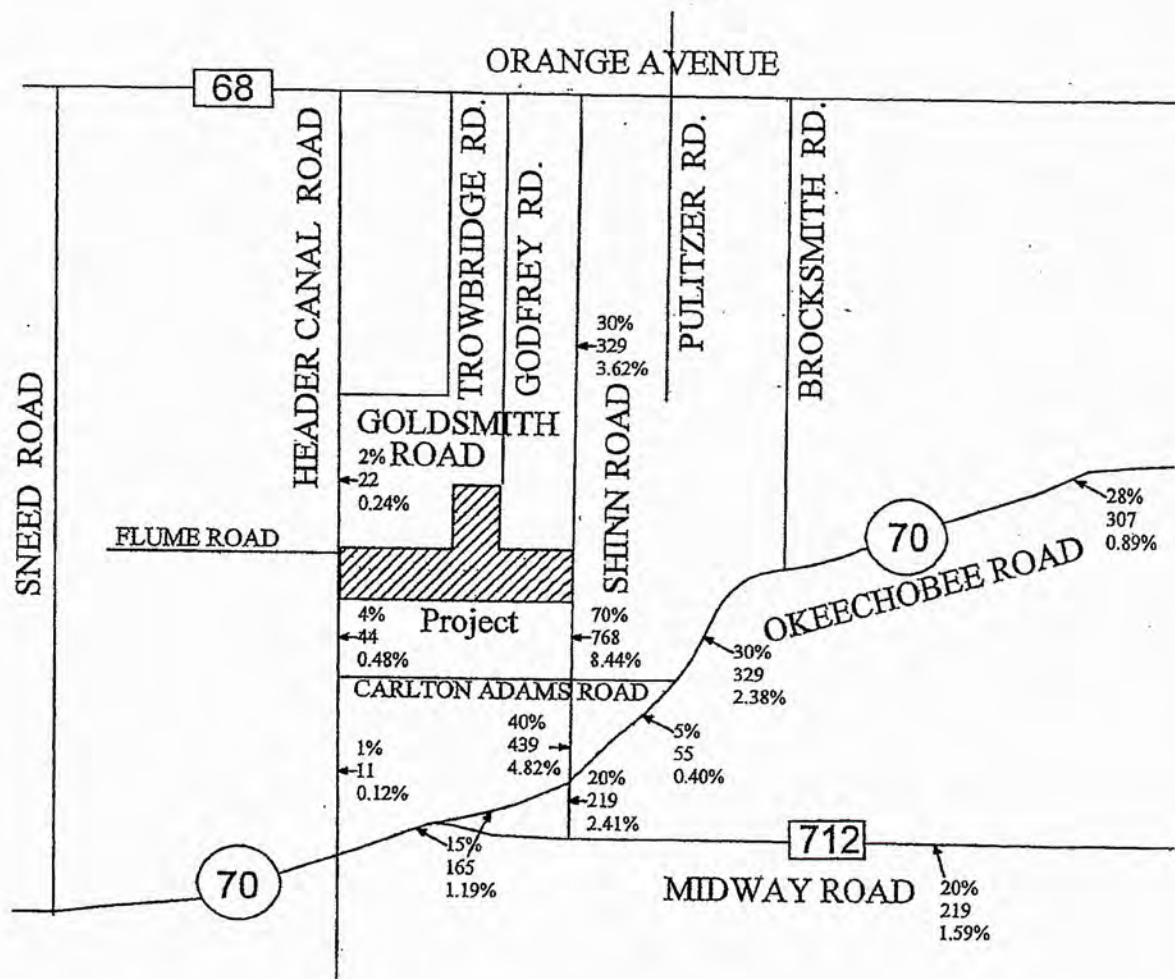
Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips	
				In	Out
Residential Single Family	210	106 Dus	$T = 0.700(X) + 9.43(25/75)$	21	63
TOTALS				21	63

PM PEAK HOUR

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips	
				In	Out
Residential Single Family	210	106 Dus	$Ln(T) = 0.90Ln(X) + 0.53(63/37)$	71	42
TOTALS				71	42

(1) Source: Institute of Transportation Engineers (ITE), Trip Generation, 7th Edition.

Not to Scale



LEGEND

20% - PROJECT TRAFFIC DISTRIBUTION
 219 - DAILY TRAFFIC ASSIGNMENT
 2.41% - PROJECT TRAFFIC IMPACT

04-04-06
 05-031 S

Shinn Road
 Equestrian Estates

EXHIBIT 4
TRAFFIC DISTRIBUTION

PTC

EXISTING TRAFFIC CONDITIONS

The Peak Season, Average Daily Traffic Volume for the roadways in the study area were obtained from the Spring 2005, St. Lucie Urban Area Metropolitan Planning Organization traffic counts. These counts include the committed trips for the roadway link as published in the Spring 2005 Counts, and are summarized below:

Roadway	Segment	LOS AADT	Current AADT	Current AADT plus committed	LOS
Keen Road	north of project entrance	14,600	2,400	2,400	B
	south of project entrance	14,600	2,400	2,400	B
St. Lucie Boulevard	west of Keen Road	16,900	6,300	6,300	C
	east of Keen Road	16,900	6,300	6,300	C
Angle Road	west of Keen Road	16,900	10,600	10,600	C
	east of Keen Road	16,900	10,600	10,600	C
	west of No. Kings Highway	14,600	n/a	n/a	
No. Kings Highway	north of Angle Road	16,900	14,700	14,700	D
	south of Angle Road	16,900	14,000	14,000	D

TRIP GENERATION

The Trip Generation for the proposed Rio Lago Subdivision project was developed by utilizing the "Institute of Transportation Engineers Trip Generation Manual, Seventh Edition" which established the Trip Generation Rates for the proposed facility.

In developing the Trip Generation Rates, the ITE Manual was utilized for the AADT volumes. The following Tables have been provided to depict the Trip Generation Rates for this development. Table I depicts the 24-Hour Daily Volumes.

The Land Use Codes 210 "Single Family Detached Housing".

TABLE I
Average Daily Trip Generation Volume

Land Use	Dwelling Units (Each/SF)	Rate	Volume (Trips/Day)
ITE Code 210	72	$\ln(T) = 0.92\ln(X) + 2.71$ $T = [e^{(0.92\ln(72)+2.71)}]$	768
Total New Trips per Day =			768

**TABLE II
P.M. Peak Hour Trip Generation Volume**

Land Use	Dwelling Units (Each/SF)	Rate	Volume (Trips/Day)
ITE Code 210	72	$\text{Ln}(T) = 0.90\text{Ln}(X) + 0.53$ $T = [e^{(0.90\text{Ln}(72)+0.53)}]$	79
Total New Trips per Day =			79

TRIP DISTRIBUTION

The Trip Distribution from the site onto the surrounding network was derived based upon a review of the surrounding destinations for shopping, school and work; local knowledge and experience in evaluating traffic and travel patterns in the area and an assessment of the condition of the existing Transportation Network in the area. A summary of the Major Trip Assignments was estimated and a graphical representation follows on the next page.

A summary of the additional trips created by the project are as follows:

**TABLE 1
Trip Distribution – Average Daily Trips**

Roadway	Segment	project trip assignments as % of total trips generated	project trips as number of total
Keen Road	north of project entrance	20%	154
	south of project entrance	80%	614
St. Lucie Boulevard	west of Keen Road	5%	38
	east of Keen Road	15%	115
Angle Road	west of Keen Road	30%	230
	east of Keen Road	50%	384
	west of No. Kings Highway	1%	8
No. Kings Highway	north of Angle Road	7%	54
	south of Angle Road	22%	169

Exhibit 2
Ravinia
Trip Generation

DAILY

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips
Residential-Single	210	150 DUs	9.52 /DU	1,428
TOTAL		150 DUs		1,428

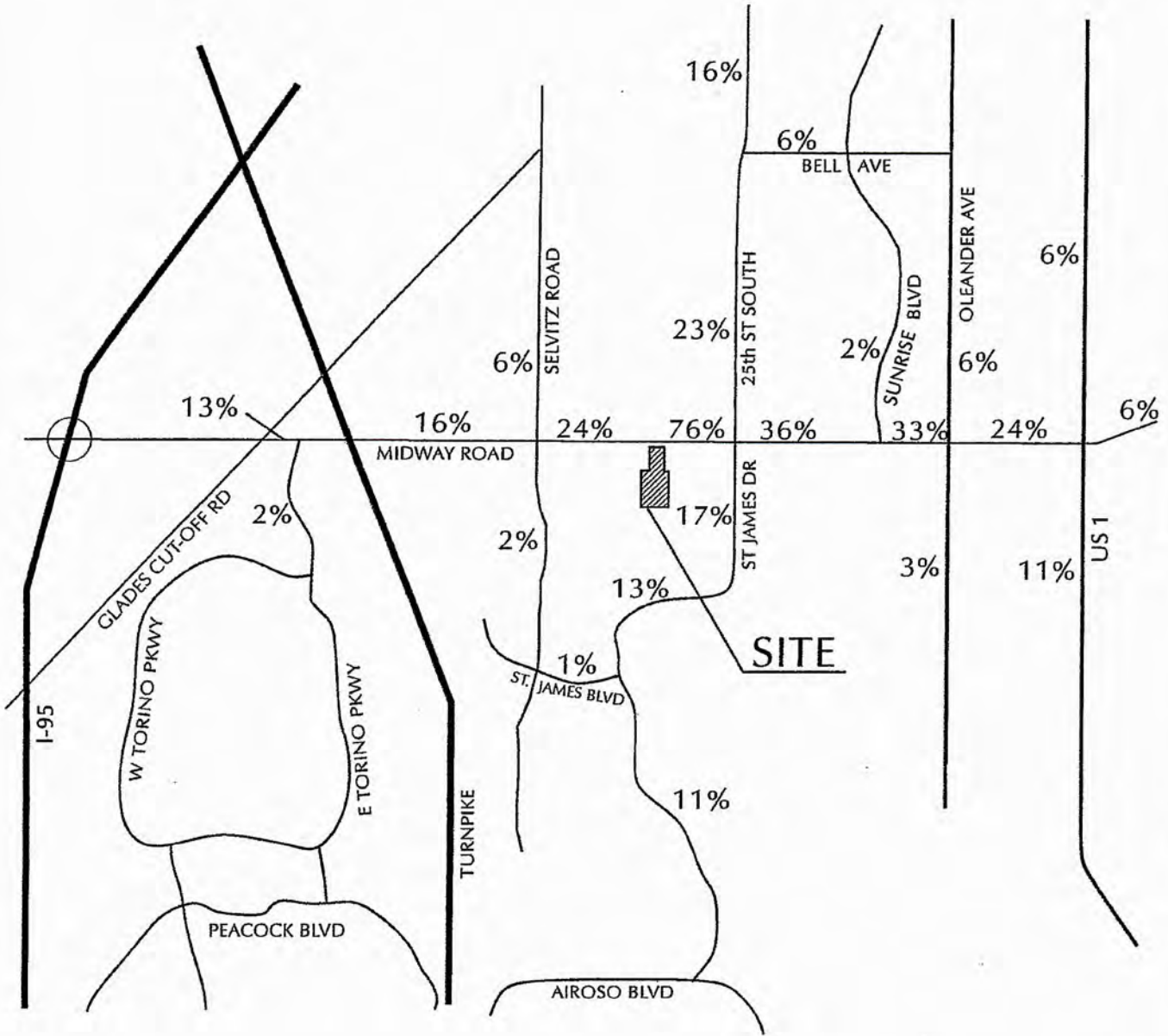
AM Peak Hour

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips		
				In	Out	Total
Residential-Single	210	150 DUs	0.75 /DU (25/75)	28	85	113
TOTAL		150 DUs		28	85	113

PM Peak Hour

Land Use	ITE Code	Intensity	Trip Generation Rate (1)	Total Trips		
				In	Out	Total
Residential-Single	210	150 DUs	1.00 /DU (63/37)	95	55	150
TOTAL		150 DUs		95	55	150

(1) Source: Institute of Transportation Engineers (ITE), Trip Generation, 9th Edition.



5/17/16
16-024

RAVINIA

EXHIBIT 3A
PROJECT TRAFFIC DISTRIBUTION

PTC

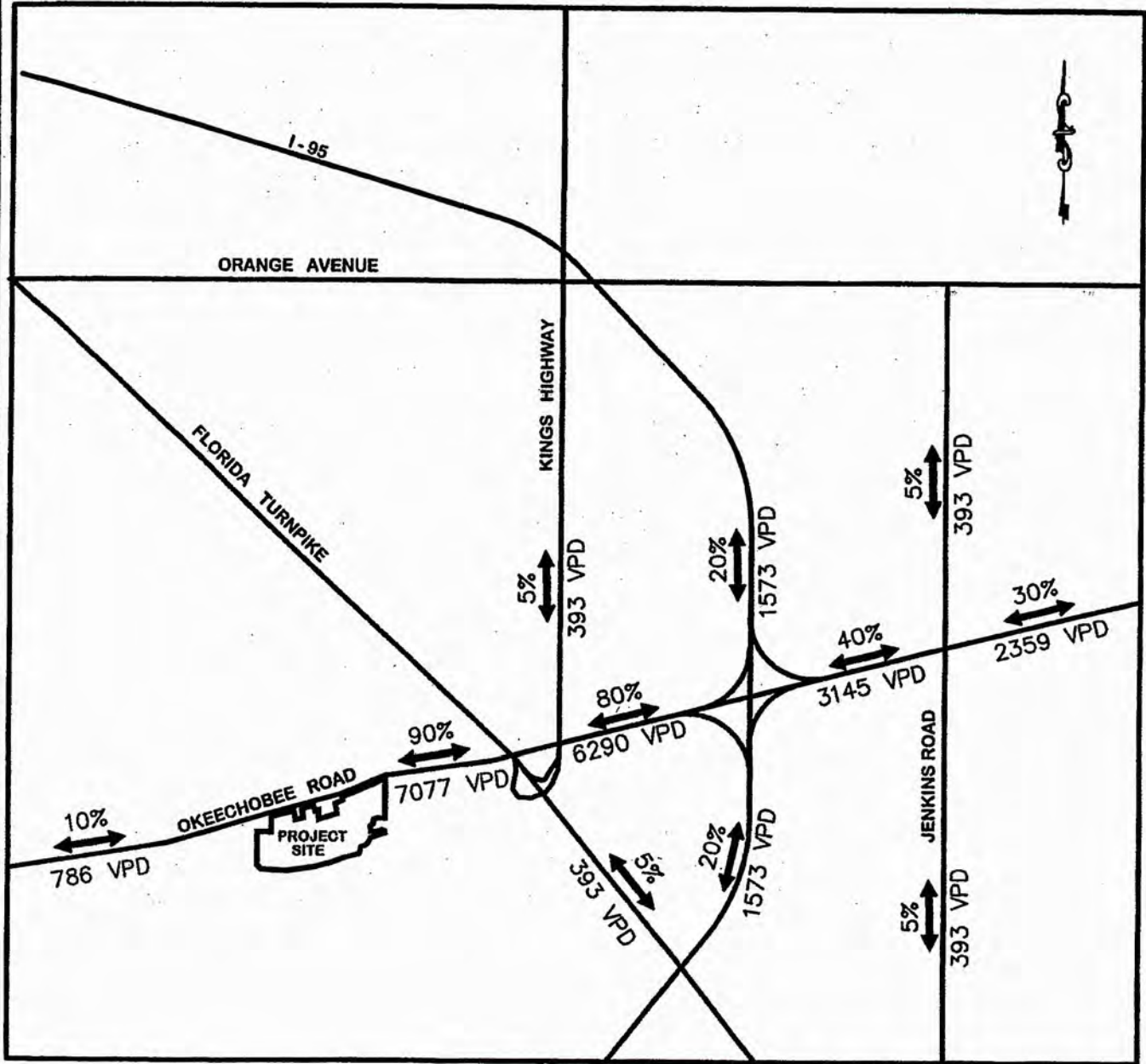


FIGURE 2



CONSULTING ENGINEERS
&
LAND SURVEYORS
2980 SOUTH 25th STREET
FORT PIERCE, FLORIDA 34981
(772) 464-3537
AUTHORIZATION NO. 4286

CREEKSIDE

TRIP DISTRIBUTION

JOB NO: 03-126	SCALE: N.T.S.
FILE: 03-126 EXH.DWG	DATE: 3-15-04

PROPOSED TRAFFIC GENERATION:

The additional traffic, which will be generated by the development of the Creekside PUD, is based upon the number and type of residential dwellings. The Institute of Transportation Engineer's Trip Generation Manual, Sixth Edition, Code 210 "Residential Single Family", Code 230 "Residential Condominium/Townhouse", Code 412 "County Park, and Code 814 Specialty Retail Center" was utilized to develop the trip generation rates. The trip generation of the facility for both the Average Daily Traffic and PM Peak Hour Traffic is calculated as follows:

**Table No. 1
Average Daily Traffic**

<u>Land Use</u>	<u>ITE Code</u>	<u>Units/Size</u>	<u>ADT Rates</u>	<u>ADT</u>
Single Family	210	443 DU	.920Ln(443)+2.707	4,077 VPD
Town Houses	230	397 DU	.850Ln(397)+2.564	2,101 VPD
County Park	412	3 Acres	2.28 Trips/Acre	7 VPD
Commercial	814	30,000 SF	40.67/1,000 SF*	1,678 VPD
			Total	7,863 VPD

* The commercial component of the development will result in pass-by and internal capture for the home to shopping portion of the standard trips generated. This percentage of pass-by and internal capture is typically estimated to be 25% for shopping centers. The trip generation rate for the commercial component is therefore reduced by 25% prior to application to the existing roadway network.

**Table No. 2
PM Peak Hour Traffic**

<u>Land Use</u>	<u>Units/Size</u>	<u>Peak Hour Avg. Rate</u>	<u>Directional Distribution</u>		<u>Directional Volumes</u>	
			<u>Enter</u>	<u>Exit</u>	<u>Enter</u>	<u>Exit</u>
Single Family	443 DU	.901Ln(443)+.527	64%	36%	263vph	147vph
Town Houses	397 DU	.827Ln(397)+.309	67%	33%	129vph	63vph
County Park	3 Acres	.06/Acre	41%	59%	0 vpd	0 vpd
Commercial	55,000 SF	2.59/1,000 SF*	43%	57%	46vph	61vph
			Totals		438vph	271vph

Table 3
Western Annexation Study
Cumulative Daily External Trips

Phase / DRI	Western Grove	Southern Grove	Riverland	Wilson Groves	TOTAL
Phase 1 (2010)	7,963	13,292	32,007	25,883	79,145
Phase 2 (2015)	26,969	66,403	110,332	61,492	265,196
Phase 3 (2020)	46,620	117,010	134,672	83,762	382,064
Phase 4 (2025)	46,975	163,121	140,083	96,188	446,367

Table 4
Western Annexation Study
Cumulative External P.M. Peak Hour Trips

Phase / DRI	Western Grove			Southern Grove			Riverland			Wilson Groves		
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
Phase 1 (2010)	2,493	2,044	4,537	5,123	6,697	11,820	6,942	6,519	13,461	4,166	4,484	8,650
Phase 2 (2015)	1,480	1,138	2,618	3,157	3,469	6,626	5,944	4,991	10,935	3,261	2,986	6,247
Phase 3 (2020)	497	300	797	734	555	1,289	1,728	1,491	3,219	1,380	1,193	2,573
Phase 4 (2025)	2,510	2,061	4,571	6,990	10,071	17,061	7,095	7,277	14,372	4,543	5,639	10,182

Table 4
Western Annexation Study
Cumulative External P.M. Peak Hour Trips – Grand Totals

Phase	In	Out	Total
Phase 1 (2010)	18,724	19,744	38,468
Phase 2 (2015)	13,842	12,584	26,426
Phase 3 (2020)	4,339	3,539	7,878
Phase 4 (2025)	21,138	25,048	46,186



MTP Group, Inc.
 12798 Forest Hill Boulevard, Suite 303
 Wellington, FL 33414-4704
 Phone: (561) 795-0678 Telefax: (561) 795-0230
<http://www.mtpgroup.net>

Western Annexation Study Final Report.doc

Table TR-4
Western Annexation Study
2025 Southern Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
Range Line	Martin Hwy. to Becker Rd.	2	3.0%	4,894	210	302	810	26%	37%	Y	Y
	Becker Rd. to E/W 4 (Paar Dr.)	2	0.7%	1,142	49	70	810	6%	9%	Y	Y
	E/W 4 (Paar Dr.) to E/W 3	2	0.8%	1,305	56	81	810	7%	10%	Y	Y
Glades Cut-Off Rd.	E/W 3 to E/W 1	2	1.0%	1,631	101	70	810	12%	9%	Y	Y
	E/W 1 to Gatlin Blvd.	2	0.5%	816	50	35	810	6%	4%	Y	N
	Gatlin Blvd. to West Virginia Blvd.	2	0.1%	163	10	7	810	1%	1%	N	N
N/S A	West Virginia Blvd. to Glades Cut-Off Rd.	2	0.4%	652	40	28	810	5%	3%	N	N
	Range Line / CR 609 to N/S A	2	0.0%	0	0	0	760	0%	0%	N	N
	N/S A to Commerce Center Pkwy.	2	0.1%	163	10	7	760	1%	1%	N	N
Community Blvd.	Commerce Center Pkwy to Midway Rd.	2	0.1%	163	10	7	760	1%	1%	N	N
	N. of Midway Rd.	2	0.2%	326	20	14	760	3%	2%	N	N
	Gatlin Blvd. to E/W XY	4	0.8%	1,305	81	56	1860	4%	3%	N	N
Commerce Center Pkwy.	E/W XY to West Virginia Blvd.	4	0.5%	816	50	35	1860	3%	2%	N	N
	West Virginia Blvd. to Glades Cut-Off Rd.	2	0.1%	163	10	7	860	1%	1%	N	N
	Gatlin Blvd. to E/W XY	2	1.1%	1,794	111	77	860	13%	9%	Y	Y
Village Pkwy.	West Virginia Blvd. to St. Lucie West Blvd.	4	1.9%	3,099	191	133	1860	10%	7%	Y	Y
	St. Lucie West Blvd. to Glades Cut-Off Rd.	2	0.8%	1,305	81	56	860	9%	7%	Y	Y
	Gatlin Blvd. to E/W XY	6	10.7%	17,454	1,078	748	2790	39%	27%	Y	Y
I-95	E/W XY to West Virginia Blvd.	4	5.8%	9,461	584	405	1860	31%	22%	Y	Y
	Martin Hwy. to Becker Rd.	6	13.9%	22,674	972	1,400	5410	18%	25%	Y	Y
	Becker Rd. to E/W 3	6	10.0%	16,312	899	1,007	5410	13%	19%	Y	Y
NW Peacock Blvd. Loop	E/W 3 to Gatlin Blvd.	6	8.3%	13,539	580	836	5410	11%	15%	Y	Y
	Gatlin Blvd. to West Virginia Blvd.	6	11.2%	18,270	1,128	783	5410	21%	14%	Y	Y
	West Virginia Blvd. to St. Lucie West Blvd.	6	7.9%	12,887	796	552	5410	15%	10%	Y	Y
Rosser Blvd.	St. Lucie West Blvd. to Midway Rd.	2	4.7%	7,667	473	329	5410	9%	6%	Y	Y
	St. Lucie West Blvd. to California Blvd.	2	1.2%	1,957	121	84	760	16%	11%	Y	Y
	California Blvd. to Cashmere Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
W. Torino Pkwy.	Becker Rd. to Paar Dr.	4	2.0%	3,262	140	201	1620	9%	12%	Y	Y
	Paar Dr. to E/W 3	4	1.7%	2,773	119	171	1620	7%	11%	Y	Y
	E/W 3 to Gatlin Blvd.	4	4.2%	6,851	294	423	1620	18%	26%	Y	Y
E Torino Pkwy.	California Blvd. to E. Torino Pkwy.	2	0.0%	0	0	0	760	0%	0%	N	N
	NW Peacock Blvd. to Midway Rd.	2	0.2%	326	20	14	760	3%	2%	N	N
	California Blvd. to Cashmere Blvd.	2	0.2%	326	20	14	760	3%	2%	N	N
S Torino Pkwy.	Del Rio Blvd. to Savonina Blvd.	2	0.3%	489	21	30	760	3%	4%	N	N
	Savonina Blvd. to Del Rio Blvd.	2	0.4%	652	28	40	760	4%	5%	N	Y
	Del Rio Blvd. to West Virginia Blvd.	2	0.2%	326	14	20	760	2%	3%	N	N
California Blvd.	West Virginia Blvd. to St. Lucie West Blvd.	4	1.0%	1,631	101	70	1620	6%	4%	Y	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.2%	326	20	14	760	3%	2%	N	N
	NW Peacock Blvd. Loop to W. Torino Pkwy.	2	0.2%	326	20	14	760	3%	2%	N	N
Savona Blvd.	Becker Rd. to Paar Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Paar Dr. to Gatlin Blvd.	2	0.7%	1,142	49	70	760	6%	9%	Y	Y
	Gatlin Blvd. to California Blvd.	2	1.4%	2,284	141	98	760	19%	13%	Y	Y
Cashmere Blvd.	Del Rio Blvd. to West Virginia Blvd.	2	0.3%	489	21	30	760	3%	4%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	2	0.4%	652	40	28	760	5%	4%	Y	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N

Table TR-4
Western Annexation Study
2025 Southern Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume		Impact		Significant Impact	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Del Rio Blvd.	Port St. Lucie Blvd. to California Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N	
	California Blvd. to Cashmere Blvd.	2	0.3%	489	30	21	760	4%	3%	N	N	
	Cashmere Blvd. to California Blvd.	2	0.1%	163	10	7	760	1%	1%	N	N	
	Marlin Hwy. to Becker Rd.	4	2.3%	3,752	161	232	1860	9%	12%	Y	Y	
Port St. Lucie Blvd.	Becker Rd. to Paar Dr.	2	2.8%	4,567	196	282	890	22%	32%	Y	Y	
	Paar Dr. to Darwin Blvd.	2	3.2%	5,220	224	322	890	25%	36%	Y	Y	
	Darwin Blvd. to Gatlin Blvd.	4	2.7%	4,404	189	272	1860	10%	15%	Y	Y	
	Gatlin Blvd. to Del Rio Blvd.	6	8.2%	13,376	828	573	2790	30%	21%	Y	Y	
	Del Rio Blvd. to Bayshore Blvd.	6	6.5%	10,603	655	454	2790	23%	16%	Y	Y	
	Bayshore Blvd. to Airosa Blvd.	6	4.9%	7,993	493	343	2790	18%	12%	Y	Y	
	Airosa Blvd. to Southbend Blvd./Floresta Dr.	6	3.7%	6,035	373	259	2790	13%	9%	Y	Y	
	Southbend Blvd./Floresta Dr. to Midport Rd.	6	3.3%	5,383	332	231	2790	12%	8%	Y	Y	
	Midport Rd. to US-1	6	2.0%	3,262	201	140	2790	7%	5%	Y	Y	
	US-1 to Lennard Rd.	4	0.9%	1,468	91	63	1860	5%	3%	N	N	
	Becker Rd. to Port St. Lucie Blvd.	2	0.1%	163	7	10	760	1%	1%	N	N	
	Turnpike	Marlin Hwy. to Becker Rd.	4	1.2%	1,957	84	121	2940	3%	4%	N	N
Becker Rd. to Port St. Lucie Blvd.		4	0.0%	0	0	0	2940	0%	0%	N	N	
Bayshore Blvd.	Port St. Lucie Blvd. to Ft. Pierce (SR 70)	4	0.0%	0	0	0	2940	0%	0%	N	N	
	Oakridge Blvd. to Port St. Lucie Blvd.	4	0.8%	1,305	56	81	1860	3%	4%	N	N	
	Port St. Lucie Blvd. to West Virginia Dr.	4	0.3%	489	30	21	1860	2%	1%	N	N	
	West Virginia Dr. to Prima Vista Blvd.	4	0.5%	816	50	35	1860	3%	2%	N	N	
	Prima Vista Blvd. to Selvitz Rd.	2	0.6%	979	60	42	760	8%	6%	Y	Y	
	Selvitz Rd. to St. James Dr.	2	0.0%	0	0	0	760	0%	0%	N	N	
Selvitz Rd.	Bayshore Blvd. to E/W 5	2	0.0%	0	0	0	760	0%	0%	N	N	
	E/W 5 to Midway Rd.	2	0.1%	163	10	7	760	1%	1%	N	N	
St. James Dr.	N. of Midway	2	0.0%	0	0	0	760	0%	0%	N	N	
	Bayshore Blvd. to E/W 5	4	0.4%	652	40	28	1860	2%	2%	N	N	
25 th Street	E/W 5 to Midway Rd.	4	0.0%	0	0	0	1860	0%	0%	N	N	
	N. of Midway	4	0.1%	163	10	7	1860	1%	0%	N	N	
Airosa Blvd.	Port St. Lucie Blvd. to West Virginia Dr.	4	0.7%	1,142	70	49	1860	4%	3%	N	N	
	West Virginia Dr. to Prima Vista Blvd.	4	1.2%	1,957	121	84	1860	7%	5%	Y	N	
	Prima Vista Blvd. to Floresta Dr.	4	0.3%	489	30	21	1860	2%	1%	N	N	
	Floresta Dr. to St. James Blvd.	4	0.3%	489	30	21	1860	2%	1%	N	N	
Southbend Blvd.	Becker Rd. to Oakridge Blvd.	2	0.9%	1,468	63	91	760	8%	12%	Y	Y	
	Oakridge Blvd. to Port St. Lucie Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N	
Floresta Dr.	Port St. Lucie Blvd. to West Virginia Dr.	4	0.4%	652	40	28	1860	2%	2%	N	N	
	West Virginia Dr. to Prima Vista Blvd.	4	0.2%	326	20	14	1860	1%	1%	N	N	
Oleander Ave.	Prima Vista Blvd. to Airosa Blvd.	4	0.0%	0	0	0	1860	0%	0%	N	N	
	E/W 6 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N	
Midport Rd.	N. of Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N	
	Port St. Lucie Blvd. to Lyngate Dr.	4	0.5%	816	50	35	1860	3%	2%	N	N	
High Meadows Ave.	Lyngate Dr. to West Virginia Dr.	4	0.1%	163	10	7	1860	1%	0%	N	N	
	CR 714 to Marlin Downs Blvd.	2	0.3%	489	21	30	760	3%	4%	N	N	
Gilson Rd.	Marlin Downs Blvd. to Mapp Rd./Murphy Rd.	2	0.1%	163	7	10	760	1%	1%	N	N	
	Mapp Rd./Murphy Rd. to Becker Rd.	2	1.0%	1,631	70	101	760	9%	13%	Y	Y	

Table TR-4
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 2025 Southern Grove Significant Impact
 External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
US-1	Lennard Rd. to Port St. Lucie Blvd.	8	1.8%	2,936	181	126	3540	5%	4%	Y	N
	Port. St. Lucie Blvd. to Tiffany Dr./Lyngate Dr.	6	0.5%	816	50	35	2790	2%	1%	N	N
	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	6	0.5%	816	50	35	2790	2%	1%	N	N
	West Virginia Dr. to Village Green Dr.	6	0.2%	326	20	14	2790	1%	1%	N	N
	Village Green Dr. to Savannah Club Blvd.	6	0.2%	326	20	14	2790	1%	1%	N	N
	Savannah Club Blvd. to St. Lucie West Blvd.	6	0.1%	163	10	7	2790	0%	0%	N	N
	St. Lucie West Blvd. to E/W 6	6	0.1%	163	10	7	2790	0%	0%	N	N
	E/W 6 to Midway Rd.	6	0.1%	163	10	7	2790	0%	0%	N	N
	N. of Midway	6	0.1%	163	10	7	2790	0%	0%	N	N
	US-1 to Tiffany Dr./Lyngate Dr.	4	0.2%	326	20	14	1620	1%	1%	N	N
Lennard Rd.	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	4	0.3%	489	30	21	1620	2%	1%	N	N
	West Virginia Dr. to Savannah Club Blvd.	4	0.0%	0	0	0	1620	0%	0%	N	N
	Savannah Club Blvd. to US-1	2	0.0%	0	0	0	760	0%	0%	N	N
	Range Line Rd. to I-95	2	0.2%	326	14	20	860	2%	2%	N	N
SR 714/Martin Hwy	I-95 to Port St. Lucie Blvd.	2	2.0%	3,262	201	140	860	23%	16%	Y	Y
	Port St. Lucie Blvd. to Turnpike	4	1.2%	1,957	121	84	1860	7%	5%	Y	N
SR 714/Martin Downs Blvd.	N. of FL. TPK Entrance to High Meadows Ave	4	0.6%	979	60	42	1860	3%	2%	N	N
	E. of High Meadows Ave.	4	0.5%	816	50	35	1860	3%	2%	N	N
CR 714	Turnpike to High Meadows Ave.	4	2.0%	3,262	201	140	1620	12%	9%	Y	Y
	High Meadows Ave. to Berry Ave.	4	1.7%	2,773	171	119	1620	11%	7%	Y	Y
Mapp Rd/Murphy Rd.	E. of High Meadows Ave.	2	0.3%	489	30	21	760	4%	3%	N	N
	I-95 to Rosser Rd.	6	8.8%	14,355	886	615	2790	32%	22%	Y	Y
Becker Rd.	Rosser Blvd. to Savona Blvd.	4	4.4%	7,177	443	308	1860	24%	17%	Y	Y
	Savona Blvd. to Port St. Lucie Blvd.	4	4.3%	7,014	433	301	1860	23%	16%	Y	Y
	Port St. Lucie Blvd. to Darwin Blvd.	4	4.8%	7,830	483	336	1860	26%	18%	Y	Y
	Darwin Blvd. to Turnpike	4	4.9%	7,993	483	343	1860	27%	18%	Y	Y
	Turnpike to Southbend Blvd.	4	3.1%	5,057	312	217	1860	17%	12%	Y	Y
	Southbend Blvd. to Gilson Rd.	4	1.0%	1,631	101	70	1860	5%	4%	Y	N
Paar Dr.	Rosser Blvd. to Savona Blvd.	4	7.5%	12,234	755	524	1860	41%	28%	Y	Y
	Savona Blvd. to Port St. Lucie Blvd.	4	6.6%	10,766	665	461	1860	36%	25%	Y	Y
	Range Line Rd. to N/S A	4	2.6%	4,241	182	262	1860	10%	14%	Y	Y
	N/S A to Community Blvd.	4	6.3%	10,277	440	634	1860	24%	34%	Y	Y
Gatlin Blvd.	Community Blvd. to Village Pkwy.	4	3.3%	5,383	231	332	1860	12%	18%	Y	Y
	Village Pkwy. to I-95	8	12.2%	19,901	1,229	853	3540	35%	24%	Y	Y
	I-95 to Rosser Blvd.	6	9.9%	16,149	997	692	2790	36%	25%	Y	Y
	Rosser Blvd. to Savona Blvd.	6	7.9%	12,887	796	552	2790	29%	20%	Y	Y
	Savona Blvd. to Port St. Lucie Blvd.	6	9.9%	16,149	997	692	2790	36%	25%	Y	Y
	Port St. Lucie Blvd. to US-1	2	0.6%	979	60	42	760	8%	6%	Y	Y
Westmoreland Blvd.	Bayshore Blvd. to Southbend Blvd.	4	0.8%	1,305	81	56	1620	5%	3%	Y	N
	Midport Rd. to US-1	2	0.3%	489	30	21	760	4%	3%	N	N
Tiffany Dr/Lyngate Dr.	US-1 to Villagegreen Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Villagegreen Dr. to Lennard Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
E/W XY	N/S A to Community Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Commerce Center Parkway to Village Pkwy.	4	0.7%	1,142	49	70	1620	3%	4%	N	N

Table TR-4
 Western Annexation Study
 2025 Southern Grove Significant Impact
 External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
West Virginia Dr.	Range Line Rd. to N/S A	4	0.8%	1,305	56	81	1620	3%	5%	N	Y
	N/S A to Village Pkwy.	4	4.1%	6,688	287	413	1860	15%	22%	Y	Y
	Village Pkwy. to Commerce Center Pkwy.	6	2.9%	4,731	292	203	2700	10%	7%	Y	Y
	Commerce Center Pkwy. to I-95	6	2.1%	3,426	211	147	2790	8%	5%	Y	Y
	I-95 to California Blvd.	6	4.3%	7,014	433	301	2790	16%	11%	Y	Y
	California Blvd. to Cashmere Rd.	6	3.2%	5,220	322	224	2790	12%	8%	Y	Y
	Cashmere Rd. to Bayshore Blvd.	6	3.2%	5,220	322	224	2790	12%	8%	Y	Y
	Bayshore Blvd. to Alrosa Blvd.	6	2.7%	4,404	272	189	2790	10%	7%	Y	Y
	Alrosa Blvd. to Floresta Dr.	6	1.6%	2,610	161	112	2790	6%	4%	Y	N
	Floresta Dr. to Midport Rd.	6	1.4%	2,284	141	98	2790	5%	4%	Y	N
	Midport Rd. to US-1	6	1.3%	2,121	131	91	2790	5%	3%	N	N
	US-1 to Villagegreen Dr.	4	0.4%	652	40	28	1860	2%	2%	N	N
	Villagegreen Dr. to Lennard Rd.	4	0.4%	652	40	28	1860	2%	2%	N	N
	Commerce Center Pkwy. to I-95	4	1.9%	3,099	133	191	1800	7%	11%	Y	Y
I-95 to NW Peacock Blvd.	6	3.0%	4,894	302	210	2710	11%	8%	Y	Y	
St. Lucie W/ Prima Vista Blvd.	NW Peacock Blvd. to California Blvd.	6	1.2%	1,957	121	84	2710	4%	3%	N	N
	California Blvd. to Cashmere Rd.	4	1.4%	2,284	141	98	1800	8%	5%	Y	Y
	Cashmere Rd. to Bayshore Blvd.	6	0.6%	979	60	42	2710	2%	2%	N	N
	Bayshore Blvd. to Alrosa Blvd.	4	0.3%	489	30	21	1800	2%	1%	N	N
	Alrosa Blvd. to Floresta Dr.	4	0.9%	1,468	91	63	1800	5%	4%	Y	N
	Floresta Dr. to US-1	4	0.5%	816	50	35	1800	3%	2%	N	N
	W. of Eleven Mile Rd.	2	0.2%	326	14	20	860	2%	2%	N	N
	Eleven Mile Rd. to Commerce Center Pkwy.	2	0.3%	489	21	30	860	2%	3%	N	N
	Commerce Center Pkwy. to I-95	2	0.2%	326	14	20	860	2%	2%	N	N
	I-95 to Glades Cut-Off Rd.	4	1.0%	1,631	70	101	1860	4%	5%	N	Y
	Glades Cut-Off Rd. to Torino Pkwy	4	0.8%	1,305	81	56	1860	4%	3%	N	N
	Torino Pkwy to Selvitz Rd.	4	0.8%	1,305	81	56	1860	4%	3%	N	N
	Selvitz Rd. to S. 25th St.	4	0.6%	979	60	42	1860	3%	2%	N	N
	S. 25th St. to Sunrise Blvd.	2	0.5%	816	50	35	860	6%	4%	Y	N
Sunrise Blvd. to Oleander Ave.	2	0.5%	816	50	35	860	6%	4%	Y	N	
Midway Rd.	Oleander Ave. to US-1	2	0.3%	489	30	21	860	3%	2%	N	N
	E. of US-1	2	0.2%	326	20	14	860	2%	2%	N	N

External Traffic
 IN 6,990
 OUT 10,071
 Daily 163,121

TABLE TR-4
 Western Annexation Study
 2025 Western Grove Significant Impact
 External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
West Virginia Dr.	Range Line Rd. to N/S A	4	16.8%	7,892	788	422	1620	47%	26%	Y	Y
	N/S A to Village Pkwy.	4	25.4%	11,932	1,161	638	1860	62%	34%	Y	Y
	Village Pkwy. to Commerce Center Pkwy.	6	18.6%	8,737	467	850	2790	17%	30%	Y	Y
	Commerce Center Pkwy. to I-95	6	17.2%	8,080	432	786	2790	15%	28%	Y	Y
	I-95 to California Blvd.	6	11.5%	5,402	289	526	2790	10%	19%	Y	Y
	California Blvd. to Cashmere Rd.	6	8.9%	4,181	223	407	2790	8%	15%	Y	Y
	Cashmere Rd. to Bayshore Blvd.	6	8.4%	3,946	211	384	2790	8%	14%	Y	Y
	Bayshore Blvd. to Airosa Blvd.	6	7.0%	3,288	176	320	2790	6%	11%	Y	Y
	Airosa Blvd. to Floresta Dr.	6	5.1%	2,396	128	233	2790	5%	8%	Y	Y
	Floresta Dr. to Midport Rd.	6	4.7%	2,208	118	215	2790	4%	8%	Y	Y
	Midport Rd. to US-1	6	4.3%	2,020	108	197	2790	4%	7%	Y	Y
	US-1 to Villagegreen Dr.	4	1.2%	564	30	55	1860	2%	3%	N	N
	Villagegreen Dr. to Lennard Rd.	4	1.1%	517	28	50	1660	2%	3%	N	N
	Commerce Center Pkwy. to I-95	6	1.5%	705	38	69	1800	2%	4%	N	N
	I-95 to NW Peacock Blvd.	6	3.0%	1,409	75	137	2710	3%	5%	N	Y
St. Lucie W/ Prima Vista Blvd.	NW Peacock Blvd. to California Blvd.	6	1.0%	470	25	46	2710	1%	2%	N	N
	California Blvd. to Cashmere Rd.	4	1.2%	584	30	55	1800	2%	3%	N	N
	Cashmere Rd. to Bayshore Blvd.	6	0.4%	188	10	18	2710	0%	1%	N	N
	Bayshore Blvd. to Airosa Blvd.	4	0.0%	0	0	0	1800	0%	0%	N	N
	Airosa Blvd. to Floresta Dr.	4	0.9%	423	23	41	1800	1%	2%	N	N
	Floresta Dr. to US-1	4	0.5%	235	13	23	1800	1%	1%	N	N
	W. of Eleven Mile Rd.	2	0.4%	188	18	10	860	2%	1%	N	N
	Eleven Mile Rd. to Commerce Center Pkwy.	2	0.5%	235	23	13	860	3%	2%	N	N
	Commerce Center Pkwy. to I-95	2	0.0%	0	0	0	860	0%	0%	N	N
	I-95 to Glades Cut-Off Rd.	4	0.4%	188	18	10	1860	1%	1%	N	N
	Glades Cut-Off Rd. to Torino Pkwy	4	1.0%	470	25	46	1860	1%	2%	N	N
	Torino Pkwy to Selvitz Rd.	4	0.8%	376	20	37	1860	1%	2%	N	N
	Selvitz Rd. to S. 26th St.	2	0.7%	329	18	32	860	2%	4%	N	N
	S. 26th St. to Sunrise Blvd.	2	0.9%	423	23	41	860	3%	5%	N	N
	Sunrise Blvd. to Oleander Ave.	2	0.4%	188	10	18	860	1%	2%	N	N
Oleander Ave. to US-1	2	0.2%	94	5	9	860	1%	1%	N	N	
E. of US-1											

External Traffic
 IN 4,571
 OUT 2,510
 Daily 46,975

TABLE TR-4

Western Annexation Study
2025 Western Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
US-1	Lennard Rd. to Port St. Lucie Blvd.	8	2.4%	1,127	60	110	3540	2%	3%	N	N
	Port St. Lucie Blvd. to Tiffany Dr./Lyngate Dr.	6	2.6%	1,221	95	119	2790	2%	4%	N	N
	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	6	0.2%	94	5	9	2790	0%	0%	N	N
	West Virginia Dr. to Village Green Dr.	6	0.1%	47	3	5	2790	0%	0%	N	N
	Village Green Dr. to Savannah Club Blvd.	6	0.1%	47	3	5	2790	0%	0%	N	N
	Savannah Club Blvd. to St. Lucie West Blvd.	6	0.1%	47	3	5	2790	0%	0%	N	N
	St. Lucie West Blvd. to E/W 6	6	0.1%	47	3	5	2790	0%	0%	N	N
	E/W 6 to Midway Rd.	6	0.1%	47	3	5	2790	0%	0%	N	N
	N. of Midway	6	0.1%	47	3	5	1620	0%	0%	N	N
	US-1 to Tiffany Dr./Lyngate Dr.	4	0.1%	47	3	5	1620	0%	0%	N	N
Lennard Rd.	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	4	0.0%	0	0	0	1620	0%	0%	N	N
	West Virginia Dr. to Savannah Club Blvd.	4	0.0%	0	0	0	1620	0%	0%	N	N
	Savannah Club Blvd. to US-1	2	0.0%	0	0	0	760	0%	0%	N	N
	Range Line Rd. to I-95	2	0.0%	0	0	0	860	0%	0%	N	N
SR 714/Martin Hwy	I-95 to Port St. Lucie Blvd.	2	1.8%	846	45	82	860	5%	10%	Y	Y
	Port St. Lucie Blvd. to Turnpike	4	0.8%	376	20	37	1860	1%	2%	N	N
SR 714/Martin Downs Blvd.	N. of FL. TPK Entrance to High Meadows Ave.	4	0.3%	141	8	14	1860	0%	1%	N	N
	E. of High Meadows Ave.	4	0.2%	94	5	9	1860	0%	0%	N	N
CR 714	Turnpike to High Meadows Ave.	4	1.1%	517	28	50	1620	2%	3%	N	N
	High Meadows Ave. to Berry Ave.	4	0.8%	376	20	37	1620	1%	2%	N	N
Mapp Rd/Murphy Rd.	E. of High Meadows Ave.	2	0.2%	94	5	9	760	1%	1%	N	N
	I-95 to Rosser Rd.	6	1.4%	658	35	64	2790	1%	2%	N	N
Becker Rd.	Rosser Blvd. to Savona Blvd.	4	1.1%	517	28	50	1860	2%	3%	N	N
	Savona Blvd. to Port St. Lucie Blvd.	4	1.1%	517	28	50	1860	2%	3%	N	N
	Port St. Lucie Blvd. to Darwin Blvd.	4	2.1%	986	53	96	1860	3%	5%	N	Y
	Darwin Blvd. to Turnpike	4	2.1%	986	53	96	1860	3%	5%	N	Y
	Turnpike to Southbend Blvd.	4	1.3%	611	33	59	1860	2%	3%	N	N
	Southbend Blvd. to Gilson Rd.	4	0.9%	423	23	41	1860	1%	2%	N	N
Paar Dr.	Rosser Blvd. to Savona Blvd.	4	2.4%	1,127	60	110	1860	3%	6%	N	Y
	Savona Blvd. to Port St. Lucie Blvd.	4	2.3%	1,080	58	105	1860	3%	6%	N	Y
Gatlin Blvd.	Range Line Rd. to N/S A	4	24.7%	11,603	1,129	620	1860	61%	33%	Y	Y
	N/S A to Community Blvd.	4	31.0%	14,562	778	1,417	1860	42%	76%	Y	Y
	Community Blvd. to Village Pkwy.	4	22.2%	10,428	557	1,015	1860	30%	55%	Y	Y
	Village Pkwy. to I-95	8	14.4%	6,764	361	658	3540	10%	19%	Y	Y
	I-95 to Rosser Blvd.	6	6.9%	3,241	173	315	2790	6%	11%	Y	Y
Westmoreland Blvd.	Rosser Blvd. to Savona Blvd.	6	4.7%	2,208	118	215	2790	4%	8%	N	Y
	Savona Blvd. to Port St. Lucie Blvd.	6	3.7%	1,738	93	169	2790	3%	6%	N	Y
Oakridge Blvd.	Port St. Lucie Blvd. to US-1	2	0.3%	141	8	14	760	1%	2%	N	N
	Baysshore Blvd. to Southbend Blvd.	4	0.7%	329	18	32	1620	1%	2%	N	N
Tiffany Dr/Lyngate Dr.	Midport Rd. to US-1	2	0.0%	0	0	0	760	0%	0%	N	N
	US-1 to Villagegreen Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
E/W XY	Villagegreen Dr. to Lennard Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	N/S A to Community Blvd.	2	4.9%	2,302	123	224	760	16%	29%	Y	Y
	Commerce Center Parkway to Village Pkwy.	4	2.5%	1,174	63	114	1620	4%	7%	N	Y

TABLE TR-4

Western Annexation Study
2025 Western Grove Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
Del Rio Blvd.	Port St. Lucie Blvd. to California Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
	California Blvd. to Cashmere Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
	Cashmere Blvd. to California Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
	Martin Hwy. to Becker Rd.	4	1.2%	564	55	30	1860	3%	2%	N	N
Port St. Lucie Blvd.	Becker Rd. to Paar Dr.	2	2.2%	1,033	101	55	890	11%	6%	Y	Y
	Paar Dr. to Darwin Blvd.	2	0.6%	282	27	15	880	3%	2%	N	N
	Darwin Blvd. to Gallin Blvd.	4	0.7%	329	32	18	1860	2%	1%	N	N
	Gallin Blvd. to Del Rio Blvd.	6	3.0%	1,409	137	75	2790	5%	3%	N	N
	Del Rio Blvd. to Bayshore Blvd.	6	2.3%	1,080	58	105	2790	2%	4%	N	N
	Bayshore Blvd. to Airoso Blvd.	6	1.6%	752	40	73	2790	1%	3%	N	N
	Airoso Blvd. to Southbend Blvd./Floresta Dr.	6	1.6%	752	40	73	2790	1%	3%	N	N
	Southbend Blvd./Floresta Dr. to Midport Rd.	6	1.3%	611	33	59	2790	1%	2%	N	N
	Midport Rd. to US-1	6	0.9%	423	23	41	2790	1%	1%	N	N
	US-1 to Lennard Rd.	4	0.5%	235	13	23	1860	1%	1%	N	N
Tumpike	Becker Rd. to Port St. Lucie Blvd.	2	0.2%	94	5	9	760	1%	1%	N	N
	Martin Hwy. to Becker Rd.	4	0.5%	235	23	13	2940	1%	0%	N	N
	Becker Rd. to Port St. Lucie Blvd.	4	0.0%	0	0	0	2940	0%	0%	N	N
	Port St. Lucie Blvd. to Ft. Pierce (SR 70)	4	0.0%	0	0	0	2940	0%	0%	N	N
Bayshore Blvd.	Oakridge Blvd. to Port St. Lucie Blvd.	4	0.7%	329	32	18	1860	2%	1%	N	N
	Port St. Lucie Blvd. to West Virginia Dr.	4	0.6%	282	15	27	1860	1%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.7%	329	18	32	1860	1%	2%	N	N
	Prima Vista Blvd. to Selvitz Rd.	2	0.5%	235	13	23	760	2%	3%	N	N
	Selvitz Rd. to St. James Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Bayshore Blvd. to E/W 5	2	0.0%	0	0	0	760	0%	0%	N	N
St. James Dr.	E/W 5 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	N. of Midway	2	0.0%	0	0	0	760	0%	0%	N	N
	Bayshore Blvd. to E/W 5	4	0.5%	235	13	23	1860	1%	1%	N	N
	E/W 5 to Midway Rd.	4	0.0%	0	0	0	1860	0%	0%	N	N
Airoso Blvd.	N. of Midway	4	0.0%	0	0	0	1860	0%	0%	N	N
	Port St. Lucie Blvd. to West Virginia Dr.	4	0.6%	282	15	27	1860	1%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	1.3%	611	33	59	1860	2%	3%	N	N
	Prima Vista Blvd. to Floresta Dr.	4	0.5%	235	13	23	1860	1%	1%	N	N
Southbend Blvd.	Floresta Dr. to St. James Blvd.	4	0.5%	235	13	23	1860	1%	1%	N	N
	Becker Rd. to Oakridge Blvd.	2	0.7%	329	32	18	760	4%	2%	N	N
Floresta Dr.	Oakridge Blvd. to Port St. Lucie Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Port St. Lucie Blvd. to West Virginia Dr.	4	0.3%	141	8	14	1860	0%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.1%	47	3	5	1860	0%	0%	N	N
	Prima Vista Blvd. to Airoso Blvd.	4	0.0%	0	0	0	1860	0%	0%	N	N
Oleander Ave.	E/W 6 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	N. of Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
Midport Rd.	Port St. Lucie Blvd. to Lyngate Dr.	4	0.2%	94	5	9	1860	0%	0%	N	N
	Lyngate Dr. to West Virginia Dr.	4	0.2%	94	5	9	1860	0%	0%	N	N
High Meadows Ave.	CR 714 to Martin Downs Blvd.	2	0.3%	141	14	8	760	2%	1%	N	N
	Martin Downs Blvd. to Mapp Rd/Murphy Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
Glison Rd.	Mapp Rd/Murphy Rd. to Becker Rd.	2	0.6%	282	27	15	760	4%	2%	N	N

TABLE TR-4
 Western Annexation Study
 2025 Western Grove Significant Impact
 External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
Range Line	Martin Hwy. to Becker Rd.	2	2.8%	1,315	128	70	810	16%	9%	Y	Y
	Becker Rd. to E/W 4 (Paar Dr.)	2	2.3%	1,080	105	58	810	13%	7%	Y	Y
	E/W 4 (Paar Dr.) to E/W 3	2	2.7%	1,268	123	68	810	15%	8%	Y	Y
	E/W 3 to E/W 1	2	3.3%	1,550	151	83	810	18%	10%	Y	Y
	E/W 1 to Gatlin Blvd.	2	3.6%	1,691	165	90	810	20%	11%	Y	Y
	Gatlin Blvd. to West Virginia Blvd.	2	0.5%	235	13	23	810	2%	3%	N	N
	West Virginia Blvd. to Glades Cut-Off Rd.	2	1.1%	517	50	28	810	6%	3%	Y	N
	Range Line / CR 609 to N/S A	2	0.1%	47	3	5	760	0%	1%	N	N
	N/S A to Commerce Center Pkwy.	2	4.7%	2,208	118	215	760	16%	28%	Y	Y
	Commerce Center Pkwy. to Midway Rd.	2	1.2%	584	30	55	760	4%	7%	Y	Y
Glades Cut-Off Rd.	N. of Midway Rd.	2	0.5%	235	13	23	760	2%	3%	N	N
	Gatlin Blvd. to E/W XY	4	16.0%	7,516	402	731	1860	22%	39%	Y	Y
	E/W XY to West Virginia Blvd.	4	13.5%	6,342	339	617	1860	18%	33%	Y	Y
	West Virginia Blvd. to Glades Cut-Off Rd.	2	4.7%	2,208	118	215	860	14%	25%	Y	Y
	Gatlin Blvd. to E/W XY	2	0.9%	423	41	23	860	5%	3%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	4	1.4%	658	35	64	1860	2%	3%	N	N
	St. Lucie West Blvd. to Glades Cut-Off Rd.	2	0.1%	47	3	5	860	0%	1%	N	N
	Gatlin Blvd. to E/W XY	6	1.1%	517	50	28	2790	2%	1%	N	N
	E/W XY to West Virginia Blvd.	4	0.0%	0	0	0	1860	0%	0%	N	N
	Martin Hwy. to Becker Rd.	6	9.5%	4,463	434	238	5410	8%	4%	Y	N
I-95	Becker Rd. to E/W 3	6	9.6%	4,510	439	241	5410	8%	4%	Y	N
	E/W 3 to Gatlin Blvd.	6	7.6%	3,570	347	191	5410	6%	4%	Y	N
	Gatlin Blvd. to West Virginia Blvd.	6	0.0%	0	0	0	5410	0%	0%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	6	5.8%	2,725	146	265	5410	3%	5%	N	N
	St. Lucie West Blvd. to Midway Rd.	6	4.1%	1,926	103	187	5410	2%	3%	N	N
	St. Lucie West Blvd. to California Blvd.	2	1.9%	893	48	87	760	6%	11%	Y	Y
	California Blvd. to Cashmere Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Becker Rd. to Paar Dr.	4	0.2%	94	9	5	1620	1%	0%	N	N
	Paar Dr. to E/W 3	4	0.0%	0	0	0	1620	0%	0%	N	N
	E/W 3 to Gatlin Blvd.	4	0.0%	0	0	0	1620	0%	0%	N	N
NW Peacock Blvd. Loop	California Blvd. to E. Torino Pkwy.	2	0.0%	0	0	0	760	0%	0%	N	N
	NW Peacock Blvd. to Midway Rd.	2	0.2%	94	5	9	760	1%	1%	N	N
	California Blvd. to Cashmere Blvd.	2	0.3%	141	8	14	760	1%	2%	N	N
	Del Rio Blvd. to Savonna Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Savonna Blvd. to Del Rio Blvd.	2	0.5%	235	23	13	760	3%	2%	N	N
	Del Rio Blvd. to West Virginia Blvd.	2	0.6%	282	27	15	760	4%	2%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	4	1.9%	893	48	87	1620	3%	5%	N	Y
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.3%	141	8	14	760	1%	2%	N	N
	NW Peacock Blvd. Loop to W. Torino Pkwy.	2	0.3%	141	8	14	760	1%	2%	N	N
	Becker Rd. to Paar Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
Rosser Blvd.	Paar Dr. to Gatlin Blvd.	2	0.8%	376	37	20	760	5%	3%	N	N
	Gatlin Blvd. to California Blvd.	2	0.2%	94	5	9	760	1%	1%	N	N
	Del Rio Blvd. to West Virginia Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	2	0.5%	235	13	23	760	2%	3%	N	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	NW Peacock Blvd. Loop to NW Peacock Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Becker Rd. to Paar Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Paar Dr. to Gatlin Blvd.	2	0.8%	376	37	20	760	5%	3%	N	N
	Gatlin Blvd. to California Blvd.	2	0.2%	94	5	9	760	1%	1%	N	N
	Del Rio Blvd. to West Virginia Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
Savonna Blvd.	West Virginia Blvd. to St. Lucie West Blvd.	2	0.5%	235	13	23	760	2%	3%	N	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	NW Peacock Blvd. Loop to W. Torino Pkwy.	2	0.3%	141	8	14	760	1%	2%	N	N
	Becker Rd. to Paar Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
	Paar Dr. to Gatlin Blvd.	2	0.8%	376	37	20	760	5%	3%	N	N
	Gatlin Blvd. to California Blvd.	2	0.2%	94	5	9	760	1%	1%	N	N
	Del Rio Blvd. to West Virginia Blvd.	2	0.1%	47	3	5	760	0%	1%	N	N
	West Virginia Blvd. to St. Lucie West Blvd.	2	0.5%	235	13	23	760	2%	3%	N	N
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	NW Peacock Blvd. Loop to NW Peacock Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N

TABLE TR-4
Western Annexation Study
2025 Wilson Groves Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
West Virginia Dr.	Range Line Rd. to N/S A	4	0.2%	192	9	11	1620	1%	1%	N	N
	N/S A to Village Pkwy.	4	5.4%	5,194	245	305	1860	13%	16%	Y	Y
	Village Pkwy. to Commerce Center Pkwy.	6	3.1%	2,982	175	141	2790	6%	5%	Y	Y
	Commerce Center Pkwy. to I-95	6	2.7%	2,987	152	123	2790	5%	4%	Y	Y
	I-95 to California Blvd.	6	3.1%	2,982	175	141	2790	6%	5%	Y	Y
	California Blvd. to Cashmere Rd.	6	2.3%	2,212	130	104	2790	5%	4%	N	N
	Cashmere Rd. to Bayshore Blvd.	6	2.0%	1,924	113	91	2790	4%	3%	N	N
	Bayshore Blvd. to Airosa Blvd.	6	1.6%	1,539	90	73	2790	3%	3%	N	N
	Airosa Blvd. to Floresta Dr.	6	0.7%	673	39	32	2790	1%	1%	N	N
	Floresta Dr. to Midport Rd.	6	0.6%	577	34	27	2790	1%	1%	N	N
	Midport Rd. to US-1	6	0.6%	577	34	27	2790	1%	1%	N	N
	St. Lucie W/ Prima Vista Blvd.	US-1 to Villagegreen Dr.	4	0.2%	192	11	9	1860	1%	0%	N
Villagegreen Dr. to Lennard Rd.		4	0.2%	192	11	9	1860	1%	0%	N	N
Commerce Center Pkwy. to I-95		4	0.4%	365	18	23	1800	1%	1%	N	N
I-95 to NW Peacock Blvd.		6	2.3%	2,212	130	104	2710	5%	4%	N	N
NW Peacock Blvd. to California Blvd.		6	0.7%	673	39	32	2710	1%	1%	N	N
California Blvd. to Cashmere Rd.		4	1.0%	962	56	45	1800	3%	3%	N	N
Cashmere Rd. to Bayshore Blvd.		6	0.4%	365	23	18	2710	1%	1%	N	N
Bayshore Blvd. to Airosa Blvd.		4	0.1%	96	6	5	1800	0%	0%	N	N
Airosa Blvd. to Floresta Dr.		4	0.4%	385	23	18	1800	1%	1%	N	N
Floresta Dr. to US-1		4	0.3%	289	17	14	1800	1%	1%	N	N
W. of Eleven Mile Rd.		2	0.2%	192	9	11	860	1%	1%	N	N
Midway Rd.		Eleven Mile Rd. to Commerce Center Pkwy.	2	0.3%	289	14	17	860	2%	2%	N
	Commerce Center Pkwy. to I-95	2	0.8%	770	36	45	860	4%	5%	N	Y
	I-95 to Glades Cut-Off Rd.	4	0.7%	673	32	39	1860	2%	2%	N	N
	Glades Cut-Off Rd. to Torino Pkwy	4	0.7%	673	39	32	1860	2%	2%	N	N
	Torino Pkwy. to Selvitz Rd.	4	0.7%	673	39	32	1860	2%	2%	N	N
	Selvitz Rd. to S. 25th St.	4	0.6%	577	34	27	1860	2%	1%	N	N
	S. 25th St. to Sunrise Blvd.	2	0.5%	481	28	23	860	3%	3%	N	N
	Sunrise Blvd. to Oleander Ave.	2	0.5%	481	28	23	860	3%	3%	N	N
	Oleander Ave. to US-1	2	0.3%	289	17	14	860	2%	2%	N	N
	E. of US-1	2	0.1%	96	6	5	860	1%	1%	N	N

External Traffic
IN 4,543
OUT 5,639
Daily 96,188

TABLE TR-4
Western Annexation Study
2025 Wilson Groves Significant Impact
External Network

Roadway	Link	Lanes	% External Traffic	Daily Traffic	Project Traffic		Service Volume		Impact		Significant Impact	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
US-1	Lenriard Rd. to Port St. Lucie Blvd.	8	0.7%	673	39	32	3540	1%	N	N	N	
	Port St. Lucie Blvd. to Tiffany Dr./Lyngate Dr.	6	0.0%	0	0	0	2790	0%	N	N	N	
	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	6	0.0%	0	0	0	2790	0%	N	N	N	
	West Virginia Dr. to Village Green Dr.	6	0.2%	192	11	9	2790	0%	N	N	N	
	Village Green Dr. to Savannah Club Blvd.	6	0.2%	192	11	9	2790	0%	N	N	N	
	Savannah Club Blvd. to St. Lucie West Blvd.	6	0.0%	0	0	0	2790	0%	N	N	N	
	St. Lucie West Blvd. to E/W 6	6	0.1%	96	6	5	2790	0%	N	N	N	
	E/W 6 to Midway Rd.	6	0.1%	96	6	5	2790	0%	N	N	N	
	N. of Midway	6	0.1%	96	6	5	2790	0%	N	N	N	
	US-1 to Tiffany Dr./Lyngate Dr.	4	0.3%	289	17	14	1620	1%	N	N	N	
Lennard Rd.	Tiffany Dr./Lyngate Dr. to West Virginia Dr.	4	0.2%	192	11	9	1620	0%	N	N	N	
	West Virginia Dr. to Savannah Club Blvd.	4	0.1%	96	6	5	1620	0%	N	N	N	
SR 714/Martin Hwy	Savannah Club Blvd. to US-1	2	0.0%	0	0	0	760	0%	N	N	N	
	Range Line Rd. to I-95	2	0.1%	96	6	5	860	1%	N	N	N	
SR 714/Martin Downs Blvd.	I-95 to Port St. Lucie Blvd.	2	1.3%	1,250	73	59	860	8%	Y	Y	Y	
	Port St. Lucie Blvd. to Turnpike	4	0.9%	866	51	41	1860	3%	N	N	N	
CR 714	N. of FL TPK Entrance to High Meadows Av	4	0.7%	673	39	32	1860	2%	N	N	N	
	E. of High Meadows Ave.	4	0.6%	577	34	27	1860	2%	N	N	N	
Miapp Rd/Murphy Rd.	Turnpike to High Meadows Ave.	4	1.7%	1,635	96	77	1620	6%	Y	Y	Y	
	High Meadows Ave. to Berry Ave.	4	1.4%	1,347	79	64	1620	5%	Y	Y	Y	
Becker Rd.	E. of High Meadows Ave.	2	0.3%	289	17	14	780	2%	N	N	N	
	I-95 to Rosser Rd.	6	8.5%	8,176	479	386	2790	17%	Y	Y	Y	
Paar Dr.	Rosser Blvd. to Savona Blvd.	4	5.6%	5,387	316	254	1860	17%	Y	Y	Y	
	Savona Blvd. to Port St. Lucie Blvd.	4	5.5%	5,290	310	250	1860	17%	Y	Y	Y	
Gatlin Blvd.	Port St. Lucie Blvd. to Darwin Blvd.	4	4.9%	4,713	276	223	1860	15%	Y	Y	Y	
	Darwin Blvd. to Turnpike	4	4.9%	4,713	276	223	1860	15%	Y	Y	Y	
Westmoreland Blvd.	Turnpike to Southbend Blvd.	4	3.1%	2,982	175	141	1860	9%	Y	Y	Y	
	Southbend Blvd. to Gilson Rd.	4	0.8%	770	45	36	1860	2%	N	N	N	
Oakridge Blvd.	Rosser Blvd. to Savona Blvd.	4	7.2%	6,926	406	327	1860	22%	Y	Y	Y	
	Savona Blvd. to Port St. Lucie Blvd.	4	6.7%	6,445	378	304	1860	20%	Y	Y	Y	
Tiffany Dr/Lyngate Dr.	Range Line Rd. to N/S A	4	0.8%	770	38	45	1860	2%	N	N	N	
	N/S A to Community Blvd.	4	0.4%	385	18	23	1860	1%	N	N	N	
E/W XY	Community Blvd. to Village Pkwy.	4	0.0%	0	0	0	1860	0%	N	N	N	
	Village Pkwy. to I-95	8	1.8%	1,539	90	73	3540	3%	N	N	N	
E/W XY	I-95 to Rosser Blvd.	6	1.0%	962	56	45	2790	2%	N	N	N	
	Rosser Blvd. to Savona Blvd.	6	1.8%	1,731	102	82	2790	4%	N	N	N	
E/W XY	Savona Blvd. to Port St. Lucie Blvd.	6	1.3%	1,250	73	59	2790	3%	N	N	N	
	Port St. Lucie Blvd. to US-1	2	0.3%	289	17	14	760	2%	N	N	N	
E/W XY	Bayshore Blvd. to Southbend Blvd.	4	0.3%	289	17	14	1620	1%	N	N	N	
	Midport Rd. to US-1	2	0.2%	192	11	9	760	1%	N	N	N	
E/W XY	US-1 to Villagegreen Dr.	2	0.0%	0	0	0	760	0%	N	N	N	
	Villagegreen Dr. to Lennard Rd.	2	0.0%	0	0	0	760	0%	N	N	N	
E/W XY	N/S A to Community Blvd.	2	0.1%	96	6	5	760	1%	N	N	N	
	Commerce Center Parkway to Village Pkwy.	4	0.3%	289	17	14	1620	1%	N	N	N	

TABLE TR-4
Western Annexation Study
2025 Wilson Groves Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume	Impact		Significant Impact	
					NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB
Del Rio Blvd.	Port St. Lucie Blvd. to California Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	California Blvd. to Cashmere Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Cashmere Blvd. to California Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Becker Rd. to Becker Rd.	4	1.8%	1,731	82	102	1860	4%	5%	Y	Y
Port St. Lucie Blvd.	Martin Hwy. to Darwin Blvd.	2	4.8%	4,713	276	223	890	31%	25%	Y	Y
	Peaer Dr. to Darwin Blvd.	4	4.0%	3,848	226	182	1860	12%	10%	Y	Y
	Darwin Blvd. to Gatlin Blvd.	6	5.2%	5,002	293	236	2790	11%	8%	Y	Y
	Del Rio Blvd. to Bayshore Blvd.	6	4.5%	4,328	254	204	2790	9%	7%	Y	Y
	Bayshore Blvd. to Airoso Blvd.	6	3.7%	3,559	209	168	2790	7%	6%	Y	Y
	Airoso Blvd. to Southbend Blvd./Floresta Dr.	6	2.9%	2,789	164	132	2790	6%	5%	Y	N
	Southbend Blvd./Floresta Dr. to Midport Rd.	6	2.4%	2,309	135	109	2790	5%	4%	N	N
	Midport Rd. to US-1	6	1.4%	1,347	79	64	2790	3%	2%	N	N
	US-1 to Lennard Rd.	4	0.5%	481	28	23	1860	2%	1%	N	N
	Becker Rd. to Port St. Lucie Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Turnpike	Martin Hwy. to Becker Rd.	4	1.0%	962	45	56	2940	2%	2%	N	N
	Becker Rd. to Port St. Lucie Blvd.	4	0.0%	0	0	0	2940	0%	0%	N	N
Bayshore Blvd.	Port St. Lucie Blvd. to Ft. Pierce (SR 70)	4	0.0%	0	0	0	2940	0%	0%	N	N
	Oakridge Blvd. to Port St. Lucie Blvd.	4	0.3%	289	14	17	1860	1%	1%	N	N
	Port St. Lucie Blvd. to West Virginia Dr.	4	0.2%	192	11	9	1860	1%	0%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.4%	385	23	18	1860	1%	1%	N	N
Selvitz Rd.	Prima Vista Blvd. to Selvitz Rd.	2	0.4%	385	23	18	760	3%	2%	N	N
	Selvitz Rd. to St. James Dr.	2	0.0%	0	0	0	760	0%	0%	N	N
St. James Dr.	Bayshore Blvd. to E/W 5	2	0.0%	0	0	0	760	0%	0%	N	N
	E/W 5 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
25 th Street	N. of Midway	2	0.0%	0	0	0	760	0%	0%	N	N
	Bayshore Blvd. to E/W 5	2	0.3%	289	17	14	1860	1%	1%	N	N
Airoso Blvd.	E/W 5 to Midway Rd.	4	0.0%	0	0	0	1860	0%	0%	N	N
	N. of Midway	4	0.1%	96	6	5	1860	0%	0%	N	N
	Port St. Lucie Blvd. to West Virginia Dr.	4	0.9%	481	28	23	1860	2%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.9%	866	51	41	1860	3%	2%	N	N
Southbend Blvd.	Prima Vista Blvd. to Floresta Dr.	4	0.3%	289	17	14	1860	1%	1%	N	N
	Floresta Dr. to St. James Blvd.	4	0.3%	289	17	14	1860	1%	1%	N	N
Floresta Dr.	Becker Rd. to Oakridge Blvd.	2	0.8%	770	45	36	760	6%	5%	Y	N
	Oakridge Blvd. to Port St. Lucie Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N
Oleander Ave.	Port St. Lucie Blvd. to West Virginia Dr.	4	0.3%	289	17	14	1860	1%	1%	N	N
	West Virginia Dr. to Prima Vista Blvd.	4	0.1%	96	6	5	1860	0%	0%	N	N
Midport Rd.	Prima Vista Blvd. to Airoso Blvd.	4	0.0%	0	0	0	1860	0%	0%	N	N
	E/W 6 to Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
High Meadows Ave.	N. of Midway Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Port St. Lucie Blvd. to Lyngate Dr.	4	0.6%	577	34	27	1860	2%	1%	N	N
Gilson Rd.	Lyngate Dr. to West Virginia Dr.	4	0.1%	96	6	5	1860	0%	0%	N	N
	GR 714 to Martin Downs Blvd.	2	0.3%	289	14	17	760	2%	2%	N	N
	Martin Downs Blvd. to Mapp Rd/Murphy Rd.	2	0.0%	0	0	0	760	0%	0%	N	N
	Mapp Rd/Murphy Rd. to Becker Rd.	2	0.8%	770	36	45	760	5%	6%	N	Y

TABLE TR-4
Western Annexation Study
2025 Wilson Groves Significant Impact
External Network

Roadway	Link	Lanes	% External	Daily Traffic	Project Traffic		Service Volume		Impact		Significant Impact	
					NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Range Line	Martin Hwy. to Becker Rd.	2	5.9%	5,675	268	333	810	33%	41%	Y	Y	
	Becker Rd. to E/W 4 (Paar Dr.)	2	1.2%	1,154	68	55	810	8%	7%	Y	Y	
	E/W 4 (Paar Dr.) to E/W 3	2	1.9%	1,828	86	107	810	11%	13%	Y	Y	
	E/W 3 to E/W 1	2	2.5%	2,405	141	114	810	17%	14%	Y	Y	
Glades Cut-Off Rd.	E/W 1 to Gatlin Blvd.	2	1.9%	1,828	107	86	810	13%	11%	Y	Y	
	Gatlin Blvd. to West Virginia Blvd.	2	1.2%	1,154	68	55	810	8%	7%	Y	Y	
	West Virginia Blvd. to Glades Cut-Off Rd.	2	1.0%	962	56	45	810	7%	6%	Y	Y	
	Range Line / CR 609 to N/S A	2	0.4%	385	23	18	760	3%	2%	N	N	
Community Blvd.	N/S A to Commerce Center Pkwy.	2	2.2%	2,116	124	100	760	16%	13%	Y	Y	
	Commerce Center Pkwy to Midway Rd.	2	0.3%	289	17	14	760	2%	2%	N	N	
	N. of Midway Rd.	2	0.3%	289	17	14	760	2%	2%	N	N	
	Gatlin Blvd. to E/W XY	4	7.2%	6,926	406	327	1860	22%	18%	Y	Y	
Commerce Center Pkwy.	E/W XY to West Virginia Blvd.	4	7.0%	6,733	395	318	1860	21%	17%	Y	Y	
	West Virginia Blvd. to Glades Cut-Off Rd.	2	1.8%	1,731	102	82	860	12%	10%	Y	Y	
	Gatlin Blvd. to E/W XY	2	1.5%	1,443	85	68	860	10%	8%	Y	Y	
	West Virginia Blvd. to St. Lucie West Blvd.	4	0.4%	385	23	18	1860	1%	1%	N	N	
Village Pkwy.	St. Lucie West Blvd. to Glades Cut-Off Rd.	2	0.1%	96	6	5	860	1%	1%	N	N	
	Gatlin Blvd. to E/W XY	6	1.7%	1,635	98	77	2790	3%	3%	N	N	
	E/W XY to West Virginia Blvd.	4	0.5%	481	28	23	1860	2%	1%	N	N	
	Martin Hwy. to Becker Rd.	6	5.7%	5,483	259	321	5410	5%	6%	N	Y	
i-95	Becker Rd. to E/W 3	6	1.7%	1,635	96	77	5410	2%	1%	N	N	
	E/W 3 to Gatlin Blvd.	6	5.7%	5,483	321	259	5410	6%	5%	Y	N	
	Gatlin Blvd. to West Virginia Blvd.	6	6.4%	6,156	361	291	5410	7%	5%	Y	Y	
	West Virginia Blvd. to St. Lucie West Blvd.	6	6.1%	5,867	344	277	5410	6%	5%	Y	Y	
NW Peacock Blvd. Loop	St. Lucie West Blvd. to Midway Rd.	6	4.0%	3,848	226	182	5410	4%	3%	N	Y	
	St. Lucie West Blvd. to California Blvd.	2	1.1%	1,058	62	50	760	8%	7%	Y	Y	
	California Blvd. to Cashmere Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N	
	Becker Rd. to Paar Dr.	4	2.9%	2,789	164	132	1620	10%	8%	Y	Y	
Rosser Blvd.	Paar Dr. to E/W 3	4	1.7%	1,635	96	77	1620	6%	5%	Y	Y	
	E/W 3 to Gatlin Blvd.	4	2.4%	2,309	135	109	1620	8%	7%	Y	Y	
	California Blvd. to E. Torino Pkwy.	2	0.0%	0	0	0	760	0%	0%	N	N	
	NW Peacock Blvd. to Midway Rd.	2	0.1%	96	6	5	760	1%	1%	N	N	
California Blvd.	California Blvd. to Cashmere Blvd.	2	0.2%	192	11	9	760	1%	1%	N	N	
	Del Rio Blvd. to Savanna Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N	
	Savanna Blvd. to Del Rio Blvd.	2	0.1%	96	6	5	760	1%	1%	N	N	
	Del Rio Blvd. to West Virginia Blvd.	2	0.1%	96	6	5	760	1%	1%	N	N	
Savona Blvd.	West Virginia Blvd. to St. Lucie West Blvd.	4	0.7%	673	39	32	1620	2%	2%	N	N	
	St. Lucie West Blvd. to NW Peacock Blvd.	2	0.1%	96	6	5	760	1%	1%	N	N	
	NW Peacock Blvd. Loop to W. Torino Pkwy.	2	0.2%	192	11	9	760	1%	1%	N	N	
	Becker Rd. to Paar Dr.	2	0.1%	96	6	5	760	1%	1%	N	N	
Cashmere Blvd.	Paar Dr. to Gatlin Blvd.	2	0.5%	481	28	23	760	4%	3%	N	N	
	Gatlin Blvd. to California Blvd.	2	0.6%	577	34	27	760	4%	4%	N	N	
	Del Rio Blvd. to West Virginia Blvd.	2	0.0%	0	0	0	760	0%	0%	N	N	
	West Virginia Blvd. to St. Lucie West Blvd.	2	0.2%	192	11	9	760	1%	1%	N	N	

**TABLE 1
VILLAGE OF SUNSET LAKES
TRIP GENERATION**

Land Use	Intensity	Daily Trips	PM Peak Hour		
			Total	In	Out
Proposed Site Traffic					
Single-Family Residential	63 DU	680	69	43	26
Apartments	314 DU	2,026	190	124	66
Townhomes	342 DU	1,875	165	111	54
Specialty Retail	2,000 SF	89	5	2	3
<i>Subtotal</i>		4,670	429	280	149
Internal Capture					
Residential to Specialty Retail	5%	234	22	11	11
Pass-By Trip Reduction					
Specialty Retail	34%	29	2	1	1
Net New External Trips		4,407	405	268	137
Driveway Trips		4,436	407	269	138

Note: Trips were calculated using the following rates and/or equations found in the Institute of Transportation Engineers' (ITE) Trip Generation Report, 8th Edition:

Daily Traffic Generation

Single-Family Residential	[ITE 210]	=	$\ln(T) = 0.92 \cdot \ln(X) + 2.71$
Apartments	[ITE 220]	=	$T = 6.06 \cdot (X) + 123.56$
Townhomes	[ITE 230]	=	$\ln(T) = 0.87 \cdot \ln(X) + 2.46$
Specialty Retail	[ITE 814]	=	$T = 44.32 \cdot (X/1000)$

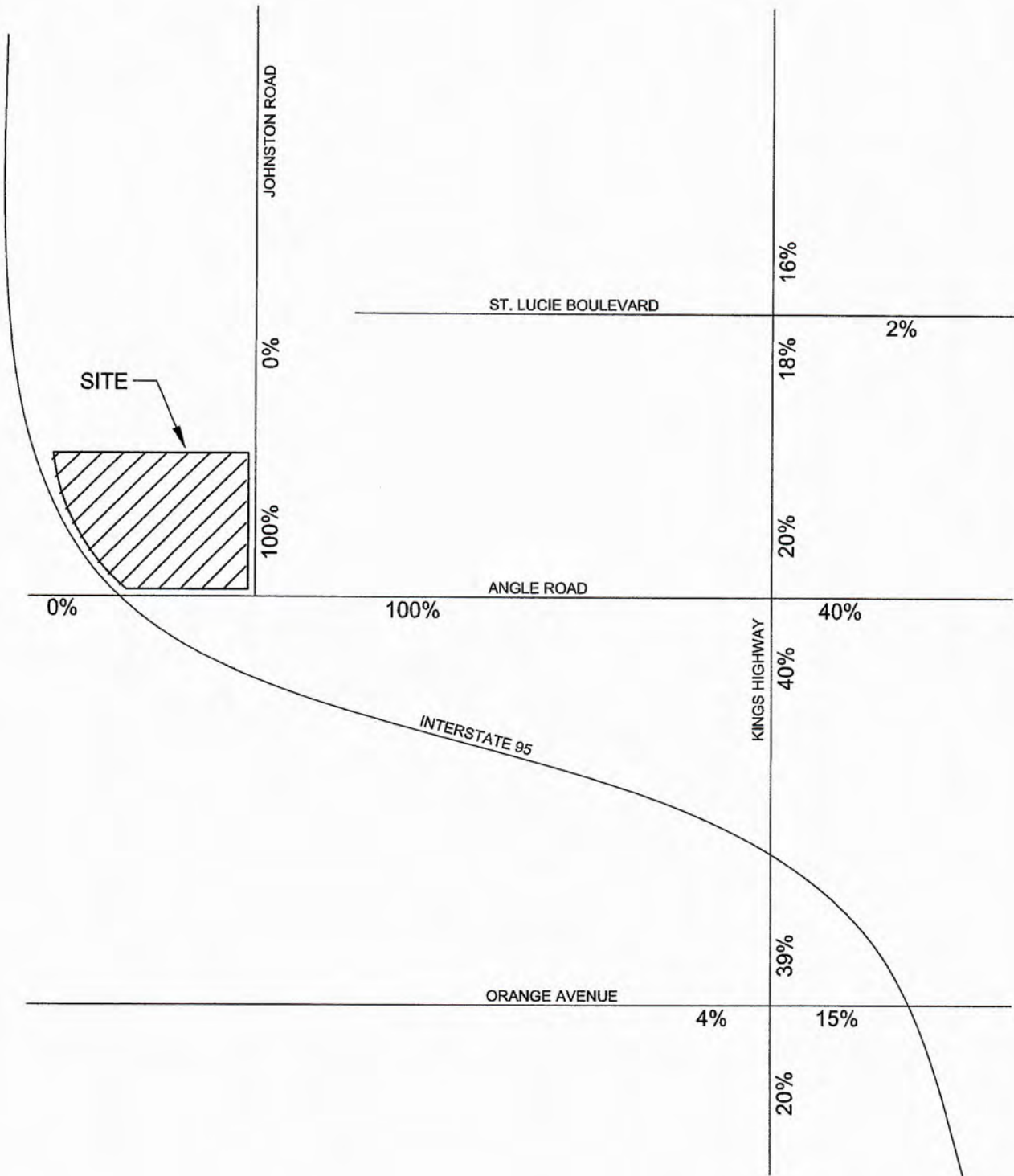
PM Peak Hour Traffic Generation

Single-Family Residential	[ITE 210]	=	$\ln(T) = 0.90 \cdot \ln(X) + 0.51$; (63% in, 37% out)
Apartments	[ITE 220]	=	$T = 0.55 \cdot (X) + 17.65$; (65% in, 35% out)
Townhomes	[ITE 230]	=	$\ln(T) = 0.82 \cdot \ln(X) + 0.32$; (67% in, 33% out)
Specialty Retail	[ITE 814]	=	$T = 2.71 \cdot (X/1000)$; (44% in, 56% out)

Average Pass-By Trip Percentage for Retail Development = 34%

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March 12, 2009

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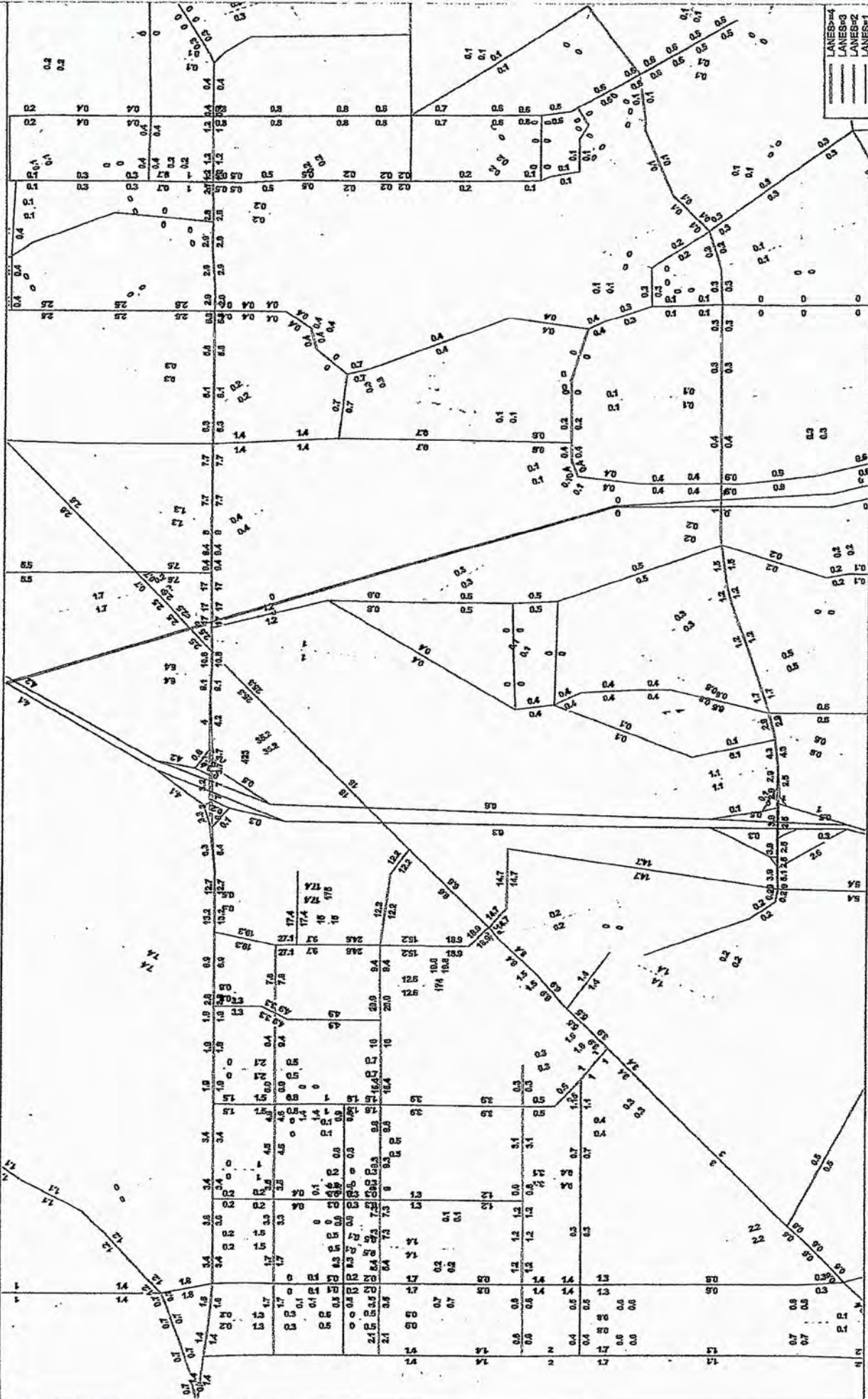
NOT TO SCALE

LEGEND
 XX% Project Traffic Distribution

FIGURE 2
PROJECT TRAFFIC DISTRIBUTION
VILLAGE OF SUNSET LAKES



LTC Ranch Zones-Percent Distribution



LANES=4
 LANES=3
 LANES=2
 LANES=1

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0110

Land Use	TE Co	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips		Internal Trips		Net External Trips		Pass-by Trips		Net New Trips		West Side Trips	East Side Trips	Total		
					In	Out	In	Out	In	Out	In	Out	In	Out	In	Out				In	Out
					%	%	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total				Total	Total
Single Family Detached	210	3.350	DU	$\text{Ln}(T) = 0.921 \text{Ln}(X) + 2.71$	50%	3,481	3,613	7,094	27.0%	19,207	9,537	19,207	2,85	5.73	2,85	5.73	19,207	20,540	-		
Multi-Family Housing	220	650	DU	$T = 7.56(X) - 40.86$	50%	2,437	2,436	4,873	27.0%	1,792	1,767	3,559	-	5.48	3,559	-	3,559	3,880	-		
General Office	710	1,508,500	SR	$\text{Ln}(T) = 0.971 \text{Ln}(X) + 2.50$	50%	1,550	3,525	5,075	34.4%	5,828	3,852	9,680	-	6.41	9,680	-	9,680	10,553	-		
Industrial Park	130	1,000,000	SR	$T = 3.37(X)$	50%	781	1,862	2,643	32.5%	617	437	1,054	-	2.27	1,054	-	1,054	1,149	-		
Warehousing	150	960,000	SR	$T = 1.58(X) + 15.54$	50%	11,562	11,561	23,123	38.5%	8,320	14,223	4,836	-	12.95	9,287	-	9,287	10,234	-		
Shopping Center	820	725,000	SR	$\text{Ln}(T) = 0.681 \text{Ln}(X) + 5.57$	50%	36,994	36,990	73,984	32.4%	25,141	24,887	49,998	4,836	9.7%	22,773	22,439	45,162	32,153	13,009	45,162	
TOTALS																				49,216	

Source: ITE 10th Edition Trip Generation Rates

Land Use	ITE Code	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips		Internal Trips		Net External Trips		Pass-by Trips		Net New Trips		West Side Trips	East Side Trips	Total	
					In	Out	In	Out	In	Out	In	Out	In	Out	In	Out				
					%	%	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total				
Single Family Detached	210	3.350	DU	$T = 0.71(X) + 4.80$	25%	596	1,287	2,883	27.0%	555	1,184	1,739	-	0.52	1,739	-	1,739	1,739	-	
Multi-Family Housing	220	650	DU	$\text{Ln}(T) = 0.951 \text{Ln}(X) - 0.51$	25%	65	217	282	27.0%	60	146	206	-	0.32	206	-	206	206	-	
General Office	710	1,508,500	SR	$T = 0.94(X) + 26.49$	86%	1,242	2,022	3,264	34.3%	833	116	949	-	0.63	949	-	949	949	-	
Industrial Park	130	1,000,000	SR	$T = 0.40(X)$	81%	324	76	400	34.3%	211	52	263	-	0.26	263	-	263	263	-	
Warehousing	150	960,000	SR	$T = 0.17(X)$	77%	126	37	163	34.4%	80	27	107	-	0.11	107	-	107	107	-	
Shopping Center	820	725,000	SR	$T = 0.94(X)$	62%	423	259	682	59.7%	130	145	275	94	34.0%	83	98	181	181	181	
TOTALS																				3,445

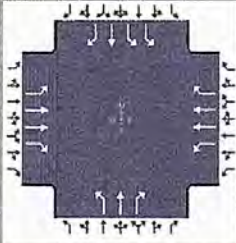
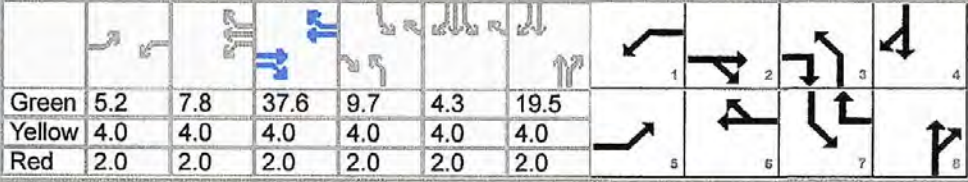
Source: ITE 10th Edition Trip Generation Rates

Land Use	TE Co	Intensity	Units	Trip Generation Rate	Directional Split		Gross Trips		Internal Trips		Net External Trips		Pass-by Trips		Net New Trips		West Side Trips	East Side Trips	Total	
					In	Out	In	Out	In	Out	In	Out	In	Out	In	Out				
					%	%	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total				
Single Family Detached	210	3.350	DU	$\text{Ln}(T) = 0.961 \text{Ln}(X) + 0.20$	63%	1,863	1,094	2,957	27.4%	811	527	1,338	-	0.64	1,338	-	1,338	1,338	-	
Multi-Family Housing	220	650	DU	$\text{Ln}(T) = 0.891 \text{Ln}(X) - 0.02$	63%	197	115	312	27.6%	171	55	226	-	0.34	226	-	226	226	-	
General Office	710	1,508,500	SR	$\text{Ln}(T) = 0.951 \text{Ln}(X) + 0.36$	16%	240	1,260	1,500	28.5%	427	1,073	1,500	-	0.71	1,500	-	1,500	1,500	-	
Industrial Park	130	1,000,000	SR	$T = 0.40(X)$	21%	84	316	400	28.5%	39	247	286	-	0.29	286	-	286	286	-	
Warehousing	150	960,000	SR	$T = 0.19(X)$	27%	49	133	182	28.6%	28	102	130	-	0.14	130	-	130	130	-	
Shopping Center	820	725,000	SR	$\text{Ln}(T) = 0.741 \text{Ln}(X) + 2.89$	48%	1,130	1,224	2,354	46.0%	349	923	1,272	432	34.0%	134	706	840	840	945	
TOTALS																				4,301

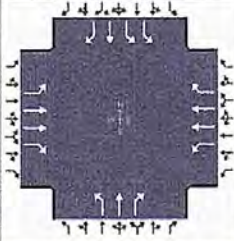
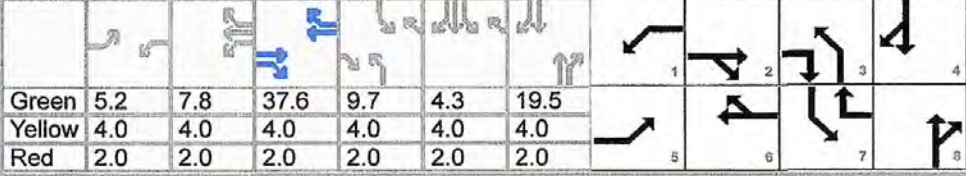
Source: ITE 10th Edition Trip Generation Rates

APPENDIX E
DRIVEWAY ANALYSIS

HCS7 Signalized Intersection Results Summary

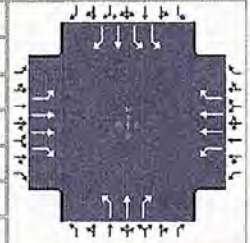
General Information				Intersection Information											
Agency	O'Rourke Engineering			Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other										
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95										
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00										
Intersection	Arterial A	File Name	Midway Rd Arterial A - AM Peak Hour - 7.22.20.xus												
Project Description	Willow Lakes														
Demand Information				EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand (v), veh/h	56	502	126	241	453	748	112	225	214	478	124	23			
Signal Information															
Cycle, s	120.0	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	5.2	7.8	37.6	9.7	4.3	19.5									
Yellow	4.0	4.0	4.0	4.0	4.0	4.0									
Red	2.0	2.0	2.0	2.0	2.0	2.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				5	2	1	6	3	8	7	4				
Case Number				2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0				
Phase Duration, s				11.2	43.6	24.9	57.3	15.7	25.5	26.0	35.8				
Change Period, (Y+R _c), s				6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Allow Headway (MAH), s				3.1	0.0	3.1	0.0	3.1	3.2	3.1	3.2				
Queue Clearance Time (g _s), s				5.9		18.5		9.7	18.3	18.7	8.7				
Green Extension Time (g _e), s				0.1	0.0	0.5	0.0	0.2	1.2	1.2	1.2				
Phase Call Probability				0.86		1.00		0.98	1.00	1.00	1.00				
Max Out Probability				0.00		0.00		0.00	0.00	0.00	0.00				
Movement Group Results				EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14			
Adjusted Flow Rate (v), veh/h	59	528	133	254	477	787	118	237	225	503	131	24			
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1900	1610	1757	1900	1610			
Queue Service Time (g _s), s	3.9	12.7	6.5	16.5	8.2	46.6	7.7	14.3	16.3	16.7	6.7	1.4			
Cycle Queue Clearance Time (g _c), s	3.9	12.7	6.5	16.5	8.2	46.6	7.7	14.3	16.3	16.7	6.7	1.4			
Green Ratio (g/C)	0.04	0.31	0.39	0.16	0.43	0.59	0.08	0.16	0.16	0.17	0.25	0.25			
Capacity (c), veh/h	78	1133	634	285	1548	957	146	309	262	585	472	400			
Volume-to-Capacity Ratio (X)	0.758	0.467	0.209	0.889	0.308	0.823	0.806	0.766	0.859	0.861	0.277	0.061			
Back of Queue (Q), ft/ln (95 th percentile)	84.3	226.1	117	305	147.8	628.3	163.4	278.2	274.5	295.5	139.2	24.4			
Back of Queue (Q), veh/ln (95 th percentile)	3.4	9.0	4.7	12.2	5.9	25.1	6.5	11.1	11.0	11.8	5.6	1.0			
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Uniform Delay (d ₁), s/veh	56.8	27.7	24.0	49.5	16.5	19.3	54.2	48.0	48.9	48.7	36.4	34.4			
Incremental Delay (d ₂), s/veh	5.5	1.4	0.7	3.8	0.5	8.0	3.9	1.5	3.2	1.5	0.1	0.0			
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Control Delay (d), s/veh	62.3	29.1	24.8	53.3	17.0	27.3	58.1	49.5	52.1	50.2	36.5	34.4			
Level of Service (LOS)	E	C	C	D	B	C	E	D	D	D	D	C			
Approach Delay, s/veh / LOS	31.0	C		28.4	C		52.3	D		46.9	D				
Intersection Delay, s/veh / LOS	36.4						D								
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.12	B		2.28	B		2.46	B		2.45	B				
Bicycle LOS Score / LOS	1.08	A		1.74	B		1.44	A		1.57	B				

HCS7 Signalized Intersection Input Data

General Information						Intersection Information																		
Agency	O'Rourke Engineering					Duration, h	0.25																	
Analyst	James Kemp		Analysis Date	Jun 29, 2020		Area Type	Other																	
Jurisdiction	St. Lucie County		Time Period	AM Peak Hour		PHF	0.95																	
Urban Street	Midway Rd		Analysis Year	2035		Analysis Period	1> 7:00																	
Intersection	Arterial A		File Name	Midway Rd Arterial A - AM Peak Hour - 7.22.20.xus																				
Project Description	Willow Lakes																							
Demand Information						EB			WB			NB			SB									
Approach Movement						L	T	R	L	T	R	L	T	R	L	T	R							
Demand (v), veh/h						56	502	126	241	453	748	112	225	214	478	124	23							
Signal Information																								
Cycle, s	120.0	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	5.2	7.8	37.6	9.7	4.3	19.5	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	Red	2.0	2.0	2.0	2.0	2.0	2.0
Traffic Information				EB			WB			NB			SB											
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R									
Demand (v), veh/h				56	502	126	241	453	748	112	225	214	478	124	23									
Initial Queue (Q _b), veh/h				0	0	0	0	0	0	0	0	0	0	0	0									
Base Saturation Flow Rate (s ₀), veh/h				1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900									
Parking (N _m), man/h				None			None			None			None											
Heavy Vehicles (P _{HV}), %				0	0	0	0	0	0	0	0	0	0	0	0									
Ped / Bike / RTOR, /h				0	0	0	0	0	0	0	0	0	0	0	0									
Buses (N _b), buses/h				0	0	0	0	0	0	0	0	0	0	0										
Arrival Type (AT)				3	4	3	3	4	3	3	3	3	3	3										
Upstream Filtering (f)				1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	12.0										
Turn Bay Length, ft				0	0	0	0	0	0	0	0	0	0	0										
Grade (Pg), %				0			0			0			0											
Speed Limit, mi/h				35	35	35	35	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				20.0	20.0	20.0	20.0	60.0	20.0	60.0	20.0													
Yellow Change Interval (Y), s				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0													
Red Clearance Interval (R _c), s				2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0													
Minimum Green (G _{min}), s				6	6	6	6	6	6	6	6													
Start-Up Lost Time (l), s				2.0	2.0	2.0	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	2.0	2.0	2.0													
Passage (PT), s				2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0													
Recall Mode				Off	Min	Off	Min	Off	Off	Off	Off													
Dual Entry				No	Yes	No	Yes	No	Yes	No	Yes													
Walk (Walk), s				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
Pedestrian Clearance Time (PC), s				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
Multimodal Information				EB			WB			NB			SB											
85th % Speed / Rest in Walk / Corner Radius				0	No	25	0	No	25	0	No	25	0	No	25									
Walkway / Crosswalk Width / Length, ft				9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0									
Street Width / Island / Curb				0	0	No	0	0	No	0	0	No	0	0	No									
Width Outside / Bike Lane / Shoulder, ft				12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0									
Pedestrian Signal / Occupied Parking				No	0.50	No	0.50	No	0.50	No	0.50	No	0.50											

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - PM Peak Hour - 7.22.20.xus		
Project Description	Willow Lakes				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	30	544	160	306	626	580	205	120	392	731	299	67

Signal Information												
Cycle, s	140.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap EW	On	Green	4.2	16.8	25.6	18.8	9.0	29.6		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0		
				Red	2.0	2.0	2.0	2.0	2.0	2.0		

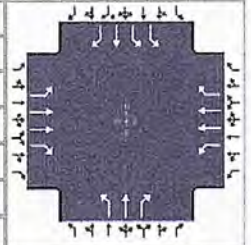
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	10.2	31.6	33.0	54.3	24.8	35.6	39.8	50.6
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.1	0.0	3.1	0.0	3.1	3.2	3.1	3.2
Queue Clearance Time (g _s), s	4.4		26.5		18.4	28.1	31.8	20.9
Green Extension Time (g _e), s	0.0	0.0	0.6	0.0	0.4	1.7	2.0	1.7
Phase Call Probability	0.71		1.00		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	32	573	168	322	659	611	216	126	307	769	315	71
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1900	1610	1757	1900	1610
Queue Service Time (g _s), s	2.4	21.2	11.2	24.5	18.2	35.3	16.4	7.9	26.1	29.8	18.9	4.4
Cycle Queue Clearance Time (g _c), s	2.4	21.2	11.2	24.5	18.2	35.3	16.4	7.9	26.1	29.8	18.9	4.4
Green Ratio (g/C)	0.03	0.18	0.32	0.19	0.35	0.59	0.13	0.21	0.21	0.24	0.32	0.32
Capacity (c), veh/h	55	664	512	348	1250	945	243	401	340	849	605	513
Volume-to-Capacity Ratio (X)	0.576	0.862	0.329	0.926	0.527	0.646	0.888	0.315	0.904	0.907	0.520	0.138
Back of Queue (Q), ft/ln (95 th percentile)	52.5	393.2	204.5	438.5	302.8	491.6	308.6	168.7	405.3	478.5	344	77.9
Back of Queue (Q), veh/ln (95 th percentile)	2.1	15.7	8.2	17.5	12.1	19.7	12.3	6.7	16.2	19.1	13.8	3.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	67.0	51.2	36.4	55.6	29.6	19.2	59.6	46.7	53.8	51.6	39.0	34.0
Incremental Delay (d ₂), s/veh	3.5	13.9	1.7	8.3	1.6	3.4	4.3	0.2	3.7	1.6	0.3	0.0
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	70.5	65.0	38.1	63.8	31.2	22.6	63.9	46.8	57.5	53.2	39.2	34.1
Level of Service (LOS)	E	E	D	E	C	C	E	D	E	D	D	C
Approach Delay, s/veh / LOS	59.4		E	34.5		C	57.6		E	48.2		D
Intersection Delay, s/veh / LOS	46.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.28	B	2.29	B	2.46	B	2.45	B
Bicycle LOS Score / LOS	1.13	A	1.80	B	1.56	B	2.39	B

HCS7 Signalized Intersection Input Data

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Arterial A	File Name	Midway Rd Arterial A - PM Peak Hour - 7.22.20.xus				
Project Description	Willow Lakes						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	30	544	160	306	626	580	205	120	392	731	299	67

Signal Information													
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	4.2	16.8	25.6	18.8	9.0	29.6			
		Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0			
Force Mode	Fixed			Red	2.0	2.0	2.0	2.0	2.0	2.0			

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	30	544	160	306	626	580	205	120	392	731	299	67
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	100	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	35	35	35	35	35	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	19.0	13.0	18.0	12.0	89.0	15.0	94.0	20.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

TURNING MOVEMENT VOLUME COUNTS

Per Ave
Willow Lakes
2/15/2010

EW STREET - Midway Rd
City St Luke

CONTROL - Signalized

Per Ave
Willow Lakes
2/15/2010

EW STREET - Midway Rd
City St Luke

CONTROL - Signalized

Per Ave
Willow Lakes
2/15/2010

EW STREET - Midway Rd
City St Luke

CONTROL - Signalized

15 Min Period

PERIOD	WBL	WBT	WBR	WBL	WBT	WBR	TOTAL	ORIG
7:00-7:15	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0

AM PEAK HOUR (6:00-7:00)

PERIOD	WBL	WBT	WBR	WBL	WBT	WBR	TOTAL	ORIG
6:00-6:15	0	0	0	0	0	0	0	0
6:15-6:30	0	0	0	0	0	0	0	0
6:30-6:45	0	0	0	0	0	0	0	0
6:45-7:00	0	0	0	0	0	0	0	0

AM PEAK HOUR (6:00-7:00)

PERIOD	WBL	WBT	WBR	WBL	WBT	WBR	TOTAL	ORIG
6:00-6:15	0	0	0	0	0	0	0	0
6:15-6:30	0	0	0	0	0	0	0	0
6:30-6:45	0	0	0	0	0	0	0	0
6:45-7:00	0	0	0	0	0	0	0	0

15 Min Period

PERIOD	WBL	WBT	WBR	WBL	WBT	WBR	TOTAL	ORIG
4:00-4:15	0	0	0	0	0	0	0	0
4:15-4:30	0	0	0	0	0	0	0	0
4:30-4:45	0	0	0	0	0	0	0	0
4:45-5:00	0	0	0	0	0	0	0	0
5:00-5:15	0	0	0	0	0	0	0	0
5:15-5:30	0	0	0	0	0	0	0	0
5:30-5:45	0	0	0	0	0	0	0	0
5:45-6:00	0	0	0	0	0	0	0	0

PM PEAK HOUR (5:00-6:00)

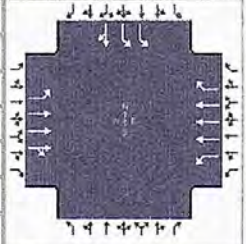
PERIOD	WBL	WBT	WBR	WBL	WBT	WBR	TOTAL	ORIG
5:00-5:15	0	0	0	0	0	0	0	0
5:15-5:30	0	0	0	0	0	0	0	0
5:30-5:45	0	0	0	0	0	0	0	0
5:45-6:00	0	0	0	0	0	0	0	0

PM PEAK HOUR (5:00-6:00)

PERIOD	WBL	WBT	WBR	WBL	WBT	WBR	TOTAL	ORIG
5:00-5:15	0	0	0	0	0	0	0	0
5:15-5:30	0	0	0	0	0	0	0	0
5:30-5:45	0	0	0	0	0	0	0	0
5:45-6:00	0	0	0	0	0	0	0	0

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - AM Peak Hour - 7.21.20.xus				
Project Description	Willow Lakes						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	38	1163	0	0	1418	1013				745	0	24

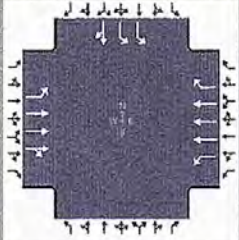


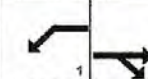
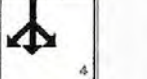
Signal Information				EB				WB				NB				SB			
Cycle, s	120.0	Reference Phase	2																
Offset, s	0	Reference Point	End																
Uncoordinated	No	Simult. Gap E/W	On	Green	0.0	4.4	67.6	30.0	0.0	0.0									
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	0.0	0.0									
				Red	0.0	2.0	2.0	2.0	0.0	0.0									

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6				4
Case Number	2.0	4.0	2.0	3.0				10.0
Phase Duration, s	10.4	84.0	0.0	73.6				36.0
Change Period, (Y+R _c), s	6.0	6.0	4.0	6.0				6.0
Max Allow Headway (MAH), s	3.1	0.0	0.0	0.0				3.1
Queue Clearance Time (g _s), s	4.6							27.9
Green Extension Time (g _e), s	0.1	0.0	0.0	0.0				2.1
Phase Call Probability	0.74							1.00
Max Out Probability	0.00							0.00

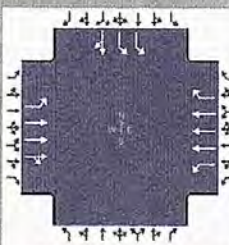
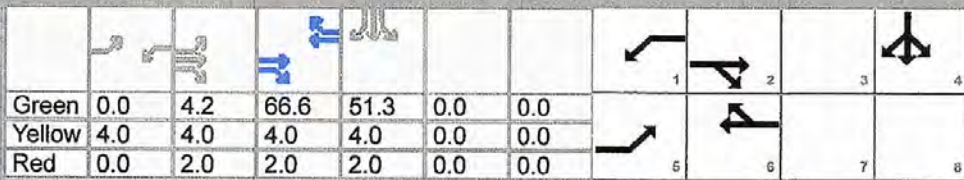
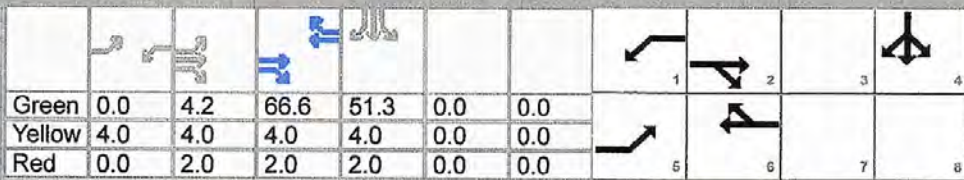
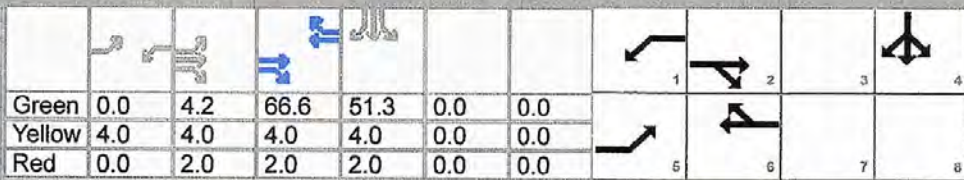
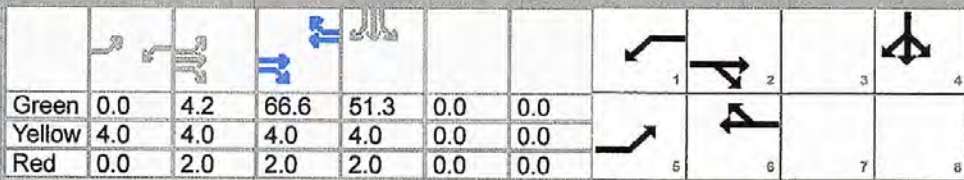
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16				7	4	14
Adjusted Flow Rate (v), veh/h	40	1224	0	0	1493	751				784	25	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	0	1810	1725	1610				1757	1610	
Queue Service Time (g _s), s	2.6	4.8	0.0	0.0	14.0	45.8				25.9	1.4	
Cycle Queue Clearance Time (g _c), s	2.6	4.8	0.0	0.0	14.0	45.8				25.9	1.4	
Green Ratio (g/C)	0.04	0.65			0.56	0.56				0.25	0.25	
Capacity (c), veh/h	67	3705		2	2915	907				878	402	
Volume-to-Capacity Ratio (X)	0.600	0.330	0.000	0.000	0.512	0.828				0.893	0.063	
Back of Queue (Q), ft/ln (95 th percentile)	56	68.8	0	0	183	632.2				417.8	25.4	
Back of Queue (Q), veh/ln (95 th percentile)	2.2	2.8	0.0	0.0	7.3	25.3				16.7	1.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	
Uniform Delay (d ₁), s/veh	56.9	3.1		0.0	8.3	21.4				43.4	34.3	
Incremental Delay (d ₂), s/veh	3.2	0.2	0.0	0.0	0.6	8.6				1.3	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
Control Delay (d), s/veh	60.1	3.4		0.0	8.9	30.0				44.8	34.3	
Level of Service (LOS)	E	A			A	C				D	C	
Approach Delay, s/veh / LOS	5.2		A	16.0		B	0.0			44.5		D
Intersection Delay, s/veh / LOS	18.1						B					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.36		A	2.09		B	3.18		C	2.62		C
Bicycle LOS Score / LOS	1.18		A	1.72		B				1.82		B

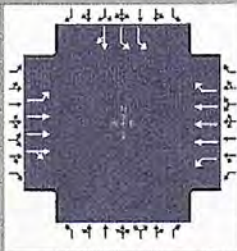
HCS7 Signalized Intersection Input Data

General Information				Intersection Information												
Agency	O'Rourke Engineering			Duration, h	0.25											
Analyst	James Kemp			Analysis Date	Jun 29, 2020			Area Type	Other							
Jurisdiction	St. Lucie County			Time Period	AM Peak Hour			PHF	0.95							
Urban Street	Midway Rd			Analysis Year	2035			Analysis Period	1> 7:00							
Intersection	Pier Rd			File Name	Midway Rd Pier Rd - AM Peak Hour - 7.21.20.xus											
Project Description	Willow Lakes															
Demand Information				EB			WB			NB			SB			
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R	
Demand (v), veh/h				38	1163	0	0	1418	1013				745	0	24	
Signal Information																
Cycle, s	120.0	Reference Phase	2	Green	0.0	4.4	67.6	30.0	0.0	0.0	0.0	0.0	0.0	0.0		
Offset, s	0	Reference Point	End	Yellow	4.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0		
Uncoordinated	No	Simult. Gap E/W	On	Red	0.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On													
Traffic Information				EB			WB			NB			SB			
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R	
Demand (v), veh/h				38	1163	0	0	1418	1013				745	0	24	
Initial Queue (Q _b), veh/h				0	0	0	0	0	0				0	0	0	
Base Saturation Flow Rate (s ₀), veh/h				1900	1900	1900	1900	1900	1900				1900	1900	1900	
Parking (N _m), man/h				None			None						None			
Heavy Vehicles (P _{HV}), %				0	0		0	0	0				0	0		
Ped / Bike / RTOR, /h				0	0		0	0	300	0	0		0	0	0	
Buses (N _b), buses/h				0	0	0	0	0	0				0	0	0	
Arrival Type (AT)				3	4	3	3	4	3				3	3	3	
Upstream Filtering (I)				1.00	1.00	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				0	0		0	0	0				0	0		
Grade (P _g), %					0			0			0			0		
Speed Limit, mi/h				35	35	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				18.0	26.0	15.0	23.0					79.0				
Yellow Change Interval (Y), s				4.0	4.0	4.0	4.0					4.0				
Red Clearance Interval (R _c), s				2.0	2.0	0.0	2.0					2.0				
Minimum Green (G _{min}), s				6	6	6	6					6				
Start-Up Lost Time (I _t), s				2.0	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	2.0				
Passage (PT), s				2.0	2.0	2.0	2.0					2.0				
Recall Mode				Off	Min	Off	Min					Off				
Dual Entry				No	Yes	No	Yes					Yes				
Walk (Walk), s				0.0	0.0	0.0	0.0					0.0	0.0			
Pedestrian Clearance Time (PC), s				0.0	0.0	0.0	0.0					0.0	0.0			
Multimodal Information				EB			WB			NB			SB			
85th % Speed / Rest in Walk / Corner Radius				0	No	25	0	No	25				0	No	25	
Walkway / Crosswalk Width / Length, ft				9.0	12	0	9.0	12	0				9.0	12	0	
Street Width / Island / Curb				0	0	No	0	0	No				0	0	No	
Width Outside / Bike Lane / Shoulder, ft				12	5.0	2.0	12	5.0	2.0				12	5.0	2.0	
Pedestrian Signal / Occupied Parking				No	0.50	No	0.50					No	0.50			

HCS7 Signalized Intersection Results Summary

General Information					Intersection Information							
Agency	O'Rourke Engineering				Duration, h	0.25						
Analyst	James Kemp	Analysis Date	Jun 29, 2020		Area Type	Other						
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour		PHF	0.95						
Urban Street	Midway Rd	Analysis Year	2035		Analysis Period	1 > 7:00						
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - PM Peak Hour - 7.21.20.xus									
Project Description	Willow Lakes											
Demand Information					EB		WB		NB		SB	
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	29	1667	0	0	1474	745				1145	0	38
Signal Information												
Cycle, s	140.0	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	0.0	4.2	66.6	51.3	0.0	0.0	
		Yellow	4.0	4.0	4.0	4.0	0.0	0.0				
		Red	0.0	2.0	2.0	2.0	0.0	0.0				
Timer Results					EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5		2		1		6				4	
Case Number	2.0		4.0		2.0		3.0				10.0	
Phase Duration, s	10.2		82.7		0.0		72.6				57.3	
Change Period, (Y+R _c), s	6.0		6.0		4.0		6.0				6.0	
Max Allow Headway (MAH), s	3.1		0.0		0.0		0.0				3.1	
Queue Clearance Time (g _s), s	4.3										48.3	
Green Extension Time (g _e), s	0.0		0.0		0.0		0.0				2.9	
Phase Call Probability	0.69										1.00	
Max Out Probability	0.00										0.12	
Movement Group Results					EB		WB		NB		SB	
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16				7	4	14
Adjusted Flow Rate (v), veh/h	31	1755	0	0	1552	468				1205	40	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	0	1810	1725	1610				1757	1610	
Queue Service Time (g _s), s	2.3	19.7	0.0	0.0	25.6	30.1				46.3	2.3	
Cycle Queue Clearance Time (g _c), s	2.3	19.7	0.0	0.0	25.6	30.1				46.3	2.3	
Green Ratio (g/C)	0.03	0.55			0.48	0.48				0.37	0.37	
Capacity (c), veh/h	54	3125		1	2461	766				1287	590	
Volume-to-Capacity Ratio (X)	0.566	0.562	0.000	0.000	0.630	0.612				0.937	0.068	
Back of Queue (Q), ft/ln (95 th percentile)	50.7	266	0	0	347.1	448.1				729.7	39.9	
Back of Queue (Q), veh/ln (95 th percentile)	2.0	10.6	0.0	0.0	13.9	17.9				29.2	1.6	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	
Uniform Delay (d ₁), s/veh	67.0	11.2		0.0	18.1	27.2				42.8	28.8	
Incremental Delay (d ₂), s/veh	3.4	0.7	0.0	0.0	1.2	3.6				10.1	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
Control Delay (d), s/veh	70.5	11.9		0.0	19.4	30.8				52.9	28.9	
Level of Service (LOS)	E	B			B	C				D	C	
Approach Delay, s/veh / LOS	12.9		B	22.0		C	0.0			52.1		D
Intersection Delay, s/veh / LOS	26.2						C					
Multimodal Results					EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.39	A		2.11	B		3.18	C		2.63	C	
Bicycle LOS Score / LOS	1.47	A		1.60	B					2.54	C	

HCS7 Signalized Intersection Input Data

General Information				Intersection Information											
Agency	O'Rourke Engineering			Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other										
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95										
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00										
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - PM Peak Hour - 7.21.20.xus												
Project Description	Willow Lakes														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				29	1667	0	0	1474	745				1145	0	38
Signal Information															
Cycle, s	140.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On	Green	0.0	4.2	66.6	51.3	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	0.0	0.0					
				Red	0.0	2.0	2.0	2.0	0.0	0.0					
Traffic Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				29	1667	0	0	1474	745				1145	0	38
Initial Queue (Q _b), veh/h				0	0	0	0	0	0				0	0	0
Base Saturation Flow Rate (s ₀), veh/h				1900	1900	1900	1900	1900	1900				1900	1900	1900
Parking (N _m), man/h				None			None						None		
Heavy Vehicles (P _{HV}), %				0	0		0	0	0				0	0	
Ped / Bike / RTOR, /h				0	0		0	0	300	0	0		0	0	0
Buses (N _b), buses/h				0	0	0	0	0	0				0	0	0
Arrival Type (AT)				3	4	3	3	4	3				3	3	3
Upstream Filtering (f)				1.00	1.00	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				0	0		0	0	0				0	0	
Grade (Pg), %				0			0			0			0		
Speed Limit, mi/h				35	35	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				13.0	62.0	13.0	62.0					65.0			
Yellow Change Interval (Y), s				4.0	4.0	4.0	4.0					4.0			
Red Clearance Interval (R _c), s				2.0	2.0	0.0	2.0					2.0			
Minimum Green (G _{min}), s				6	6	6	6					6			
Start-Up Lost Time (l _f), s				2.0	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	2.0				
Passage (PT), s				2.0	2.0	2.0	2.0				2.0				
Recall Mode				Off	Min	Off	Min				Off				
Dual Entry				No	Yes	No	Yes				Yes				
Walk (Walk), s				0.0	0.0	0.0	0.0			0.0	0.0				
Pedestrian Clearance Time (PC), s				0.0	0.0	0.0	0.0			0.0	0.0				
Multimodal Information				EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius				0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft				9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb				0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft				12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking				No	0.50	No	0.50					No	0.50		

TURNING MOVEMENT VOLUME COUNTS

HWY STREET: WYBRIET Midway Rd
 CONTROL: Signalized
 FILENAME: Willow Lakes
 COUNTY: City of Louisville
 DATE: Tuesday, 2/18/2020
 ANALYSIS YEAR: 2035
 REPORT DATE:

15 Min Period

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NRL	SBL	SBT	SBR	SRL	EEL	EET	EER	EWL	WBT	WBR	WBL	WTL
7:50-7:55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:55-7:58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:58-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM PEAK HOUR IS FROM: 7:15AM TO 8:15AM

Direction	Volume	Seasonal Factor	Greenish Rule	Years Observed	Trips In	Trips Out
Northbound	455	1	1.003	15	1,582	1,570
Southbound	455	1	1.003	15	1,582	1,570
Eastbound	455	1	1.003	15	1,582	1,570
Westbound	455	1	1.003	15	1,582	1,570

AM PEAK HOUR IS FROM: 7:15AM TO 8:15AM

Direction	Volume	Seasonal Factor	Greenish Rule	Years Observed	Trips In	Trips Out
Northbound	455	1	1.003	15	1,582	1,570
Southbound	455	1	1.003	15	1,582	1,570
Eastbound	455	1	1.003	15	1,582	1,570
Westbound	455	1	1.003	15	1,582	1,570

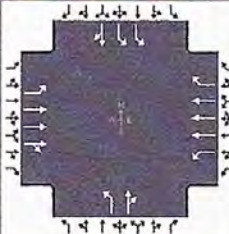
PM PEAK HOUR IS FROM: 4:00 PM TO 5:30PM

Direction	Volume	Seasonal Factor	Greenish Rule	Years Observed	Trips In	Trips Out
Northbound	117	1	1.003	15	1,582	1,570
Southbound	117	1	1.003	15	1,582	1,570
Eastbound	117	1	1.003	15	1,582	1,570
Westbound	117	1	1.003	15	1,582	1,570

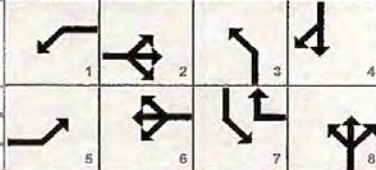
TOTAL

Direction	Volume	Seasonal Factor	Greenish Rule	Years Observed	Trips In	Trips Out
Northbound	455	1	1.003	15	1,582	1,570
Southbound	455	1	1.003	15	1,582	1,570
Eastbound	455	1	1.003	15	1,582	1,570
Westbound	455	1	1.003	15	1,582	1,570

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	O'Rourke Engineering			Duration, h	0.25	
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other	
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95	
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00	
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - AM Peak Hour - 7.21.20...			
Project Description	Willow Lakes					

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	57	1851	0	0	2845	1207	0	0	0	1002	0	15

Signal Information												
Cycle, s	120.0	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	5.2	63.8	33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Red	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

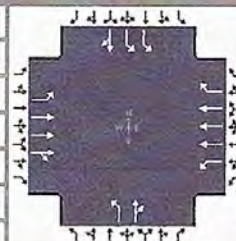
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	3.0		10.0		10.0
Phase Duration, s	11.2	81.0	0.0	69.8		0.0		39.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (MAH), s	3.1	0.0	0.0	0.0		0.0		3.1
Queue Clearance Time (g _s), s	3.7							35.0
Green Extension Time (g _e), s	0.1	0.0	0.0	0.0		0.0		0.0
Phase Call Probability	0.86							1.00
Max Out Probability	0.00							1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	60	1948	0	0	2995	771	0	0		1055	16	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	0	1810	1900	1610	1810	1610		1810	1610	
Queue Service Time (g _s), s	1.7	12.6	0.0	0.0	61.3	21.3	0.0	0.0		33.0	0.9	
Cycle Queue Clearance Time (g _c), s	1.7	12.6	0.0	0.0	61.3	21.3	0.0	0.0		33.0	0.9	
Green Ratio (g/C)	0.59	0.62		0.48	0.53	0.81		0.32		0.28	0.28	
Capacity (c), veh/h	140	3562		177	3031	1299	2			995	443	
Volume-to-Capacity Ratio (X)	0.429	0.547	0.000	0.000	0.988	0.593	0.000	0.000		1.060	0.036	
Back of Queue (Q), ft/ln (95 th percentile)	42.4	153	0	0	752.6	238.4	0	0		731.9	15.2	
Back of Queue (Q), veh/ln (95 th percentile)	1.7	6.1	0.0	0.0	30.1	9.5	0.0	0.0		29.3	0.6	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	28.4	4.8		0.0	17.1	4.3	0.0			43.5	31.9	
Incremental Delay (d ₂), s/veh	0.8	0.6	0.0	0.0	13.8	2.0	0.0	0.0		45.8	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	29.1	5.4		0.0	30.9	6.3	0.0			89.3	31.9	
Level of Service (LOS)	C	A			C	A				F	C	
Approach Delay, s/veh / LOS	6.1		A	25.8		C	0.0			88.4		F
Intersection Delay, s/veh / LOS	29.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	2.09	B	3.43	C	2.62	C
Bicycle LOS Score / LOS	1.59	B	2.56	C	0.49	A	2.25	B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - PM Peak Hour - 7.21.20...				
Project Description	Willow Lakes						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	40	2317	0	0	1701	915	0	0	0	1427	0	45

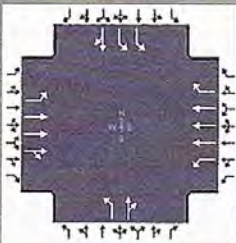
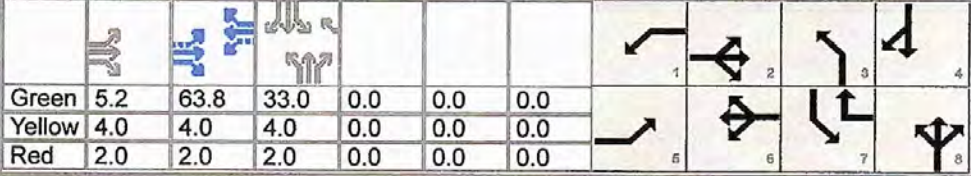
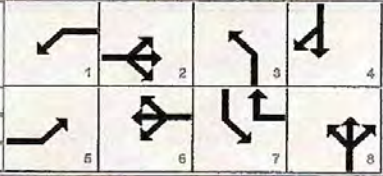
Signal Information				Signal Phases							
Cycle, s	140.0	Reference Phase	2								
Offset, s	0	Reference Point	End	Green	4.8	58.2	59.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	2.0	3.0		10.0		10.0
Phase Duration, s	10.8	75.0	0.0	64.2		0.0		65.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (MAH), s	3.1	0.0	0.0	0.0		0.0		3.1
Queue Clearance Time (g _s), s	3.8							59.5
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.0		0.0
Phase Call Probability	0.81							1.00
Max Out Probability	0.00							1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	42	2439	0	0	1791	542	0	0		1502	47	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	0	1810	1900	1610	1810	1610		1810	1610	
Queue Service Time (g _s), s	1.8	47.8	0.0	0.0	33.8	41.5	0.0	0.0		57.5	2.5	
Cycle Queue Clearance Time (g _c), s	1.8	47.8	0.0	0.0	33.8	41.5	0.0	0.0		57.5	2.5	
Green Ratio (g/C)	0.46	0.49			0.42	0.42		0.42		0.42	0.42	
Capacity (c), veh/h	161	2809		1	2368	669	1			1525	679	
Volume-to-Capacity Ratio (X)	0.262	0.868	0.000	0.000	0.756	0.810	0.000	0.000		0.985	0.070	
Back of Queue (Q), ft/ln (95 th percentile)	35	637.3	0	0	505.6	622	0	0		945.8	42.7	
Back of Queue (Q), veh/ln (95 th percentile)	1.4	25.5	0.0	0.0	20.2	24.9	0.0	0.0		37.8	1.7	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	26.0	20.4		0.0	25.8	36.1	0.0			40.1	24.1	
Incremental Delay (d ₂), s/veh	0.3	4.0	0.0	0.0	2.3	10.3	0.0	0.0		19.4	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	26.3	24.3		0.0	28.1	46.3	0.0			59.5	24.2	
Level of Service (LOS)	C	C			C	D				E	C	
Approach Delay, s/veh / LOS	24.4		C	32.3		C	0.0			58.4		E
Intersection Delay, s/veh / LOS	35.6						D					

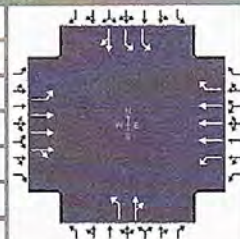
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	2.12	B	3.33	C	2.62	C
Bicycle LOS Score / LOS	1.85	B	1.77	B	0.49	A	3.04	C

HCS7 Signalized Intersection Input Data

General Information					Intersection Information										
Agency	O'Rourke Engineering				Duration, h	0.25									
Analyst	James Kemp	Analysis Date	Jun 29, 2020		Area Type	Other									
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour		PHF	0.95									
Urban Street	Midway Rd	Analysis Year	2035		Analysis Period	1> 7:00									
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - AM Peak Hour - 7.21.20...												
Project Description	Willow Lakes														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				57	1851	0	0	2845	1207	0	0	0	1002	0	15
Signal Information															
Cycle, s	120.0	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				5.2	63.8	33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Yellow				4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Red				2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Traffic Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				57	1851	0	0	2845	1207	0	0	0	1002	0	15
Initial Queue (Q _b), veh/h				0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h				1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h				None			None			None			None		
Heavy Vehicles (P _{HV}), %				0	0		0	0	0	0	0		0	0	
Ped / Bike / RTOR, /h				0	0		0	0	475	0	0		0	0	0
Buses (N _b), buses/h				0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)				3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (f)				1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft				0	0		0	0	0	0	0		0	0	
Grade (P _g), %					0			0			0			0	
Speed Limit, mi/h				35	35	35	35	35	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				12.0	57.0	12.0	57.0	12.0	12.0	39.0	39.0				
Yellow Change Interval (Y), s				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Red Clearance Interval (R _c), s				2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
Minimum Green (G _{min}), s				6	6	6	6	6	6	6	6				
Start-Up Lost Time (l _t), s				2.0	2.0	2.0	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	2.0	2.0	2.0				
Passage (PT), s				2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
Recall Mode				Off	Min	Off	Min	Off	Off	Off	Off				
Dual Entry				No	Yes	No	Yes	No	Yes	No	Yes				
Walk (Walk), s					0.0		0.0		0.0		0.0				
Pedestrian Clearance Time (PC), s					0.0		0.0		0.0		0.0				
Multimodal Information				EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius				0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft				9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb				0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft				12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking				No	0.50	No	0.50	No	0.50	No	0.50	No	0.50		

HCS7 Signalized Intersection Input Data

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - PM Peak Hour - 7.21.20...				
Project Description	Willow Lakes						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	40	2317	0	0	1701	915	0	0	0	1427	0	45

Signal Information				Signal Timing (s)									
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	4.8	58.2	59.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0			
				Red	2.0	2.0	2.0	0.0	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	40	2317	0	0	1701	915	0	0	0	1427	0	45
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h		None			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0	0	0	0		0	0	
Ped / Bike / RTOR, /h	0	0		0	0	400	0	0		0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0	0	0		0	0	
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	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	17.0	51.0	12.0	46.0	23.0	12.0	65.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (PC), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

TURNING MOVEMENT VOLUME COUNTS

AMND A
 Willows Lakes
 2/18/2020
 CITY 31 LANE
 ANALYSIS YEAR 2015

DAY Tuesday
 ANALYSIS YEAR 2015

CONTROL Signature

Northbound			Southbound			Eastbound			Westbound			
NEL	NUT	NBR	SBL	SRT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL
0	0	0	0	0	0	0	53	0	0	49	0	112
0	0	0	0	0	0	0	57	0	0	50	0	107
0	0	0	0	0	0	0	81	0	0	67	0	148
0	0	0	0	0	0	0	63	0	0	66	0	129
0	0	0	0	0	0	0	55	0	0	58	0	113
0	0	0	0	0	0	0	41	0	0	36	0	77
0	0	0	0	0	0	0	44	0	0	61	0	105
0	0	0	0	0	0	0	57	0	0	35	0	92

AM PEAK HOUR IS FROM:

Volume	Season Factor	Season Rate	Years Growth	Willows Lakes	Trips Out
112	1	112	15	1,670	400
113	1	113	15	1,624	366
114	1	114	15	2,233	497
115	1	115	15	3,809	683
116	1	116	15	4,791	917
117	1	117	15	5,858	1,151
118	1	118	15	2,135	487
119	1	119	15	22	54

AM PEAK HOUR IS FROM:

Volume	Season Factor	Season Rate	Years Growth	Willows Lakes	Trips Out
400	1	400	15	1,670	400
366	1	366	15	1,624	366
497	1	497	15	2,233	497
683	1	683	15	3,809	683
917	1	917	15	4,791	917
1151	1	1151	15	5,858	1151
487	1	487	15	2,135	487
54	1	54	15	22	54

PM PEAK HOUR IS FROM:

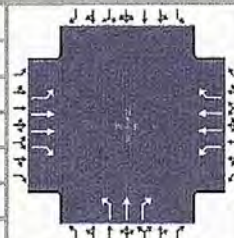
Volume	Season Factor	Season Rate	Years Growth	Willows Lakes	Trips Out
205	1	205	15	1,316	205
431	1	431	15	2,989	431
514	1	514	15	6,290	514
559	1	559	15	4,543	559
337	1	337	15	7,895	337
431	1	431	15	2,110	431
497	1	497	15	77	41
656	1	656	15	1333	656

PM PEAK HOUR IS FROM:

Volume	Season Factor	Season Rate	Years Growth	Willows Lakes	Trips Out
205	1	205	15	1,316	205
431	1	431	15	2,989	431
514	1	514	15	6,290	514
559	1	559	15	4,543	559
337	1	337	15	7,895	337
431	1	431	15	2,110	431
497	1	497	15	77	41
656	1	656	15	1333	656

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - AM Peak Hour - w.o. Arteri...		
Project Description	Willow Lakes w.o. Arterial A				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	0	446	126	274	430	0	112	0	254			

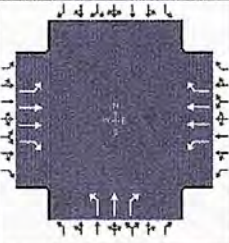
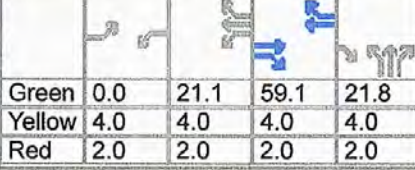
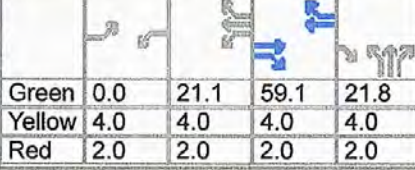
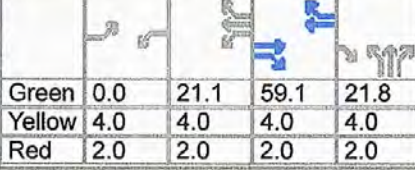
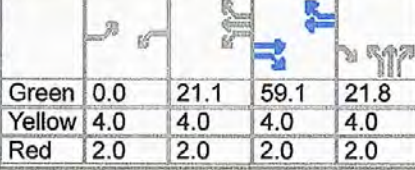
Signal Information													
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	0.0	21.1	59.1	21.8	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	0.0	0.0			
				Red	2.0	2.0	2.0	2.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		
Case Number	2.0	3.0	2.0	3.0		9.0		
Phase Duration, s	0.0	65.1	27.1	92.2		27.8		
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0		6.0		
Max Allow Headway (MAH), s	0.0	0.0	3.1	0.0		3.3		
Queue Clearance Time (g _s), s			20.7			21.6		
Green Extension Time (g _e), s	0.0	0.0	0.4	0.0		0.2		
Phase Call Probability			1.00			1.00		
Max Out Probability			0.01			1.00		

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18			
Adjusted Flow Rate (v), veh/h	0	469	133	288	453	0	118	0	267			
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1900	1610			
Queue Service Time (g _s), s	0.0	6.5	3.5	18.7	0.8	0.0	6.8	0.0	19.6			
Cycle Queue Clearance Time (g _c), s	0.0	6.5	3.5	18.7	0.8	0.0	6.8	0.0	19.6			
Green Ratio (g/C)		0.49	0.67	0.18	0.72	0.72	0.18	0.18	0.18			
Capacity (c), veh/h	2	1780	1085	319	2599	1157	329	345	293			
Volume-to-Capacity Ratio (X)	0.000	0.264	0.122	0.905	0.174	0.000	0.359	0.000	0.914			
Back of Queue (Q), ft/ln (95 th percentile)	0	112.3	53.5	365	12.2	0	138.1	0	376.8			
Back of Queue (Q), veh/ln (95 th percentile)	0.0	4.5	2.1	14.6	0.5	0.0	5.5	0.0	15.1			
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Uniform Delay (d ₁), s/veh	0.0	11.6	7.0	48.4	0.7	0.0	43.0	0.0	48.2			
Incremental Delay (d ₂), s/veh	0.0	0.4	0.2	13.3	0.1	0.0	0.2	0.0	26.6			
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Control Delay (d), s/veh	0.0	11.9	7.2	61.8	0.9	0.0	43.2	0.0	74.8			
Level of Service (LOS)		B	A	E	A		D		E			
Approach Delay, s/veh / LOS	10.9		B	24.6		C	65.2		E	0.0		
Intersection Delay, s/veh / LOS				28.9						C		

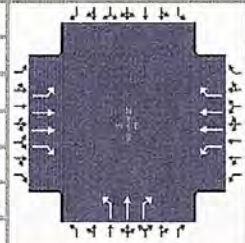
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	1.34	A	2.48	B	2.48	B
Bicycle LOS Score / LOS	0.98	A	1.10	A	1.12	A		

HCS7 Signalized Intersection Input Data

General Information				Intersection Information											
Agency	O'Rourke Engineering			Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other										
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95										
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00										
Intersection	Arterial A	File Name	Midway Rd Arterial A - AM Peak Hour - w.o. Arteri...												
Project Description	Willow Lakes w.o. Arterial A														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				0	446	126	274	430	0	112	0	254			
Signal Information															
Cycle, s	120.0	Reference Phase	2	Green	0.0	21.1	59.1	21.8	0.0	0.0					
Offset, s	0	Reference Point	End	Yellow	4.0	4.0	4.0	4.0	0.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Red	2.0	2.0	2.0	2.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On												
Traffic Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				0	446	126	274	430	0	112	0	254			
Initial Queue (Q _b), veh/h				0	0	0	0	0	0	0	0	0			
Base Saturation Flow Rate (s ₀), veh/h				1900	1900	1900	1900	1900	1900	1900	1900	1900			
Parking (N _m), man/h				None			None			None					
Heavy Vehicles (P _{HV}), %				0	0	0	0	0	0	0	0	0			
Ped / Bike / RTOR, /h				0	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	4	3	3	4	3	3	3	3			
Upstream Filtering (f)				1.00	1.00	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	12.0	12.0			
Turn Bay Length, ft				0	0	0	0	0	0	0	0	0			
Grade (P _g), %					0			0			0			0	
Speed Limit, mi/h				35	35	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				13.0	56.0	34.0	77.0	30.0	30.0						
Yellow Change Interval (Y), s				4.0	4.0	4.0	4.0	4.0	4.0						
Red Clearance Interval (R _c), s				2.0	2.0	2.0	2.0	2.0	2.0						
Minimum Green (G _{min}), s				6	6	6	6	6	6						
Start-Up Lost Time (l _f), s				2.0	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	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				0.0	0.0	0.0	0.0	0.0	0.0						
Pedestrian Clearance Time (PC), s				0.0	0.0	0.0	0.0	0.0	0.0						
Multimodal Information				EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius				0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft				9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb				0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft				12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking				No	0.50		No	0.50		No	0.50				

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Arterial A	File Name	Midway Rd Arterial A - PM Peak Hour - w.o. Arteri...		
Project Description	Willow Lakes w.o. Arterial A				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	0	514	160	337	559	0	205	0	431			

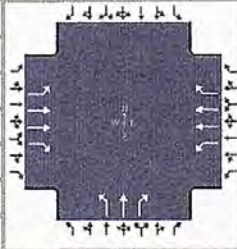
Signal Information				Signal Timing (s)									Signal Phases					
Cycle, s	140.0	Reference Phase	2	Green	0.0	29.6	59.6	32.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	4.0	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On															

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		
Case Number	2.0	3.0	2.0	3.0		9.0		
Phase Duration, s	0.0	65.6	35.6	101.2		38.8		
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0		6.0		
Max Allow Headway (MAH), s	0.0	0.0	3.1	0.0		3.3		
Queue Clearance Time (g _s), s			28.9			31.6		
Green Extension Time (g _e), s	0.0	0.0	0.7	0.0		1.2		
Phase Call Probability			1.00			1.00		
Max Out Probability			0.00			0.00		

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18			
Adjusted Flow Rate (v), veh/h	0	541	168	355	588	0	216	0	348			
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1809	1610	1810	1900	1610			
Queue Service Time (g _s), s	0.0	11.3	5.6	26.9	2.7	0.0	14.5	0.0	29.6			
Cycle Queue Clearance Time (g _c), s	0.0	11.3	5.6	26.9	2.7	0.0	14.5	0.0	29.6			
Green Ratio (g/C)		0.43	0.66	0.21	0.68	0.68	0.23	0.23	0.23			
Capacity (c), veh/h	1	1539	1063	383	2459	1095	424	446	378			
Volume-to-Capacity Ratio (X)	0.000	0.352	0.158	0.927	0.239	0.000	0.509	0.000	0.923			
Back of Queue (Q), ft/ln (95 th percentile)	0	201.2	89.7	460.6	41.5	0	269.3	0	450.8			
Back of Queue (Q), veh/ln (95 th percentile)	0.0	8.0	3.6	18.4	1.7	0.0	10.8	0.0	18.0			
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Uniform Delay (d ₁), s/veh	0.0	19.9	9.0	54.1	2.2	0.0	46.6	0.0	52.3			
Incremental Delay (d ₂), s/veh	0.0	0.6	0.3	4.2	0.2	0.0	0.4	0.0	4.1			
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Control Delay (d), s/veh	0.0	20.5	9.4	58.4	2.5	0.0	46.9	0.0	56.4			
Level of Service (LOS)		C	A	E	A		D		E			
Approach Delay, s/veh / LOS	17.8		B	23.5		C	52.8		D	0.0		
Intersection Delay, s/veh / LOS	29.1						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.26		B	1.36		A	2.48		B	2.48		B
Bicycle LOS Score / LOS	1.07		A	1.27		A	1.42		A			

HCS7 Signalized Intersection Input Data

General Information				Intersection Information												
Agency	O'Rourke Engineering			Duration, h	0.25											
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other											
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95											
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00											
Intersection	Arterial A	File Name	Midway Rd Arterial A - PM Peak Hour - w.o. Arteri...													
Project Description	Willow Lakes w.o. Arterial A															
Demand Information				EB			WB			NB			SB			
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R	
Demand (v), veh/h				0	514	160	337	559	0	205	0	431				
Signal Information																
Cycle, s	140.0	Reference Phase	2													
Offset, s	0	Reference Point	End													
Uncoordinated	No	Simult. Gap E/W	On	Green	0.0	29.6	59.6	32.8	0.0	0.0						
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
				Red	2.0	2.0	2.0	2.0	0.0	0.0						
Traffic Information				EB			WB			NB			SB			
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R	
Demand (v), veh/h				0	514	160	337	559	0	205	0	431				
Initial Queue (Q _b), veh/h				0	0	0	0	0	0	0	0	0				
Base Saturation Flow Rate (s ₀), veh/h				1900	1900	1900	1900	1900	1900	1900	1900	1900				
Parking (N _m), man/h				None			None			None						
Heavy Vehicles (P _{HV}), %				0	0	0	0	0	0	0	0	0				
Ped / Bike / RTOR, /h				0	0	0	0	0		0	0	100	0	0		
Buses (N _b), buses/h				0	0	0	0	0	0	0	0	0				
Arrival Type (AT)				3	4	3	3	4	3	3	3	3				
Upstream Filtering (f)				1.00	1.00	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	12.0	12.0				
Turn Bay Length, ft				0	0	0	0	0	0	0	0	0				
Grade (Pg), %					0			0			0			0		
Speed Limit, mi/h				35	35	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				13.0	13.0	30.0	30.0	97.0	97.0							
Yellow Change Interval (Y), s				4.0	4.0	4.0	4.0	4.0	4.0							
Red Clearance Interval (R _c), s				2.0	2.0	2.0	2.0	2.0	2.0							
Minimum Green (G _{min}), s				6	6	6	6	6	6							
Start-Up Lost Time (l _t), s				2.0	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	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				0.0	0.0	0.0	0.0	0.0	0.0							
Pedestrian Clearance Time (PC), s				0.0	0.0	0.0	0.0	0.0	0.0							
Multimodal Information				EB			WB			NB			SB			
85th % Speed / Rest in Walk / Corner Radius				0	No	25	0	No	25	0	No	25				
Walkway / Crosswalk Width / Length, ft				9.0	12	0	9.0	12	0	9.0	12	0				
Street Width / Island / Curb				0	0	No	0	0	No	0	0	No				
Width Outside / Bike Lane / Shoulder, ft				12	5.0	2.0	12	5.0	2.0	12	5.0	2.0				
Pedestrian Signal / Occupied Parking				No	0.50	No	0.50	No	0.50	No	0.50					

TURNING MOVEMENT VOLUME COUNTS

Per Ave: Willow Lakes
 CONTROL: Signalized
 RWY STREET: Kildenny Rd
 CITY: St Louis
 DAY: Tuesday
 ANNUALS YEAR: 2015



15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	6	49	0	112	496
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	50	0	107	497
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	67	0	148	489
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	66	0	125	446
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	58	0	113	419
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	56	0	99	
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	61	0	105	
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	35	0	102	

AM PEAK HOUR IS FROM: 7:15AM TO 8:15AM

Volume	Season Factor	Growth	Yield	Percentage	PROJECT	Trips In	Trips Out
13.2%	1.005	15	1.005	15	1,862	1,673	
LTC Ranch %	1.005	15	1.005	15	1,862	1,673	
LTC Ranch Volume	1.005	15	1.005	15	1,862	1,673	
Southern Grove %	1.005	15	1.005	15	1,862	1,673	
Southern Grove Volume	1.005	15	1.005	15	1,862	1,673	
Wilson Groves %	1.005	15	1.005	15	1,862	1,673	
Wilson Groves Volume	1.005	15	1.005	15	1,862	1,673	
Bonfield/Kennedy %	1.005	15	1.005	15	1,862	1,673	
Bonfield/Kennedy Volume	1.005	15	1.005	15	1,862	1,673	
Western Grove %	1.005	15	1.005	15	1,862	1,673	
Western Grove Volume	1.005	15	1.005	15	1,862	1,673	
Ravella %	1.005	15	1.005	15	1,862	1,673	
Ravella Volume	1.005	15	1.005	15	1,862	1,673	



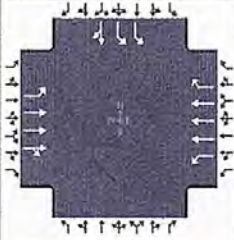
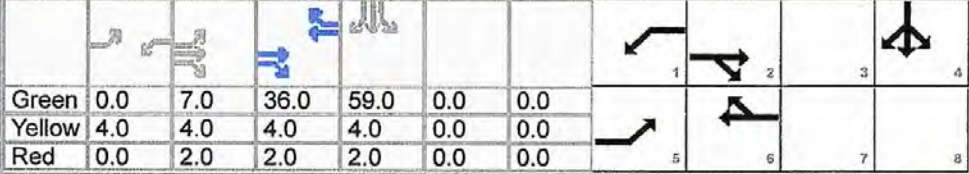
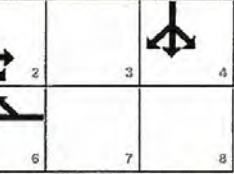
15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	0	0	0	0	0	0	0	0	0	71	0	125	517
4:15-4:30	0	0	0	0	0	0	0	0	0	0	0	0	77	0	128	571
4:30-4:45	0	0	0	0	0	0	0	0	0	0	0	0	73	0	148	582
4:45-5:00	0	0	0	0	0	0	0	0	0	0	0	0	76	0	136	564
5:00-5:15	0	0	0	0	0	0	0	0	0	0	0	0	72	0	160	543
5:15-5:30	0	0	0	0	0	0	0	0	0	0	0	0	81	0	138	
5:30-5:45	0	0	0	0	0	0	0	0	0	0	0	0	85	0	130	
5:45-6:00	0	0	0	0	0	0	0	0	0	0	0	0	56	0	117	

PM PEAK HOUR IS FROM: 4:30 PM TO 5:30 PM

Volume	Season Factor	Growth	Yield	Percentage	PROJECT	Trips In	Trips Out
13.2%	1.005	15	1.005	15	1,862	1,673	
LTC Ranch %	1.005	15	1.005	15	1,862	1,673	
LTC Ranch Volume	1.005	15	1.005	15	1,862	1,673	
Southern Grove %	1.005	15	1.005	15	1,862	1,673	
Southern Grove Volume	1.005	15	1.005	15	1,862	1,673	
Wilson Groves %	1.005	15	1.005	15	1,862	1,673	
Wilson Groves Volume	1.005	15	1.005	15	1,862	1,673	
Bonfield/Kennedy %	1.005	15	1.005	15	1,862	1,673	
Bonfield/Kennedy Volume	1.005	15	1.005	15	1,862	1,673	
Western Grove %	1.005	15	1.005	15	1,862	1,673	
Western Grove Volume	1.005	15	1.005	15	1,862	1,673	
Ravella %	1.005	15	1.005	15	1,862	1,673	
Ravella Volume	1.005	15	1.005	15	1,862	1,673	

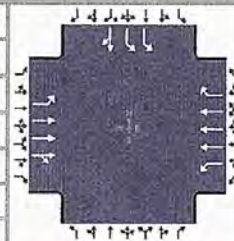


HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	O'Rourke Engineering			Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other										
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95										
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00										
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - AM Peak Hour - w.o. Arteria...												
Project Description	Willow Lakes - without Arterial A														
Demand Information				EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand (v), veh/h	20	641	0	0	654	667				701	0	17			
Signal Information															
Cycle, s	120.0	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	0.0	7.0	36.0	59.0	0.0	0.0									
Yellow	4.0	4.0	4.0	4.0	0.0	0.0									
Red	0.0	2.0	2.0	2.0	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				5	2	1	6				4				
Case Number				2.0	4.0	2.0	3.0				10.0				
Phase Duration, s				13.0	55.0	0.0	42.0				65.0				
Change Period, (Y+R _c), s				6.0	6.0	4.0	6.0				6.0				
Max Allow Headway (MAH), s				3.1	0.0	0.0	0.0				3.1				
Queue Clearance Time (g _s), s				3.3							18.2				
Green Extension Time (g _e), s				0.0	0.0	0.0	0.0				2.0				
Phase Call Probability				1.00							1.00				
Max Out Probability				0.32							0.00				
Movement Group Results				EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Assigned Movement	5	2	12	1	6	16				7	4	14			
Adjusted Flow Rate (v), veh/h	21	675	0	0	688	492				738	18				
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	0	1810	1725	1610				1757	1610				
Queue Service Time (g _s), s	1.3	7.7	0.0	0.0	11.6	36.0				16.2	0.7				
Cycle Queue Clearance Time (g _c), s	1.3	7.7	0.0	0.0	11.6	36.0				16.2	0.7				
Green Ratio (g/C)	0.06	0.41			0.30	0.30				0.49	0.49				
Capacity (c), veh/h	106	2327		2	1553	483				1728	792				
Volume-to-Capacity Ratio (X)	0.199	0.290	0.000	0.000	0.443	1.018				0.427	0.023				
Back of Queue (Q), ft/ln (95 th percentile)	27.5	145.7	0	0	203.6	692.9				266.1	11.3				
Back of Queue (Q), veh/ln (95 th percentile)	1.1	5.8	0.0	0.0	8.1	27.7				10.6	0.5				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00				
Uniform Delay (d ₁), s/veh	53.8	17.9			0.0	28.7	42.0			19.6	15.7				
Incremental Delay (d ₂), s/veh	0.3	0.3	0.0	0.0	0.9	45.5				0.1	0.0				
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0				
Control Delay (d), s/veh	54.2	18.2			0.0	29.6	87.5			19.7	15.7				
Level of Service (LOS)	D	B			C	F				B	B				
Approach Delay, s/veh / LOS	19.3		B		53.7		D		0.0		19.6		B		
Intersection Delay, s/veh / LOS	34.8						C								
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.40		A		2.12		B		3.03		C		2.62		C
Bicycle LOS Score / LOS	0.87		A		1.14		A						1.73		B

HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - AM Peak Hour - w.o. Arteria...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	20	641	0	0	654	667				701	0	17

Signal Information				Phase Diagram								
Cycle, s	120.0	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	0.0	7.0	36.0	59.0	0.0	0.0						
Yellow	4.0	4.0	4.0	4.0	0.0	0.0						
Red	0.0	2.0	2.0	2.0	0.0	0.0						

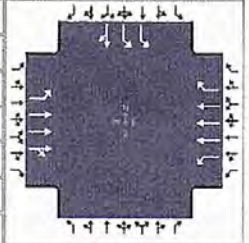
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	20	641	0	0	654	667				701	0	17
Initial Queue (Q _b), veh/h	0	0	0	0	0	0				0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900				1900	1900	1900
Parking (N _m), man/h	None			None						None		
Heavy Vehicles (P _{HV}), %	0	0		0	0	0				0	0	
Ped / Bike / RTOR, /h	0	0		0	0	200	0	0		0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (AT)	3	4	3	3	4	3				3	3	3
Upstream Filtering (f)	1.00	1.00	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	0	0		0	0	0				0	0	
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	35	35	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	13.0	42.0	13.0	42.0				65.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0				4.0
Red Clearance Interval (R _c), s	2.0	2.0	0.0	2.0				2.0
Minimum Green (G _{min}), s	6	6	6	6				6
Start-Up Lost Time (l _f), s	2.0	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	2.0
Passage (PT), s	2.0	2.0	2.0	2.0				2.0
Recall Mode	Off	Min	Off	Min				Off
Dual Entry	No	Yes	No	Yes				Yes
Walk (Walk), s	0.0	0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50					No	0.50	

HCS7 Signalized Intersection Input Data

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - PM Peak Hour - w.o. Arteria...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	19	1193	0	0	1239	662				644	0	15

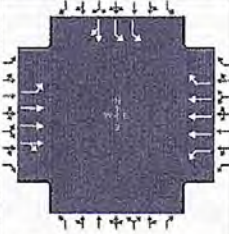
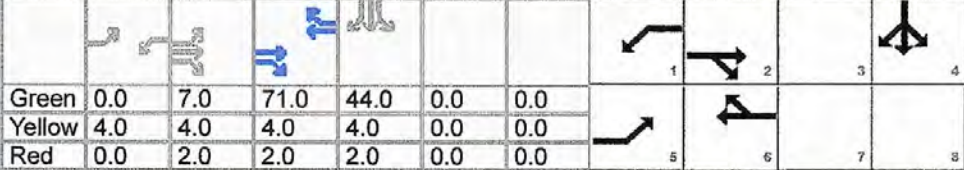
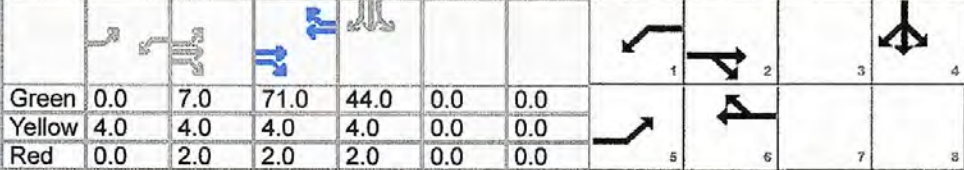
Signal Information														
Cycle, s	140.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	0.0	7.0	71.0	44.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	0.0	0.0				
				Red	0.0	2.0	2.0	2.0	0.0	0.0				

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	19	1193	0	0	1239	662				644	0	15
Initial Queue (Q _b), veh/h	0	0	0	0	0	0				0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900				1900	1900	1900
Parking (N _m), man/h	None			None						None		
Heavy Vehicles (P _{HV}), %	0	0		0	0	0				0	0	
Ped / Bike / RTOR, /h	0	0		0	0	200	0	0		0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (AT)	3	4	3	3	4	3				3	3	3
Upstream Filtering (I)	1.00	1.00	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	0	0		0	0	0				0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	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	13.0	77.0	13.0	77.0				50.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0				4.0
Red Clearance Interval (R _c), s	2.0	2.0	0.0	2.0				2.0
Minimum Green (G _{min}), s	6	6	6	6				6
Start-Up Lost Time (I _f), s	2.0	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	2.0
Passage (PT), s	2.0	2.0	2.0	2.0				2.0
Recall Mode	Off	Min	Off	Min				Off
Dual Entry	No	Yes	No	Yes				Yes
Walk (Walk), s	0.0	0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50					No	0.50	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	O'Rourke Engineering			Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other										
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95										
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00										
Intersection	Pier Rd	File Name	Midway Rd Pier Rd - PM Peak Hour - w.o. Arteria...												
Project Description	Willow Lakes - without Arterial A														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				19	1193	0	0	1239	662				644	0	15
Signal Information															
Cycle, s	140.0	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	0.0	7.0	71.0	44.0	0.0	0.0					
		Yellow	4.0	4.0	4.0	4.0	0.0	0.0							
		Red	0.0	2.0	2.0	2.0	0.0	0.0							
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				5	2	1	6				4				
Case Number				2.0	4.0	2.0	3.0				10.0				
Phase Duration, s				13.0	90.0	0.0	77.0				50.0				
Change Period, (Y+R _c), s				6.0	6.0	4.0	6.0				6.0				
Max Allow Headway (MAH), s				3.1	0.0	0.0	0.0				3.1				
Queue Clearance Time (g _s), s				3.5							24.9				
Green Extension Time (g _e), s				0.0	0.0	0.0	0.0				1.7				
Phase Call Probability				1.00							1.00				
Max Out Probability				0.44							0.00				
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				5	2	12	1	6	16				7	4	14
Adjusted Flow Rate (v), veh/h				20	1256	0	0	1304	486				678	16	
Adjusted Saturation Flow Rate (s), veh/h/ln				1810	1900	0	1810	1725	1610				1757	1610	
Queue Service Time (g _s), s				1.5	8.7	0.0	0.0	17.2	29.9				22.9	1.0	
Cycle Queue Clearance Time (g _c), s				1.5	8.7	0.0	0.0	17.2	29.9				22.9	1.0	
Green Ratio (g/C)				0.05	0.60			0.51	0.51				0.31	0.31	
Capacity (c), veh/h				90	3420		1	2625	817				1104	506	
Volume-to-Capacity Ratio (X)				0.221	0.367	0.000	0.000	0.497	0.596				0.614	0.031	
Back of Queue (Q), ft/ln (95 th percentile)				31.3	136.2	0	0	239.9	439.2				379.7	17	
Back of Queue (Q), veh/ln (95 th percentile)				1.3	5.4	0.0	0.0	9.6	17.6				15.2	0.7	
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00				0.00	0.00	
Uniform Delay (d ₁), s/veh				63.9	6.5		0.0	14.0	24.4				40.8	33.2	
Incremental Delay (d ₂), s/veh				0.5	0.3	0.0	0.0	0.7	3.2				0.7	0.0	
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	
Control Delay (d), s/veh				64.3	6.8		0.0	14.6	27.6				41.5	33.3	
Level of Service (LOS)				E	A			B	C				D	C	
Approach Delay, s/veh / LOS				7.7		A	18.1		B	0.0			41.3		D
Intersection Delay, s/veh / LOS				18.9						B					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				1.38		A	2.10		B	3.04		C	2.63		C
Bicycle LOS Score / LOS				1.19		A	1.47		A				1.63		B

TURNING MOVEMENT VOLUME COUNTS

N/S STREET: EW AVENUE, Mckinney Rd
 FEEDNAME: Willow Lakes
 COUNTY: Tarrant
 CITY: S. Lewis
 ANALYSIS YEAR: 2015
 CONTROL: Signalized
 REPORT DATE: 2/11/2016

15 Min Period	Northbound				Eastbound				Westbound				TOTAL	TOTAL	
	NEL	NRT	NLR	NLR	EBL	EBT	EBR	EBR	WBL	WBT	WBR	WBR			ONE HOUR SUM
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM PEAK HOUR IS FROM:
 Volume: 1258
 Season Factor: 1.00
 M/D/A: 0.00
 Percentage: 0.00
 PRECIPIT: 0.00
 Windy: 0.00
 Wet: 0.00
 Snow: 0.00
 Ice: 0.00
 Fog: 0.00
 Other: 0.00
 Total: 1258

7:00AM TO 8:00AM	8:00AM TO 9:00AM	9:00AM TO 10:00AM	10:00AM TO 11:00AM	11:00AM TO 12:00PM	12:00PM TO 1:00PM	1:00PM TO 2:00PM	2:00PM TO 3:00PM	3:00PM TO 4:00PM	4:00PM TO 5:00PM	5:00PM TO 6:00PM	6:00PM TO 7:00PM	7:00PM TO 8:00PM	8:00PM TO 9:00PM	9:00PM TO 10:00PM	10:00PM TO 11:00PM	11:00PM TO 12:00AM
1258	1851	1207	1002	954	1617	1701	1745	2317	40	2317	1745	2317	1745	2317	1745	2317

12:00PM TO 1:00PM	1:00PM TO 2:00PM	2:00PM TO 3:00PM	3:00PM TO 4:00PM	4:00PM TO 5:00PM	5:00PM TO 6:00PM	6:00PM TO 7:00PM	7:00PM TO 8:00PM	8:00PM TO 9:00PM	9:00PM TO 10:00PM	10:00PM TO 11:00PM	11:00PM TO 12:00AM
1745	2317	1745	2317	1745	2317	1745	2317	1745	2317	1745	2317

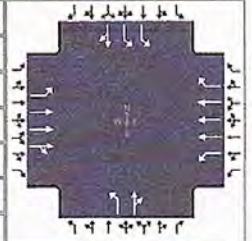
12:00PM TO 1:00PM	1:00PM TO 2:00PM	2:00PM TO 3:00PM	3:00PM TO 4:00PM	4:00PM TO 5:00PM	5:00PM TO 6:00PM	6:00PM TO 7:00PM	7:00PM TO 8:00PM	8:00PM TO 9:00PM	9:00PM TO 10:00PM	10:00PM TO 11:00PM	11:00PM TO 12:00AM
1745	2317	1745	2317	1745	2317	1745	2317	1745	2317	1745	2317

Seasonal Factor: 1.00
 Growth Rate: 1.00
 Years Growth: 15
 Willow Lakes: 1.00
 Village at McKinney: 1.00
 LTC Ranch: 2.00
 Southern Grove: 1.00
 Wilson Grove: 1.00
 Riverland/Kennedy: 1.00
 Western Grove: 1.00
 Florida: 1.00

Total: 1258 (Northbound), 1851 (Eastbound), 1207 (Westbound), 1002 (Total), 954 (Total), 1617 (Total), 1701 (Total), 1745 (Total), 2317 (Total), 40 (Total), 2317 (Total), 1745 (Total), 2317 (Total), 1745 (Total), 2317 (Total), 1745 (Total), 2317 (Total), 1745 (Total), 2317 (Total)

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other
Jurisdiction	St. Lucie County	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - AM Peak Hour - w.o. Art...		
Project Description	Willow Lakes - without Arterial A				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	20	1329	0	0	1750	785	0	0	0	935	0	0

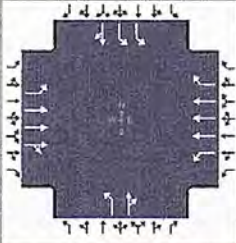
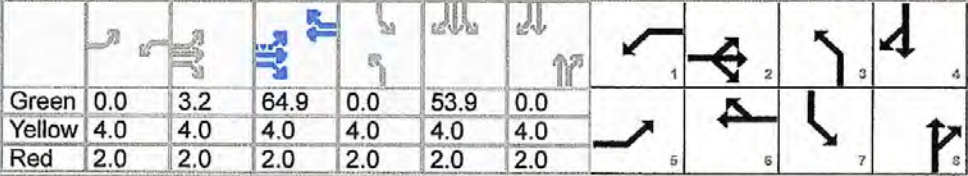
Signal Information				Signal Phases									
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	3.0	65.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	2.0	3.0		10.0		10.0
Phase Duration, s	9.0	80.0	0.0	71.0		0.0		40.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (MAH), s	3.1	0.0	0.0	0.0		0.0		3.1
Queue Clearance Time (g _s), s	2.6							34.6
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.0		0.0
Phase Call Probability	0.50							1.00
Max Out Probability	0.00							1.00

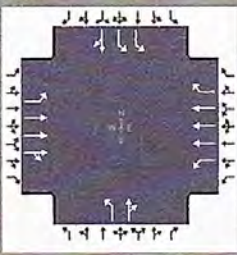
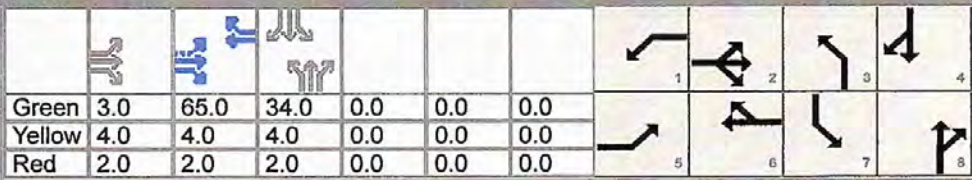
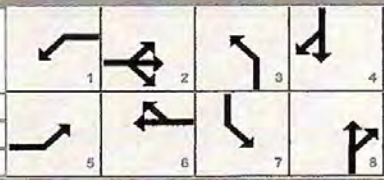
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	21	1399	0	0	1842	511	0	0		984	0	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	0	1810	1725	1610	1810	0		1792	0	
Queue Service Time (g _s), s	0.6	7.8	0.0	0.0	22.6	25.5	0.0	0.0		32.6	0.0	
Cycle Queue Clearance Time (g _c), s	0.6	7.8	0.0	0.0	22.6	25.5	0.0	0.0		32.6	0.0	
Green Ratio (g/C)	0.58	0.62			0.54	0.54				0.28		
Capacity (c), veh/h	196	3515		2	2802	872	2			1016		
Volume-to-Capacity Ratio (X)	0.108	0.398	0.000	0.000	0.657	0.586	0.000	0.000		0.969	0.000	
Back of Queue (Q), ft/ln (95 th percentile)	10.5	111.2	0	0	260.8	373	0	0		595.4	0	
Back of Queue (Q), veh/ln (95 th percentile)	0.4	4.4	0.0	0.0	10.4	14.9	0.0	0.0		23.8	0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	13.3	4.8		0.0	10.8	18.5	0.0			42.5		
Incremental Delay (d ₂), s/veh	0.1	0.3	0.0	0.0	1.2	2.9	0.0	0.0		20.9	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	13.4	5.1		0.0	12.0	21.3	0.0			63.4		
Level of Service (LOS)	B	A			B	C				E		
Approach Delay, s/veh / LOS	5.2		A	14.0		B	0.0			63.4		E
Intersection Delay, s/veh / LOS	21.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	2.09	B	3.18	C	2.62	C
Bicycle LOS Score / LOS	1.27	A	1.78	B	0.49	A	2.11	B

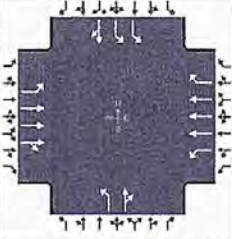
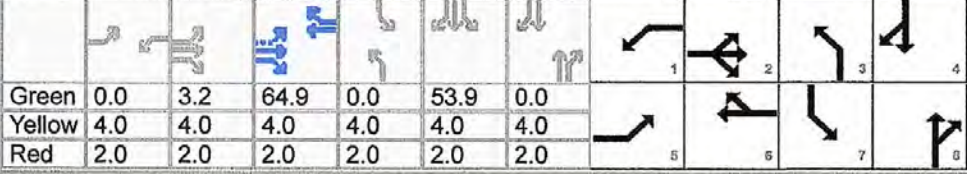
HCS7 Signalized Intersection Results Summary

General Information					Intersection Information																		
Agency	O'Rourke Engineering				Duration, h	0.25																	
Analyst	James Kemp	Analysis Date	Jun 29, 2020		Area Type	Other																	
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour		PHF	0.95																	
Urban Street	Midway Rd	Analysis Year	2035		Analysis Period	1> 7:00																	
Intersection	Gordy Rd	File Name	Midway Rd Gordy Rd - PM Peak Hour - w.o. Arte...																				
Project Description	Willow Lakes - without Arterial A																						
Demand Information				EB			WB			NB			SB										
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R								
Demand (v), veh/h				19	1222	0	0	1209	778	0	0	0	858	0	0								
Signal Information																							
Cycle, s	140.0	Reference Phase	2																				
Offset, s	0	Reference Point	End																				
Uncoordinated	No	Simult. Gap E/W	On																				
Force Mode	Float	Simult. Gap N/S	On	Green	0.0	3.2	64.9	0.0	53.9	0.0	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	Red	2.0	2.0	2.0	2.0	2.0
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT												
Assigned Phase				5	2	1	6	3	8	7	4												
Case Number				1.1	4.0	2.0	3.0	2.0	4.0	2.0	4.0												
Phase Duration, s				9.2	80.1	0.0	70.9	0.0	0.0	59.9	59.9												
Change Period, (Y+R _c), s				6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0												
Max Allow Headway (MAH), s				3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0												
Queue Clearance Time (g _s), s				2.8						53.8													
Green Extension Time (g _e), s				0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0												
Phase Call Probability				0.54						1.00													
Max Out Probability				0.00						1.00													
Movement Group Results				EB			WB			NB			SB										
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R								
Assigned Movement				5	2	12	1	6	16	3	8	18	7	4	14								
Adjusted Flow Rate (v), veh/h				20	1286	0	0	1273	503	0	0		903	0									
Adjusted Saturation Flow Rate (s), veh/h/ln				1810	1900	0	1810	1725	1610	1810	0		1202	0									
Queue Service Time (g _s), s				0.8	13.3	0.0	0.0	19.6	34.2	0.0	0.0		51.8	0.0									
Cycle Queue Clearance Time (g _c), s				0.8	13.3	0.0	0.0	19.6	34.2	0.0	0.0		51.8	0.0									
Green Ratio (g/C)				0.50	0.53			0.46	0.46				0.38										
Capacity (c), veh/h				236	3017		1	2398	746	1			925										
Volume-to-Capacity Ratio (X)				0.085	0.426	0.000	0.000	0.531	0.675	0.000	0.000		0.976	0.000									
Back of Queue (Q), ft/ln (95th percentile)				15	211.9	0	0	282	503.2	0	0		627.1	0									
Back of Queue (Q), veh/ln (95th percentile)				0.6	8.5	0.0	0.0	11.3	20.1	0.0	0.0		25.1	0.0									
Queue Storage Ratio (RQ) (95th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00									
Uniform Delay (d ₁), s/veh				19.4	11.7		0.0	18.1	29.3	0.0			42.4										
Incremental Delay (d ₂), s/veh				0.1	0.4	0.0	0.0	0.8	4.8	0.0	0.0		23.7	0.0									
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0									
Control Delay (d), s/veh				19.4	12.1		0.0	19.0	34.2	0.0			66.1										
Level of Service (LOS)				B	B			B	C				E										
Approach Delay, s/veh / LOS				12.2		B	23.3		C	0.0			66.1		E								
Intersection Delay, s/veh / LOS				29.3						C													
Multimodal Results				EB			WB			NB			SB										
Pedestrian LOS Score / LOS				1.91		B	2.11		B	3.18		C	2.58		C								
Bicycle LOS Score / LOS				1.21		A	1.46		A	0.49		A	1.98		B								

HCS7 Signalized Intersection Input Data

General Information						Intersection Information																		
Agency	O'Rourke Engineering					Duration, h	0.25																	
Analyst	James Kemp	Analysis Date	Jun 29, 2020			Area Type	Other																	
Jurisdiction	St. Lucie County		Time Period	AM Peak Hour		PHF	0.95																	
Urban Street	Midway Rd		Analysis Year	2035		Analysis Period	1> 7:00																	
Intersection	Gordy Rd	File Name	Midway Rd & Gordy Rd - AM Peak Hour - w.o. Art...																					
Project Description	Willow Lakes - without Arterial A																							
Demand Information			EB			WB			NB			SB												
Approach Movement			L	T	R	L	T	R	L	T	R	L	T	R										
Demand (v), veh/h			20	1329	0	0	1750	785	0	0	0	935	0	0										
Signal Information																								
Cycle, s	120.0	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	3.0	65.0	34.0	0.0	0.0	0.0	Yellow	4.0	4.0	4.0	0.0	0.0	0.0	Red	2.0	2.0	2.0	0.0	0.0	0.0
Traffic Information			EB			WB			NB			SB												
Approach Movement			L	T	R	L	T	R	L	T	R	L	T	R										
Demand (v), veh/h			20	1329	0	0	1750	785	0	0	0	935	0	0										
Initial Queue (Q _b), veh/h			0	0	0	0	0	0	0	0	0	0	0	0										
Base Saturation Flow Rate (s ₀), veh/h			1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900										
Parking (N _m), man/h			None			None			None			None												
Heavy Vehicles (P _{HV}), %			0	0		0	0	0	0	0		0	0											
Ped / Bike / RTOR, /h			0	0		0	0	300	0	0		0	0											
Buses (N _b), buses/h			0	0	0	0	0	0	0	0	0	0	0	0										
Arrival Type (AT)			3	4	3	3	4	3	3	3	3	3	3	3										
Upstream Filtering (I)			1.00	1.00	1.00	1.00	1.00	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		12.0	12.0											
Turn Bay Length, ft			0	0		0	0	0	0	0		0	0											
Grade (P _g), %			0			0			0			0												
Speed Limit, mi/h			35	35	35	35	35	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			13.0	55.0	13.0	55.0	12.0	12.0	40.0	40.0														
Yellow Change Interval (Y), s			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0														
Red Clearance Interval (R _c), s			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0														
Minimum Green (G _{min}), s			6	6	6	6	6	6	6	6														
Start-Up Lost Time (I _t), s			2.0	2.0	2.0	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	2.0	2.0	2.0														
Passage (PT), s			2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0														
Recall Mode			Off	Min	Off	Min	Off	Off	Off	Off														
Dual Entry			No	Yes	No	Yes	No	Yes	No	Yes														
Walk (Walk), s				0.0		0.0		0.0		0.0														
Pedestrian Clearance Time (PC), s				0.0		0.0		0.0		0.0														
Multimodal Information			EB			WB			NB			SB												
85th % Speed / Rest in Walk / Corner Radius			0	No	25	0	No	25	0	No	25	0	No	25										
Walkway / Crosswalk Width / Length, ft			9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0										
Street Width / Island / Curb			0	0	No	0	0	No	0	0	No	0	0	No										
Width Outside / Bike Lane / Shoulder, ft			12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0										
Pedestrian Signal / Occupied Parking			No	0.50	No	0.50	No	0.50	No	0.50	No	0.50												

HCS7 Signalized Intersection Input Data

General Information				Intersection Information											
Agency	O'Rourke Engineering			Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Jun 29, 2020	Area Type	Other										
Jurisdiction	St. Lucie County	Time Period	PM Peak Hour	PHF	0.95										
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00										
Intersection	Gordy Rd	File Name	Midway Rd Gordy Rd - PM Peak Hour - w.o. Arte...												
Project Description	Willow Lakes - without Arterial A														
Demand Information				EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	19	1222	0	0	1209	778	0	0	0	858	0	0	0	0	0
Signal Information															
Cycle, s	140.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap EW	On												
Force Mode	Float	Simult. Gap N/S	On	Green	0.0	3.2	64.9	0.0	53.9	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
		Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Traffic Information				EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	19	1222	0	0	1209	778	0	0	0	858	0	0	0	0	0
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None					
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	300	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0		12.0	12.0	
Turn Bay Length, ft	0	0		0	0	0	0	0		0	0		0	0	
Grade (P _g), %		0			0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	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	17.0	51.0	14.0	48.0	23.0	15.0	60.0	52.0							
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0							
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0							
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6							
Start-Up Lost Time (l), s	2.0	2.0	2.0	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	2.0	2.0	2.0							
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0							
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off							
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes							
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Multimodal Information				EB	WB	NB	SB								
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50	No	0.50	No	0.50	No	0.50	No	0.50					

APPENDIX F

2035 Intersection Data

2035 Intersection Worksheet
HCS
Timing Sheets

TURNING MOVEMENT VOLUME COUNTS

#1E

7/15/2020

N/S STREET: Midway Rd
 FILENAME: Willow Lakes
 COUNTY DATE: 7/20/2020
 REPORT DATE: Thursday
 ANALYSIS YEAR: 2020
 DAY: Thursday
 CITY: St Lucie
 E/W STREET: Okeechobee Rd
 CONTROL: TWSC

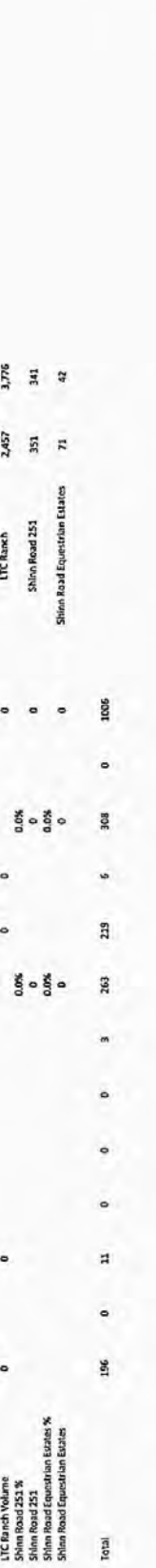
15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	NRT	SBL	SBT	SBR	SRT	EBL	EBT	EBR	EBR	WBL	WBT	WBR	WRT	
7:00-7:15	27	0	2	0	0	0	0	0	0	49	40	0	3	47	0	0	168
7:15-7:30	34	0	1	0	0	0	0	0	51	42	0	58	0	58	0	186	
7:30-7:45	48	0	0	0	0	0	0	0	65	55	0	2	45	0	0	215	
7:45-8:00	47	0	0	0	0	0	0	0	55	39	5	53	0	53	0	159	
8:00-8:15	38	0	0	0	0	0	0	0	55	31	5	38	0	38	0	167	
8:15-8:30	50	0	0	0	0	0	0	0	54	34	1	49	0	49	0	188	
8:30-8:45	46	0	0	0	0	0	0	0	59	30	2	46	0	46	0	183	
8:45-9:00	26	0	0	0	0	0	0	0	64	44	4	30	0	30	0	177	

AM PEAK HOUR IS FROM: 7:30 AM TO 8:30 AM
 Volumes: 183 0 0 0 0 0 0 0 0 229 159 13 185 0 185 0 0 769
 Season Factor: 1
 Growth Rate: 1
 Years Grown: 0
 In/Out: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PRODUCT: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 Trips In: 1,327
 Trips Out: 1,032
 Willow Lakes
 PHS: 0.894
 Seasonal Factor: 1
 Growth Rate: 1
 Years Grown: 0



15 Min Period lanes	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	NRT	SBL	SBT	SBR	SRT	EBL	EBT	EBR	EBR	WBL	WBT	WBR	WRT	
4:00-4:15	42	0	2	0	0	0	0	0	0	67	44	0	81	0	0	236	
4:15-4:30	45	0	2	0	0	0	0	0	67	51	0	67	0	67	0	232	
4:30-4:45	65	0	2	0	0	0	0	0	73	40	0	87	0	87	0	247	
4:45-5:00	59	0	1	0	0	0	0	1	74	44	1	84	0	84	0	264	
5:00-5:15	48	0	6	0	0	0	0	0	59	52	1	79	0	79	0	245	
5:15-5:30	49	0	0	0	0	0	0	0	69	48	2	73	0	73	0	241	
5:30-5:45	40	0	4	0	0	0	0	2	61	75	2	72	0	72	0	256	
5:45-6:00	35	0	0	0	0	0	0	0	70	46	1	47	0	47	0	199	

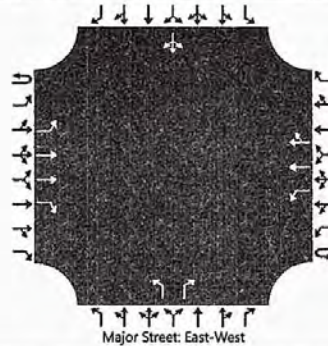
PM PEAK HOUR IS FROM: 4:45 PM TO 5:45 PM
 Volumes: 196 0 11 0 0 0 0 0 0 263 219 6 308 0 308 0 0 1006
 Season Factor: 1
 Growth Rate: 1
 Years Grown: 0
 In/Out: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PRODUCT: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 Midway %
 Village at Midway
 LTC Ranch %
 LTC Ranch Volume
 Shinn Road 253 %
 Shinn Road 253
 Shinn Road Equestrian Estates %
 Shinn Road Equestrian Estates
 Trips In: 1,441
 Trips Out: 1,027
 Willow Lakes
 PHS: 0.953
 Seasonal Factor: 1
 Growth Rate: 1
 Years Grown: 0



HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	James Kemp			Intersection	Midway & Okeechobee		
Agency/Co.	O'Rourke Engineering			Jurisdiction	St. Lucie		
Date Performed	4/10/2020			East/West Street	Okeechobee Rd		
Analysis Year	2020			North/South Street	Midway Rd		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	Existing						

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	2	1	0	1	2	0		1	0	1		0	1	0	
Configuration		L	T	R		L	T	TR		L		R			LTR		
Volume (veh/h)	0	0	229	159	0	13	185	0		183		0		0	0	0	
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3	3	3	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized		No								No							
Median Type Storage					Left Only								1				

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				14				193		0				0
Capacity, c (veh/h)		1368				1140				611		905				
v/c Ratio		0.00				0.01				0.32		0.00				
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				1.3		0.0				
Control Delay (s/veh)		7.6				8.2				13.6		9.0				
Level of Service (LOS)		A				A				B		A				
Approach Delay (s/veh)		0.0				0.5				13.6						
Approach LOS										B						

HCS7 Two-Way Stop-Control Report

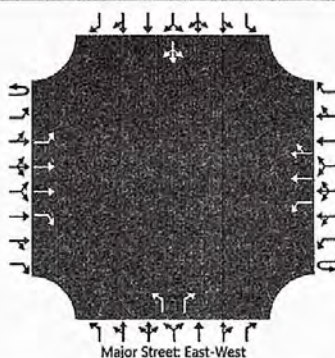
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2020
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	Existing

Site Information

Intersection	Midway & Okeechobee
Jurisdiction	St. Lucie
East/West Street	Okeechobee Rd
North/South Street	Midway Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

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	2	1	0	1	2	0	1	0	1		0	1	0			
Configuration		L	T	R		L	T	TR	L		R				LTR			
Volume (veh/h)	0	3	263	219	0	6	308	0	196		11		0	0	0			
Percent Heavy Vehicles (%)	3	3			3	3			3		3		3	3	3			
Proportion Time Blocked																		
Percent Grade (%)									0				0					
Right Turn Channelized		No							No									
Median Type Storage		Left Only									1							

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3				6				206		12				0
Capacity, c (veh/h)		1225				1047				556		881				
v/c Ratio		0.00				0.01				0.37		0.01				
95% Queue Length, Q ₉₅ (veh)		0.0				0.0				1.7		0.0				
Control Delay (s/veh)		7.9				8.5				15.2		9.1				
Level of Service (LOS)		A				A				C		A				
Approach Delay (s/veh)		0.0				0.2				14.9						
Approach LOS										B						

TURNING MOVEMENT VOLUME COUNTS

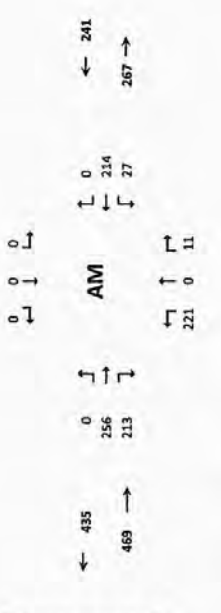
CONTROL TWSC

EW STREET, Okeschooborff

CITY, St. Louis

Michoud Rd
Willow Lakes

DATE: Thursday
ANALYSIS YEAR: 2005

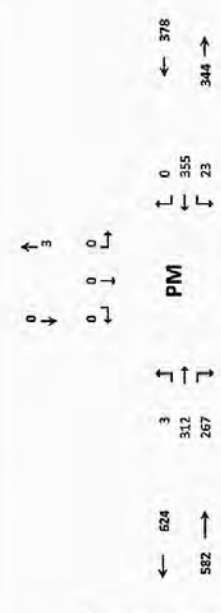


15 Min Period	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL
7:00-7:15	27	0	2	0	0	0	0	49	40	3	47	0	188	768
7:15-7:30	34	0	1	0	0	0	51	42	0	58	0	186	767	
7:30-7:45	48	0	0	0	0	0	65	55	2	45	0	315	768	
7:45-8:00	47	0	0	0	0	0	55	39	5	53	0	159	717	
8:00-8:15	38	0	0	0	0	0	55	33	5	38	0	167	715	
8:15-8:30	50	0	0	0	0	0	54	34	1	40	0	188		
8:30-8:45	46	0	0	0	0	0	59	30	2	46	0	183		
8:45-9:00	26	0	0	0	0	0	64	44	4	39	0	177		

AM PEAK HOUR IS FROM:
 Volumes: 183 0 0 0 0 0 0 229 159 13 185 0 0 769
 Season Factor: 1
 Growth Rate: 1.005
 Years Open: 15
 In/Out: - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT: Willow Lakes
 Trips In: 1,377
 Trips Out: 1,052

7:00 AM TO 8:00 AM
 Volumes: 183 0 0 0 0 0 0 229 159 13 185 0 0 769
 Season Factor: 1
 Growth Rate: 1.005
 Years Open: 15
 In/Out: - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT: Willow Lakes
 Trips In: 1,377
 Trips Out: 1,052

AM PEAK HOUR IS FROM:
 Volumes: 183 0 0 0 0 0 0 229 159 13 185 0 0 769
 Season Factor: 1
 Growth Rate: 1.005
 Years Open: 15
 In/Out: - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT: Willow Lakes
 Trips In: 1,377
 Trips Out: 1,052



15 Min Period	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL
4:00-4:15	42	0	2	0	0	0	0	67	44	0	81	0	236	978
4:15-4:30	45	0	2	0	0	0	0	67	51	0	67	0	231	988
4:30-4:45	45	0	2	0	0	0	0	73	40	0	87	0	247	997
4:45-5:00	59	0	1	0	0	0	1	74	44	1	84	0	264	1006
5:00-5:15	48	0	0	0	0	0	0	59	51	1	75	0	245	941
5:15-5:30	49	0	0	0	0	0	0	69	45	2	71	0	241	
5:30-5:45	40	0	0	0	0	0	2	61	75	2	72	0	256	
5:45-6:00	35	0	0	0	0	0	0	70	46	1	47	0	199	

PM PEAK HOUR IS FROM:
 Volumes: 196 0 0 0 0 0 0 263 219 6 308 0 0 1006
 Season Factor: 1
 Growth Rate: 1.005
 Years Open: 15
 In/Out: - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT: Willow Lakes
 Trips In: 1,441
 Trips Out: 1,072

4:00 PM TO 5:00 PM
 Volumes: 196 0 0 0 0 0 0 263 219 6 308 0 0 1006
 Season Factor: 1
 Growth Rate: 1.005
 Years Open: 15
 In/Out: - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT: Willow Lakes
 Trips In: 1,441
 Trips Out: 1,072

PM PEAK HOUR IS FROM:
 Volumes: 196 0 0 0 0 0 0 263 219 6 308 0 0 1006
 Season Factor: 1
 Growth Rate: 1.005
 Years Open: 15
 In/Out: - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT: Willow Lakes
 Trips In: 1,441
 Trips Out: 1,072

HCS7 Two-Way Stop-Control Report

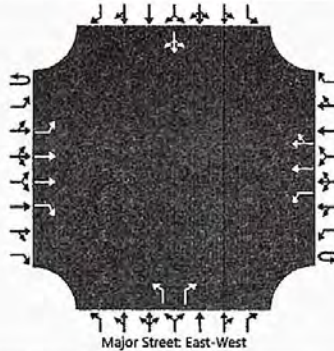
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	with Project

Site Information

Intersection	Midway & Okeechobee
Jurisdiction	St. Lucie
East/West Street	Okeechobee Rd
North/South Street	Midway Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

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	2	1	0	1	2	0		1	0	1		0	1	0	
Configuration		L	T	R		L	T	TR		L		R			LTR		
Volume (veh/h)	0	0	256	240	0	27	214	0		242		11		0	0	0	
Percent Heavy Vehicles (%)	3	3			3	3				3		3		3	3	3	
Proportion Time Blocked																	
Percent Grade (%)										0				0			
Right Turn Channelized		No								No							
Median Type Storage		Left Only												1			

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				28				255		12				0
Capacity, c (veh/h)		1333				1034				563		886				
v/c Ratio		0.00				0.03				0.45		0.01				
95% Queue Length, Q ₉₅ (veh)		0.0				0.1				2.3		0.0				
Control Delay (s/veh)		7.7				8.6				16.6		9.1				
Level of Service (LOS)		A				A				C		A				
Approach Delay (s/veh)		0.0				1.0				16.3						
Approach LOS										C						

HCS7 Two-Way Stop-Control Report

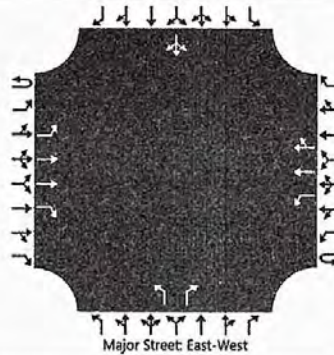
General Information

Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/10/2020
Analysis Year	2035
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	without Project

Site Information

Intersection	Midway & Okeechobee
Jurisdiction	St. Lucie
East/West Street	Okeechobee Rd
North/South Street	Midway Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

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	2	1	0	1	2	0	1	0	1		0	1	0			
Configuration		L	T	R		L	T	TR	L		R				LTR			
Volume (veh/h)	3	0	312	267	0	23	355	0	268		33		0	0	0			
Percent Heavy Vehicles (%)	3	3			3	3			3		3		3	3	3			
Proportion Time Blocked																		
Percent Grade (%)									0				0					
Right Turn Channelized		No							No									
Median Type Storage		Left Only									1							

Critical and Follow-up Headways

Base Critical Headway (sec)	6.4	4.1			4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)	6.46	4.16			4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)	2.5	2.2			2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)	2.53	2.23			2.23				3.53		3.33		3.53	4.03	3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3			24				282		35				0
Capacity, c (veh/h)		827			958				490		848				
v/c Ratio		0.00			0.03				0.58		0.04				
95% Queue Length, Q ₉₅ (veh)		0.0			0.1				3.6		0.1				
Control Delay (s/veh)		9.4			8.9				21.9		9.4				
Level of Service (LOS)		A			A				C		A				
Approach Delay (s/veh)		0.0				0.5				20.5					
Approach LOS										C					

1 W/P

TURNING MOVEMENT VOLUME COUNTS

CONTROL TWSC

81W STREET Overlake Rd

CITY 31 Lucie

Midway Rd

Willow Lakes

N/S STREET

FILENAME

COUNTY DATE

REPORT DATE

DAY Thursday

ANALYSIS YEAR 2035

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	27	0	2	0	0	0	0	0	49	40	40	3	47	0	118	768
7:15-7:30	34	0	1	0	0	0	0	0	51	42	42	0	58	0	388	787
7:30-7:45	48	0	0	0	0	0	0	0	65	55	55	2	45	0	211	769
7:45-8:00	47	0	0	0	0	0	0	0	55	39	39	5	53	0	199	737
8:00-8:15	38	0	0	0	0	0	0	0	55	31	31	5	38	0	167	715
8:15-8:30	50	0	0	0	0	0	0	0	54	34	34	1	45	0	288	
8:30-8:45	46	0	0	0	0	0	0	0	59	30	30	2	46	0	383	
8:45-9:00	25	0	0	0	0	0	0	0	64	44	44	4	39	0	377	

AM PEAK HOUR IS FROM:

7:30 AM TO 8:00 AM

Seasonal Factor	Growth Rate	Years to Open	Trips In	Trips Out
1.000	1.000	15	1,355	1,065
0.7%	0.7%	15	1,451	693
0.7%	0.7%	15	1,823	1,024
5.0%	5.0%	15	113	109
15.0%	15.0%	15	21	63

Willow Lakes

Village at Midway

LTC Ranch

Shinn Road 251

Shinn Road Equestrian Estates

AM

← 456 →

↑ 0 ↓

← 496 →

↑ 0 ↓

← 241 →

↑ 0 ↓

← 253 →

↑ 0 ↓

← 267 →

↑ 0 ↓

← 281 →

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	42	0	2	0	0	0	0	0	67	44	44	0	81	0	236	979
4:15-4:30	45	0	2	0	0	0	0	0	67	51	51	0	67	0	232	888
4:30-4:45	46	0	2	0	0	0	0	0	73	40	40	0	87	0	247	997
4:45-5:00	59	0	1	0	0	0	0	1	74	44	44	1	84	0	264	1006
5:00-5:15	48	0	6	0	0	0	0	0	59	52	52	1	79	0	245	941
5:15-5:30	49	0	0	0	0	0	0	0	69	48	48	2	73	0	241	
5:30-5:45	40	0	4	0	0	0	0	2	61	75	75	2	72	0	256	
5:45-6:00	35	0	0	0	0	0	0	0	70	46	46	1	47	0	199	

PM PEAK HOUR IS FROM:

4:45 PM TO 5:00 PM

Seasonal Factor	Growth Rate	Years to Open	Trips In	Trips Out
1.000	1.000	15	1,950	1,016
0.7%	0.7%	15	2,118	322
0.7%	0.7%	15	2,309	2,970
5.0%	5.0%	15	301	341
15.0%	15.0%	15	71	42

Willow Lakes

Village at Midway

LTC Ranch

Shinn Road 251

Shinn Road Equestrian Estates

PM

← 644 →

↑ 0 ↓

← 611 →

↑ 0 ↓

← 378 →

↑ 0 ↓

← 322 →

↑ 0 ↓

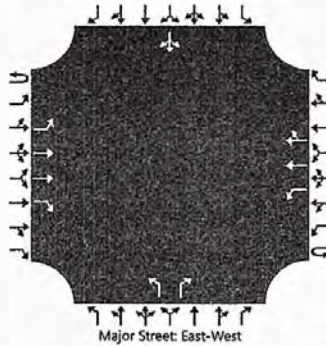
← 344 →

↑ 0 ↓

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	James Kemp			Intersection	Midway & Okeechobee		
Agency/Co.	O'Rourke Engineering			Jurisdiction	St. Lucie		
Date Performed	4/10/2020			East/West Street	Okeechobee Rd		
Analysis Year	2035			North/South Street	Midway Rd		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	with Project						

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	2	1	0	1	2	0	1	0	1		0	1	0	
Configuration		L	T	R		L	T	TR	L		R				LTR	
Volume (veh/h)	0	0	267	252	0	40	225	0	253		23		0	0	0	
Percent Heavy Vehicles (%)	3	3			3	3			3		3		3	3	3	
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized	No								No							
Median Type Storage					Left Only								1			

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.5		6.9		7.5	6.5	6.9
Critical Headway (sec)		4.16				4.16				7.56		6.96		7.56	6.56	6.96
Base Follow-Up Headway (sec)		2.2				2.2				3.5		3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.23				2.23				3.53		3.33		3.53	4.03	3.33

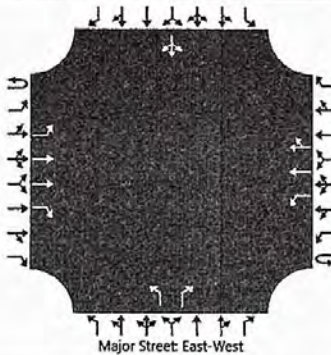
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0				42				266		24				0
Capacity, c (veh/h)		1320				1012				534		879				
v/c Ratio		0.00				0.04				0.50		0.03				
95% Queue Length, Q ₉₅ (veh)		0.0				0.1				2.8		0.1				
Control Delay (s/veh)		7.7				8.7				18.3		9.2				
Level of Service (LOS)		A				A				C		A				
Approach Delay (s/veh)		0.0				1.3				17.5						
Approach LOS										C						

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	James Kemp			Intersection	Midway & Okeechobee		
Agency/Co.	O'Rourke Engineering			Jurisdiction	St. Lucie		
Date Performed	4/10/2020			East/West Street	Okeechobee Rd		
Analysis Year	2035			North/South Street	Midway Rd		
Time Analyzed	PM Peak Hour			Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	with Project						

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	2	1	0	1	2	0	1	0	1		0	1	0	
Configuration		L	T	R		L	T	TR	L		R				LTR	
Volume (veh/h)	3	0	312	296	0	23	355	0	289		33		0	0	0	
Percent Heavy Vehicles (%)	3	3			3	3			3		3		3	3	3	
Proportion Time Blocked																
Percent Grade (%)									0				0			
Right Turn Channelized		No							No							
Median Type Storage					Left Only							1				

Critical and Follow-up Headways

Base Critical Headway (sec)	6.4	4.1			4.1				7.5		6.9		7.5	6.5	6.9	
Critical Headway (sec)	6.46	4.16			4.16				7.56		6.96		7.56	6.56	6.96	
Base Follow-Up Headway (sec)	2.5	2.2			2.2				3.5		3.3		3.5	4.0	3.3	
Follow-Up Headway (sec)	2.53	2.23			2.23				3.53		3.33		3.53	4.03	3.33	

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		3			24				304		35				0	
Capacity, c (veh/h)		827			933				490		848					
v/c Ratio		0.00			0.03				0.62		0.04					
95% Queue Length, Q ₉₅ (veh)		0.0			0.1				4.2		0.1					
Control Delay (s/veh)		9.4			9.0				23.7		9.4					
Level of Service (LOS)		A			A				C		A					
Approach Delay (s/veh)		0.0			0.5				22.2							
Approach LOS									C							

TURNING MOVEMENT VOLUME COUNTS

#2 E

CONTROL: Signalized

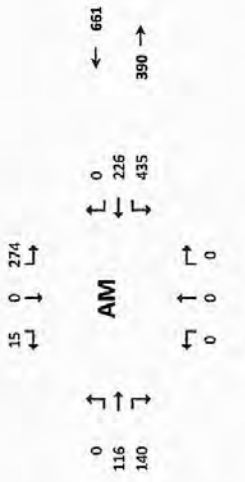
EW STREET: Midway Rd

M/S STREET: Willow Lakes

DAY: Tuesday
ANALYSIS YEAR: 2020

CITY: St. Lucie

ISS SR Ramp
Willow Lakes
2/18/2020



15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM		
	NBL	NBT	NBR	NBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	WBL	WBT	WBR		TOTAL	
7:00-7:15	0	0	0	53	0	5	0	23	40	101	44	0	266	1203	0	0	0	308	1206
7:15-7:30	0	0	0	75	0	1	0	24	33	126	49	0	308	1206	0	0	0	317	1159
7:30-7:45	0	0	0	71	0	5	0	38	43	108	62	0	302	1067	0	0	0	269	984
7:45-8:00	0	0	0	71	0	5	0	31	32	102	61	0	261	961	0	0	0	235	895
8:00-8:15	0	0	0	57	0	4	0	23	32	98	54	0	261	961	0	0	0	219	824
8:15-8:30	0	0	0	72	0	6	0	19	22	90	52	0	261	961	0	0	0	219	824
8:30-8:45	0	0	0	51	0	9	0	25	19	79	52	0	235	895	0	0	0	219	824
8:45-9:00	0	0	0	44	0	5	0	32	30	78	30	0	219	824	0	0	0	219	824
Total	0	0	0	274	0	15	0	116	140	435	226	0	1206	0	0	0	1206		

PH: 0.922
Seasonal Factor: 1
Growth Rate: 1
Years Crown: 0

AM PEAK HOUR IS FROM:
7:15AM TO 8:15AM
Volumes: 0 0 0 274 0 15 0 116 140 435 226 0 1206
Season Factor: 0 0 0 274 0 15 0 116 140 435 226 0 1206
Growth: 0 0 0 274 0 15 0 116 140 435 226 0 1206
In/Out: - - - - - Out In - - -
Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
PROJECT: 0 0 0 0 0 0 0 0 0 0 0 0 0

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM		
	NBL	NBT	NBR	NBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	WBL	WBT	WBR		TOTAL	
4:00-4:15	0	0	0	71	0	3	0	21	33	111	68	0	307	1274	0	0	0	327	1321
4:15-4:30	0	0	0	68	0	6	0	32	25	125	71	0	327	1321	0	0	0	315	1310
4:30-4:45	0	0	0	62	0	11	0	37	38	115	62	0	315	1310	0	0	0	348	1372
4:45-5:00	0	0	0	74	0	4	0	29	31	105	72	0	354	1419	0	0	0	283	1122
5:00-5:15	0	0	0	89	0	5	0	40	48	105	67	0	354	1419	0	0	0	283	1122
5:15-5:30	0	0	0	85	0	7	0	18	37	127	74	0	348	1372	0	0	0	283	1122
5:30-5:45	0	0	0	66	0	4	0	32	33	97	61	0	283	1122	0	0	0	283	1122
5:45-6:00	0	0	0	75	0	7	0	30	31	85	49	0	277	1104	0	0	0	277	1104
Total	0	0	0	310	0	27	0	124	154	452	275	0	1342	0	0	0	1342		

PH: 0.9477
Seasonal Factor: 1
Growth Rate: 1
Years Crown: 0

PM PEAK HOUR IS FROM:
4:30 PM TO 5:30 PM
Volumes: 0 0 0 310 0 27 0 124 154 452 275 0 1342
Season Factor: 0 0 0 310 0 27 0 124 154 452 275 0 1342
Growth: 0 0 0 310 0 27 0 124 154 452 275 0 1342
In/Out: - - - - - Out In - - -
Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
PROJECT: 0 0 0 0 0 0 0 0 0 0 0 0 0

St. Lucie County



00024 - MIDWAY RD @ I-95 SB RAMP - - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

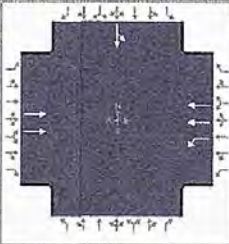
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	WB-T	E-L	W-T	WB-L	EB-T	W-L	SB	N	N	N	N	N	N	N	N
Min Green	0	8	0	0	7	8	0	6	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	3.0	0.0	0.0	5.0	3.0	0.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	0	45	0	0	30	45	0	25	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	0.0	5.0	0.0	0.0	5.0	5.0	0.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	0.0	3.0	0.0	0.0	3.0	3.0	0.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Q in use

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1 > 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - Existing.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		116		435	226					274	0	

Signal Information													
Cycle, s	56.8	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
				Green	14.4	8.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0
				Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				12.0
Phase Duration, s		16.0	22.4	38.4				18.4
Change Period, (Y+R _c), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		2.9	3.0	2.9				3.0
Queue Clearance Time (g _s), s		3.8	13.5	3.9				11.0
Green Extension Time (g _e), s		0.8	0.9	0.8				0.5
Phase Call Probability		1.00	1.00	1.00				0.99
Max Out Probability		0.00	0.00	0.00				0.00

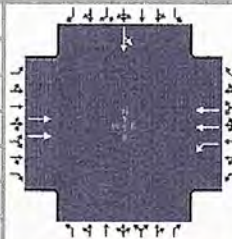
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		126		473	246						298	
Adjusted Saturation Flow Rate (s), veh/h/ln		1809		1810	1809						1810	
Queue Service Time (g _s), s		1.8		11.5	1.9						9.0	
Cycle Queue Clearance Time (g _c), s		1.8		11.5	1.9						9.0	
Green Ratio (g/C)		0.14		0.43	0.54						0.20	
Capacity (c), veh/h		509		726	1936						364	
Volume-to-Capacity Ratio (X)		0.248		0.651	0.127						0.819	
Back of Queue (Q), ft/ln (95 th percentile)		29.7		160	22.4						153.2	
Back of Queue (Q), veh/ln (95 th percentile)		1.2		6.4	0.9						6.1	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00						0.00	
Uniform Delay (d ₁), s/veh		21.8		12.7	6.6						21.7	
Incremental Delay (d ₂), s/veh		0.1		0.4	0.0						1.8	
Initial Queue Delay (d ₃), s/veh		0.0		0.0	0.0						0.0	
Control Delay (d), s/veh		21.8		13.1	6.6						23.5	
Level of Service (LOS)		C		B	A						C	
Approach Delay, s/veh / LOS	21.8	C		10.9	B		0.0				23.5	C
Intersection Delay, s/veh / LOS	15.4						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.35	A	2.30	B	2.13	B
Bicycle LOS Score / LOS	0.59	A	1.08	A			0.98	A

HCS7 Signalized Intersection Input Data

2 E A M

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1 > 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - Existing - 6.2....				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		116		435	226					274	0	

Signal Information				Signal Phases								
Cycle, s	56.8	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	Yes	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	14.4	8.0	11.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		116		435	226					274	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (S ₀), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None			None						None	
Heavy Vehicles (P _{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	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	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0		
Turn Bay Length, ft		0		0	0					0		
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

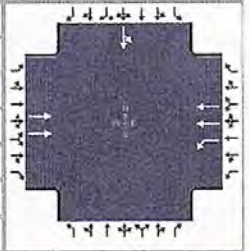
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		40.0	40.0	40.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l _t), s		2.0	2.0	2.0			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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50					No	0.50	

HCS7 Signalized Intersection Results Summary

2 AM PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - Existing - 6.2.2...		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		124		452	275					310	0	

Signal Information													
Cycle, s	58.6	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	14.9	8.0	12.7	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				12.0
Phase Duration, s		16.0	22.9	38.9				19.7
Change Period, (Y+R _c), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		2.9	3.0	2.9				3.0
Queue Clearance Time (g _s), s		3.9	14.0	4.4				12.1
Green Extension Time (g _e), s		0.9	0.9	0.9				0.6
Phase Call Probability		1.00	1.00	1.00				1.00
Max Out Probability		0.00	0.00	0.00				0.00

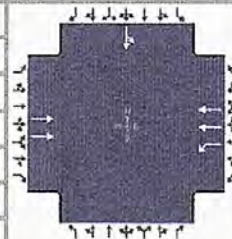
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		131		476	289						326	
Adjusted Saturation Flow Rate (s), veh/h/ln		1809		1810	1809						1810	
Queue Service Time (g _s), s		1.9		12.0	2.4						10.1	
Cycle Queue Clearance Time (g _c), s		1.9		12.0	2.4						10.1	
Green Ratio (g/C)		0.14		0.43	0.53						0.22	
Capacity (c), veh/h		493		717	1910						392	
Volume-to-Capacity Ratio (X)		0.265		0.663	0.152						0.833	
Back of Queue (Q), ft/ln (95 th percentile)		32.4		171.9	29.5						174	
Back of Queue (Q), veh/ln (95 th percentile)		1.3		6.9	1.2						7.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00						0.00	
Uniform Delay (d ₁), s/veh		22.7		13.3	7.1						22.0	
Incremental Delay (d ₂), s/veh		0.1		0.4	0.0						1.8	
Initial Queue Delay (d ₃), s/veh		0.0		0.0	0.0						0.0	
Control Delay (d), s/veh		22.8		13.7	7.1						23.8	
Level of Service (LOS)		C		B	A						C	
Approach Delay, s/veh / LOS	22.8		C	11.2		B	0.0			23.8		C
Intersection Delay, s/veh / LOS	15.8						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.36	A	2.30	B	2.13	B
Bicycle LOS Score / LOS	0.60	A	1.12	A			1.03	A

HCS7 Signalized Intersection Input Data

2 EPM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1 > 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - Existing - 6.2....				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		124		452	275					310	0	

Signal Information												
Cycle, s	58.6	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	14.9	8.0	12.7	0.0	0.0	0.0	0.0	0.0
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		124		452	275					310	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s ₀), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None			None						None	
Heavy Vehicles (P _{HV}), %		0		0	0						0	
Ped / Bike / RTOR, /h	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	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0						12.0	
Turn Bay Length, ft		0		0	0						0	
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

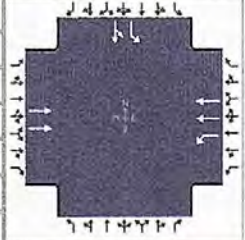
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		40.0	40.0	40.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l), s		2.0	2.0	2.0			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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50					No	0.50	

HCS7 Signalized Intersection Results Summary

#2 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - AM - 2035 w.o. Proje...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		748		476	802					363	0	

Signal Information												
Cycle, s	120.0	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		17.0	52.0	28.0	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow		5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
		Red		3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		60.0	25.0	85.0				35.0
Change Period, (Y+R _c), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g _s), s			19.0					27.6
Green Extension Time (g _e), s		0.0	0.0	0.0				0.4
Phase Call Probability			1.00					1.00
Max Out Probability			1.00					0.18

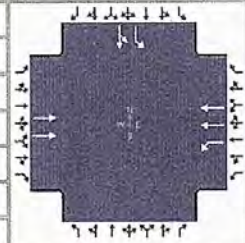
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		813		517	872					395	0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1809		1810	1809					1810	1900	
Queue Service Time (g _s), s		16.3		17.0	6.2					25.6	0.0	
Cycle Queue Clearance Time (g _c), s		16.3		17.0	6.2					25.6	0.0	
Green Ratio (g/C)		0.43		0.59	0.64					0.23	0.23	
Capacity (c), veh/h		1568		519	2320					423	444	
Volume-to-Capacity Ratio (X)		0.519		0.997	0.376					0.933	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		245		467.8	80.3					491.2	0	
Back of Queue (Q), veh/ln (95 th percentile)		9.8		18.7	3.2					19.6	0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (d ₁), s/veh		17.8		22.1	3.6					45.1	0.0	
Incremental Delay (d ₂), s/veh		1.2		38.7	0.5					21.4	0.0	
Initial Queue Delay (d ₃), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (d), s/veh		19.0		60.8	4.0					66.5	0.0	
Level of Service (LOS)		B		E	A					E		
Approach Delay, s/veh / LOS	19.0		B	25.2		C	0.0			66.5		E
Intersection Delay, s/veh / LOS	29.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.65	B	2.32	B	2.16	B
Bicycle LOS Score / LOS	1.16	A	1.63	B			1.14	A

HCS7 Signalized Intersection Input Data

2 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		748		476	802					363	0	

Signal Information												
Cycle, s	120.0	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		17.0	52.0	28.0	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow		5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
		Red		3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		748		476	802					363	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s _b), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None			None						None	
Heavy Vehicles (P _{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	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)		4		3	4					3	3	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

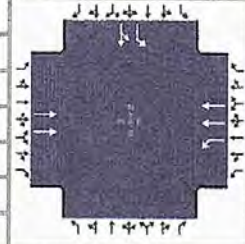
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		60.0	20.0	80.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l _f), s		2.0	2.0	2.0			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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

HCS7 Signalized Intersection Results Summary

2 w/o PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - 2035 w.o. Proje...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		1603		496	832					460	0	

Signal Information													
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	12.0	52.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		60.0	20.0	80.0				40.0
Change Period, (Y+R _c), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g _s), s			14.0					35.0
Green Extension Time (g _e), s		0.0	0.0	0.0				0.0
Phase Call Probability			1.00					1.00
Max Out Probability			1.00					1.00

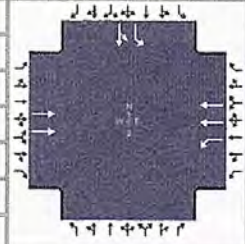
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	6			5	2					3	8	
Adjusted Flow Rate (v), veh/h	1742			539	904					500	0	
Adjusted Saturation Flow Rate (s), veh/h/ln	1809			1810	1809					1810	1900	
Queue Service Time (g _s), s	52.0			12.0	9.0					33.0	0.0	
Cycle Queue Clearance Time (g _c), s	52.0			12.0	9.0					33.0	0.0	
Green Ratio (g/C)	0.43			0.55	0.60					0.28	0.28	
Capacity (c), veh/h	1568			241	2171					498	523	
Volume-to-Capacity Ratio (X)	1.111			2.237	0.417					1.005	0.000	
Back of Queue (Q), ft/ln (95 th percentile)	1060.8			1595.3	121.6					681.5	0	
Back of Queue (Q), veh/ln (95 th percentile)	42.4			63.8	4.9					27.3	0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00	0.00					0.00	0.00	
Uniform Delay (d ₁), s/veh	25.3			39.1	5.7					43.5	0.0	
Incremental Delay (d ₂), s/veh	59.8			570.1	0.6					41.5	0.0	
Initial Queue Delay (d ₃), s/veh	0.0			0.0	0.0					0.0	0.0	
Control Delay (d), s/veh	85.1			609.1	6.3					85.0	0.0	
Level of Service (LOS)	F			F	A					F		
Approach Delay, s/veh / LOS	85.1	F		231.4	F		0.0			85.0	F	
Intersection Delay, s/veh / LOS	142.4						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.66	B	2.32	B	2.16	B
Bicycle LOS Score / LOS	1.93	B	1.68	B			1.31	A

HCS7 Signalized Intersection Input Data

2 w/o PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - 2035 w.o. Proj...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		1603		496	832					460	0	

Signal Information												
Cycle, s	120.0	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	12.0	52.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	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		1603		496	832					460	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s ₀), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None			None						None	
Heavy Vehicles (P _{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	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)		4		3	4					3	3	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

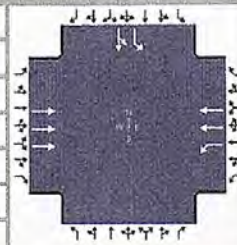
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s		60.0	20.0	80.0			
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l _t), s		2.0	2.0	2.0			2.0	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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

HCS7 Signalized Intersection Results Summary

2 w/o AM turnp

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - AM - 2035 w.o. Proje...				
Project Description	without Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		748		476	802					363	0	

Signal Information												
Cycle, s	120.0	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	21.4	48.4	27.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		56.4	29.4	85.8				34.2
Change Period, (Y+R _c), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g _s), s			20.5					26.8
Green Extension Time (g _e), s		0.0	0.9	0.0				0.4
Phase Call Probability			1.00					1.00
Max Out Probability			0.00					0.10

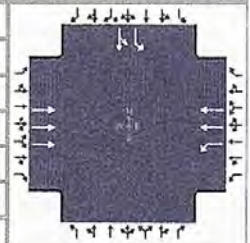
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		787		501	844					382	0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1725		1810	1809					1810	1900	
Queue Service Time (g _s), s		10.6		18.5	5.5					24.8	0.0	
Cycle Queue Clearance Time (g _c), s		10.6		18.5	5.5					24.8	0.0	
Green Ratio (g/C)		0.40		0.60	0.65					0.23	0.23	
Capacity (c), veh/h		2087		602	2344					411	431	
Volume-to-Capacity Ratio (X)		0.377		0.832	0.360					0.930	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		173.8		296.1	72.2					475.2	0	
Back of Queue (Q), veh/ln (95 th percentile)		7.0		11.8	2.9					19.0	0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (d ₁), s/veh		19.0		15.8	3.3					45.4	0.0	
Incremental Delay (d ₂), s/veh		0.5		3.5	0.4					20.3	0.0	
Initial Queue Delay (d ₃), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (d), s/veh		19.5		19.2	3.7					65.7	0.0	
Level of Service (LOS)		B		B	A					E		
Approach Delay, s/veh / LOS	19.5		B	9.5		A	0.0			65.7		E
Intersection Delay, s/veh / LOS	21.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.65	B	2.48	B	2.33	B
Bicycle LOS Score / LOS	0.92	A	1.60	B			1.12	A

HCS7 Signalized Intersection Input Data

2 w/o AM+1MP

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		748		476	802					363	0	

Signal Information				Phase Diagram								
Cycle, s	120.0	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	21.4	48.4	27.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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		748		476	802					363	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s ₀), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None			None						None	
Heavy Vehicles (P _{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	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)		4		3	4					3	3	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

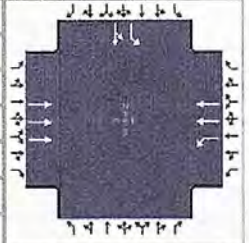
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		40.0	40.0	80.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l _f), s		2.0	2.0	2.0			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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

HCS7 Signalized Intersection Results Summary

2 w/o PM + imp

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - 2035 w.o. Proje...				
Project Description	without Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		1603		496	832					460	0	

Signal Information				Phase Diagram								
Cycle, s	140.0	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	32.0	52.0	33.0	0.0	0.0	0.0				
		Yellow	5.0	5.0	4.0	0.0	0.0	0.0				
		Red	3.0	3.0	3.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		60.0	40.0	100.0				40.0
Change Period, (Y+Rc), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (gs), s			34.0					35.0
Green Extension Time (ge), s		0.0	0.0	0.0				0.0
Phase Call Probability			1.00					1.00
Max Out Probability			1.00					1.00

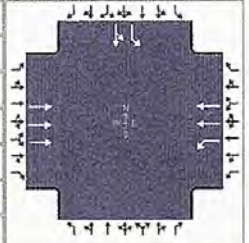
Movement Group Results	EB			WB			NB			SB					
	L	T	R	L	T	R	L	T	R	L	T	R			
Assigned Movement	6			5			2			3			8		
Adjusted Flow Rate (v), veh/h	1687			522			876			484			0		
Adjusted Saturation Flow Rate (s), veh/h/ln	1725			1810			1809			1810			1900		
Queue Service Time (gs), s	40.8			32.0			6.2			33.0			0.0		
Cycle Queue Clearance Time (gc), s	40.8			32.0			6.2			33.0			0.0		
Green Ratio (g/C)	0.37			0.61			0.66			0.24			0.24		
Capacity (c), veh/h	1922			489			2377			427			448		
Volume-to-Capacity Ratio (X)	0.878			1.068			0.368			1.135			0.000		
Back of Queue (Q), ft/ln (95th percentile)	560.3			833.9			82.7			885.1			0		
Back of Queue (Q), veh/ln (95th percentile)	22.4			33.4			3.3			35.4			0.0		
Queue Storage Ratio (RQ) (95th percentile)	0.00			0.00			0.00			0.00			0.00		
Uniform Delay (d1), s/veh	32.5			42.9			3.4			53.5			0.0		
Incremental Delay (d2), s/veh	6.1			60.1			0.4			85.9			0.0		
Initial Queue Delay (d3), s/veh	0.0			0.0			0.0			0.0			0.0		
Control Delay (d), s/veh	38.6			103.0			3.8			139.4			0.0		
Level of Service (LOS)	D			F			A			F					
Approach Delay, s/veh / LOS	38.6		D	40.9		D	0.0			139.4		F			
Intersection Delay, s/veh / LOS	53.1						D								

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.41	A	1.66	B	2.48	B	2.33	B
Bicycle LOS Score / LOS	1.42	A	1.64	B			1.29	A

HCS7 Signalized Intersection Input Data

#2 w/o PM uimp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		1603		496	832					460	0	

Signal Information													
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	32.0	52.0	33.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	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		1603		496	832					460	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s ₀), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None		None	None					None	None	
Heavy Vehicles (P _{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	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)		4		3	4					3	3	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (Pg), %		0		0	0			0		0	0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		60.0	40.0	100.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l _f), 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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50				No		0.50

TURNING MOVEMENT VOLUME COUNTS

MS 18 Ramp
 2/14/2020
 2/14/2020
 2/14/2020

EWING STREET - Midway Rd
 CITY: St. Louis

DATE: 2/14/2020
 ANALYSIS YEAR: 2015

Control: Squared

15 Min Period

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	0	0	0	53	0	0	5	0	73	42	102	44	0	0	216	1303
7:15-7:30	0	0	0	75	0	1	0	24	31	216	49	0	0	0	300	1706
7:30-7:45	0	0	0	71	0	0	5	0	34	43	108	82	0	0	317	1199
7:45-8:00	0	0	0	71	0	0	5	0	31	32	102	63	0	0	302	1067
8:00-8:15	0	0	0	57	0	4	0	13	32	99	54	0	0	0	219	984
8:15-8:30	0	0	0	72	0	0	0	0	10	32	90	52	0	0	261	
8:30-8:45	0	0	0	51	0	0	9	0	25	15	79	53	0	0	235	
8:45-9:00	0	0	0	44	0	0	5	0	21	30	78	39	0	0	211	

1600
 1237 0 363
 1280 →
 536 →

← 2717
 ← 1516
 ← 1556
 ← 1480
 ← 476
 ← 1643

AM

AM PEAK HOUR IS FROM:

Volume	Season Factor	Growth Rate	Year Growth	Wilson Index	Truck Out Loss	Truck Out Loss
1002	1.000	1.000	15	1.000	1.000	1.000
1.451	1.000	1.000	15	1.000	1.000	1.000
1.823	1.000	1.000	15	1.000	1.000	1.000
6.318	1.000	1.000	15	1.000	1.000	1.000
3.815	1.000	1.000	15	1.000	1.000	1.000
4.791	1.000	1.000	15	1.000	1.000	1.000
1.322	1.000	1.000	15	1.000	1.000	1.000
32	1.000	1.000	15	1.000	1.000	1.000
58	1.000	1.000	15	1.000	1.000	1.000

Total

0	0	0	0	161	0	127	0	1200	536	476	1650	6	3372
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15 Min Period

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	0	0	0	71	0	0	3	0	21	33	111	68	0	0	307	1274
4:15-4:30	0	0	0	68	0	0	6	0	32	35	125	71	0	0	317	1271
4:30-4:45	0	0	0	62	0	0	11	0	37	48	115	62	0	0	325	1342
4:45-5:00	0	0	0	74	0	0	4	0	29	31	105	72	0	0	315	1300
5:00-5:15	0	0	0	82	0	0	5	0	40	48	105	67	0	0	324	1272
5:15-5:30	0	0	0	85	0	0	7	0	18	27	127	74	0	0	348	
5:30-5:45	0	0	0	66	0	0	4	0	32	33	97	61	0	0	293	
5:45-6:00	0	0	0	75	0	0	7	0	30	33	85	48	0	0	277	

1512
 1053 0 460
 2121
 913
 2610
 3034

← 2610
 ← 3034
 ← 2053
 ← 1557
 ← 496
 ← 2581

PM

PM PEAK HOUR IS FROM:

Volume	Season Factor	Growth Rate	Year Growth	Wilson Index	Truck Out Loss	Truck Out Loss
1002	1.000	1.000	15	1.000	1.000	1.000
1.24	1.000	1.000	15	1.000	1.000	1.000
154	1.000	1.000	15	1.000	1.000	1.000
452	1.000	1.000	15	1.000	1.000	1.000
275	1.000	1.000	15	1.000	1.000	1.000
187	1.000	1.000	15	1.000	1.000	1.000
1466	1.000	1.000	15	1.000	1.000	1.000
2107	1.000	1.000	15	1.000	1.000	1.000
1873	1.000	1.000	15	1.000	1.000	1.000
793	1.000	1.000	15	1.000	1.000	1.000
116	1.000	1.000	15	1.000	1.000	1.000
81	1.000	1.000	15	1.000	1.000	1.000
115	1.000	1.000	15	1.000	1.000	1.000
33	1.000	1.000	15	1.000	1.000	1.000
6	1.000	1.000	15	1.000	1.000	1.000
6099	1.000	1.000	15	1.000	1.000	1.000

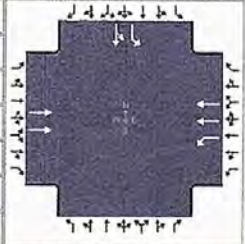
Total

0	0	0	0	460	0	1063	0	2121	913	458	1557	6	6099
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HCS7 Signalized Intersection Results Summary

#2 w/p AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - AM - 2035 with Proje...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		1280		476	1480					363	0	

Signal Information				Signal Timing (s)																
Cycle, s	120.0	Reference Phase	2																	
Offset, s	0	Reference Point	End	Green	31.2	38.6	27.2	0.0	0.0	0.0										
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	4.0	0.0	0.0	0.0										
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0										

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		46.6	39.2	85.8				34.2
Change Period, (Y+R _c), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g _s), s			30.5					26.8
Green Extension Time (g _e), s		0.0	0.7	0.0				0.4
Phase Call Probability			1.00					1.00
Max Out Probability			0.08					0.10

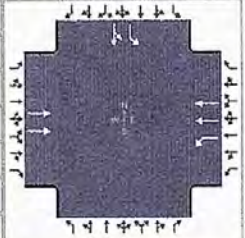
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		1347		501	1558					382	0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1809		1810	1809					1810	1900	
Queue Service Time (g _s), s		38.6		28.5	16.5					24.8	0.0	
Cycle Queue Clearance Time (g _c), s		38.6		28.5	16.5					24.8	0.0	
Green Ratio (g/C)		0.32		0.60	0.65					0.23	0.23	
Capacity (c), veh/h		1163		530	2344					411	431	
Volume-to-Capacity Ratio (X)		1.159		0.945	0.665					0.930	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		995.3		589.4	154.6					475.2	0	
Back of Queue (Q), veh/ln (95 th percentile)		39.8		23.6	6.2					19.0	0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (d ₁), s/veh		34.3		35.9	4.0					45.4	0.0	
Incremental Delay (d ₂), s/veh		81.3		20.2	1.5					20.3	0.0	
Initial Queue Delay (d ₃), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (d), s/veh		115.6		56.1	5.5					65.7	0.0	
Level of Service (LOS)		F		E	A					E		
Approach Delay, s/veh / LOS	115.6		F	17.8		B	0.0			65.7		E
Intersection Delay, s/veh / LOS	57.4						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.41	A	1.65	B	2.32	B	2.16	B
Bicycle LOS Score / LOS	1.60	B	2.19	B			1.12	A

HCS7 Signalized Intersection Input Data

2 w/p AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - 2035 with Proj...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		1280		476	1480					363	0	

Signal Information				Signal Timing (s)														
Cycle, s	120.0	Reference Phase	2															
Offset, s	0	Reference Point	End	Green	31.2	38.6	27.2	0.0	0.0	0.0								
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	4.0	0.0	0.0	0.0								
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	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		1280		476	1480					363	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s ₀), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None		None	None					None	None	
Heavy Vehicles (P _{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	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)		4		3	4					3	3	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (P _g), %		0		0	0		0			0	0	
Speed Limit, mi/h		45		45	45					45	45	

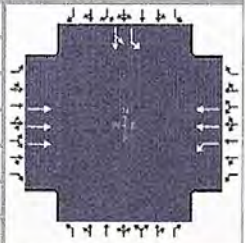
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		40.0	40.0	80.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l _t), s		2.0	2.0	2.0			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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50					No	0.50	

HCS7 Signalized Intersection Results Summary

2 w/ PAM + Imp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - AM - 2035 with Proje...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		1280		476	1480					363	0	

Signal Information				Signal Timing (s)									
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End	Green	27.4	42.3	27.2	0.0	0.0	0.0	0.0		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		50.3	35.4	85.8				34.2
Change Period, (Y+R _c), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g _s), s			26.6					26.8
Green Extension Time (g _e), s		0.0	0.8	0.0				0.4
Phase Call Probability			1.00					1.00
Max Out Probability			0.01					0.10

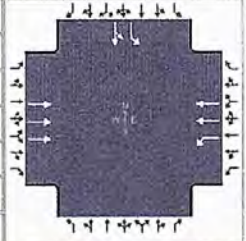
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		1347		501	1558					382	0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1725		1810	1809					1810	1900	
Queue Service Time (g _s), s		25.3		24.6	16.5					24.8	0.0	
Cycle Queue Clearance Time (g _c), s		25.3		24.6	16.5					24.8	0.0	
Green Ratio (g/C)		0.35		0.60	0.65					0.23	0.23	
Capacity (c), veh/h		1826		532	2344					411	431	
Volume-to-Capacity Ratio (X)		0.738		0.942	0.665					0.930	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		358.5		574.1	154.6					475.2	0	
Back of Queue (Q), veh/ln (95 th percentile)		14.3		23.0	6.2					19.0	0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (d ₁), s/veh		27.3		29.9	4.0					45.4	0.0	
Incremental Delay (d ₂), s/veh		2.7		16.8	1.5					20.3	0.0	
Initial Queue Delay (d ₃), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (d), s/veh		30.0		46.8	5.5					65.7	0.0	
Level of Service (LOS)		C		D	A					E		
Approach Delay, s/veh / LOS	30.0		C	15.6		B	0.0			65.7		E
Intersection Delay, s/veh / LOS	25.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.41	A	1.65	B	2.48	B	2.33	B
Bicycle LOS Score / LOS	1.23	A	2.19	B			1.12	A

HCS7 Signalized Intersection Input Data

2 w/ P AM + Imp

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - AM - 2035 with Proj...				
Project Description	with Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		1280		476	1480					363	0	

Signal Information													
Cycle, s	120.0	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		27.4	42.3	27.2	0.0	0.0	0.0	0.0			
		Yellow		5.0	5.0	4.0	0.0	0.0	0.0				
		Red		3.0	3.0	3.0	0.0	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		1280		476	1480					363	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s ₀), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None		None						None		
Heavy Vehicles (P _{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	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)		4		3	4					3	3	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (Pg), %		0		0			0			0		
Speed Limit, mi/h		45		45	45					45	45	

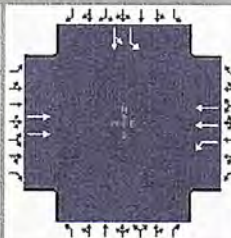
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		40.0	40.0	80.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l _t), s		2.0	2.0	2.0			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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50					No	0.50	

HCS7 Signalized Intersection Results Summary

2 w/p PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - 2035 with Proje...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		2121		496	1557					460	0	

Signal Information				Phase Diagram								
Cycle, s	140.0	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	38.3	57.9	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		65.9	46.3	112.2				27.8
Change Period, (Y+R _c), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g _s), s			37.6					20.4
Green Extension Time (g _e), s		0.0	0.7	0.0				0.3
Phase Call Probability			1.00					1.00
Max Out Probability			0.12					0.00

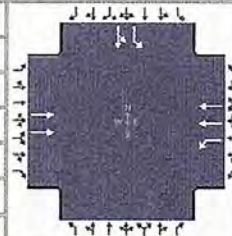
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6		5	2					3	8	
Adjusted Flow Rate (v), veh/h		2233		522	1639					242	0	
Adjusted Saturation Flow Rate (s), veh/h/ln		1809		1810	1809					1810	1900	
Queue Service Time (g _s), s		57.9		35.6	1.1					18.4	0.0	
Cycle Queue Clearance Time (g _c), s		57.9		35.6	1.1					18.4	0.0	
Green Ratio (g/C)		0.41		0.70	0.74					0.15	0.15	
Capacity (c), veh/h		1497		547	2694					268	282	
Volume-to-Capacity Ratio (X)		1.491		0.955	0.608					0.903	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		2571.9		706.3	24					348.8	0	
Back of Queue (Q), veh/ln (95 th percentile)		102.9		28.3	1.0					14.0	0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00		0.00	0.00					0.00	0.00	
Uniform Delay (d ₁), s/veh		31.4		44.0	0.1					58.6	0.0	
Incremental Delay (d ₂), s/veh		224.7		23.0	1.0					10.3	0.0	
Initial Queue Delay (d ₃), s/veh		0.0		0.0	0.0					0.0	0.0	
Control Delay (d), s/veh		256.1		67.0	1.2					68.9	0.0	
Level of Service (LOS)		F		E	A					E		
Approach Delay, s/veh / LOS	256.1		F	17.1		B	0.0			68.9		E
Intersection Delay, s/veh / LOS	134.9						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.41	A	1.63	B	2.33	B	2.16	B
Bicycle LOS Score / LOS	2.33	B	2.27	B			1.29	A

HCS7 Signalized Intersection Input Data

2 w/ P PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - 2035 with Proj...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		2121		496	1557					460	0	

Signal Information												
Cycle, s	140.0	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	38.3	57.9	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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		2121		496	1557					460	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s ₀), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None		None						None		
Heavy Vehicles (P _{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	0	0		0	0		0	0		0	0	
Buses (N _b), buses/h	0	0	0	0	0	0				0	0	0
Arrival Type (A _T)		4		3	4					3	3	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (P _g), %		0		0			0			0		
Speed Limit, mi/h		45		45	45					45	45	

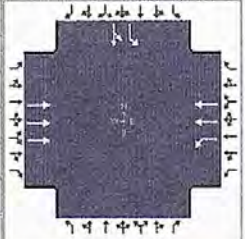
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		60.0	40.0	100.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l _t), s		2.0	2.0	2.0			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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50					No	0.50	

HCS7 Signalized Intersection Results Summary

2 w/p PM+imp

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp Midway Rd - PM - 2035 with Proje...				
Project Description	with Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		2121		496	1557					460	0	

Signal Information				Signal Timing (s)													
Cycle, s	140.0	Reference Phase	2	Green		Yellow		Red		1		2		3		4	
Offset, s	0	Reference Point	End	38.3	57.9	20.8	0.0	0.0	0.0	5		6		7		8	
Uncoordinated	No	Simult. Gap E/W	On	5.0	5.0	4.0	0.0	0.0	0.0	5		6		7		8	
Force Mode	Fixed	Simult. Gap N/S	On	3.0	3.0	3.0	0.0	0.0	0.0	5		6		7		8	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2				8
Case Number		8.3	1.0	4.0				10.0
Phase Duration, s		65.9	46.3	112.2				27.8
Change Period, (Y+R _c), s		8.0	8.0	8.0				7.0
Max Allow Headway (MAH), s		0.0	3.0	0.0				3.0
Queue Clearance Time (g _s), s			37.6					20.4
Green Extension Time (g _e), s		0.0	0.7	0.0				0.3
Phase Call Probability			1.00					1.00
Max Out Probability			0.12					0.00

Movement Group Results	EB			WB			NB			SB					
	L	T	R	L	T	R	L	T	R	L	T	R			
Assigned Movement	6			5			2			3			8		
Adjusted Flow Rate (v), veh/h	2233			522			1639			242			0		
Adjusted Saturation Flow Rate (s), veh/h/ln	1725			1810			1809			1810			1900		
Queue Service Time (g _s), s	57.9			35.6			1.1			18.4			0.0		
Cycle Queue Clearance Time (g _c), s	57.9			35.6			1.1			18.4			0.0		
Green Ratio (g/C)	0.41			0.70			0.74			0.15			0.15		
Capacity (c), veh/h	2142			547			2694			268			282		
Volume-to-Capacity Ratio (X)	1.042			0.955			0.608			0.903			0.000		
Back of Queue (Q), ft/ln (95 th percentile)	899.8			706.4			24			348.8			0		
Back of Queue (Q), veh/ln (95 th percentile)	36.0			28.3			1.0			14.0			0.0		
Queue Storage Ratio (RQ) (95 th percentile)	0.00			0.00			0.00			0.00			0.00		
Uniform Delay (d ₁), s/veh	31.4			44.0			0.1			58.6			0.0		
Incremental Delay (d ₂), s/veh	31.6			23.0			1.0			10.3			0.0		
Initial Queue Delay (d ₃), s/veh	0.0			0.0			0.0			0.0			0.0		
Control Delay (d), s/veh	62.9			67.0			1.2			68.9			0.0		
Level of Service (LOS)	F			E			A			E					
Approach Delay, s/veh / LOS	62.9	E		17.1	B		0.0			68.9	E				
Intersection Delay, s/veh / LOS	41.9						D								

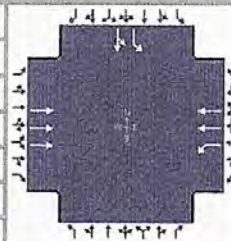
Multimodal Results	EB		WB		NB		SB	
	Pedestrian LOS Score / LOS	1.41	A	1.63	B	2.48	B	2.33
Bicycle LOS Score / LOS	1.72	B	2.27	B			1.29	A

HCS7 Signalized Intersection Input Data

2 W/P AM + PM

General Information

Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00
Intersection	I-95 SB Ramp	File Name	I-95 SB Ramp & Midway Rd - PM - 2035 with Proj...		
Project Description	with Project + Imp				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		2121		496	1557					460	0	

Signal Information

Cycle, s	140.0	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	38.3	57.9	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Traffic Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		2121		496	1557					460	0	
Initial Queue (Q _b), veh/h		0		0	0					0	0	
Base Saturation Flow Rate (s ₀), veh/h		1900		1900	1900					1900	1900	
Parking (N _m), man/h		None			None						None	
Heavy Vehicles (P _{HV}), %		0		0	0					0	0	
Ped / Bike / RTOR, /h	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)		4		3	4					3	3	
Upstream Filtering (f)		1.00		1.00	1.00					1.00	1.00	
Lane Width (W), ft		12.0		12.0	12.0					12.0	12.0	
Turn Bay Length, ft		0		0	0					0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h		45		45	45					45	45	

Phase Information

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		60.0	40.0	100.0				40.0
Yellow Change Interval (Y), s		5.0	5.0	5.0				4.0
Red Clearance Interval (R _c), s		3.0	3.0	3.0				3.0
Minimum Green (G _{min}), s		8	7	8				6
Start-Up Lost Time (l _f), 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
Recall Mode		Min	Off	Min				Off
Dual Entry		Yes	No	Yes				Yes
Walk (Walk), s		0.0	0.0	0.0			0.0	0.0
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0			0.0	0.0

Multimodal Information

85th % Speed / Rest in Walk / Corner Radius	EB			WB			NB			SB		
	0	No	25	0	No	25				0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0				9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No				0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0				12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50					No	0.50	

TURNING MOVEMENT VOLUME COUNTS

N/S STREET: 195 NB Ramp
 FILENAME: Willow Lakes
 COUNT DATE: 2/19/2020
 REPORT DATE: 2/19/2020
 DAY: Tuesday
 ANALYSIS YEAR: 2020
 E/W STREET: Midway Rd
 CITY: St Lucie
 CONTROL: Signalized

15 Min Period	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL
7:00-7:15	35	0	99	0	0	0	1	82	0	0	125	88	430	2147
7:15-7:30	31	0	115	0	0	0	4	102	0	0	369	145	566	2198
7:30-7:45	40	0	122	0	0	0	4	140	0	0	172	150	628	2074
7:45-8:00	32	0	125	0	0	0	2	119	0	0	340	105	523	1855
8:00-8:15	32	0	110	0	0	0	4	85	0	0	137	113	481	1681
8:15-8:30	31	0	114	0	0	0	3	75	0	0	110	100	442	
8:30-8:45	28	0	111	0	0	0	3	85	0	0	100	91	410	
8:45-9:00	21	0	82	0	0	0	7	73	0	0	90	66	339	

AM PEAK HOURS FROM: 7:15AM TO 8:15AM
 Volumes: 135 0 472 0 0 0 14 446 0 0 618 513 2198
 Season Factor: 1
 Growth Rate: 1
 Years Growth: 0
 PHF: 0.875
 Trips In: 446
 Trips Out: 0

Total	135	0	472	0	0	0	14	446	0	0	618	513	2198
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15 Min Period lanes	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL
4:00-4:15	26	0	111	0	0	0	3	89	0	0	132	70	483	1778
4:15-4:30	26	0	105	0	0	0	7	91	0	0	165	81	475	1893
4:30-4:45	34	0	112	0	0	0	12	93	0	0	134	68	453	1836
4:45-5:00	42	0	103	0	0	0	3	97	0	0	110	62	417	1805
5:00-5:15	37	0	90	0	0	0	2	129	0	0	191	99	548	1744
5:15-5:30	41	0	108	0	0	0	1	101	0	0	111	56	418	
5:30-5:45	25	0	102	0	0	0	1	95	0	0	130	69	422	
5:45-6:00	29	0	80	0	0	0	5	93	0	0	100	49	356	

PM PEAK HOURS FROM: 4:15PM TO 5:15PM
 Volumes: 139 0 410 0 0 0 24 410 0 0 600 310 1893
 Season Factor: 1
 Growth Rate: 1
 Years Growth: 0
 PHF: 0.864
 Trips In: 410
 Trips Out: 0

Total	139	0	410	0	0	0	24	410	0	0	600	310	1893
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St. Lucie County



00023 - MIDWAY RD @ I-95 NB RAMP - - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

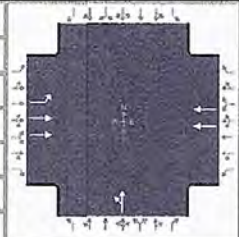
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	EBL	WB	N	NB	N	N	N	N	N	N	N	N	N	N	N	N
Min Green	7	15	5	7	5	15	5	5	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	18	45	0	25	0	45	0	25	35	35	35	35	35	35	35	35
Max2	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40	40
Max3	28	55	0	35	0	55	0	35	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	5.0	4.0	5.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	3.0	3.0	1.0	3.0	1.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Pinuse

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1 > 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - Existing.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	14	446			618		135	0				

Signal Information				Signal Timing (s)									
Cycle, s	46.2	Reference Phase	2	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Offset, s	0	Reference Point	End	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Uncoordinated	Yes	Simult. Gap E/W	On	Green	1.2	15.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		12.0		
Phase Duration, s	9.2	32.2		23.0		13.9		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	2.9		2.9		3.0		
Queue Clearance Time (g _s), s	2.2	5.4		9.1		5.6		
Green Extension Time (g _e), s	0.0	2.7		2.7		0.2		
Phase Call Probability	0.18	1.00		1.00		0.85		
Max Out Probability	0.00	0.00		0.00		0.00		

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		2			7	4				
Adjusted Flow Rate (v), veh/h	15	485		672			147					
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809		1809			1810					
Queue Service Time (g _s), s	0.2	3.4		7.1			3.6					
Cycle Queue Clearance Time (g _c), s	0.2	3.4		7.1			3.6					
Green Ratio (g/C)	0.40	0.52		0.32			0.13					
Capacity (c), veh/h	337	1899		1175			233					
Volume-to-Capacity Ratio (X)	0.045	0.255		0.572			0.630					
Back of Queue (Q), ft/ln (95 th percentile)	3	32.4		95.6			57.9					
Back of Queue (Q), veh/ln (95 th percentile)	0.1	1.3		3.8			2.3					
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00			0.00					
Uniform Delay (d ₁), s/veh	9.4	6.0		12.9			19.1					
Incremental Delay (d ₂), s/veh	0.0	0.0		0.2			1.1					
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0			0.0					
Control Delay (d), s/veh	9.5	6.0		13.1			20.1					
Level of Service (LOS)	A	A		B			C					
Approach Delay, s/veh / LOS	6.1	A		13.1	B		20.1	C		0.0		
Intersection Delay, s/veh / LOS	11.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.35	A	1.38	A	2.13	B	2.29	B
Bicycle LOS Score / LOS	0.90	A	1.04	A	0.73	A		

HCS7 Signalized Intersection Input Data

3 E AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.88		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1 > 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - Existing - 6.2....				
Project Description	Existing						

Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				14	446			618		135	0				

Signal Information															
Cycle, s	46.3	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	1.3	15.0	6.0	0.0	0.0	0.0					
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0					

Traffic Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				14	446			618		135	0				
Initial Queue (Q _b), veh/h				0	0			0		0	0				
Base Saturation Flow Rate (s ₀), veh/h				1900	1900			1900		1900	1900				
Parking (N _m), man/h					None			None			None				
Heavy Vehicles (P _{HV}), %				0	0			0		0	0				
Ped / Bike / RTOR, /h				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				
Upstream Filtering (f)				1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft				12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft				0	0			0		0	0				
Grade (P _g), %					0			0		0	0			0	
Speed Limit, mi/h				45	45			45		45	45				

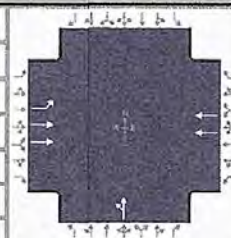
Phase Information		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		28.0	55.0		55.0		35.0		
Yellow Change Interval (Y), s		5.0	5.0		5.0		5.0		
Red Clearance Interval (R _c), s		3.0	3.0		3.0		3.0		
Minimum Green (G _{min}), s		7	15		15		7		
Start-Up Lost Time (l _t), s		2.0	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		
Recall Mode		Off	Min		Min		Off		
Dual Entry		No	Yes		Yes		Yes		
Walk (Walk), s		0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s		0.0	0.0		0.0	0.0	0.0		

Multimodal Information				EB			WB			NB			SB			
85th % Speed / Rest in Walk / Corner Radius				0	No	25	0	No	25	0	No	25				
Walkway / Crosswalk Width / Length, ft				9.0	12	0	9.0	12	0	9.0	12	0				
Street Width / Island / Curb				0	0	No	0	0	No	0	0	No				
Width Outside / Bike Lane / Shoulder, ft				12	5.0	2.0	12	5.0	2.0	12	5.0	2.0				
Pedestrian Signal / Occupied Parking				No	0.50		No	0.50		No	0.50					

HCS7 Signalized Intersection Results Summary

#36 AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1 > 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - Existing.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	24	410			600			139	0			

Signal Information				Phase Diagram								
Cycle, s	47.1	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	Yes	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green		2.0	15.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow		5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
		Red		3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		12.0		
Phase Duration, s	10.0	33.0		23.0		14.0		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	2.9		2.9		3.0		
Queue Clearance Time (g _s), s	2.4	5.1		9.1		5.7		
Green Extension Time (g _e), s	0.0	2.5		2.5		0.2		
Phase Call Probability	0.29	1.00		1.00		0.86		
Max Out Probability	0.00	0.00		0.00		0.00		

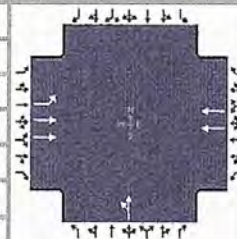
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (v), veh/h	26	446			652			151				
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809			1809			1810				
Queue Service Time (g _s), s	0.4	3.1			7.1			3.7				
Cycle Queue Clearance Time (g _c), s	0.4	3.1			7.1			3.7				
Green Ratio (g/C)	0.40	0.53			0.32			0.13				
Capacity (c), veh/h	365	1924			1153			232				
Volume-to-Capacity Ratio (X)	0.072	0.232			0.566			0.651				
Back of Queue (Q), ft/ln (95 th percentile)	5.1	29.7			96.8			61.5				
Back of Queue (Q), veh/ln (95 th percentile)	0.2	1.2			3.9			2.5				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00			0.00				
Uniform Delay (d ₁), s/veh	9.4	5.9			13.3			19.5				
Incremental Delay (d ₂), s/veh	0.0	0.0			0.2			1.2				
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0			0.0				
Control Delay (d), s/veh	9.4	5.9			13.5			20.7				
Level of Service (LOS)	A	A			B			C				
Approach Delay, s/veh / LOS	6.1	A		13.5	B		20.7	C		0.0		
Intersection Delay, s/veh / LOS	11.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.35	A	1.38	A	2.13	B	2.29	B
Bicycle LOS Score / LOS	0.88	A	1.03	A	0.74	A		

HCS7 Signalized Intersection Input Data

#3 EPM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.86
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - Existing - 6.2....		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	24	410			600			139	0			

Signal Information				Signal Phases									
Cycle, s	47.3	Reference Phase	2	EB		WB		NB		SB		SB	
Offset, s	0	Reference Point	End	Green	2.2	15.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	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	24	410			600			139	0			
Initial Queue (Q _b), veh/h	0	0			0			0	0			
Base Saturation Flow Rate (s ₀), veh/h	1900	1900			1900			1900	1900			
Parking (N _m), man/h	None			None			None					
Heavy Vehicles (P _{HV}), %	0	0			0			0	0			
Ped / Bike / RTOR, /h	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			
Upstream Filtering (f)	1.00	1.00			1.00			1.00	1.00			
Lane Width (W), ft	12.0	12.0			12.0			12.0				
Turn Bay Length, ft	0	0			0			0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45			45	45			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	28.0	55.0		55.0		35.0	
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R _c), s	3.0	3.0		3.0		3.0		
Minimum Green (G _{min}), s	7	15		15		7		
Start-Up Lost Time (l ₀), 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		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

TURNING MOVEMENT VOLUME COUNTS

3 w/o Project

1/14/2020

605 NB Ramp
 Willow Lake
 2/18/2010
 COUNTY: Madison
 COUNTY DATE: 2/18/2010
 REPORT DATE: 2/18/2010
 CONTROL: Signalized
 CMA STREET: Highway 61
 CITY: St. Louis
 DAY: Tuesday
 ANIMATE YEAR: 2015
 15 Min
 Period
 7:00-7:15
 7:15-7:30
 7:30-7:45
 7:45-8:00
 8:00-8:15
 8:15-8:30
 8:30-8:45
 8:45-9:00

15 Min Period	Northbound					Southbound					Eastbound					Westbound				
	NEL	NRT	NBL	SFT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	WBL	WBT	WBR	TOTAL	ONE WAY SUM			
7:00-7:15	0	0	0	0	0	1	21	0	0	0	0	22	0	0	0	0	22			
7:15-7:30	0	0	0	0	0	4	102	0	0	0	106	145	0	0	0	145				
7:30-7:45	0	0	0	0	0	4	160	0	0	0	164	204	0	0	0	204				
7:45-8:00	0	0	0	0	0	2	119	0	0	0	121	165	0	0	0	165				
8:00-8:15	0	0	0	0	0	4	85	0	0	0	89	113	0	0	0	113				
8:15-8:30	0	0	0	0	0	3	75	0	0	0	78	100	0	0	0	100				
8:30-8:45	0	0	0	0	0	3	86	0	0	0	89	116	0	0	0	116				
8:45-9:00	0	0	0	0	0	7	71	0	0	0	78	103	0	0	0	103				
TOTAL	0	0	0	0	0	24	446	0	0	0	470	613	0	0	0	613				

1
 Seasonal Factor:
 Growth Rate: 1.005
 Years Growth: 15
 Willow Lake
 1,237
 1,061
 603
 1,451
 603
 1,823
 1,624
 6,218
 5,231
 3,875
 3,887
 4,291
 5,158
 1,252
 1,135
 22
 68

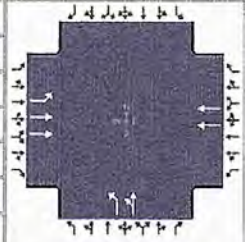
15 Min Period	Northbound					Southbound					Eastbound					Westbound				
	NEL	NRT	NBL	SFT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	WBL	WBT	WBR	TOTAL	ONE WAY SUM			
9:00-9:15	0	0	0	0	0	3	89	0	0	0	92	120	0	0	0	120				
9:15-9:30	0	0	0	0	0	7	91	0	0	0	98	131	0	0	0	131				
9:30-9:45	0	0	0	0	0	12	53	0	0	0	65	82	0	0	0	82				
9:45-10:00	0	0	0	0	0	3	79	0	0	0	82	117	0	0	0	117				
10:00-10:15	0	0	0	0	0	2	129	0	0	0	131	181	0	0	0	181				
10:15-10:30	0	0	0	0	0	1	101	0	0	0	102	148	0	0	0	148				
10:30-10:45	0	0	0	0	0	1	95	0	0	0	96	139	0	0	0	139				
10:45-11:00	0	0	0	0	0	5	51	0	0	0	56	79	0	0	0	79				
TOTAL	0	0	0	0	0	24	419	0	0	0	443	613	0	0	0	613				

1
 Seasonal Factor:
 Growth Rate: 1.005
 Years Growth: 15
 Willow Lake
 1,474
 1,237
 1,167
 1,336
 1,106
 1,442
 1,167
 1,442
 1,441
 1,237
 783
 1,158
 0
 0
 0
 0
 368
 0
 458
 0
 0
 626

HCS7 Signalized Intersection Results Summary

#3 w/o AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	287	832			1167		581	0				

Signal Information				Signal Phases									
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	17.0	37.0	42.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0			
				Red	3.0	3.0	3.0	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	25.0	70.0		45.0		50.0		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g _s), s	18.6					43.8		
Green Extension Time (g _e), s	0.0	0.0		0.0		0.0		
Phase Call Probability	1.00					1.00		
Max Out Probability	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			2		7	4				
Adjusted Flow Rate (v), veh/h	312	904			1268		632	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809			1809		1810	1900				
Queue Service Time (g _s), s	16.6	14.0			37.0		41.8	0.0				
Cycle Queue Clearance Time (g _c), s	16.6	14.0			37.0		41.8	0.0				
Green Ratio (g/C)	0.47	0.52			0.31		0.35	0.35				
Capacity (c), veh/h	316	1869			1115		633	665				
Volume-to-Capacity Ratio (X)	0.986	0.484			1.137		0.997	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	476.6	202.4			911.2		792	0				
Back of Queue (Q), veh/ln (95 th percentile)	19.1	8.1			36.4		31.7	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d ₁), s/veh	37.4	11.2			35.3		38.9	0.0				
Incremental Delay (d ₂), s/veh	46.6	0.9			73.1		35.0	0.0				
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (d), s/veh	84.0	12.1			108.4		73.9	0.0				
Level of Service (LOS)	F	B			F		E					
Approach Delay, s/veh / LOS	30.5		C		108.4		F		73.9		E	
Intersection Delay, s/veh / LOS	71.0						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.42	A	2.16	B	2.32	B
Bicycle LOS Score / LOS	1.49	A	1.53	B	1.53	B		

HCS7 Signalized Intersection Input Data

#3 w/o AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.92		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 w.o. Proj...				
Project Description	without Project						

Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				287	832			1167		581	0				

Signal Information				EB				WB				NB				SB			
Cycle, s	120.0	Reference Phase	2	Green				Yellow				Red				Signal Phases			
Offset, s	0	Reference Point	End	17.0	37.0	42.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Uncoordinated	No	Simult. Gap E/W	On	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Force Mode	Fixed	Simult. Gap N/S	On	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Traffic Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				287	832			1167		581	0				
Initial Queue (Q _b), veh/h				0	0			0		0	0				
Base Saturation Flow Rate (s ₀), veh/h				1900	1900			1900		1900	1900				
Parking (N _m), man/h				None			None			None					
Heavy Vehicles (P _{HV}), %				0	0			0		0	0				
Ped / Bike / RTOR, /h				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	4			4		3	3				
Upstream Filtering (f)				1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft				12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft				0	0			0		0	0				
Grade (P _g), %					0			0			0			0	
Speed Limit, mi/h				45	45			45		45	45				

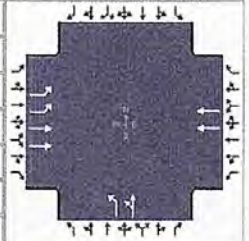
Phase Information		EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		25.0	70.0		45.0		50.0		
Yellow Change Interval (Y), s		5.0	5.0		5.0		5.0		
Red Clearance Interval (R _c), s		3.0	3.0		3.0		3.0		
Minimum Green (G _{min}), s		7	15		15		7		
Start-Up Lost Time (l), s		2.0	2.0		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		
Recall Mode		Off	Min		Min		Off		
Dual Entry		No	Yes		Yes		Yes		
Walk (Walk), s		0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s		0.0	0.0		0.0	0.0	0.0		

Multimodal Information				EB			WB			NB			SB			
85th % Speed / Rest in Walk / Corner Radius				0	No	25	0	No	25	0	No	25				
Walkway / Crosswalk Width / Length, ft				9.0	12	0	9.0	12	0	9.0	12	0				
Street Width / Island / Curb				0	0	No	0	0	No	0	0	No				
Width Outside / Bike Lane / Shoulder, ft				12	5.0	2.0	12	5.0	2.0	12	5.0	2.0				
Pedestrian Signal / Occupied Parking				No		0.50	No		0.50	No		0.50				

HCS7 Signalized Intersection Results Summary

3 w/o AM + IMP

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 w.o. Proj...				
Project Description	without Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	287	832			1167		581	0				

Signal Information													
Cycle, s	120.0	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	8.5	44.9	42.6	0.0	0.0	0.0			
				Yellow	5.0	5.0	5.0	0.0	0.0	0.0			
				Red	3.0	3.0	3.0	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	16.5	69.4		52.9		50.6		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g _s), s	8.1					41.5		
Green Extension Time (g _e), s	0.5	0.0		0.0		1.0		
Phase Call Probability	1.00					1.00		
Max Out Probability	0.00					0.02		

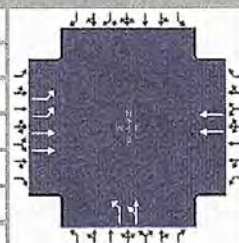
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6		2			7	4				
Adjusted Flow Rate (v), veh/h	302	876		1228			612	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809		1809			1810	1900				
Queue Service Time (g _s), s	6.1	13.6		37.3			39.5	0.0				
Cycle Queue Clearance Time (g _c), s	6.1	13.6		37.3			39.5	0.0				
Green Ratio (g/C)	0.46	0.51		0.37			0.35	0.35				
Capacity (c), veh/h	429	1852		1354			642	674				
Volume-to-Capacity Ratio (X)	0.705	0.473		0.907			0.953	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	108.6	199.8		544.9			678.3	0				
Back of Queue (Q), veh/ln (95 th percentile)	4.3	8.0		21.8			27.1	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00			0.00	0.00				
Uniform Delay (d ₁), s/veh	27.4	11.4		28.2			37.8	0.0				
Incremental Delay (d ₂), s/veh	0.8	0.9		10.4			18.2	0.0				
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0			0.0	0.0				
Control Delay (d), s/veh	28.2	12.3		38.6			56.0	0.0				
Level of Service (LOS)	C	B		D			E					
Approach Delay, s/veh / LOS	16.4		B	38.6		D	56.0		E	0.0		
Intersection Delay, s/veh / LOS	33.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	1.70	B	2.16	B	2.48	B
Bicycle LOS Score / LOS	1.46	A	1.50	B	1.50	A		

HCS7 Signalized Intersection Input Data

#3 w/o AM + IMP

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	287	832			1167		581	0				

Signal Information				Signal Phases									
Cycle, s	120.0	Reference Phase	2	EB		WB		NB		SB		SB	
Offset, s	0	Reference Point	End	Green	8.5	44.9	42.6	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	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	287	832			1167		581	0				
Initial Queue (Q _b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s ₀), veh/h	1900	1900			1900		1900	1900				
Parking (N _m), man/h	None			None			None					
Heavy Vehicles (P _{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	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	4			4		3	3				
Upstream Filtering (f)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	16.0	60.0		44.0		60.0	
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R _c), s	3.0	3.0		3.0		3.0		
Minimum Green (G _{min}), s	7	15		15		7		
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		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

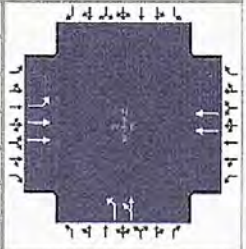
Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

HCS7 Signalized Intersection Results Summary

3 w/o PM

General Information

Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 w.o. Proj...		
Project Description	without Project				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	783	1158			1106		368	0				

Signal Information

Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	35.4	32.0	28.6	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	43.4	83.4		40.0		36.6		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g _s), s	37.4					27.9		
Green Extension Time (g _e), s	0.0	0.0		0.0		0.6		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.00		

Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (v), veh/h	851	1259			1202		400	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809			1809		1810	1900				
Queue Service Time (g _s), s	35.4	12.6			32.0		25.9	0.0				
Cycle Queue Clearance Time (g _c), s	35.4	12.6			32.0		25.9	0.0				
Green Ratio (g/C)	0.58	0.63			0.27		0.24	0.24				
Capacity (c), veh/h	593	2273			966		431	453				
Volume-to-Capacity Ratio (X)	1.434	0.554			1.244		0.928	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	1882.2	141.9			1050.5		463.9	0				
Back of Queue (Q), veh/ln (95 th percentile)	75.3	5.7			42.0		18.6	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d ₁), s/veh	35.4	4.6			38.6		44.7	0.0				
Incremental Delay (d ₂), s/veh	205.0	1.0			118.8		12.5	0.0				
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (d), s/veh	240.4	5.6			157.4		57.2	0.0				
Level of Service (LOS)	F	A			F		E					
Approach Delay, s/veh / LOS	100.3	F		157.4	F		57.2	E		0.0		
Intersection Delay, s/veh / LOS	114.2						F					

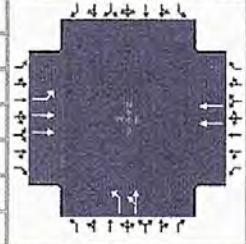
Multimodal Results

	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.66	B	1.42	A	2.16	B	2.32	B
Bicycle LOS Score / LOS	2.23	B	1.48	A	1.15	A		

HCS7 Signalized Intersection Input Data

3 w/o PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 w.o. Proj...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	783	1158			1106		368	0				

Signal Information				Signal Phases											
Cycle, s	120.0	Reference Phase	2	EB			WB			NB			SB		
Offset, s	0	Reference Point	End	Green	35.4	32.0	28.6	0.0	0.0	0.0	1	2	3	4	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0	5	6	7	8	
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	783	1158			1106		368	0				
Initial Queue (Q _b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s ₀), veh/h	1900	1900			1900		1900	1900				
Parking (N _m), man/h	None			None			None					
Heavy Vehicles (P _{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	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	4			4		3	3				
Upstream Filtering (f)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

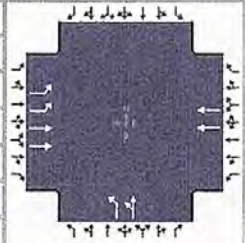
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	30.0	70.0		40.0		50.0		
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R _c), s	3.0	3.0		3.0		3.0		
Minimum Green (G _{min}), s	7	15		15		7		
Start-Up Lost Time (l _t), s	2.0	2.0		2.0	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		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

HCS7 Signalized Intersection Results Summary

3 w/o PM + IMP

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 w.o. Proj...		
Project Description	without Project + Improvements				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	783	1158			1106		368	0				

Signal Information				Phase Diagram								
Cycle, s	120.0	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	20.0	49.0	27.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

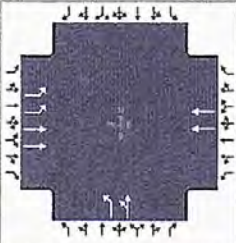
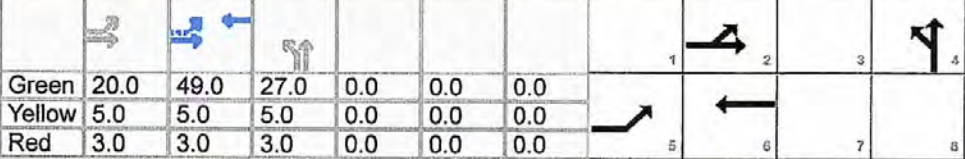
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	28.0	85.0		57.0		35.0		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g _s), s	20.7					27.3		
Green Extension Time (g _e), s	0.0	0.0		0.0		0.0		
Phase Call Probability	1.00					1.00		
Max Out Probability	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	5	2		6			7	4				
Adjusted Flow Rate (v), veh/h	824	1219		1164			387	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809		1809			1810	1900				
Queue Service Time (g _s), s	18.7	10.6		30.8			25.3	0.0				
Cycle Queue Clearance Time (g _c), s	18.7	10.6		30.8			25.3	0.0				
Green Ratio (g/C)	0.59	0.64		0.41			0.22	0.22				
Capacity (c), veh/h	854	2321		1477			407	428				
Volume-to-Capacity Ratio (X)	0.965	0.525		0.788			0.951	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	374.8	119.3		426.7			521.5	0				
Back of Queue (Q), veh/ln (95 th percentile)	15.0	4.8		17.1			20.9	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00			0.00	0.00				
Uniform Delay (d ₁), s/veh	28.8	3.9		23.2			45.9	0.0				
Incremental Delay (d ₂), s/veh	22.4	0.9		4.3			32.0	0.0				
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0			0.0	0.0				
Control Delay (d), s/veh	51.2	4.7		27.5			77.9	0.0				
Level of Service (LOS)	D	A		C			E					
Approach Delay, s/veh / LOS	23.5		C	27.5		C	77.9		E	0.0		
Intersection Delay, s/veh / LOS	30.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.65	B	1.69	B	2.16	B	2.48	B
Bicycle LOS Score / LOS	2.17	B	1.45	A	1.13	A		

HCS7 Signalized Intersection Input Data

3 w/o PM + Imp

General Information				Intersection Information											
Agency	O'Rourke Engineering & Planning			Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other										
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95										
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00										
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 w.o. Proj...												
Project Description	without Project + Improvements														
Demand Information				EB			WB			NB			SB		
Approach Movement		L	T	R	L	T	R	L	T	R	L	T	R		
Demand (v), veh/h		783	1158			1106		368	0						
Signal Information															
Cycle, s	120.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	20.0	49.0	27.0	0.0	0.0	0.0	1	2	3	4	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0	5	6	7	8	
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0					
Traffic Information				EB			WB			NB			SB		
Approach Movement		L	T	R	L	T	R	L	T	R	L	T	R		
Demand (v), veh/h		783	1158			1106		368	0						
Initial Queue (Q _b), veh/h		0	0			0		0	0						
Base Saturation Flow Rate (s ₀), veh/h		1900	1900			1900		1900	1900						
Parking (N _m), man/h		None			None			None							
Heavy Vehicles (P _{HV}), %		0	0			0		0	0						
Ped / Bike / RTOR, /h		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	4			4		3	3						
Upstream Filtering (f)		1.00	1.00			1.00		1.00	1.00						
Lane Width (W), ft		12.0	12.0			12.0		12.0	12.0						
Turn Bay Length, ft		0	0			0		0	0						
Grade (Pg), %			0			0			0			0			
Speed Limit, mi/h		45	45			45		45	45						
Phase Information				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Maximum Green (G _{max}) or Phase Split, s		28.0	85.0			57.0		35.0							
Yellow Change Interval (Y), s		5.0	5.0			5.0		5.0							
Red Clearance Interval (R _c), s		3.0	3.0			3.0		3.0							
Minimum Green (G _{min}), s		7	15			15		7							
Start-Up Lost Time (l _f), s		2.0	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	2.0						
Passage (PT), s		2.0	2.0			2.0		2.0	2.0						
Recall Mode		Off	Min			Min		Off	Off						
Dual Entry		No	Yes			Yes		Yes	Yes						
Walk (Walk), s		0.0	0.0			0.0	0.0	0.0	0.0						
Pedestrian Clearance Time (PC), s		0.0	0.0			0.0	0.0	0.0	0.0						
Multimodal Information				EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius		0	No	25	0	No	25	0	No	25					
Walkway / Crosswalk Width / Length, ft		9.0	12	0	9.0	12	0	9.0	12	0					
Street Width / Island / Curb		0	0	No	0	0	No	0	0	No					
Width Outside / Bike Lane / Shoulder, ft		12	5.0	2.0	12	5.0	2.0	12	5.0	2.0					
Pedestrian Signal / Occupied Parking		No	0.50		No	0.50		No	0.50						

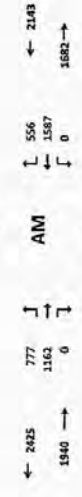
TURNING MOVEMENT VOLUME COUNTS

CONTROL: Signalized

RD NO Route: 65 N Highway
 Address: Willow Lakes
 COUNTY: 218/2020
 CITY: St. Louis
 DAY: Tuesday
 ANALYSIS YEAR: 2025

15 MIN Period

	Northbound				Eastbound				Westbound				ONE WAY	
	NBL	RHT	LFT	SAR	EEL	EFF	EBR	WEV	WEW	WEW	TOTAL	INDOR	INDOR	
7:00-7:15	25	0	0	0	3	21	0	0	125	83	430	217	0	
7:15-7:30	31	0	0	0	4	102	0	0	109	145	566	218	0	
7:30-7:45	40	0	0	0	4	140	0	0	172	150	628	204	0	
7:45-8:00	32	0	0	0	2	119	0	0	142	105	523	165	0	
8:00-8:15	32	0	0	0	4	85	0	0	117	113	481	181	0	
8:15-8:30	31	0	0	0	3	75	0	0	119	120	442	181	0	
8:30-8:45	28	0	0	0	3	66	0	0	202	91	419	149	0	
8:45-9:00	21	0	0	0	3	73	0	0	90	66	339	118	0	

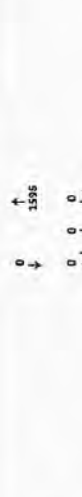


AM PEAK HOUR'S FROM:

Volume	7:00-7:15	7:15-7:30	7:30-7:45	7:45-8:00	8:00-8:15	8:15-8:30	8:30-8:45	8:45-9:00
Volume	135	0	472	0	0	0	0	418
Saturn Factor	145	0	472	0	0	0	0	418
Green Time	10%	0%	0%	0%	0%	0%	0%	0%
Red Time	10%	0%	0%	0%	0%	0%	0%	0%
Percentile	257	0	0	0	0	0	0	1498

7:00-7:15 AM

Area	Volume
Widow Lakes	1,350
Village at McKinley	1,455
LTC Ranch	1,823
Southern Grove	6,218
Wilson Grove	3,875
Riviera/Edenwood	4,251
Western Grove	1,152
Bethesda	21



PM PEAK HOUR'S FROM:

Volume	4:00-4:15	4:15-4:30	4:30-4:45	4:45-5:00	5:00-5:15	5:15-5:30	5:30-5:45	5:45-6:00
Volume	139	0	410	0	0	0	0	608
Saturn Factor	120	0	410	0	0	0	0	608
Green Time	10%	0%	0%	0%	0%	0%	0%	0%
Red Time	10%	0%	0%	0%	0%	0%	0%	0%
Percentile	276	0	0	0	0	0	0	1233

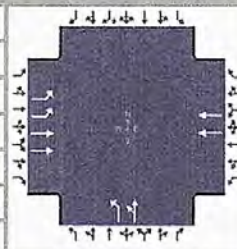
4:00-4:15 PM

Area	Volume
Widow Lakes	1,450
Village at McKinley	726
LTC Ranch	2,139
Southern Grove	6,799
Wilson Grove	4,543
Riviera/Edenwood	2,995
Western Grove	2,219
Bethesda	77

HCS7 Signalized Intersection Results Summary

#3 w/P AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 with Proj...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	777	1162			1587		838	0				

Signal Information				Phase Diagram								
Cycle, s	140.0	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	15.9	64.0	36.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	23.9	95.9		72.0		44.1		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g _s), s	17.9					35.5		
Green Extension Time (g _e), s	0.0	0.0		0.0		0.6		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.01		

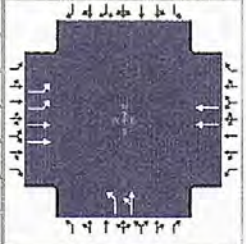
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (v), veh/h	818	1223			1671		441	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809			1809		1810	1900				
Queue Service Time (g _s), s	15.9	14.1			64.0		33.5	0.0				
Cycle Queue Clearance Time (g _c), s	15.9	14.1			64.0		33.5	0.0				
Green Ratio (g/C)	0.58	0.63			0.46		0.26	0.26				
Capacity (c), veh/h	501	2271			1654		467	490				
Volume-to-Capacity Ratio (X)	1.631	0.539			1.010		0.945	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	1120.7	167.4			916.9		605.2	0				
Back of Queue (Q), veh/ln (95 th percentile)	44.8	6.7			36.7		24.2	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d ₁), s/veh	48.5	5.4			27.3		51.0	0.0				
Incremental Delay (d ₂), s/veh	292.9	0.9			24.6		20.2	0.0				
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (d), s/veh	341.4	6.3			51.9		71.2	0.0				
Level of Service (LOS)	F	A			F		E					
Approach Delay, s/veh / LOS	140.6	F		51.9	D		71.2	E		0.0		
Intersection Delay, s/veh / LOS	97.6						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.66	B	1.69	B	2.16	B	2.48	B
Bicycle LOS Score / LOS	2.17	B	1.87	B	1.94	B		

HCS7 Signalized Intersection Input Data

3 w/P AM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 with Proj...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	777	1162			1587		838	0				

Signal Information												
Cycle, s	140.0	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	15.9	64.0	36.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	777	1162			1587		838	0				
Initial Queue (Q _b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s ₀), veh/h	1900	1900			1900		1900	1900				
Parking (N _m), man/h		None			None			None				
Heavy Vehicles (P _{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	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	4			4		3	3				
Upstream Filtering (f)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	15.0	87.0		72.0		53.0	
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R _c), s	3.0	3.0		3.0		3.0		
Minimum Green (G _{min}), s	7	15		15		7		
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		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

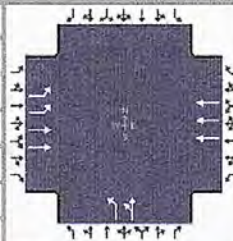
Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

HCS7 Signalized Intersection Results Summary

3 W/P AM IMP

General Information

Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 with Proj...		
Project Description	with Project + Improvements				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	777	1162			1587		838	0				

Signal Information

Cycle, s	140.0	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	15.9	64.0	36.1	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	23.9	95.9		72.0		44.1		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g _s), s	17.9					35.5		
Green Extension Time (g _e), s	0.0	0.0		0.0		0.6		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.01		

Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2		7	4				
Adjusted Flow Rate (v), veh/h	818	1223			1671		441	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809			1725		1810	1900				
Queue Service Time (g _s), s	15.9	14.1			31.0		33.5	0.0				
Cycle Queue Clearance Time (g _c), s	15.9	14.1			31.0		33.5	0.0				
Green Ratio (g/C)	0.58	0.63			0.46		0.26	0.26				
Capacity (c), veh/h	644	2271			2366		467	490				
Volume-to-Capacity Ratio (X)	1.270	0.539			0.706		0.945	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	695.1	167.4			398.2		605.2	0				
Back of Queue (Q), veh/ln (95 th percentile)	27.8	6.7			15.9		24.2	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d ₁), s/veh	33.2	5.4			20.9		51.0	0.0				
Incremental Delay (d ₂), s/veh	133.5	0.9			1.8		20.2	0.0				
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (d), s/veh	166.7	6.3			22.7		71.2	0.0				
Level of Service (LOS)	F	A			C		E					
Approach Delay, s/veh / LOS	70.6	E		22.7	C		71.2	E		0.0		
Intersection Delay, s/veh / LOS	51.4						D					

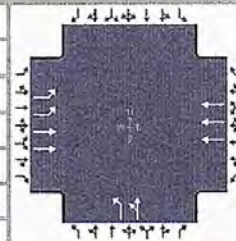
Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.66	B		1.69	B		2.33	B		2.62	C	
Bicycle LOS Score / LOS	2.17	B		1.41	A		1.94	B				

HCS7 Signalized Intersection Input Data

3 WIP AM 11/19

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - AM - 2035 with Proj...		
Project Description	with Project + Improvements				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	777	1162			1587		838	0				

Signal Information				Signal Phases								
Cycle, s	140.0	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	15.9	64.0	36.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	777	1162			1587		838	0				
Initial Queue (Q _b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s ₀), veh/h	1900	1900			1900		1900	1900				
Parking (N _m), man/h	None			None			None					
Heavy Vehicles (P _{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	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	4			4		3	3				
Upstream Filtering (f)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

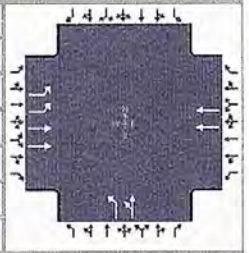
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	15.0	87.0		72.0		53.0	
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R _c), s	3.0	3.0		3.0		3.0		
Minimum Green (G _{min}), s	7	15		15		7		
Start-Up Lost Time (l _t), s	2.0	2.0		2.0	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		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

HCS7 Signalized Intersection Results Summary

#3 W/P PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 with Proj...		
Project Description	with Project				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	1260	1479			1556		643	0				

Signal Information				Signal Phases									
Cycle, s	140.0	Reference Phase	2	←	←	←	←	←	←	←	←	←	←
Offset, s	0	Reference Point	End	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
Uncoordinated	No	Simult. Gap E/W	On	Green	43.8	44.0	28.2	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	51.8	103.8		52.0		36.2		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g _s), s	45.8					27.7		
Green Extension Time (g _e), s	0.0	0.0		0.0		0.5		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.00		

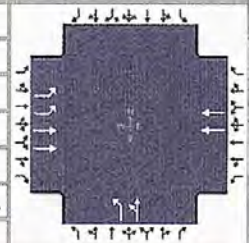
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2			6		7	4				
Adjusted Flow Rate (v), veh/h	1326	1557			1638		338	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809			1809		1810	1900				
Queue Service Time (g _s), s	43.8	12.4			44.0		25.7	0.0				
Cycle Queue Clearance Time (g _c), s	43.8	12.4			44.0		25.7	0.0				
Green Ratio (g/C)	0.64	0.68			0.31		0.20	0.20				
Capacity (c), veh/h	1234	2475			1137		365	383				
Volume-to-Capacity Ratio (X)	1.075	0.629			1.440		0.928	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	990.4	115.3			1861		470.1	0				
Back of Queue (Q), veh/ln (95 th percentile)	39.6	4.6			74.4		18.8	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d ₁), s/veh	42.1	2.5			40.7		54.9	0.0				
Incremental Delay (d ₂), s/veh	48.3	1.2			203.1		14.6	0.0				
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (d), s/veh	90.4	3.7			243.8		69.5	0.0				
Level of Service (LOS)	F	A			F		E					
Approach Delay, s/veh / LOS	43.6		D		243.8	F	69.5		E		0.0	
Intersection Delay, s/veh / LOS	112.9						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.65	B	1.71	B	2.16	B	2.48	B
Bicycle LOS Score / LOS	2.87	C	1.84	B	1.60	B		

HCS7 Signalized Intersection Input Data

#3 WIP PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 with Proj...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	1260	1479			1556		643	0				

Signal Information				Signal Phases								
Cycle, s	140.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap EW	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	43.8	44.0	28.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	1260	1479			1556		643	0				
Initial Queue (Q _b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s ₀), veh/h	1900	1900			1900		1900	1900				
Parking (N _m), man/h		None			None			None				
Heavy Vehicles (P _{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	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	4			4		3	3				
Upstream Filtering (f)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

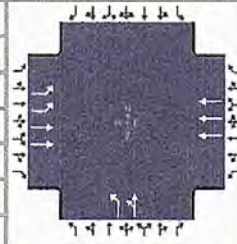
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	39.0	91.0		52.0		49.0	
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R _c), s	3.0	3.0		3.0		3.0		
Minimum Green (G _{min}), s	7	15		15		7		
Start-Up Lost Time (l _t), s	2.0	2.0		2.0	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		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

HCS7 Signalized Intersection Results Summary

3 WIP + IMP

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 with Proj...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	1260	1479			1556		643	0				

Signal Information				Phase Diagram								
Cycle, s	140.0	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	43.8	44.0	28.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	3.0	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		4		
Case Number	1.0	4.0		8.3		10.0		
Phase Duration, s	51.8	103.8		52.0		36.2		
Change Period, (Y+R _c), s	8.0	8.0		8.0		8.0		
Max Allow Headway (MAH), s	3.0	0.0		0.0		3.0		
Queue Clearance Time (g _s), s	45.8					27.7		
Green Extension Time (g _e), s	0.0	0.0		0.0		0.5		
Phase Call Probability	1.00					1.00		
Max Out Probability	1.00					0.00		

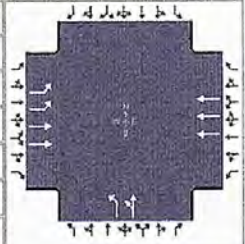
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2			6		7	4				
Adjusted Flow Rate (v), veh/h	1326	1557			1638		338	0				
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809			1725		1810	1900				
Queue Service Time (g _s), s	43.8	12.4			44.0		25.7	0.0				
Cycle Queue Clearance Time (g _c), s	43.8	12.4			44.0		25.7	0.0				
Green Ratio (g/C)	0.64	0.68			0.31		0.20	0.20				
Capacity (c), veh/h	1234	2475			1627		365	383				
Volume-to-Capacity Ratio (X)	1.075	0.629			1.007		0.928	0.000				
Back of Queue (Q), ft/ln (95 th percentile)	989.5	115.3			693.6		470.1	0				
Back of Queue (Q), veh/ln (95 th percentile)	39.6	4.6			27.7		18.8	0.0				
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00			0.00		0.00	0.00				
Uniform Delay (d ₁), s/veh	42.1	2.5			40.7		54.9	0.0				
Incremental Delay (d ₂), s/veh	48.2	1.2			23.9		14.6	0.0				
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0		0.0	0.0				
Control Delay (d), s/veh	90.3	3.7			64.6		69.5	0.0				
Level of Service (LOS)	F	A			F		E					
Approach Delay, s/veh / LOS	43.5		D		64.6		E		69.5		E	0.0
Intersection Delay, s/veh / LOS	52.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.65	B	1.71	B	2.33	B	2.62	C
Bicycle LOS Score / LOS	2.87	C	1.39	A	1.60	B		

HCS7 Signalized Intersection Input Data

#3 with IMP

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 1, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	I-95 NB Ramp	File Name	I-95 NB Ramp & Midway Rd - PM - 2035 with Proj...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	1260	1479			1556		643	0				

Signal Information				Signal Timing (s)									
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	43.8	44.0	28.2	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	5.0	5.0	0.0	0.0	0.0			
				Red	3.0	3.0	3.0	0.0	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	1260	1479			1556		643	0				
Initial Queue (Q _b), veh/h	0	0			0		0	0				
Base Saturation Flow Rate (s ₀), veh/h	1900	1900			1900		1900	1900				
Parking (N _m), man/h		None			None			None				
Heavy Vehicles (P _{HV}), %	0	0			0		0	0				
Ped / Bike / RTOR, /h	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	4			4		3	3				
Upstream Filtering (I)	1.00	1.00			1.00		1.00	1.00				
Lane Width (W), ft	12.0	12.0			12.0		12.0	12.0				
Turn Bay Length, ft	0	0			0		0	0				
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45			45		45	45				

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	39.0	91.0		52.0		49.0	
Yellow Change Interval (Y), s	5.0	5.0		5.0		5.0		
Red Clearance Interval (R _c), s	3.0	3.0		3.0		3.0		
Minimum Green (G _{min}), s	7	15		15		7		
Start-Up Lost Time (I _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		
Recall Mode	Off	Min		Min		Off		
Dual Entry	No	Yes		Yes		Yes		
Walk (Walk), s	0.0	0.0		0.0	0.0	0.0		
Pedestrian Clearance Time (PC), s	0.0	0.0		0.0	0.0	0.0		

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

TURNING MOVEMENT VOLUME COUNTS

#4E

CONTROL TWSC

N/S STREET: Willow Lakes
 FILENAME: 7/18/2020
 COUNT DATE: 7/18/2020
 REPORT DATE: 7/18/2020

E/W STREET: Midway Rd
 CITY: St Lucie
 DAY: Tuesday
 ANALYSIS YEAR: 2020

15 Min Period	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EFT	EBR	WBL	WFT	WBR		TOTAL
7:00-7:15	0	0	2	0	0	0	0	159	30	5	203	0	398	1861
7:15-7:30	0	0	3	0	0	0	0	158	24	7	243	0	435	1861
7:30-7:45	0	0	1	0	0	0	0	217	27	2	235	0	483	1896
7:45-8:00	0	0	2	0	0	0	0	226	30	6	228	0	488	1700
8:00-8:15	0	0	0	0	0	0	0	234	30	6	185	0	455	1513
8:15-8:30	0	0	2	0	0	0	0	223	22	2	181	0	430	
8:30-8:45	0	0	0	0	0	0	0	143	8	3	173	0	317	
8:45-9:00	0	0	0	0	0	0	0	140	13	7	141	0	301	

AM PEAK HOUR IS FROM:
 Volumes 1111
 Season Factor 1
 Growth Rate 1
 Years Growth 0

7:15AM TO 8:00AM
 Volumes 1111
 Season Factor 1
 Growth Rate 1
 Years Growth 0

AM PEAK HOUR IS FROM:
 Volumes 1111
 Season Factor 1
 Growth Rate 1
 Years Growth 0

Trips In 835
 Trips Out 888

PHF: 0.953
 Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0

Total 0 0 6 0 0 0 0 835 111 21 888 0 1861

15 Min Period	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EFT	EBR	WBL	WFT	WBR		TOTAL
4:00-4:15	15	0	3	0	0	0	0	185	7	2	224	0	436	1672
4:15-4:30	15	0	1	0	0	0	0	151	16	1	211	0	395	1686
4:30-4:45	15	0	3	0	0	0	0	188	16	0	194	0	416	1707
4:45-5:00	18	0	3	0	0	0	0	220	22	3	159	0	425	1677
5:00-5:15	25	0	9	0	0	0	0	175	19	1	221	0	450	1622
5:15-5:30	12	0	3	0	0	0	0	209	12	1	179	0	416	
5:30-5:45	17	0	0	0	0	0	0	182	12	0	175	0	366	
5:45-6:00	6	0	2	0	0	0	0	154	9	0	159	0	370	

PM PEAK HOUR IS FROM:
 Volumes 753
 Season Factor 1
 Growth Rate 1
 Years Growth 0

4:30 PM TO 5:00PM
 Volumes 753
 Season Factor 1
 Growth Rate 1
 Years Growth 0

PM PEAK HOUR IS FROM:
 Volumes 753
 Season Factor 1
 Growth Rate 1
 Years Growth 0

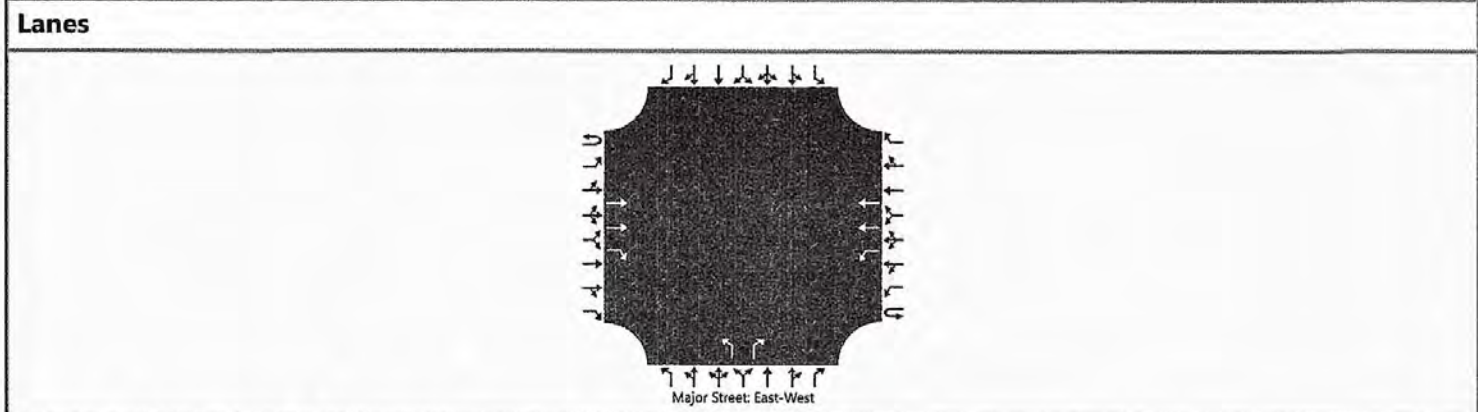
Trips In 792
 Trips Out 823

PHF: 0.948
 Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0

Total 70 0 18 0 0 0 0 792 69 5 753 0 1707

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	James Kemp	Intersection	Midway & LTC Pkwy
Agency/Co.	O'Rourke Engineering	Jurisdiction	St. Lucie County
Date Performed	4/10/2020	East/West Street	Midway Road
Analysis Year	2020	North/South Street	LTC Parkway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Existing		



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	0	2	1	0	1	2	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			835	111	0	21	888			0		6				
Percent Heavy Vehicles (%)					3	3				3		3				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No							No						
Median Type Storage					Left Only								1			

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.5		6.9				
Critical Headway (sec)					4.16				6.86		6.96				
Base Follow-Up Headway (sec)					2.2				3.5		3.3				
Follow-Up Headway (sec)					2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					22				0		6				
Capacity, c (veh/h)					684				254		563				
v/c Ratio					0.03				0.00		0.01				
95% Queue Length, Q ₉₅ (veh)					0.1				0.0		0.0				
Control Delay (s/veh)					10.4				19.2		11.5				
Level of Service (LOS)					B				C		B				
Approach Delay (s/veh)					0.2					11.5					
Approach LOS										B					

HCS7 Two-Way Stop-Control Report

/

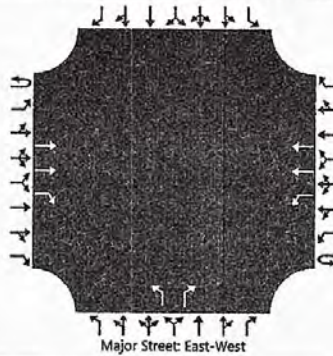
General Information

Site Information

45

Analyst	James Kemp	Intersection	Midway & LTC Pkwy
Agency/Co.	O'Rourke Engineering	Jurisdiction	St. Lucie County
Date Performed	4/10/2020	East/West Street	Midway Road
Analysis Year	2020	North/South Street	LTC Parkway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	Existing		

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	0	2	1	0	1	2	0	1	0	1		0	0	0	
Configuration			T	R		L	T			L		R				
Volume (veh/h)			792	69	0	5	753		70		18					
Percent Heavy Vehicles (%)					3	3			3		3					
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized			No						No							
Median Type Storage					Left Only								1			

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.5		6.9					
Critical Headway (sec)					4.16				6.86		6.96					
Base Follow-Up Headway (sec)					2.2				3.5		3.3					
Follow-Up Headway (sec)					2.23				3.53		3.33					

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					5				74		19					
Capacity, c (veh/h)					740				287		582					
v/c Ratio					0.01				0.26		0.03					
95% Queue Length, Q ₉₅ (veh)					0.0				1.0		0.1					
Control Delay (s/veh)					9.9				21.8		11.4					
Level of Service (LOS)					A				C		B					
Approach Delay (s/veh)					0.1				19.7							
Approach LOS									C							

TURNING MOVEMENT VOLUME COUNTS

CONTROL: TRAC

ENVIRONMENT: MICHIGAN

CITY: LANSING

DATE: 08/08/2023

PROJECT: 2023 TURNING MOVEMENT VOLUME COUNTS

DATE: 08/08/2023

TIME: 08:00 AM

TIME: 04:00 PM

15 MIN Period	Northbound				Eastbound				Westbound				Southbound			
	NEL	NEF	NBR	NBL	EAL	EFT	EBR	EBL	WAL	WFT	WBR	WBL	SAL	SFT	SBR	SBL
7:00-7:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

15 MIN Period	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

15 MIN Period	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

15 MIN Period	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

15 MIN Period	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

15 MIN Period	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

15 MIN Period	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL	WEL	WFT	WBR	WBL	SAL	SFT	SBR	SBL
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM PLOA HOUR IN DEMAND: 160, 1481, 1473, 1504, 1481, 1473, 1504, 1481, 1473, 1504

PM PLOA HOUR IN DEMAND: 2085, 1664, 1779, 1459, 1664, 1779, 1459

AM PLOA HOUR IN DEMAND: 160, 1481, 1473, 1504, 1481, 1473, 1504, 1481, 1473, 1504

PM PLOA HOUR IN DEMAND: 2085, 1664, 1779, 1459, 1664, 1779, 1459

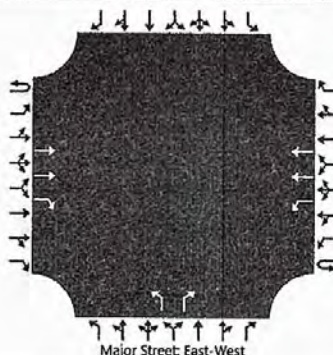
AM PLOA HOUR IN DEMAND: 160, 1481, 1473, 1504, 1481, 1473, 1504, 1481, 1473, 1504

PM PLOA HOUR IN DEMAND: 2085, 1664, 1779, 1459, 1664, 1779, 1459

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	James Kemp	Intersection	Midway & LTC Pkwy
Agency/Co.	O'Rourke Engineering	Jurisdiction	St. Lucie County
Date Performed	4/10/2020	East/West Street	Midway Road
Analysis Year	2035	North/South Street	LTC Parkway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	without Project		

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	0	2	1	0	1	2	0	1	0	1			0	0	0
Configuration			T	R		L	T		L		R					
Volume (veh/h)			1330	138	0	23	1481		401		104					
Percent Heavy Vehicles (%)					3	3			3		3					
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized		No							No							
Median Type Storage					Left Only								1			

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.16				6.86		6.96				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.23				3.53		3.33				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						24				422		109				
Capacity, c (veh/h)						421				129		379				
v/c Ratio						0.06				3.28		0.29				
95% Queue Length, Q ₉₅ (veh)						0.2				40.6		1.2				
Control Delay (s/veh)						14.1				1098.9		18.3				
Level of Service (LOS)						B				F		C				
Approach Delay (s/veh)						0.2				876.3						
Approach LOS										F						

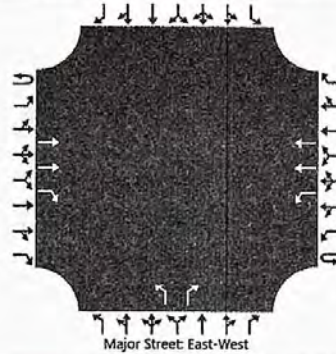
HCS7 Two-Way Stop-Control Report

General Information

Site Information

Analyst	James Kemp	Intersection	Midway & LTC Pkwy
Agency/Co.	O'Rourke Engineering	Jurisdiction	St. Lucie County
Date Performed	4/10/2020	East/West Street	Midway Road
Analysis Year	2035	North/South Street	LTC Parkway
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	without Project		

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	
Number of Lanes	0	0	2	1	0	1	2	0	1	0	1		0	0	0	
Configuration			T	R		L	T		L		R					
Volume (veh/h)			1644	129	0	5	1453		552		198					
Percent Heavy Vehicles (%)					3	3			3		3					
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized		No							No							
Median Type Storage					Left Only								1			

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.5		6.9				
Critical Headway (sec)					4.16				6.86		6.96				
Base Follow-Up Headway (sec)					2.2				3.5		3.3				
Follow-Up Headway (sec)					2.23				3.53		3.33				

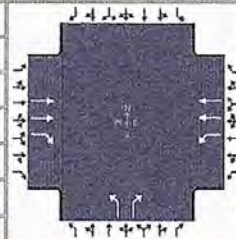
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					5				581		208				
Capacity, c (veh/h)					315				95		295				
v/c Ratio					0.02				6.09		0.71				
95% Queue Length, Q ₉₅ (veh)					0.1				64.1		5.0				
Control Delay (s/veh)					16.6				2378.8		42.0				
Level of Service (LOS)					C				F		E				
Approach Delay (s/veh)					0.1				1761.9						
Approach LOS									F						

HCS7 Signalized Intersection Results Summary

#4 w/o AM + imp

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	LTC Parkway	File Name	LTC Pkwy Midway - AM - 2035 w.o. Project + Imp...				
Project Description	without Project + Improvements						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1330	138	23	1481		401		104			

Signal Information												
Cycle, s	120.0	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	3.3	74.7	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		80.7	9.3	90.0		30.0		
Change Period, (Y+R _c), s		6.0	6.0	6.0		6.0		
Max Allow Headway (MAH), s		0.0	3.0	0.0		3.1		
Queue Clearance Time (g _s), s			2.5			26.0		
Green Extension Time (g _e), s		0.0	0.0	0.0		0.0		
Phase Call Probability			0.55			1.00		
Max Out Probability			0.00			1.00		

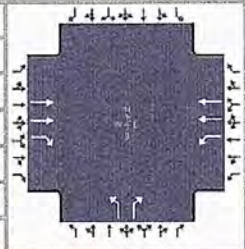
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (v), veh/h		1400	145	24	1559		422		109			
Adjusted Saturation Flow Rate (s), veh/h/ln		1809	1610	1810	1809		1810		1610			
Queue Service Time (g _s), s		28.6	4.5	0.5	27.3		24.0		7.0			
Cycle Queue Clearance Time (g _c), s		28.6	4.5	0.5	27.3		24.0		7.0			
Green Ratio (g/C)		0.62	0.62	0.67	0.70		0.20		0.20			
Capacity (c), veh/h		2251	1002	260	2532		362		322			
Volume-to-Capacity Ratio (X)		0.622	0.145	0.093	0.616		1.166		0.340			
Back of Queue (Q), ft/ln (95 th percentile)		402.6	68.6	8.5	354		758.2		123			
Back of Queue (Q), veh/ln (95 th percentile)		16.1	2.7	0.3	14.2		30.3		4.9			
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay (d ₁), s/veh		14.0	9.4	10.9	9.5		48.0		41.2			
Incremental Delay (d ₂), s/veh		1.3	0.3	0.1	1.1		100.8		0.2			
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (d), s/veh		15.3	9.7	11.0	10.6		148.8		41.4			
Level of Service (LOS)		B	A	B	B		F		D			
Approach Delay, s/veh / LOS	14.7	B		10.6	B		126.7	F		0.0		
Intersection Delay, s/veh / LOS	29.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.88	B	0.67	A	2.33	B	2.32	B
Bicycle LOS Score / LOS	1.76	B	1.79	B		F		

HCS7 Signalized Intersection Input Data

4 W/O AM + IMP

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	LTC Parkway	File Name	LTC Pkwy & Midway - AM - 2035 w.o. Project + I...				
Project Description	without Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1330	138	23	1481		401		104			

Signal Information												
Cycle, s	120.0	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	3.3	74.7	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1330	138	23	1481		401		104			
Initial Queue (Q _b), veh/h		0	0	0	0		0		0			
Base Saturation Flow Rate (s ₀), veh/h		1900	1900	1900	1900		1900		1900			
Parking (N _m), man/h		None			None			None				
Heavy Vehicles (P _{HV}), %		0	0	0	0		0		0			
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 (A _T)		3	3	3	3		3		3			
Upstream Filtering (f)		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			
Turn Bay Length, ft		0	0	0	0		0		0			
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h		45	45	45	45		45		45			

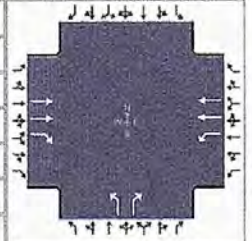
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s		70.0	20.0	90.0		30.0	
Yellow Change Interval (Y), s		4.0	4.0	4.0		4.0		
Red Clearance Interval (R _c), s		2.0	2.0	2.0		2.0		
Minimum Green (G _{min}), s		6	6	6		6		
Start-Up Lost Time (l _f), s		2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s		2.0	2.0	2.0	2.0			
Passage (P _T), s		2.0	2.0	2.0		2.0		
Recall Mode		Min	Off	Min		Off		
Dual Entry		Yes	No	Yes		Yes		
Walk (Walk), s		0.0	0.0	0.0	0.0			
Pedestrian Clearance Time (P _C), s		0.0	0.0	0.0	0.0			

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

HCS7 Signalized Intersection Results Summary

#4 w/o PM + Imp

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	LTC Parkway	File Name	LTC Pkwy Midway - PM - 2035 w.o. Project + Im...				
Project Description	without Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1644	129	5	1453		552		198			

Signal Information														
Cycle, s	120.0	Reference Phase	2											
Offset, s	0	Reference Point	End	Green	1.0	67.0	34.0	0.0	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	0.0	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		73.0	7.0	80.0		40.0		
Change Period, (Y+R _c), s		6.0	6.0	6.0		6.0		
Max Allow Headway (MAH), s		0.0	3.0	0.0		3.1		
Queue Clearance Time (g _s), s			2.1			36.0		
Green Extension Time (g _e), s		0.0	0.0	0.0		0.0		
Phase Call Probability			0.16			1.00		
Max Out Probability			0.00			1.00		

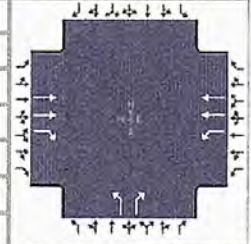
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	2	12		1	6		3		18			
Adjusted Flow Rate (v), veh/h	1731	136		5	1529		581		208			
Adjusted Saturation Flow Rate (s), veh/h/ln	1809	1610		1810	1809		1810		1610			
Queue Service Time (g _s), s	48.6	1.7		0.1	33.7		34.0		12.8			
Cycle Queue Clearance Time (g _c), s	48.6	1.7		0.1	33.7		34.0		12.8			
Green Ratio (g/C)	0.56	0.84		0.58	0.62		0.28		0.28			
Capacity (c), veh/h	2021	1356		118	2231		513		456			
Volume-to-Capacity Ratio (X)	0.856	0.100		0.044	0.686		1.133		0.457			
Back of Queue (Q), ft/ln (95 th percentile)	679.4	13.7		2.6	464.6		932.7		213.2			
Back of Queue (Q), veh/ln (95 th percentile)	27.2	0.5		0.1	18.6		37.3		8.5			
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00		0.00		0.00			
Uniform Delay (d ₁), s/veh	22.4	1.6		21.3	15.3		43.0		35.4			
Incremental Delay (d ₂), s/veh	4.9	0.1		0.1	1.7		81.9		0.3			
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0	0.0		0.0		0.0			
Control Delay (d), s/veh	27.3	1.8		21.4	17.0		124.9		35.7			
Level of Service (LOS)	C		A	C		B	F		D			
Approach Delay, s/veh / LOS	25.5	C		17.0	B		101.3	F		0.0		
Intersection Delay, s/veh / LOS	36.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	0.69	A	2.33	B	2.32	B
Bicycle LOS Score / LOS	2.03	B	1.75	B		F		

HCS7 Signalized Intersection Input Data

#4 w/o PM + mid

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	LTC Parkway	File Name	LTC Pkwy & Midway - PM - 2035 w.o. Project + I...				
Project Description	without Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		1644	129	5	1453		552		198			

Signal Information				Signal Phases								
Cycle, s	120.0	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	1.0	67.0	34.0	0.0	0.0	0.0				
		Yellow	4.0	4.0	4.0	0.0	0.0	0.0				
		Red	2.0	2.0	2.0	0.0	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		1644	129	5	1453		552		198			
Initial Queue (Q _b), veh/h		0	0	0	0		0		0			
Base Saturation Flow Rate (s ₀), veh/h		1900	1900	1900	1900		1900		1900			
Parking (N _m), man/h		None		None			None					
Heavy Vehicles (P _{HV}), %		0	0	0	0		0		0			
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			
Upstream Filtering (f)		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			
Turn Bay Length, ft		0	0	0	0		0		0			
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h		45	45	45	45		45		45			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s		60.0	20.0	80.0	20.0	40.0	
Yellow Change Interval (Y), s		4.0	4.0	4.0	4.0	4.0		
Red Clearance Interval (R _c), s		2.0	2.0	2.0	2.0	2.0		
Minimum Green (G _{min}), s		6	6	6	6	6		
Start-Up Lost Time (l), s		2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s		2.0	2.0	2.0	2.0			
Passage (PT), s		2.0	2.0	2.0	2.0	2.0		
Recall Mode		Min	Off	Min	Off	Off		
Dual Entry		Yes	No	Yes	No	Yes		
Walk (Walk), s		0.0	0.0	0.0	0.0			
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0	0.0			

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No		0.50	No		0.50	No		0.50			

4 WIP

TURNING MOVEMENT VOLUME COUNTS

ITC Fwy: Willow Lakes
 DATE: 11/19/2020
 COUNTY: 2023
 CONTROL: THOC
 DIRECTION: Midway Rd
 CITY: Stillme
 DATE: Tuesday
 ANCHOR YEAR: 2023

15 MIN PERIOD	Northbound				Eastbound				Westbound				ONE HOUR TOTAL SUM	
	NBL	NRT	WBL	WRT	ENL	EBT	ESL	WBL	WRT	NBL	NRT	WBL		WRT
7:00-7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30-7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45-8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00-8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15-8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30-8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45-9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0

15 MIN PERIOD	Northbound				Eastbound				Westbound				ONE HOUR TOTAL SUM	
	NBL	NRT	WBL	WRT	ENL	EBT	ESL	WBL	WRT	NBL	NRT	WBL		WRT
9:00-9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15-9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30-9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45-10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00-10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15-10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30-10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45-11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ITC Fwy: Willow Lakes - 2023 - with Project - 7.8.22
 DATE: 11/19/2020
 COUNTY: 2023
 CONTROL: THOC
 DIRECTION: Midway Rd
 CITY: Stillme
 DATE: Tuesday
 ANCHOR YEAR: 2023

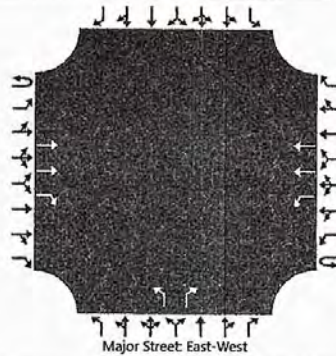
HCS7 Two-Way Stop-Control Report

General Information

Site Information

Analyst	James Kemp	Intersection	Midway & LTC Pkwy
Agency/Co.	O'Rourke Engineering	Jurisdiction	St. Lucie County
Date Performed	4/10/2020	East/West Street	Midway Road
Analysis Year	2035	North/South Street	LTC Parkway
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	with Project		

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	0	2	1	0	1	2	0	1	0	1		0	0	0	
Configuration			T	R		L	T		L		R					
Volume (veh/h)			1660	138	0	23	1901		401		104					
Percent Heavy Vehicles (%)					3	3			3		3					
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized		No							No							
Median Type Storage					Left Only								1			

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.5		6.9					
Critical Headway (sec)					4.16				6.86		6.96					
Base Follow-Up Headway (sec)					2.2				3.5		3.3					
Follow-Up Headway (sec)					2.23				3.53		3.33					

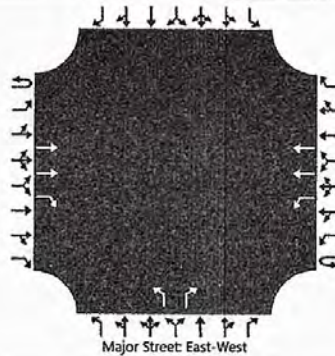
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					24				422		109					
Capacity, c (veh/h)					308				83		291					
v/c Ratio					0.08				5.09		0.38					
95% Queue Length, Q ₉₅ (veh)					0.3				45.8		1.7					
Control Delay (s/veh)					17.7				1939.7		24.6					
Level of Service (LOS)					C				F		C					
Approach Delay (s/veh)					0.2					1545.3						
Approach LOS										F						

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	James Kemp			Intersection	Midway & LTC Pkwy		
Agency/Co.	O'Rourke Engineering			Jurisdiction	St. Lucie County		
Date Performed	4/10/2020			East/West Street	Midway Road		
Analysis Year	2035			North/South Street	LTC Parkway		
Time Analyzed	PM Peak Hour			Peak Hour Factor	0.95		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	with Project						

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	0	2	1	0	1	2	0	1	0	1		0	0	0	
Configuration			T	R		L	T		L		R					
Volume (veh/h)			1965	129	0	5	1903		552		198					
Percent Heavy Vehicles (%)					3	3			3		3					
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized		No							No							
Median Type Storage			Left Only								1					

Critical and Follow-up Headways

Base Critical Headway (sec)					4.1				7.5		6.9					
Critical Headway (sec)					4.16				6.86		6.96					
Base Follow-Up Headway (sec)					2.2				3.5		3.3					
Follow-Up Headway (sec)					2.23				3.53		3.33					

Delay, Queue Length, and Level of Service

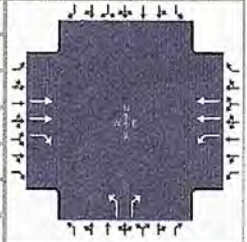
Flow Rate, v (veh/h)					5				581		208					
Capacity, c (veh/h)					232				62		227					
v/c Ratio					0.02				9.42		0.92					
95% Queue Length, Q ₉₅ (veh)					0.1				68.1		7.7					
Control Delay (s/veh)					20.9				3918.5		85.0					
Level of Service (LOS)					C				F		F					
Approach Delay (s/veh)					0.1				2906.5							
Approach LOS									F							

HCS7 Signalized Intersection Results Summary

4 w/p AM + imp

General Information

Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00
Intersection	LTC Parkway	File Name	LTC Pkwy Midway - AM - 2035 with Project + Imp...		
Project Description	with Project + Improvements				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1660	138	23	1901		401		104			

Signal Information

Cycle, s	120.0	Reference Phase	2																
Offset, s	0	Reference Point	End	Green	3.3	74.7	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		80.7	9.3	90.0		30.0		
Change Period, (Y+R _c), s		6.0	6.0	6.0		6.0		
Max Allow Headway (MAH), s		0.0	3.0	0.0		3.1		
Queue Clearance Time (g _s), s			2.5			26.0		
Green Extension Time (g _e), s		0.0	0.0	0.0		0.0		
Phase Call Probability			0.55			1.00		
Max Out Probability			0.00			1.00		

Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (v), veh/h		1747	145	24	2001		422		109			
Adjusted Saturation Flow Rate (s), veh/h/ln		1809	1610	1810	1809		1810		1610			
Queue Service Time (g _s), s		42.3	4.5	0.5	44.6		24.0		7.0			
Cycle Queue Clearance Time (g _c), s		42.3	4.5	0.5	44.6		24.0		7.0			
Green Ratio (g/C)		0.62	0.62	0.67	0.70		0.20		0.20			
Capacity (c), veh/h		2251	1002	185	2532		362		322			
Volume-to-Capacity Ratio (X)		0.776	0.145	0.131	0.790		1.166		0.340			
Back of Queue (Q), ft/ln (95 th percentile)		567.3	68.6	10.7	543.3		758.2		123			
Back of Queue (Q), veh/ln (95 th percentile)		22.7	2.7	0.4	21.7		30.3		4.9			
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay (d ₁), s/veh		16.6	9.4	15.7	12.1		48.0		41.2			
Incremental Delay (d ₂), s/veh		2.7	0.3	0.1	2.6		100.8		0.2			
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (d), s/veh		19.3	9.7	15.8	14.7		148.8		41.4			
Level of Service (LOS)		B	A	B	B		F		D			
Approach Delay, s/veh / LOS	18.5	B		14.7	B		126.7	F		0.0		
Intersection Delay, s/veh / LOS	29.7						C					

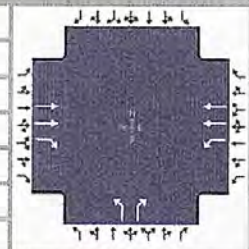
Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.88	B		0.67	A		2.33	B		2.32	B	
Bicycle LOS Score / LOS	2.05	B		2.16	B			F				

HCS7 Signalized Intersection Input Data

#4 w/p AM+imp

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	LTC Parkway	File Name	LTC Pkwy & Midway - AM - 2035 with Project + I...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1660	138	23	1901		401		104			

Signal Information													
Cycle, s	120.0	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	3.3	74.7	24.0	0.0	0.0	0.0	0.0				
		Yellow	4.0	4.0	4.0	0.0	0.0	0.0	0.0				
		Red	2.0	2.0	2.0	0.0	0.0	0.0	0.0				

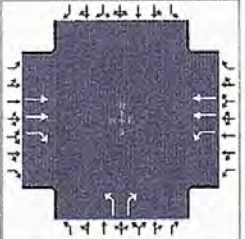
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1660	138	23	1901		401		104			
Initial Queue (Q _b), veh/h		0	0	0	0		0		0			
Base Saturation Flow Rate (s ₀), veh/h		1900	1900	1900	1900		1900		1900			
Parking (N _m), man/h		None			None				None			
Heavy Vehicles (P _{HV}), %		0	0	0	0		0		0			
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			
Upstream Filtering (f)		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			
Turn Bay Length, ft		0	0	0	0		0		0			
Grade (Pg), %		0			0				0			0
Speed Limit, mi/h		45	45	45	45		45		45			

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s		70.0	20.0	90.0		30.0		
Yellow Change Interval (Y), s		4.0	4.0	4.0		4.0		
Red Clearance Interval (R _c), s		2.0	2.0	2.0		2.0		
Minimum Green (G _{min}), s		6	6	6		6		
Start-Up Lost Time (l _t), s		2.0	2.0	2.0	2.0			
Extension of Effective Green (e), s		2.0	2.0	2.0	2.0			
Passage (PT), s		2.0	2.0	2.0		2.0		
Recall Mode		Min	Off	Min		Off		
Dual Entry		Yes	No	Yes		Yes		
Walk (Walk), s		0.0	0.0	0.0	0.0			
Pedestrian Clearance Time (PC), s		0.0	0.0	0.0	0.0			

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25			
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0			
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No			
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0			
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50				

HCS7 Signalized Intersection Results Summary #4 w/p PM+Imp

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 28, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	LTC Parkway	File Name	LTC Pkwy Midway - PM - 2035 with Project + Im...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		1965	129	5	1903		552		198			

Signal Information												
Cycle, s	140.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	1.1	86.9	34.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	0.0	0.0	0.0		
				Red	2.0	2.0	2.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6		8		
Case Number		7.3	1.0	4.0		9.0		
Phase Duration, s		92.9	7.1	100.0		40.0		
Change Period, (Y+R _c), s		6.0	6.0	6.0		6.0		
Max Allow Headway (MAH), s		0.0	3.0	0.0		3.1		
Queue Clearance Time (g _s), s			2.1			36.0		
Green Extension Time (g _e), s		0.0	0.0	0.0		0.0		
Phase Call Probability			0.19			1.00		
Max Out Probability			0.00			1.00		

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6		3		18			
Adjusted Flow Rate (v), veh/h		2068	136	5	2003		581		208			
Adjusted Saturation Flow Rate (s), veh/h/ln		1809	1610	1810	1809		1810		1610			
Queue Service Time (g _s), s		70.9	1.8	0.1	57.1		34.0		15.8			
Cycle Queue Clearance Time (g _c), s		70.9	1.8	0.1	57.1		34.0		15.8			
Green Ratio (g/C)		0.62	0.86	0.64	0.67		0.24		0.24			
Capacity (c), veh/h		2245	1390	89	2429		439		391			
Volume-to-Capacity Ratio (X)		0.921	0.098	0.059	0.825		1.322		0.533			
Back of Queue (Q), ft/ln (95 th percentile)		960	14	4.2	736.4		1278.8		259.6			
Back of Queue (Q), veh/ln (95 th percentile)		38.4	0.6	0.2	29.5		51.2		10.4			
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay (d ₁), s/veh		23.5	1.4	28.5	16.9		53.0		46.1			
Incremental Delay (d ₂), s/veh		7.7	0.1	0.1	3.3		160.2		0.7			
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0		0.0		0.0			
Control Delay (d), s/veh		31.2	1.6	28.6	20.3		213.2		46.8			
Level of Service (LOS)		C	A	C	C		F		D			
Approach Delay, s/veh / LOS	29.4	C		20.3	C		169.3	F		0.0		
Intersection Delay, s/veh / LOS	47.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.89	B	0.68	A	2.33	B	2.33	B
Bicycle LOS Score / LOS	2.31	B	2.14	B		F		

HCS7 Signalized Intersection Input Data

#4 w/p PM + 1amP

General Information				Intersection Information				Diagram																																																																																																																																																																																																																																						
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TURNING MOVEMENT VOLUME COUNTS

CONTROL: Signalized

EW STREET: Midway Rd

Guides Cut Off
Willow Lakes
2/18/2020

DAY: Tuesday
CITY: St. Lucie
ANALYSIS YEAR: 2020

N/S STREET:
FILENAME:
COUNT DATE:
REPORT DATE:



Northbound				Southbound				Eastbound				Westbound			
NBL	NBT	NBR	ONE HOUR SUM	SBL	SBT	SBR	ONE HOUR SUM	EBL	EBT	EBR	TOTAL	WBL	WBT	WBR	TOTAL
17	25	9	16	12	22	28	2438	28	146	5	518	40	160	27	2438
17	25	13	24	16	31	52	2482	52	196	8	628	43	214	19	2482
26	20	29	22	18	27	29	2530	29	170	13	590	24	196	16	2530
18	20	25	29	22	31	51	2200	51	261	9	702	25	187	18	702
9	16	6	18	18	24	81	1880	81	168	5	562	17	173	27	562
7	4	4	15	5	33	40	476	40	139	9	476	17	170	33	476
8	11	15	25	8	22	43	460	43	119	5	460	16	173	15	460
3	12	11	17	7	22	37	382	37	110	1	382	17	131	13	382

PHF: 0.884
Seasonal Factor: 1
Growth Rate: 1
Years Growth: 0

Trips In
Trips Out

Total 70 81 73 93 99 104 213 755 35 109 770 80 2482

AM PEAK HOUR IS FROM:
Volumes
Season Factor
Growth
In/Out
Percentage
PROJECT



Northbound				Southbound				Eastbound				Westbound			
NBL	NBT	NBR	ONE HOUR SUM	SBL	SBT	SBR	ONE HOUR SUM	EBL	EBT	EBR	TOTAL	WBL	WBT	WBR	TOTAL
6	8	32	56	9	61	46	2068	46	127	10	524	14	128	17	2068
10	20	11	55	11	64	44	2035	44	161	16	561	1	135	33	2035
15	13	25	58	6	40	39	1962	39	162	25	531	12	142	14	1962
11	7	17	39	7	28	21	1966	21	171	16	452	7	117	9	452
5	13	18	48	10	27	23	491	23	145	10	491	14	115	8	491
11	10	12	46	7	21	23	488	23	159	16	488	15	152	14	488
6	7	11	45	16	27	18	535	18	227	10	535	15	133	20	535
1	10	12	23	7	27	37	609	37	175	2	609	9	115	11	609

PHF: 0.932
Seasonal Factor: 1
Growth Rate: 1
Years Growth: 0

Trips In
Trips Out

Total 42 48 85 209 33 190 130 621 69 36 522 83 2068

PM PEAK HOUR IS FROM:
Volumes
Season Factor
Growth
In/Out
Percentage
PROJECT

#56

St. Lucie County



00022 - MIDWAY RD @ GLADES CUT OFF - - Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

Plan 1 - ""

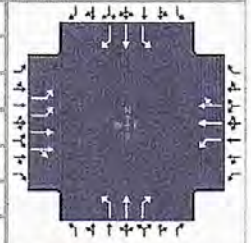
Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	15	10	7	7	10	10	7	7	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	0	0	0	0	7	0	0	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	20	0	0	0	0	0	20	0	0	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	25	60	20	25	25	60	10	25	35	35	35	35	35	35	35	35
Max2	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCS7 Signalized Intersection Results Summary

5 E AM

General Information

Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.88
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1 > 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - Existing - 6.2.202...		
Project Description	Existing				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	213	755	35	109	770	80	70	81	73	93	99	104

Signal Information

Cycle, s	85.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	9.2	3.5	10.0	7.3	0.8	24.2			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	0.0	5.0	4.0	0.0	4.0			
				Red	3.0	0.0	3.0	3.0	0.0	3.0			

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	15.1	32.0	14.3	31.2	20.7	21.5	17.2	18.0
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.1	3.1	3.1	3.1	3.2	3.1	3.2
Queue Clearance Time (g _s), s	7.7	20.8	7.7	23.2	4.9	5.9	6.1	7.9
Green Extension Time (g _e), s	0.4	2.0	0.0	1.0	0.1	0.8	0.1	0.8
Phase Call Probability	1.00	1.00	0.95	1.00	0.85	1.00	0.92	1.00
Max Out Probability	0.00	0.83	1.00	1.00	0.00	0.00	0.00	0.00

Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	242	452	445	124	491	475	80	92	83	106	113	118
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1870	1810	1900	1837	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	5.7	18.8	18.8	5.7	21.2	21.2	2.9	3.6	3.9	4.1	4.7	5.9
Cycle Queue Clearance Time (g _c), s	5.7	18.8	18.8	5.7	21.2	21.2	2.9	3.6	3.9	4.1	4.7	5.9
Green Ratio (g/C)	0.10	0.29	0.29	0.09	0.28	0.28	0.27	0.16	0.16	0.23	0.12	0.12
Capacity (c), veh/h	335	558	549	156	541	523	436	302	256	403	223	189
Volume-to-Capacity Ratio (X)	0.722	0.811	0.811	0.793	0.908	0.908	0.182	0.304	0.324	0.262	0.503	0.624
Back of Queue (Q), ft/ln (95 th percentile)	109.1	358.4	354.3	128.6	436.5	426.3	53.4	73.7	66.7	77	97.3	104.6
Back of Queue (Q), veh/ln (95 th percentile)	4.4	14.3	14.2	5.1	17.5	17.1	2.1	2.9	2.7	3.1	3.9	4.2
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	37.4	27.8	27.8	38.1	29.3	29.3	24.0	31.6	31.7	27.1	35.2	35.7
Incremental Delay (d ₂), s/veh	1.1	8.2	8.3	9.3	17.8	18.3	0.1	0.2	0.3	0.1	0.7	1.3
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	38.5	36.0	36.2	47.4	47.2	47.6	24.1	31.8	32.0	27.2	35.8	37.0
Level of Service (LOS)	D	D	D	D	D	D	C	C	C	C	D	D
Approach Delay, s/veh / LOS	36.6		D	47.4		D	29.4		C	33.5		C
Intersection Delay, s/veh / LOS	39.8						D					

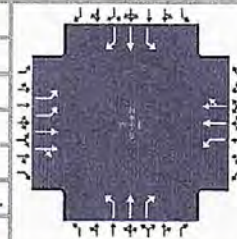
Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.11		B	2.28		B	2.29		B	2.45		B
Bicycle LOS Score / LOS	1.43		A	1.39		A	0.91		A	1.04		A

HCS7 Signalized Intersection Input Data

5 E AM

General Information				Intersection Information			
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Demand Information	EB			WB			NB			SB		
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Approach Movement												
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Signal Information				Signal Phases											
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Green	9.2	3.5	10.0	7.3	0.8	24.2									
Yellow	5.0	0.0	5.0	4.0	0.0	4.0									
Red	3.0	0.0	3.0	3.0	0.0	3.0									

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	213	755	35	109	770	80	70	81	73	93	99	104
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	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	20.0	25.0	10.0	25.0	25.0	60.0	25.0	60.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	15	10	10	10
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

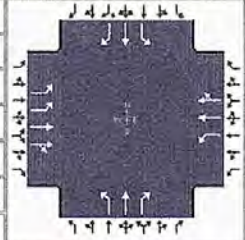
Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#5 E.P.M

General Information

Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off Midway - PM - Existing - 6.2.2020...		
Project Description	Existing				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	130	621	69	36	522	83	42	48	85	209	33	190

Signal Information

Cycle, s	74.9	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	Yes	Simult. Gap E/W	On	Green	9.2	0.8	11.3	3.9	2.7	17.0	1	2	3	4
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	0.0	5.0	4.0	0.0	4.0	5	6	7	8
				Red	3.0	0.0	3.0	3.0	0.0	3.0				

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	13.6	26.7	10.9	24.0	17.2	19.3	18.0	20.1
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.1	3.1	3.1	3.1	3.3	3.1	3.3
Queue Clearance Time (g _s), s	4.9	15.9	3.6	14.5	3.4	5.9	9.7	11.2
Green Extension Time (g _e), s	0.2	2.3	0.0	2.4	0.0	0.8	0.4	0.8
Phase Call Probability	0.95	1.00	0.56	1.00	0.61	1.00	0.99	1.00
Max Out Probability	0.00	0.23	0.00	0.17	0.00	0.00	0.00	0.00

Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	141	381	369	39	336	322	46	52	92	227	36	207
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1833	1810	1900	1809	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	2.9	13.9	13.9	1.6	12.5	12.5	1.4	1.8	3.9	7.7	1.2	9.2
Cycle Queue Clearance Time (g _c), s	2.9	13.9	13.9	1.6	12.5	12.5	1.4	1.8	3.9	7.7	1.2	9.2
Green Ratio (g/C)	0.09	0.26	0.26	0.05	0.23	0.23	0.27	0.15	0.15	0.28	0.16	0.16
Capacity (c), veh/h	311	499	482	95	430	410	486	287	244	514	307	260
Volume-to-Capacity Ratio (X)	0.454	0.764	0.765	0.414	0.781	0.785	0.094	0.181	0.379	0.442	0.117	0.794
Back of Queue (Q), ft/ln (95 th percentile)	53.3	259	253	31.2	235	228	25.4	35.6	65.2	138.6	23.8	159.9
Back of Queue (Q), veh/ln (95 th percentile)	2.1	10.4	10.1	1.2	9.4	9.1	1.0	1.4	2.6	5.5	1.0	6.4
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	32.4	25.5	25.5	34.4	27.2	27.3	20.3	27.8	28.6	22.0	26.9	30.2
Incremental Delay (d ₂), s/veh	0.4	3.0	3.2	1.1	2.0	2.2	0.0	0.1	0.4	0.2	0.1	2.1
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.8	28.5	28.7	35.5	29.2	29.5	20.3	27.9	29.0	22.2	26.9	32.3
Level of Service (LOS)	C	C	C	D	C	C	C	C	C	C	C	C
Approach Delay, s/veh / LOS	29.3	C		29.7	C		26.6	C		27.0	C	
Intersection Delay, s/veh / LOS	28.7						C					

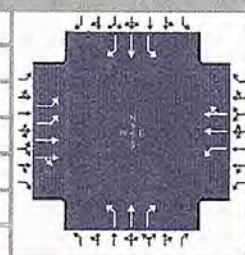
Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.11	B		2.28	B		2.29	B		2.44	B	
Bicycle LOS Score / LOS	1.22	A		1.06	A		0.80	A		1.26	A	

HCS7 Signalized Intersection Input Data

#5 E PM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.92		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - Existing - 6.2.20...				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	130	621	69	36	522	83	42	48	85	209	33	190

Signal Information				Signal Diagrams												
Cycle, s	74.9	Reference Phase	2													
Offset, s	0	Reference Point	End													
Uncoordinated	Yes	Simult. Gap E/W	On													
Force Mode	Fixed	Simult. Gap N/S	On													
Green	9.2	0.8	11.3													3.9
Yellow	5.0	0.0	5.0	4.0	0.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red	3.0	0.0	3.0	3.0	0.0	3.0	3.0	0.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	130	621	69	36	522	83	42	48	85	209	33	190
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	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	20.0	25.0	10.0	25.0	25.0	60.0	25.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	15	10	10	10
Start-Up Lost Time (l), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

TURNING MOVEMENT VOLUME COUNTS

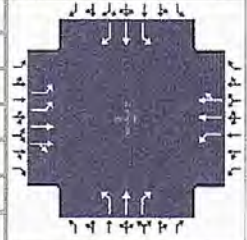
WPS STREET: GLENVIEW, MCKEY RD
 FROM/TO: WILSON LAKE
 COUNT DATE: 2/28/2020
 REPORT DATE: AMATEUR ROAD, 2020
 CITY: ST. LOUIS
 CONTROL: Signalized
 DAY: Tuesday
 DATE: 2/28/2020

30 Min Period	Northbound					Eastbound					Westbound					ONE HOUR TOTAL
	NEL	NRT	NBR	NBL	NBT	EBL	EBT	EBR	WBL	WBT	WBR	WBW	WBT	WBL		
7:00-7:15	27	25	9	16	12	22	25	148	5	40	109	27	518	2418		
7:15-7:30	27	25	13	24	16	31	52	156	8	43	214	19	628	2482		
7:30-7:45	26	20	29	27	22	17	29	170	13	24	195	16	506	2210		
7:45-8:00	28	20	25	29	17	22	51	251	9	25	187	18	722	2200		
8:00-8:15	9	16	6	18	18	24	81	168	5	17	173	27	562	1880		
8:15-8:30	7	4	4	15	5	33	40	139	9	17	170	38	476			
8:30-8:45	8	11	15	25	8	22	41	119	5	16	178	35	469			
8:45-9:00	3	12	12	17	7	32	37	110	1	17	121	13	382			
7:00AM TO 9:00AM																
Volumes	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Season Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Growth Rate	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Year Growth	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
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Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
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Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
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Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
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Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
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Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
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Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Volume	20	81	71	93	99	124	213	795	35	129	770	80	2482			
Peak Hour Factor	20	81	71	93	99	124	213	795	35	129	770	80	2482			

HCS7 Signalized Intersection Results Summary

#5 w/o AM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 w.o. Project...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	258	1185	44	240	137	86	90	167	193	100	185	168

Signal Information				Signal Phases															
Cycle, s	140.0	Reference Phase	2																
Offset, s	0	Reference Point	Begin																
Uncoordinated	No	Simult. Gap E/W	On																
Force Mode	Fixed	Simult. Gap N/S	On																
		Green		9.8	4.8	34.4	12.7	0.3	48.0										
		Yellow		5.0	0.0	5.0	4.0	0.0	4.0										
		Red		3.0	0.0	3.0	3.0	0.0	3.0										

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	19.7	55.0	20.0	55.3	22.6	47.2	17.8	42.4
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.1	3.1	3.1	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s	12.7	50.0	15.0	8.7	7.0		7.9	
Green Extension Time (g _e), s	0.0	0.0	0.0	3.4	0.1	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		0.98	
Max Out Probability	1.00	1.00	1.00	0.00	0.00		1.00	

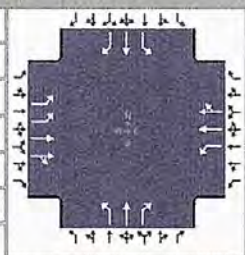
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	272	651	643	253	121	114	95	176	203	105	195	177
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1876	1810	1900	1662	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	10.7	47.9	48.0	13.0	6.2	6.7	5.0	10.3	14.6	5.9	12.1	13.0
Cycle Queue Clearance Time (g _c), s	10.7	47.9	48.0	13.0	6.2	6.7	5.0	10.3	14.6	5.9	12.1	13.0
Green Ratio (g/C)	0.09	0.34	0.34	0.09	0.35	0.35	0.35	0.28	0.28	0.32	0.25	0.25
Capacity (c), veh/h	318	651	643	168	656	574	433	532	450	414	467	395
Volume-to-Capacity Ratio (X)	0.853	0.999	1.000	1.504	0.184	0.199	0.219	0.331	0.451	0.254	0.417	0.447
Back of Queue (Q), ft/ln (95 th percentile)	234.9	931.5	925.5	707.1	130.1	123.5	100.1	219.1	256.8	118.6	251.9	237.3
Back of Queue (Q), veh/ln (95 th percentile)	9.4	37.3	37.0	28.3	5.2	4.9	4.0	8.8	10.3	4.7	10.1	9.5
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	62.7	46.0	46.0	63.5	32.1	32.2	31.8	40.0	41.6	35.0	44.4	44.8
Incremental Delay (d ₂), s/veh	17.8	34.9	35.5	255.0	0.0	0.1	0.1	1.7	3.2	0.1	2.7	3.6
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	80.6	80.9	81.5	318.5	32.1	32.3	31.9	41.7	44.8	35.1	47.1	48.4
Level of Service (LOS)	F	F	F	F	C	C	C	D	D	D	D	D
Approach Delay, s/veh / LOS	81.1		F	180.6		F	41.1		D	44.9		D
Intersection Delay, s/veh / LOS	85.2						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.29	B	2.30	B	2.46	B
Bicycle LOS Score / LOS	1.78	B	0.89	A	1.27	A	1.27	A

HCS7 Signalized Intersection Input Data

5 w/o AM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 w.o. Project...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	258	1185	44	240	137	86	90	167	193	100	185	168

Signal Information				Signal Timing Diagram								
Cycle, s	140.0	Reference Phase	2									
Offset, s	0	Reference Point	Begin									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	9.8	4.8	34.4	12.7	0.3	48.0						
Yellow	5.0	0.0	5.0	4.0	0.0	4.0						
Red	3.0	0.0	3.0	3.0	0.0	3.0						

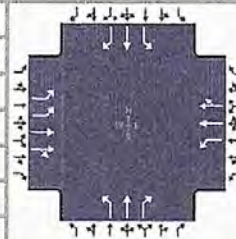
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	258	1185	44	240	137	86	90	167	193	100	185	168
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	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	20.0	55.0	20.0	55.0	24.0	46.0	19.0	41.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	15	10	10	10
Start-Up Lost Time (I _l), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary #5 w/o PM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 w.o. Project...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	190	1413	93	195	1156	69	51	180	273	211	140	204

Signal Information														
Cycle, s	140.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	10.0	3.1	35.9	10.0	3.0	48.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	0.0	5.0	4.0	0.0	4.0				
				Red	3.0	0.0	3.0	3.0	0.0	3.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	17.0	55.0	20.0	58.0	21.1	47.0	18.0	43.9
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s	9.8	50.0	15.0	47.7	4.8		12.0	
Green Extension Time (g _e), s	0.1	0.0	0.0	2.4	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.88		1.00	
Max Out Probability	0.96	1.00	1.00	0.98	0.00		1.00	

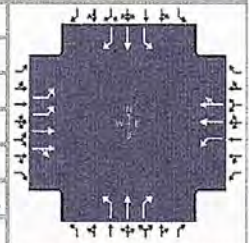
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	200	798	787	205	651	639	54	189	287	222	147	215
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1858	1810	1900	1862	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	7.8	48.0	48.0	13.0	45.3	45.7	2.8	11.2	21.9	10.0	8.8	16.0
Cycle Queue Clearance Time (g _c), s	7.8	48.0	48.0	13.0	45.3	45.7	2.8	11.2	21.9	10.0	8.8	16.0
Green Ratio (g/C)	0.07	0.34	0.34	0.09	0.36	0.36	0.35	0.28	0.28	0.33	0.26	0.26
Capacity (c), veh/h	250	651	637	168	692	679	465	529	449	404	487	412
Volume-to-Capacity Ratio (X)	0.799	1.225	1.236	1.222	0.940	0.942	0.115	0.358	0.641	0.549	0.303	0.521
Back of Queue (Q), ft/ln (95th percentile)	169.4	1465.7	1478.8	493.8	768.7	770.6	55.3	234.5	366.4	77.9	194	281.1
Back of Queue (Q), veh/ln (95th percentile)	6.8	58.6	59.2	19.8	30.7	30.8	2.2	9.4	14.7	3.1	7.8	11.2
Queue Storage Ratio (RQ) (95th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	64.0	38.0	39.0	63.5	34.5	35.5	30.8	40.5	44.3	38.7	42.0	44.7
Incremental Delay (d ₂), s/veh	7.6	114.5	119.2	141.4	20.5	21.1	0.0	1.9	6.9	0.9	1.6	4.6
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	71.6	152.5	158.2	204.9	55.0	56.7	30.8	42.4	51.2	39.6	43.6	49.3
Level of Service (LOS)	E	F	F	F	E	E	C	D	D	D	D	D
Approach Delay, s/veh / LOS	146.0		F	76.3		E	46.0		D	44.2		D
Intersection Delay, s/veh / LOS	96.7						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.29	B	2.30	B	2.46	B
Bicycle LOS Score / LOS	1.96	B	1.72	B	1.36	A	1.45	A

HCS7 Signalized Intersection Input Data

5 w/o PM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 w.o. Project...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	190	1413	93	195	1156	69	51	180	273	211	140	204

Signal Information				Signal Phases										
Cycle, s	140.0	Reference Phase	2	[Diagrammatic representation of 8 signal phases]										
Offset, s	0	Reference Point	End	Green	10.0	3.1	35.9	10.0	3.0	48.0				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	0.0	5.0	4.0	0.0	4.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	0.0	3.0	3.0	0.0	3.0				

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	190	1413	93	195	1156	69	51	180	273	211	140	204
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

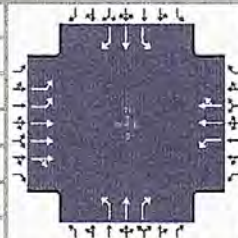
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	20.0	55.0	20.0	55.0	24.0	47.0	18.0	41.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	15	10	10	10
Start-Up Lost Time (l _f), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

5 w/o AM + Imp

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 w.o. Project...				
Project Description	without Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	258	1185	44	240	1347	86	90	167	193	100	185	168

Signal Information				Signal Timing (s)														
Cycle, s	140.0	Reference Phase	2	Green	9.7	24.9	13.1	1.6	53.6	0.0	Yellow	5.0	5.0	4.0	4.0	4.0	0.0	
Offset, s	0	Reference Point	End	Red	3.0	3.0	3.0	3.0	3.0	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	7	4	3	8	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.1	60.6	28.7	69.2	17.7	32.8	17.8	32.9
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s	12.6	27.6	21.2	54.4	7.8		8.5	
Green Extension Time (g _e), s	0.4	8.8	0.5	7.9	0.1	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		0.98	
Max Out Probability	0.00	0.06	0.00	0.23	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	272	868	426	253	760	749	95	176	203	105	195	177
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1864	1810	1900	1860	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	10.6	25.6	25.6	19.2	51.8	52.4	5.8	11.7	16.6	6.5	13.1	14.2
Cycle Queue Clearance Time (g _c), s	10.6	25.6	25.6	19.2	51.8	52.4	5.8	11.7	16.6	6.5	13.1	14.2
Green Ratio (g/C)	0.09	0.38	0.38	0.15	0.44	0.44	0.25	0.18	0.18	0.25	0.18	0.18
Capacity (c), veh/h	328	1456	714	280	845	827	262	337	286	293	338	287
Volume-to-Capacity Ratio (X)	0.828	0.596	0.596	0.902	0.900	0.905	0.362	0.521	0.711	0.359	0.576	0.617
Back of Queue (Q), ft/ln (95 th percentile)	210.6	434.9	429	350.3	838.9	835.2	118.5	254.6	310.2	132.3	280.6	266.8
Back of Queue (Q), veh/ln (95 th percentile)	8.4	17.4	17.2	14.0	33.6	33.4	4.7	10.2	12.4	5.3	11.2	10.7
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	62.4	34.5	34.5	58.1	36.0	36.1	42.7	52.2	54.2	42.6	52.7	53.1
Incremental Delay (d ₂), s/veh	2.1	0.1	0.3	4.3	8.1	8.8	0.3	5.7	14.0	0.3	7.0	9.6
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	64.4	34.7	34.8	62.4	44.1	44.9	43.1	57.8	68.2	42.9	59.6	62.7
Level of Service (LOS)	E	C	C	E	D	D	D	E	E	D	E	E
Approach Delay, s/veh / LOS	39.9	D		47.1	D		59.3	E			57.1	E
Intersection Delay, s/veh / LOS	46.9						D					

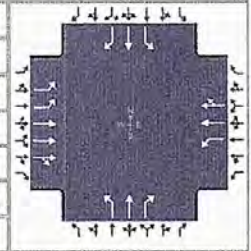
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	2.28	B	2.46	B	2.61	C
Bicycle LOS Score / LOS	1.35	A	1.94	B	1.27	A	1.27	A

HCS7 Signalized Intersection Input Data

#5 w/o AM + imp

General Information

Agency	O'Rourke Engineering			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 w.o. Project...		
Project Description	without Project + Imp				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	258	1185	44	240	1347	86	90	167	193	100	185	168

Signal Information

Cycle, s	140.0	Reference Phase	2																					
Offset, s	0	Reference Point	End	Green	9.7	24.9	13.1	1.6	53.6	0.0	Yellow	5.0	5.0	4.0	4.0	4.0	0.0	Red	3.0	3.0	3.0	3.0	3.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Force Mode	Fixed	Simult. Gap N/S	On																	

Traffic Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	258	1185	44	240	1347	86	90	167	193	100	185	168
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (S ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	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	29.0	17.0	87.0	75.0	18.0	18.0	18.0	18.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

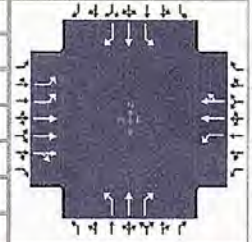
Multimodal Information

	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#5 w/o PM+MP

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off Midway - PM - 2035 w.o. Project...				
Project Description	without Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	215	1422	93	196	1075	89	53	175	290	225	139	241

Signal Information				Signal Timing (s)								Signal Phases			
Cycle, s	140.0	Reference Phase	2	Green	8.9	7.5	28.7	11.3	6.7	46.9	1	2	3	4	
Offset, s	0	Reference Point	End	Yellow	5.0	0.0	5.0	4.0	0.0	4.0	5	6	7	8	
Uncoordinated	No	Simult. Gap E/W	On	Red	3.0	0.0	3.0	3.0	0.0	3.0					
Force Mode	Fixed	Simult. Gap N/S	On												

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	18.3	53.9	25.0	60.6	16.9	36.7	24.4	44.3
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.1	3.1	3.1	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s	10.9	38.7	17.7	44.0	5.3		16.1	
Green Extension Time (g _e), s	0.4	8.1	0.3	8.3	0.1	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.89		1.00	
Max Out Probability	0.00	0.19	0.00	0.17	0.00		0.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	226	1075	520	206	620	605	56	184	305	237	146	254
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1838	1810	1900	1848	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	8.9	36.7	36.7	15.7	41.9	42.0	3.3	11.9	26.0	14.1	8.7	19.4
Cycle Queue Clearance Time (g _c), s	8.9	36.7	36.7	15.7	41.9	42.0	3.3	11.9	26.0	14.1	8.7	19.4
Green Ratio (g/C)	0.08	0.33	0.33	0.13	0.38	0.38	0.27	0.21	0.21	0.33	0.26	0.26
Capacity (c), veh/h	283	1272	615	233	728	708	397	390	331	409	492	417
Volume-to-Capacity Ratio (X)	0.800	0.845	0.845	0.887	0.853	0.854	0.141	0.472	0.923	0.579	0.297	0.608
Back of Queue (Q), ft/ln (95 th percentile)	181.2	608.4	603.5	298.2	690	676.5	65.8	254.1	489	259.3	192.1	331.7
Back of Queue (Q), veh/ln (95 th percentile)	7.2	24.3	24.1	11.9	27.6	27.1	2.6	10.2	19.6	10.4	7.7	13.3
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	63.3	43.2	43.2	60.0	39.6	39.6	38.7	48.9	54.5	36.6	41.6	45.6
Incremental Delay (d ₂), s/veh	2.0	2.4	4.7	4.5	4.9	5.1	0.1	4.1	33.3	0.5	1.5	6.5
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	65.3	45.5	47.9	64.5	44.5	44.7	38.7	53.0	87.9	37.1	43.2	52.1
Level of Service (LOS)	E	D	D	E	D	D	D	D	F	D	D	D
Approach Delay, s/veh / LOS	48.7		D	47.5		D	71.1		E	44.5		D
Intersection Delay, s/veh / LOS	50.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.29	B	2.46	B	2.60	C
Bicycle LOS Score / LOS	1.49	A	1.67	B	1.39	A	1.54	B

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HCS7 Signalized Intersection Input Data

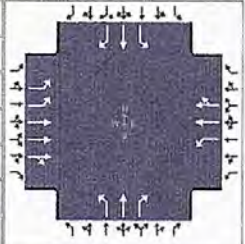
#5 w/c pm+imp

General Information

Agency: O'Rourke Engineering
 Analyst: James Kemp
 Jurisdiction: St. Lucie
 Urban Street: Midway Rd
 Intersection: Glades Cut Off Rd
 Project Description: without Project + Imp

Intersection Information

Duration, h: 0.25
 Area Type: Other
 PHF: 0.95
 Analysis Period: 1> 7:00
 File Name: Glades Cut Off & Midway - PM - 2035 w.o. Project...



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	215	1422	93	196	1075	89	53	175	290	225	139	241

Signal Information

Cycle, s	140.0	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	8.9	7.5	28.7	11.3	6.7	46.9						
Yellow	5.0	0.0	5.0	4.0	0.0	4.0						
Red	3.0	0.0	3.0	3.0	0.0	3.0						

Traffic Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	215	1422	93	196	1075	89	53	175	290	225	139	241
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	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	31.0	56.0	39.0	64.0	24.0	27.0	18.0	21.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information

	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

E#5 WIP

TURNING MOVEMENT VOLUME COUNTS

CONTROL: Signalized

EWART STREET, Midway Rd
CITY: SLACK

REV: Tuesday
ANALYSIS YEAR: 2020

US STREET: 7/14/2020
FILENAME: 2/14/2020
DATE: 2/14/2020
REPORT DATE:

15 Min Period

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR TOTAL SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	WBL		
7:00-7:15	3	25	9	16	13	22	22	22	22	248	5	47	149	27	218		
7:15-7:30	3	25	13	24	26	31	31	31	31	214	8	43	214	19	624		
7:30-7:45	3	20	29	29	28	37	37	37	37	270	13	24	296	16	290		
7:45-8:00	3	20	25	29	37	31	31	31	31	261	9	25	377	18	202		
8:00-8:15	3	16	5	18	38	24	24	24	24	248	5	17	173	27	562		
8:15-8:30	7	4	4	12	5	33	40	39	9	17	130	31	31	475			
8:30-8:45	3	11	15	22	8	22	43	119	5	16	173	15	460				
8:45-9:00	3	13	12	17	7	22	37	150	1	17	131	13	382				

AM/FM HOURS FROM

Seasonal Factor: 1
Growth Rate: 1.005
Year Growth: 25

Without Lanes: 1,855
Volume at Midway: 4,451
LTC Branch: 1,831
Southern Grove: 6,218
Wilson Grove: 3,876
Riverside/Kennedy: 6,975
Western Grove: 1,312
Ravels: 22
Frontiers: 58

Trips In: 1,855
Trips Out: 4,611

15 Min Period

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR TOTAL SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	WBL		
9:00-9:15	3	25	9	16	13	22	22	22	22	248	5	47	149	27	218		
9:15-9:30	3	25	13	24	26	31	31	31	31	214	8	43	214	19	624		
9:30-9:45	3	20	29	29	28	37	37	37	37	270	13	24	296	16	290		
9:45-10:00	3	20	25	29	37	31	31	31	31	261	9	25	377	18	202		
10:00-10:15	3	16	5	18	38	24	24	24	24	248	5	17	173	27	562		
10:15-10:30	7	4	4	12	5	33	40	39	9	17	130	31	31	475			
10:30-10:45	3	11	15	22	8	22	43	119	5	16	173	15	460				
10:45-11:00	3	13	12	17	7	22	37	150	1	17	131	13	382				

AM/FM HOURS FROM

Seasonal Factor: 1
Growth Rate: 1.005
Year Growth: 25

Without Lanes: 1,855
Volume at Midway: 4,451
LTC Branch: 1,831
Southern Grove: 6,218
Wilson Grove: 3,876
Riverside/Kennedy: 6,975
Western Grove: 1,312
Ravels: 22
Frontiers: 58

Trips In: 1,855
Trips Out: 4,611

15 Min Period

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR TOTAL SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	WBL		
4:00-4:15	6	8	82	56	9	61	61	61	61	127	16	14	128	27	824		
4:15-4:30	10	20	31	36	11	61	61	61	61	161	16	3	115	33	561		
4:30-4:45	15	13	25	58	6	40	39	152	35	11	142	14	131	1562			
4:45-5:00	11	7	17	39	7	28	21	172	18	7	117	9	452	1966			
5:00-5:15	5	13	18	41	10	27	23	145	10	14	115	6	691	1913			
5:15-5:30	11	10	11	46	7	21	23	159	18	15	152	14	468				
5:30-5:45	6	7	11	41	16	37	58	227	10	15	113	20	535				
5:45-6:00	1	10	12	23	7	37	37	125	2	9	115	11	469				

AM/FM HOURS FROM

Seasonal Factor: 1
Growth Rate: 1.005
Year Growth: 25

Without Lanes: 1,490
Volume at Midway: 728
LTC Branch: 3,320
Southern Grove: 6,990
Riverside/Kennedy: 4,543
Western Grove: 3,510
Ravels: 77
Frontiers: 107

Trips In: 1,490
Trips Out: 3,686

15 Min Period

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR TOTAL SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	WBL		
6:00-6:15	4	48	85	209	33	300	130	621	69	16	522	83	522	83	2048		
6:15-6:30	4	48	85	209	33	300	130	621	69	16	522	83	522	83	2048		
6:30-6:45	0	1	7	21	1	30	0	0	0	0	0	0	0	0	2223		
6:45-7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	771		
7:00-7:15	12%	7	16%	62%	34%	30%	130%	10%	10%	73	3	16%	10%	337			
7:15-7:30	7%	16%	62%	34%	30%	130%	10%	10%	10%	10%	10%	10%	10%	2018			
7:30-7:45	0.1%	17	0.1%	14	0.1%	14	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	312			
7:45-8:00	0.1%	17	0.1%	14	0.1%	14	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	314			
8:00-8:15	0.1%	10	0.1%	10	0.1%	10	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	64			
8:15-8:30	0.1%	1	0.1%	1	0.1%	1	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	16			
8:30-8:45	0.1%	1	0.1%	1	0.1%	1	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	99			
8:45-9:00	0.1%	1	0.1%	1	0.1%	1	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	89			

AM/FM HOURS FROM

Seasonal Factor: 1
Growth Rate: 1.005
Year Growth: 25

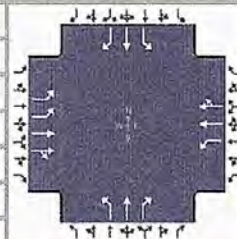
Without Lanes: 1,490
Volume at Midway: 728
LTC Branch: 3,320
Southern Grove: 6,990
Riverside/Kennedy: 4,543
Western Grove: 3,510
Ravels: 77
Frontiers: 107

Trips In: 1,490
Trips Out: 3,686

HCS7 Signalized Intersection Results Summary

#5 w/PAM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 with Project...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249

Signal Information				Signal Timing (s)													
Cycle, s	140.0	Reference Phase	2	Green	9.7	19.3	13.0	1.6	59.4	0.0	Yellow	5.0	5.0	4.0	4.0	4.0	0.0
Offset, s	0	Reference Point	End	Red	3.0	3.0	3.0	3.0	3.0	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	7	4	3	8	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.0	66.4	28.6	75.0	17.7	27.2	17.8	27.3
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s	15.0	59.7	21.2	70.0	8.1		8.9	
Green Extension Time (g _e), s	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		0.98	
Max Out Probability	1.00	1.00	0.00	1.00	0.37		0.00	

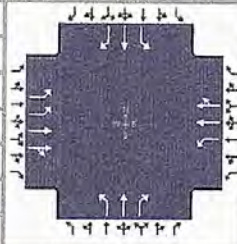
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	339	789	784	253	934	931	95	176	203	105	195	262
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1880	1810	1900	1867	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	13.0	57.3	57.7	19.2	68.0	68.0	6.1	12.3	17.4	6.9	13.8	19.3
Cycle Queue Clearance Time (g _c), s	13.0	57.3	57.7	19.2	68.0	68.0	6.1	12.3	17.4	6.9	13.8	19.3
Green Ratio (g/C)	0.09	0.42	0.42	0.15	0.49	0.49	0.21	0.14	0.14	0.21	0.14	0.14
Capacity (c), veh/h	326	806	797	280	923	907	207	260	220	239	261	221
Volume-to-Capacity Ratio (X)	1.039	0.980	0.984	0.903	1.012	1.027	0.457	0.676	0.922	0.441	0.745	1.184
Back of Queue (Q), ft/ln (95 th percentile)	337.3	1032.8	1035	350.4	1233.7	1260.5	126.2	278.7	370.9	140.6	311.9	578.6
Back of Queue (Q), veh/ln (95 th percentile)	13.5	41.3	41.4	14.0	49.3	50.4	5.0	11.1	14.8	5.6	12.5	23.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	63.5	39.7	39.8	58.1	36.0	36.0	47.5	57.5	59.7	47.3	58.0	60.4
Incremental Delay (d ₂), s/veh	60.2	26.6	27.7	4.4	32.6	36.9	0.6	13.2	43.2	0.5	17.5	119.1
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	123.7	66.4	67.6	62.5	68.6	72.9	48.0	70.7	102.8	47.8	75.5	179.5
Level of Service (LOS)	F	E	E	E	F	F	D	E	F	D	E	F
Approach Delay, s/veh / LOS	77.0	E		69.8	E		80.0	E			118.8	F
Intersection Delay, s/veh / LOS	78.9						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	2.27	B	2.32	B	2.47	B
Bicycle LOS Score / LOS	2.07	B	2.23	B	1.27	A	1.42	A

HCS7 Signalized Intersection Input Data

#5 w/p AM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 with Project...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249

Signal Information				Signal Diagram															
Cycle, s	140.0	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		9.7	19.3	13.0	1.6	59.4	0.0										
		Yellow		5.0	5.0	4.0	4.0	4.0	0.0										
		Red		3.0	3.0	3.0	3.0	3.0	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	322	1451	44	240	1686	86	90	167	193	100	185	249
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

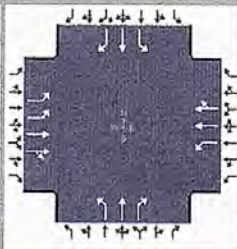
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	20.0	47.0	48.0	75.0	20.0	18.0	27.0	25.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#5 w/ P PM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 with Project...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328

Signal Information				Signal Timing Diagram											
Cycle, s	140.0	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	8.9	1.2	19.0	13.9	4.1	63.0									
Yellow	5.0	0.0	5.0	4.0	0.0	4.0									
Red	3.0	0.0	3.0	3.0	0.0	3.0									

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.9	70.0	25.0	74.1	16.9	27.0	18.0	28.1
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s	13.4	65.0	17.7	56.8	5.6		12.1	
Green Extension Time (g _e), s	0.5	0.0	0.3	6.8	0.0	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.89		1.00	
Max Out Probability	0.00	1.00	0.00	0.76	0.00		1.00	

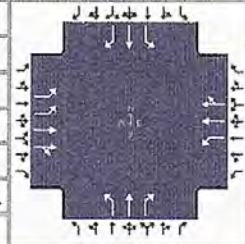
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	292	935	932	206	808	798	56	184	305	237	146	345
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1865	1810	1900	1861	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	11.4	63.0	63.0	15.7	54.0	54.8	3.6	13.0	19.0	10.1	10.0	20.1
Cycle Queue Clearance Time (g _c), s	11.4	63.0	63.0	15.7	54.0	54.8	3.6	13.0	19.0	10.1	10.0	20.1
Green Ratio (g/C)	0.10	0.45	0.45	0.13	0.48	0.48	0.20	0.14	0.14	0.21	0.14	0.14
Capacity (c), veh/h	349	855	839	233	910	891	240	257	218	233	273	232
Volume-to-Capacity Ratio (X)	0.834	1.094	1.111	0.887	0.888	0.896	0.233	0.716	1.400	1.018	0.535	1.490
Back of Queue (Q), ft/ln (95 th percentile)	222.4	1427.1	1466.1	298.2	880.3	881.8	73.1	294.8	784.3	298.3	228.2	925.5
Back of Queue (Q), veh/ln (95 th percentile)	8.9	57.1	58.6	11.9	35.2	35.3	2.9	11.8	31.4	11.9	9.1	37.0
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	61.9	38.5	38.5	60.0	33.0	33.3	46.8	57.9	60.5	56.0	55.6	59.9
Incremental Delay (d ₂), s/veh	2.0	59.6	66.2	4.5	10.3	11.3	0.2	15.7	205.5	63.9	7.3	242.0
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.9	98.1	104.7	64.5	43.3	44.5	47.0	73.7	266.0	119.8	62.9	301.9
Level of Service (LOS)	E	F	F	E	D	D	D	E	F	F	E	F
Approach Delay, s/veh / LOS	96.3	F		46.3	D		178.6	F		194.7	F	
Intersection Delay, s/veh / LOS	101.3						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	2.28	B	2.32	B	2.47	B
Bicycle LOS Score / LOS	2.27	B	1.98	B	1.39	A	1.69	B

HCS7 Signalized Intersection Input Data

#5 WP PM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 with Project...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328

Signal Information														
Cycle, s	140.0	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	8.9	1.2	19.0	13.9	4.1	63.0				
				Yellow	5.0	0.0	5.0	4.0	0.0	4.0				
				Red	3.0	0.0	3.0	3.0	0.0	3.0				

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

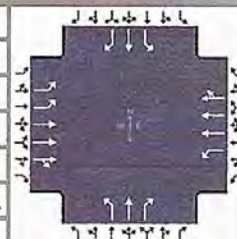
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	31.0	56.0	39.0	64.0	24.0	27.0	18.0	21.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (l), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#5 w/ PAM + imp

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 with Project...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328

Signal Information				Signal Diagrams											
Cycle, s	140.0	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	8.9	0.3	21.2	13.9	4.1	53.7									
Yellow	5.0	5.0	5.0	4.0	0.0	4.0									
Red	3.0	3.0	3.0	3.0	0.0	3.0									

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.9	60.7	25.0	64.8	16.9	29.2	25.1	37.5
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s	13.4	43.0	17.7	31.7	5.5		17.0	
Green Extension Time (g _e), s	0.5	10.7	0.3	13.5	0.1	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.89		1.00	
Max Out Probability	0.00	0.44	0.00	0.21	0.00		1.00	

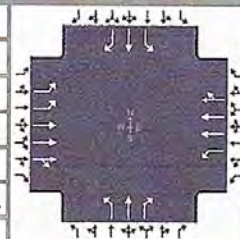
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	292	1256	612	206	1082	524	56	184	305	237	146	345
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1900	1847	1810	1900	1841	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	11.4	40.4	41.0	15.7	28.9	29.7	3.5	12.8	21.2	15.0	9.2	26.4
Cycle Queue Clearance Time (g _c), s	11.4	40.4	41.0	15.7	28.9	29.7	3.5	12.8	21.2	15.0	9.2	26.4
Green Ratio (g/C)	0.10	0.38	0.38	0.13	0.41	0.41	0.21	0.15	0.28	0.29	0.21	0.31
Capacity (c), veh/h	349	1457	708	233	1568	760	330	288	451	346	400	499
Volume-to-Capacity Ratio (X)	0.834	0.862	0.864	0.887	0.690	0.690	0.169	0.640	0.677	0.684	0.366	0.692
Back of Queue (Q), ft/ln (95 th percentile)	222.4	607.3	631.5	298.2	435.1	448.4	71.4	281.4	391.1	284.5	205	426.3
Back of Queue (Q), veh/ln (95 th percentile)	8.9	24.3	25.3	11.9	17.4	17.9	2.9	11.3	15.6	11.4	8.2	17.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	61.9	31.0	32.4	60.0	25.0	26.6	44.6	55.8	44.8	41.8	47.3	42.4
Incremental Delay (d ₂), s/veh	2.0	3.7	7.4	4.5	0.6	1.3	0.1	10.5	7.9	3.5	2.6	7.7
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.9	34.7	39.8	64.5	25.6	27.9	44.7	66.3	52.7	45.3	49.9	50.1
Level of Service (LOS)	E	C	D	E	C	C	D	E	D	D	D	D
Approach Delay, s/veh / LOS	40.1		D	30.7		C	56.5		E	48.5		D
Intersection Delay, s/veh / LOS	39.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	2.28	B	2.61	C	2.73	C
Bicycle LOS Score / LOS	1.68	B	1.48	A	1.39	A	1.69	B

HCS7 Signalized Intersection Input Data

#5 w/PAAM + Imp

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - PM - 2035 with Project...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328

Signal Information				Signal Phases											
Cycle, s	140.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	8.9	0.3	21.2	13.9	4.1	53.7					
Uncoordinated	No	Simult. Gap E/W	On	Yellow	5.0	5.0	5.0	4.0	0.0	4.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	3.0	3.0	3.0	3.0	0.0	3.0					

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	277	1681	93	196	1437	89	53	175	290	225	139	328
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

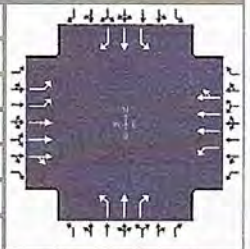
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	31.0	56.0	39.0	64.0	24.0	27.0	18.0	21.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (PC), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#5 WIP PM+imp

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 with Project...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249

Signal Information				Signal Timing (s)													
Cycle, s	140.0	Reference Phase	2														
Offset, s	0	Reference Point	End	Green	9.7	31.2	13.0	1.6	47.4	0.0	Yellow	5.0	5.0	4.0	4.0	4.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	3.0	3.0	3.0	3.0	3.0	0.0							
Force Mode	Fixed	Simult. Gap N/S	On														

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	7	4	3	8	1	6	5	2
Case Number	2.0	4.0	2.0	4.0	1.1	3.0	1.1	3.0
Phase Duration, s	20.0	54.4	28.6	63.0	17.7	39.2	17.8	39.2
Change Period, (Y+R _c), s	7.0	7.0	7.0	7.0	8.0	8.0	8.0	8.0
Max Allow Headway (MAH), s	3.1	3.0	3.1	3.0	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s	15.0	36.0	21.2	41.1	7.5		8.1	
Green Extension Time (g _e), s	0.0	11.3	0.4	12.0	0.1	0.0	0.2	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		0.98	
Max Out Probability	1.00	0.36	0.00	0.30	0.00		0.00	

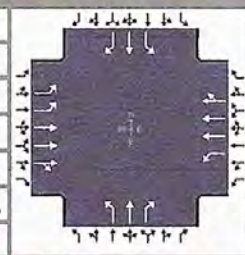
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	339	1055	519	253	1254	612	95	176	203	105	195	262
Adjusted Saturation Flow Rate (s), veh/h/in	1757	1900	1870	1810	1900	1851	1810	1900	1610	1810	1900	1610
Queue Service Time (g _s), s	13.0	33.9	34.0	19.2	38.5	39.1	5.5	11.1	12.6	6.1	12.4	18.6
Cycle Queue Clearance Time (g _c), s	13.0	33.9	34.0	19.2	38.5	39.1	5.5	11.1	12.6	6.1	12.4	18.6
Green Ratio (g/C)	0.09	0.34	0.34	0.15	0.40	0.40	0.29	0.22	0.38	0.29	0.22	0.32
Capacity (c), veh/h	326	1286	633	280	1520	740	322	423	607	354	424	509
Volume-to-Capacity Ratio (X)	1.039	0.820	0.820	0.903	0.825	0.826	0.294	0.416	0.335	0.297	0.459	0.515
Back of Queue (Q), ft/in (95 th percentile)	337.3	528.1	539.3	350.4	567.4	587.3	110.4	237.2	221.9	123.3	260.4	311.8
Back of Queue (Q), veh/in (95 th percentile)	13.5	21.1	21.6	14.0	22.7	23.5	4.4	9.5	8.9	4.9	10.4	12.5
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	63.5	34.7	35.4	58.1	28.6	29.9	37.8	46.6	31.1	37.7	47.1	39.1
Incremental Delay (d ₂), s/veh	60.2	2.3	4.5	4.4	2.2	4.5	0.2	3.0	1.5	0.2	3.6	3.7
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	123.7	37.0	39.9	62.5	30.8	34.4	38.0	49.6	32.6	37.8	50.6	42.8
Level of Service (LOS)	F	D	D	E	C	C	D	D	C	D	D	D
Approach Delay, s/veh / LOS	53.1		D	35.6		D	40.0		D	44.6		D
Intersection Delay, s/veh / LOS	43.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.29	B	2.60	C	2.73	C
Bicycle LOS Score / LOS	1.54	B	1.65	B	1.27	A	1.42	A

HCS7 Signalized Intersection Input Data

5 w/p AM + 117P

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Glades Cut Off Rd	File Name	Glades Cut Off & Midway - AM - 2035 with Project...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249

Signal Information				Signal Timing (s)												
Cycle, s	140.0	Reference Phase	2	Green	9.7	31.2	13.0	1.6	47.4	0.0	5.0	5.0	4.0	4.0	4.0	0.0
Offset, s	0	Reference Point	End	Yellow	5.0	5.0	4.0	4.0	4.0	0.0	3.0	3.0	3.0	3.0	3.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	3.0	3.0	3.0	3.0	3.0	0.0						
Force Mode	Fixed	Simult. Gap N/S	On													

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	322	1451	44	240	1686	86	90	167	193	100	185	249
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	4	3	3	4	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0
Turn Bay Length, ft	0	0		0	0		0	0	0	0	0	0
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	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	20.0	47.0	48.0	75.0	20.0	18.0	27.0	25.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0
Red Clearance Interval (R _c), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Green (G _{min}), s	7	7	7	7	10	10	10	10
Start-Up Lost Time (l), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (PC), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

TURNING MOVEMENT VOLUME COUNTS

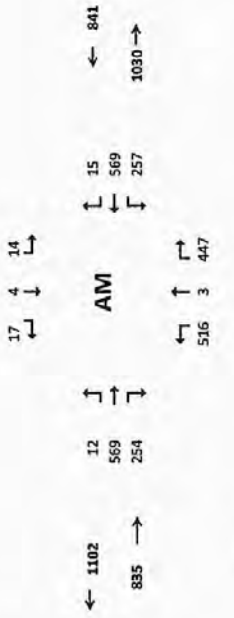
CONTROL: TN5C

EW STREET: Midway Rd

To: Ho Hwy
 Willow Lakes
 7/20/2020

DAY: Thursday
 ANALYSIS YEAR: 2020

CITY: St. Louis



15 Min Period	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL
7:00-7:15	1	1	126	3	2	1	3	117	52	45	124	5	615	2677
7:15-7:30	0	0	85	1	2	5	4	110	55	64	162	3	594	2623
7:30-7:45	1	1	108	6	0	7	1	161	77	52	145	1	734	2905
7:45-8:00	1	1	128	4	0	4	4	181	70	56	136	6	734	2311
8:00-8:15	1	1	101	2	0	3	8	123	41	49	121	2	561	1989
8:15-8:30	0	0	93	1	0	6	11	134	47	55	143	3	576	
8:30-8:45	0	0	67	3	1	5	4	93	35	48	99	2	440	
8:45-9:00	0	0	57	0	0	3	5	92	52	43	106	2	392	

AM PEAK HOUR IS FROM:

Volumes: 516
 Season Factor: 1
 Growth: 516
 In/Out: 0%
 Percentage: 0%
 PROJECT: 0

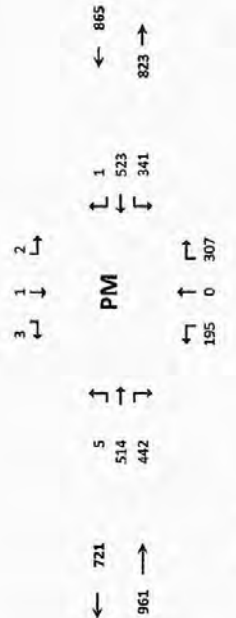
PHF: 0.912

Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0

Trips In: 516

Trips Out: 447

Total: 516 (left), 3 (right), 447 (right), 15 (left), 569 (through), 254 (right), 569 (through), 15 (right), 1677 (right)



15 Min Period	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL
4:00-4:15	1	1	59	0	2	0	1	143	71	58	96	0	483	2137
4:15-4:30	0	0	76	0	1	0	0	92	95	106	183	1	595	2280
4:30-4:45	0	0	76	0	1	3	1	117	69	63	128	0	512	2393
4:45-5:00	0	0	66	0	0	0	1	141	103	85	96	0	547	2334
5:00-5:15	0	0	63	0	1	2	3	94	98	86	185	1	576	2380
5:15-5:30	0	0	107	0	0	0	1	153	137	89	124	0	668	
5:30-5:45	0	0	71	2	0	1	0	135	104	81	115	0	543	
5:45-6:00	1	1	74	0	0	0	1	107	82	70	95	2	493	

PM PEAK HOUR IS FROM:

Volumes: 195
 Season Factor: 1
 Growth: 195
 In/Out: 0%
 Percentage: 0%
 PROJECT: 0

PHF: 0.874

Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0

Trips In: 195

Trips Out: 307

Total: 195 (left), 0 (right), 307 (right), 1 (left), 514 (through), 442 (right), 341 (left), 523 (right), 1 (right), 2334 (right)

By-Phase Timing Data

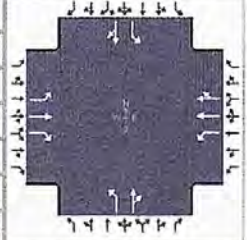
Midway

Direction	Phase											
	1 ERL	2 W/B	3 S/BL	4 N/B	5 W/BL	6 E/B	7 N/BL	8 S/B	9	10	11	12
Minimum Green	7	7	7	7	7	7	7	7	5	5	5	5
Bike Min Green	0	0	0	0	0	0	0	0	0	0	0	0
Cond Serv Min Grn	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	10	0	10
Ped Clearance	0	16	0	16	0	16	0	16	0	16	0	16
Veh Extension	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Alt Veh Exten	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Extension	0	0	0	25	0	0	0	0	0	0	0	0
Max 1	15	60	15	40	35	60	40	35	35	35	35	35
Max 2	40	40	40	40	40	40	40	40	40	40	40	40
Max 3	0	0	0	50	0	0	0	0	0	0	0	0
Det. Fail Max	0	0	0	0	0	0	0	0	0	0	0	0
Yellow Change	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0	3.0	3.0	3.0	3.0
Red Clearance	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act. B4 Init	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Actuation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Initial	30	30	30	30	30	30	30	30	30	30	30	30
Time B4 Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Cars Waiting	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCS7 Signalized Intersection Results Summary

#6EAM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - Existing - 7.22.20.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	12	569	254	257	569	15	516	3	447	14	4	17

Signal Information				Signal Timing Diagram								
Cycle, s	103.9	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	Yes	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
Green	1.8	4.0	36.0	2.1	11.9	12.1						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0						
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	7.8	42.0	17.8	52.0	26.0	36.0	8.1	18.1
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.5	33.3	11.5	13.2	22.0	32.0	2.7	3.2
Green Extension Time (g _e), s	0.0	2.7	0.3	2.9	0.0	0.0	0.0	1.1
Phase Call Probability	0.31	1.00	1.00	1.00	1.00	1.00	0.35	1.00
Max Out Probability	0.00	0.04	0.01	0.00	1.00	1.00	0.00	0.00

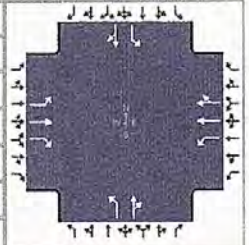
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	13	599	267	271	309	306	543	474		15	22	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1883	1810	1612		1810	1658	
Queue Service Time (g _s), s	0.5	31.3	13.5	9.5	11.2	11.2	20.0	30.0		0.7	1.2	
Cycle Queue Clearance Time (g _c), s	0.5	31.3	13.5	9.5	11.2	11.2	20.0	30.0		0.7	1.2	
Green Ratio (g/C)	0.36	0.35	0.35	0.48	0.44	0.44	0.33	0.29		0.14	0.12	
Capacity (c), veh/h	360	658	558	314	841	833	565	465		106	193	
Volume-to-Capacity Ratio (X)	0.035	0.910	0.479	0.863	0.367	0.367	0.961	1.018		0.140	0.115	
Back of Queue (Q), ft/ln (95 th percentile)	8.5	531.4	214.5	193.6	204.1	202.9	308.4	603.6		14.6	22.3	
Back of Queue (Q), veh/ln (95 th percentile)	0.3	21.3	8.6	7.7	8.2	8.1	12.3	24.1		0.6	0.9	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	21.2	32.4	26.6	23.2	19.3	19.3	35.0	37.0		39.8	41.1	
Incremental Delay (d ₂), s/veh	0.0	8.3	0.2	8.1	0.1	0.1	28.2	46.4		0.2	0.1	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	21.2	40.7	26.8	31.2	19.4	19.4	63.2	83.3		40.0	41.2	
Level of Service (LOS)	C	D	C	C	B	B	E	F		D	D	
Approach Delay, s/veh / LOS	36.2			23.0			72.6			40.7		
Intersection Delay, s/veh / LOS	45.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.91	B	2.12	B	2.31	B
Bicycle LOS Score / LOS	1.94	B	1.22	A	2.17	B	0.55	A

HCS7 Signalized Intersection Input Data

#6 E Am

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - Existing - 7.22.20.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	12	569	254	257	569	15	516	3	447	14	4	17

Signal Information				Signal Timing (s)								Signal Phases												
Cycle, s	103.9	Reference Phase	2	Green	1.8	4.0	36.0	2.1	11.9	12.1	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	Red	2.0	2.0	2.0	2.0	2.0	2.0
Offset, s	0	Reference Point	End																					
Uncoordinated	Yes	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	12	569	254	257	569	15	516	3	447	14	4	17
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

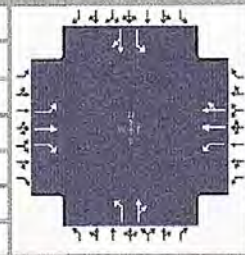
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	20.0	50.0	20.0	50.0	20.0	30.0	20.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _f), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#6 EPM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - Existing 7.22.20.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	514	442	341	523	1	195	0	307	2	1	3

Signal Information				Phase Diagrams											
Cycle, s	84.2	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	0.7	6.0	28.1	0.3	4.0	9.1					
Uncoordinated	Yes	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	2.0	2.0	2.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	6.7	34.1	18.7	46.1	16.3	25.0	6.3	15.1
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.2	24.8	12.3	9.5	10.1	18.4	2.1	2.2
Green Extension Time (g _e), s	0.0	3.1	0.4	3.2	0.2	0.6	0.0	0.7
Phase Call Probability	0.12	1.00	1.00	1.00	0.99	1.00	0.05	1.00
Max Out Probability	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00

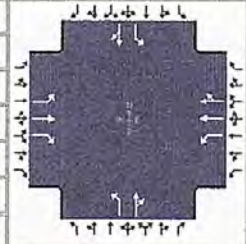
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	541	465	359	276	276	205	323		2	4	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1899	1810	1610		1810	1674	
Queue Service Time (g _s), s	0.2	22.4	22.8	10.3	7.5	7.5	8.1	16.4		0.1	0.2	
Cycle Queue Clearance Time (g _c), s	0.2	22.4	22.8	10.3	7.5	7.5	8.1	16.4		0.1	0.2	
Green Ratio (g/C)	0.34	0.33	0.33	0.51	0.48	0.48	0.25	0.23		0.11	0.11	
Capacity (c), veh/h	391	635	538	420	907	906	460	365		101	181	
Volume-to-Capacity Ratio (X)	0.013	0.852	0.865	0.854	0.304	0.304	0.447	0.886		0.021	0.023	
Back of Queue (Q), ft/ln (95 th percentile)	2.8	359.1	320.3	194.6	127	126.9	146.4	269.1		1.7	3.3	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	14.4	12.8	7.8	5.1	5.1	5.9	10.8		0.1	0.1	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	18.3	26.2	26.3	17.6	13.5	13.5	26.5	31.6		33.8	33.7	
Incremental Delay (d ₂), s/veh	0.0	1.3	1.7	7.0	0.1	0.1	0.3	6.7		0.0	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	18.3	27.4	28.0	24.6	13.6	13.6	26.8	38.3		33.8	33.7	
Level of Service (LOS)	B	C	C	C	B	B	C	D		C	C	
Approach Delay, s/veh / LOS	27.6 / C			17.9 / B			33.8 / C			33.7 / C		
Intersection Delay, s/veh / LOS	25.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.90	B	2.12	B	2.30	B
Bicycle LOS Score / LOS	2.16	B	1.24	A	1.36	A	0.50	A

HCS7 Signalized Intersection Input Data

#6 E PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - Existing 7.22.20.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	514	442	341	523	1	195	0	307	2	1	3

Signal Information													
Cycle, s	84.2	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
				Green	0.7	6.0	28.1	0.3	4.0	9.1			
				Yellow	4.0	4.0	4.0	4.0	4.0	4.0			
				Red	2.0	2.0	2.0	2.0	2.0	2.0			

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	514	442	341	523	1	195	0	307	2	1	3
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	20.0	50.0	20.0	50.0	20.0	30.0	20.0	30.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _f), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

#6 w/o

TURNING MOVEMENT VOLUME COUNTS

NO. STREET: Midway Rd
 FROM: WILSON LAKE
 COUNTY: DAY
 REPORT DATE: 2/20/2005
 ANALYSIS YEAR: 2005
 DAY: Thursday
 CITY: SLICK
 CONTROL TYPE: TWY

15 Min Period

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NLR	NLR	SBL	SBT	SBR	SBR	EAL	ETB	ETB	ETB	WBL	WBT	WBR	TOTAL
7:00-7:15	336	0	126	3	2	1	1	1	137	52	45	124	5	615	2077	
7:15-7:30	351	0	85	1	2	1	1	1	118	55	64	152	3	504	2613	
7:30-7:45	335	1	108	0	0	7	1	151	77	93	145	1	814	2605		
7:45-8:00	342	1	128	4	0	4	4	131	70	56	138	6	714	2311		
8:00-8:15	335	1	121	2	0	3	1	123	41	49	121	2	561	1949		
8:15-8:30	311	0	91	1	0	1	1	124	47	55	143	3	516			
8:30-8:45	342	1	67	3	1	5	4	91	35	48	99	2	440			
8:45-9:00	34	0	57	0	0	3	5	92	52	43	104	2	332			

7:00AM TO 8:00AM
 Seasonal Factor: 1
 Growth Rate: 1.005
 Years Growth: 15

Volume	W/O	W/L	W/T	Total
336	0	126	3	465
351	0	85	1	437
335	1	108	0	444
342	1	128	4	475
335	1	121	2	459
311	0	91	1	402
342	1	67	3	413
34	0	57	0	91

AM PEAK HOUR DIAGONAL

Volume	W/O	W/L	W/T	Total
516	3	447	14	977
556	3	447	14	1010
556	3	442	15	1010
576	0	466	10	1052
576	0	466	10	1052

15 Min Period

15 Min Period	NBL	NBT	NLR	NLR	SBL	SBT	SBR	SBR	EAL	ETB	ETB	ETB	WBL	WBT	WBR	TOTAL
4:00-4:15	50	1	59	0	2	0	0	0	1	143	71	58	38	0	483	2317
4:15-4:30	41	0	76	0	1	0	0	0	92	69	70	183	1	595	2220	
4:30-4:45	54	0	66	0	1	3	1	137	69	63	138	0	513	2361		
4:45-5:00	54	0	66	0	0	0	1	145	103	85	98	0	547	2314		
5:00-5:15	43	0	63	0	1	2	3	94	58	86	165	1	516	2280		
5:15-5:30	57	0	67	0	0	0	1	103	119	89	134	0	608			
5:30-5:45	43	0	71	2	0	1	0	126	124	81	116	0	543			
5:45-6:00	45	1	74	0	0	0	1	107	82	70	97	2	621			

4:00PM TO 5:00PM
 Seasonal Factor: 1
 Growth Rate: 1.005
 Years Growth: 15

Volume	W/O	W/L	W/T	Total
50	1	59	0	110
41	0	76	0	117
54	0	66	0	120
54	0	66	0	120
43	0	63	0	106
57	0	67	0	124
43	0	71	2	116
45	1	74	0	120

PM PEAK HOUR DIAGONAL

Volume	W/O	W/L	W/T	Total
195	0	307	2	504
195	0	307	2	504
195	0	307	2	504
195	0	307	2	504
195	0	307	2	504

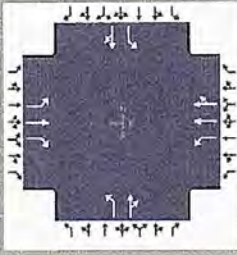
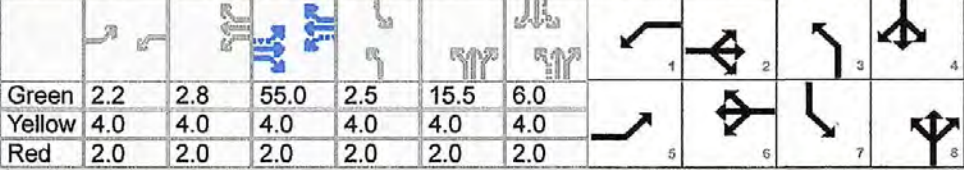
15 Min Period

15 Min Period	NBL	NBT	NLR	NLR	SBL	SBT	SBR	SBR	EAL	ETB	ETB	ETB	WBL	WBT	WBR	TOTAL
8:00-8:15	195	0	307	2	1	1	1	5	114	442	341	513	1	2134		
8:15-8:30	195	0	307	2	1	1	1	5	114	442	341	513	1	2134		
8:30-8:45	195	0	307	2	1	1	1	5	114	442	341	513	1	2134		
8:45-9:00	195	0	307	2	1	1	1	5	114	442	341	513	1	2134		

8:00PM TO 9:00PM
 Seasonal Factor: 1
 Growth Rate: 1.005
 Years Growth: 15

Volume	W/O	W/L	W/T	Total
195	0	307	2	504
195	0	307	2	504
195	0	307	2	504
195	0	307	2	504
195	0	307	2	504

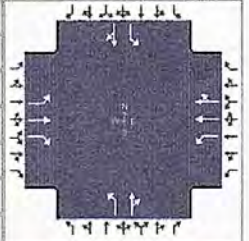
HCS7 Signalized Intersection Results Summary # 6 w/o AM

General Information					Intersection Information											
Agency	O'Rourke Engineering & Planning				Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Apr 17, 2020		Area Type	Other										
Jurisdiction	St. Lucie	Time Period	AM Peak Hour		PHF	0.95										
Urban Street	Midway Road	Analysis Year	2035		Analysis Period	1 > 7:00										
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 w.o. Project - 7....													
Project Description	without Project															
Demand Information					EB			WB			NB			SB		
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h					13	1092	280	277	1237	16	572	3	482	15	4	18
Signal Information																
Cycle, s	120.0	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	2.2	2.8	55.0	2.5	15.5	6.0										
Yellow	4.0	4.0	4.0	4.0	4.0	4.0										
Red	2.0	2.0	2.0	2.0	2.0	2.0										
Timer Results					EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					5	2	1	6	3	8	7	4				
Case Number					1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0				
Phase Duration, s					8.2	61.0	17.0	69.8	30.0	33.5	8.5	12.0				
Change Period, (Y+R _c), s					6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Allow Headway (MAH), s					3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3				
Queue Clearance Time (g _s), s					2.5		13.0		26.0	29.5	3.0	3.6				
Green Extension Time (g _e), s					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4				
Phase Call Probability					0.37		1.00		1.00	1.00	0.41	1.00				
Max Out Probability					0.00		1.00		1.00	1.00	0.10	1.00				
Movement Group Results					EB			WB			NB			SB		
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement					5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h					14	1149	295	292	661	658	602	511		16	23	
Adjusted Saturation Flow Rate (s), veh/h/ln					1810	1900	1610	1810	1900	1891	1810	1612		1810	1656	
Queue Service Time (g _s), s					0.5	55.0	14.6	11.0	30.0	30.0	24.0	27.5		1.0	1.6	
Cycle Queue Clearance Time (g _c), s					0.5	55.0	14.6	11.0	30.0	30.0	24.0	27.5		1.0	1.6	
Green Ratio (g/C)					0.48	0.46	0.46	0.57	0.53	0.53	0.27	0.23		0.07	0.05	
Capacity (c), veh/h					205	871	738	226	1010	1006	473	370		97	83	
Volume-to-Capacity Ratio (X)					0.067	1.320	0.399	1.289	0.654	0.654	1.272	1.380		0.163	0.280	
Back of Queue (Q), ft/ln (95 th percentile)					8.7	2193	235.5	638.6	476.3	475.4	773.5	1135.8		20	30.4	
Back of Queue (Q), veh/ln (95 th percentile)					0.3	87.7	9.4	25.5	19.1	19.0	30.9	45.4		0.8	1.2	
Queue Storage Ratio (RQ) (95 th percentile)					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh					18.9	32.5	21.6	39.2	20.2	20.2	44.5	46.2		52.5	54.9	
Incremental Delay (d ₂), s/veh					0.1	152.2	1.6	159.2	3.3	3.3	138.2	187.2		0.3	0.7	
Initial Queue Delay (d ₃), s/veh					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh					18.9	184.7	23.2	198.4	23.5	23.5	182.7	233.4		52.7	55.6	
Level of Service (LOS)					B	F	C	F	C	C	F	F		D	E	
Approach Delay, s/veh / LOS					150.5		F	55.2		E	206.0		F	54.4		D
Intersection Delay, s/veh / LOS					127.8						F					
Multimodal Results					EB			WB			NB			SB		
Pedestrian LOS Score / LOS					1.91		B	1.90		B	2.13		B	2.32		B
Bicycle LOS Score / LOS					2.89		C	1.82		B	2.32		B	0.55		A

HCS7 Signalized Intersection Input Data

6 w/o AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 w.o. Project - 7...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information																	
Cycle, s	120.0	Reference Phase	2	Green		Yellow		Red		1		2		3		4	
Offset, s	0	Reference Point	End	2.2	2.8	55.0	2.5	15.5	6.0	5		6		7		8	
Uncoordinated	No	Simult. Gap E/W	On	4.0	4.0	4.0	4.0	4.0	4.0	5		6		7		8	
Force Mode	Fixed	Simult. Gap N/S	On	2.0	2.0	2.0	2.0	2.0	2.0	5		6		7		8	

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

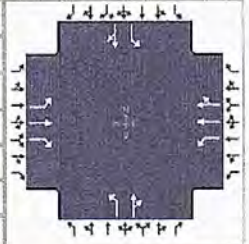
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	14.0	61.0	17.0	64.0	30.0	29.0	13.0	12.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l ₀), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

6 W/O PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project - 7....				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information				Phase Diagrams							
Cycle, s	140.0	Reference Phase	2								
Offset, s	0	Reference Point	End	Green	1.1	11.9	78.0	0.5	3.5	9.0	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	2.0	2.0	2.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	7.1	84.0	25.0	101.9	16.0	24.5	6.5	15.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.2		21.0		12.0	20.5	2.2	2.3
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.00	0.09

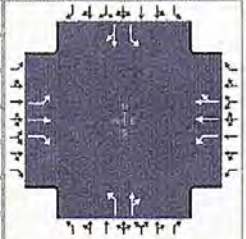
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	1563	522	386	646	646	229	348		2	4	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1899	1810	1610		1810	1674	
Queue Service Time (g _s), s	0.2	78.0	29.8	19.0	22.7	22.7	10.0	18.5		0.2	0.3	
Cycle Queue Clearance Time (g _c), s	0.2	78.0	29.8	19.0	22.7	22.7	10.0	18.5		0.2	0.3	
Green Ratio (g/C)	0.56	0.56	0.56	0.71	0.68	0.68	0.15	0.13		0.07	0.06	
Capacity (c), veh/h	286	1058	897	298	1301	1301	269	213		58	108	
Volume-to-Capacity Ratio (X)	0.018	1.477	0.582	1.298	0.497	0.497	0.852	1.636		0.037	0.039	
Back of Queue (Q), ft/ln (95 th percentile)	3.2	3669.9	418.7	870.7	348.6	348.5	203	1004.7		3.2	6.3	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	146.8	16.7	34.8	13.9	13.9	8.1	40.2		0.1	0.3	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	13.5	31.0	20.3	51.7	10.5	10.5	59.3	60.7		61.2	61.5	
Incremental Delay (d ₂), s/veh	0.0	219.9	2.8	156.8	1.4	1.4	21.2	306.3		0.1	0.1	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	13.5	250.9	23.1	208.5	11.9	11.9	80.6	367.0		61.3	61.5	
Level of Service (LOS)	B	F	C	F	B	B	F	F		E	E	
Approach Delay, s/veh / LOS	193.4		F	57.1		E	253.3		F	61.4		E
Intersection Delay, s/veh / LOS	148.6						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.88	B	2.15	B	2.32	B
Bicycle LOS Score / LOS	3.94	D	1.87	B	1.44	A	0.50	A

HCS7 Signalized Intersection Input Data

6 w/o PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project - 7...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information				Signal Diagram													
Cycle, s	140.0	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	1.1	11.9	78.0	0.5	3.5	9.0							
				Yellow	4.0	4.0	4.0	4.0	4.0	4.0							
				Red	2.0	2.0	2.0	2.0	2.0	2.0							

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

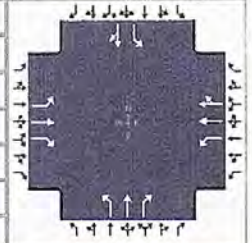
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	84.0	84.0	25.0	25.0	16.0	18.0	13.0	15.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

6 w/o +NBR AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy & Midway - AM - 2035 w.o. Project - ...				
Project Description	without Project +NBR						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information				Signal Timing Diagram													
Cycle, s	120.0	Reference Phase	2	[Diagram showing signal timing for 8 phases: 1-4 for EB, WB, NB, SB and 5-8 for EB, WB, NB, SB]													
Offset, s	0	Reference Point	End	Green	2.2	6.0	43.8	2.5	5.5	24.0	Yellow	4.0	4.0	4.0	4.0	4.0	4.0
Uncoordinated	No	Simult. Gap E/W	On	Red	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Force Mode	Fixed	Simult. Gap N/S	On														

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	8.2	49.8	20.2	61.8	20.0	41.5	8.5	30.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.6		16.3		16.0	37.5	2.8	3.4
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.00	0.00

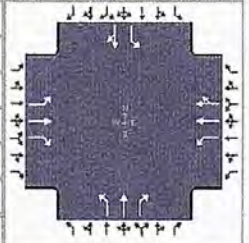
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	14	1149	295	292	661	658	602	3	507	16	23	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1891	1810	1900	1610	1810	1656	
Queue Service Time (g _s), s	0.6	43.7	17.1	14.3	34.2	34.2	14.0	0.1	35.5	0.8	1.4	
Cycle Queue Clearance Time (g _c), s	0.6	43.7	17.1	14.3	34.2	34.2	14.0	0.1	35.5	0.8	1.4	
Green Ratio (g/C)	0.38	0.37	0.37	0.50	0.47	0.47	0.33	0.30	0.30	0.22	0.20	
Capacity (c), veh/h	163	692	587	277	884	880	535	562	476	382	331	
Volume-to-Capacity Ratio (X)	0.084	1.661	0.502	1.052	0.747	0.748	1.126	0.006	1.065	0.041	0.070	
Back of Queue (Q), ft/ln (95th percentile)	10.7	2989.7	278.8	494.3	559.6	558.5	737.6	2.8	753.4	16.1	24.6	
Back of Queue (Q), veh/ln (95th percentile)	0.4	119.6	11.2	19.8	22.4	22.3	29.5	0.1	30.1	0.6	1.0	
Queue Storage Ratio (RQ) (95th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	25.5	38.1	29.7	38.1	26.3	26.3	41.5	29.8	42.3	36.8	39.0	
Incremental Delay (d ₂), s/veh	0.1	303.7	3.1	68.5	5.7	5.8	78.5	0.0	59.7	0.0	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	25.6	341.8	32.7	106.6	32.0	32.1	119.9	29.8	102.0	36.8	39.0	
Level of Service (LOS)	C	F	C	F	C	C	F	C	F	D	D	
Approach Delay, s/veh / LOS	276.4		F	45.5		D	111.5		F	38.1		D
Intersection Delay, s/veh / LOS	142.6						F					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.12 B	1.91 B	2.12 B	2.30 B
Bicycle LOS Score / LOS	2.89 C	1.82 B	2.32 B	0.55 A

HCS7 Signalized Intersection Input Data

#6 w/o +NBR AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy & Midway - AM - 2035 w.o. Project -...				
Project Description	without Project <i>f NBR</i>						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information				Phase Diagrams								
Cycle, s	120.0	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	2.2	6.0	43.8	2.5	5.5	24.0						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0						
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

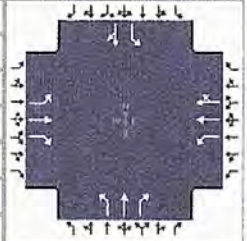
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	20.0	50.0	20.0	50.0	20.0	30.0	20.0	30.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#6 W/O + N BR PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project - 7...				
Project Description	without Project + N BR						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information				Signal Timing Diagram									
Cycle, s	140.0	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		1.1	12.2	64.0	0.5	7.5	18.7				
		Yellow		4.0	4.0	4.0	4.0	4.0	4.0				
		Red		2.0	2.0	2.0	2.0	2.0	2.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	7.1	70.0	25.3	88.2	20.0	38.2	6.5	24.7
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.2		21.4		16.0	31.8	2.1	2.3
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.7
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	0.18	0.00	0.00

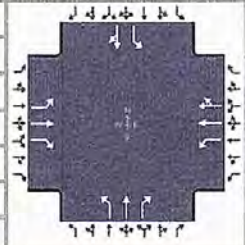
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	1563	522	386	646	646	229	0	348	2	4	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1899	1810	1900	1610	1810	1674	
Queue Service Time (g _s), s	0.2	64.0	36.5	19.4	29.8	29.8	14.0	0.0	29.8	0.1	0.3	
Cycle Queue Clearance Time (g _c), s	0.2	64.0	36.5	19.4	29.8	29.8	14.0	0.0	29.8	0.1	0.3	
Green Ratio (g/C)	0.46	0.46	0.46	0.61	0.59	0.59	0.25	0.23	0.23	0.14	0.13	
Capacity (c), veh/h	222	868	736	302	1116	1116	420	437	370	249	223	
Volume-to-Capacity Ratio (X)	0.024	1.800	0.710	1.280	0.579	0.579	0.546	0.000	0.941	0.008	0.019	
Back of Queue (Q), ft/ln (95 th percentile)	4.1	4551.4	525.7	856.5	470.6	470.5	278.3	0	514.2	2.9	5.8	
Back of Queue (Q), veh/ln (95 th percentile)	0.2	182.1	21.0	34.3	18.8	18.8	11.1	0.0	20.6	0.1	0.2	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	20.8	38.0	30.5	49.3	18.1	18.1	45.6	0.0	53.0	52.2	52.7	
Incremental Delay (d ₂), s/veh	0.0	364.8	5.7	149.1	2.2	2.2	0.8	0.0	25.5	0.0	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	20.8	402.8	36.3	198.4	20.3	20.3	46.4	0.0	78.5	52.2	52.7	
Level of Service (LOS)	C	F	D	F	C	C	D		E	D	D	
Approach Delay, s/veh / LOS	310.3		F	61.3		E	65.8		E	52.6		D
Intersection Delay, s/veh / LOS	181.4						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	1.90	B	2.14	B	2.32	B
Bicycle LOS Score / LOS	3.94	D	1.87	B	1.44	A	0.50	A

HCS7 Signalized Intersection Input Data

6 w/o + NBR PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project - 7....				
Project Description	without Project + NBR						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information				Signal Timing and Phases									
Cycle, s	140.0	Reference Phase	2	[Signal Timing Diagram]									
Offset, s	0	Reference Point	End	Green	1.1	12.2	64.0	0.5	7.5	18.7	[Phase Diagram]		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	[Phase Diagram]		
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	2.0	2.0	2.0	[Phase Diagram]		

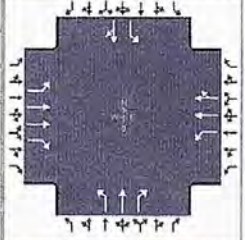
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (P _g), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	20.0	70.0	20.0	70.0	20.0	30.0	20.0	30.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary # 6 w/o AM + Imp

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy & Midway - AM - 2035 w.o. Project +...				
Project Description	without Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information				Signal Timing Diagram								
Cycle, s	120.0	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	2.2	2.5	43.5	2.5	15.5	17.8						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0						
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	8.2	49.5	16.7	58.0	30.0	45.3	8.5	23.8
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.6		13.1		26.0	39.1	2.9	3.5
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.1
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.00	0.00

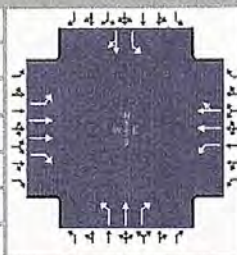
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	14	1149	295	292	661	658	602	3	507	16	23	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1900	1891	1810	1900	1610	1810	1656	
Queue Service Time (g _s), s	0.6	35.8	17.2	11.1	36.2	36.3	24.0	0.1	37.1	0.9	1.5	
Cycle Queue Clearance Time (g _c), s	0.6	35.8	17.2	11.1	36.2	36.3	24.0	0.1	37.1	0.9	1.5	
Green Ratio (g/C)	0.38	0.36	0.36	0.47	0.43	0.43	0.36	0.33	0.33	0.17	0.15	
Capacity (c), veh/h	145	1301	579	257	824	821	607	622	527	303	245	
Volume-to-Capacity Ratio (X)	0.094	0.883	0.509	1.135	0.802	0.802	0.991	0.005	0.963	0.052	0.095	
Back of Queue (Q), ft/ln (95 th percentile)	10.8	581.9	281	446.3	604.9	603.7	423.6	2.7	628.4	17.4	26.4	
Back of Queue (Q), veh/ln (95 th percentile)	0.4	23.3	11.2	17.9	24.2	24.1	16.9	0.1	25.1	0.7	1.1	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	26.9	36.1	30.1	29.9	29.5	29.5	38.5	27.2	39.6	41.9	44.2	
Incremental Delay (d ₂), s/veh	0.1	9.0	3.2	97.6	8.1	8.1	34.2	0.0	28.5	0.0	0.1	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	27.0	45.0	33.3	127.5	37.6	37.6	72.6	27.2	68.2	41.9	44.3	
Level of Service (LOS)	C	D	C	F	D	D	E	C	E	D	D	
Approach Delay, s/veh / LOS	42.5		D	53.9		D	70.5		E	43.3		D
Intersection Delay, s/veh / LOS	54.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.12	B	1.92	B	2.29	B	2.46	B
Bicycle LOS Score / LOS	1.69	B	1.82	B	2.32	B	0.55	A

HCS7 Signalized Intersection Input Data

6 w/o AM turnp

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy & Midway - AM - 2035 w.o. Project +...		
Project Description	without Project + Imp				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18

Signal Information				Signal Timing (s)								Signal Phases			
Cycle, s	120.0	Reference Phase	2	Green	2.2	2.5	43.5	2.5	15.5	17.8	1	2	3	4	
Offset, s	0	Reference Point	End	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	5	6	7	8	
Uncoordinated	No	Simult. Gap E/W	On	Red	2.0	2.0	2.0	2.0	2.0	2.0					
Force Mode	Fixed	Simult. Gap N/S	On												

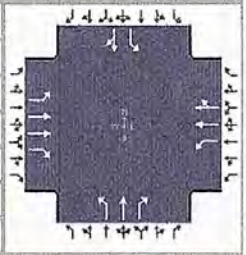
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1092	280	277	1237	16	572	3	482	15	4	18
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	15.0	50.0	15.0	50.0	30.0	25.0	30.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
	85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No			0.50			No			0.50		

HCS7 Signalized Intersection Results Summary # 6 w/o PM + Imp

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project + I...				
Project Description	without Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information				Phase Diagrams										
Cycle, s	140.0	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	1.1	12.0	73.9	0.5	2.5	14.0	1		2		3		4	
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	5		6		7		8	
Red	2.0	2.0	2.0	2.0	2.0	2.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	7.1	79.9	25.1	97.9	15.0	28.5	6.5	20.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.2		21.1		11.0	24.5	2.1	2.3
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.00	0.00

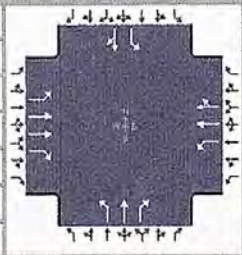
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	1563	522	386	646	646	229	0	348	2	4	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1900	1899	1810	1900	1610	1810	1674	
Queue Service Time (g _s), s	0.2	50.3	31.7	19.1	24.8	24.8	9.0	0.0	22.5	0.1	0.3	
Cycle Queue Clearance Time (g _c), s	0.2	50.3	31.7	19.1	24.8	24.8	9.0	0.0	22.5	0.1	0.3	
Green Ratio (g/C)	0.54	0.53	0.53	0.68	0.66	0.66	0.18	0.16	0.16	0.10	0.10	
Capacity (c), veh/h	268	1909	850	354	1247	1247	307	305	259	201	167	
Volume-to-Capacity Ratio (X)	0.020	0.819	0.614	1.090	0.518	0.518	0.747	0.000	1.346	0.010	0.025	
Back of Queue (Q), ft/ln (95 th percentile)	3.5	727.1	448.6	697.3	384.1	384	178.6	0	838.7	3	6	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	29.1	17.9	27.9	15.4	15.4	7.1	0.0	33.5	0.1	0.2	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	15.4	27.5	23.1	42.1	12.5	12.5	55.7	0.0	58.7	56.4	56.9	
Incremental Delay (d ₂), s/veh	0.0	4.1	3.3	74.2	1.5	1.5	8.6	0.0	179.1	0.0	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	15.4	31.5	26.4	116.4	14.1	14.1	64.3	0.0	237.9	56.4	56.9	
Level of Service (LOS)	B	C	C	F	B	B	E		F	E	E	
Approach Delay, s/veh / LOS	30.2		C	37.6		D	168.9		F	56.7		E
Intersection Delay, s/veh / LOS	51.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.10	B	1.88	B	2.31	B	2.47	B
Bicycle LOS Score / LOS	2.21	B	1.87	B	1.44	A	0.50	A

HCS7 Signalized Intersection Input Data

#6 w/o AM + Imp

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 w.o. Project + I...				
Project Description	without Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3

Signal Information				Signal Timing (s)													
Cycle, s	140.0	Reference Phase	2	Green	1.1	12.0	73.9	0.5	2.5	14.0	Yellow	4.0	4.0	4.0	4.0	4.0	4.0
Offset, s	0	Reference Point	End	Red	2.0	2.0	2.0	2.0	2.0	2.0	Force Mode	Fixed	Simult. Gap E/W	On	Simult. Gap N/S	On	

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1485	496	367	1227	1	218	0	331	2	1	3
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	20.0	80.0	25.0	85.0	15.0	20.0	15.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
	85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

TURNING MOVEMENT VOLUME COUNTS

#6 WIP

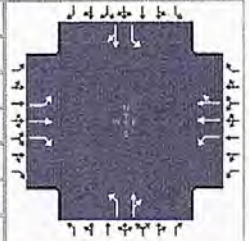
15 Min Period	Northbound				Eastbound				Westbound				TOTAL	TOTAL	TOTAL
	NBL	NBT	NRA	NRL	EBL	EBT	EBR	EBL	WBL	WBT	WBR	WBL			
7:00-7:15	335	1	135	3	2	1	3	137	33	45	124	5	615	2677	
7:15-7:30	353	0	43	1	2	1	4	112	55	64	152	3	594	2423	
7:30-7:45	315	1	109	0	0	7	1	561	77	92	145	1	714	2695	
7:45-8:00	342	1	128	4	0	4	4	381	70	56	138	6	714	3111	
8:00-8:15	315	0	91	2	0	3	8	323	41	49	121	2	561	1969	
8:15-8:30	305	0	93	1	0	8	11	334	47	55	143	3	576		← 2166 → ← 1337 → ← 302 →
8:30-8:45	382	1	67	3	1	5	4	91	35	48	99	2	640		← 1672 → ← 277 →
8:45-9:00	34	0	13	0	0	3	1	92	52	43	154	2	202		← 593 → ← 3 → ← 482 →
AM															
Peak Hour Factor: 1															
Growth Rate: 1.005															
Years Growth: 15															
Veh/Sec Lanes: 1															
Veh/Sec Lanes: 1.065															
Village of Midway															
LTC Branch															
Southern Grove															
Wilson Grove															
Hawthorn/Kennedy															
Western Grove															
Riviera															
Proctors															
Total In: 1,555															
Total Out: 1,565															
Total: 599															
Time: 599 3 482 15 4 16 13 137 321 277 1549 18 4615															
PM															
Peak Hour Factor: 1															
Growth Rate: 1.005															
Years Growth: 15															
Veh/Sec Lanes: 1															
Veh/Sec Lanes: 1.000															
Village of Midway															
LTC Branch															
Southern Grove															
Wilson Grove															
Hawthorn/Kennedy															
Western Grove															
Riviera															
Proctors															
Total In: 1,723															
Total Out: 1,740															
Total: 217															
Time: 217 0 311 2 1 3 1 173 517 367 1551 1 4710															

HCS7 Signalized Intersection Results Summary

#6 w/ PAM

General Information

Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project - 7...		
Project Description	with Project				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information

Cycle, s	120.0	Reference Phase	2																					
Offset, s	0	Reference Point	End	Green	2.2	1.8	62.0	2.5	9.5	6.0	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	Red	2.0	2.0	2.0	2.0	2.0	2.0
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	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	8.2	68.0	16.0	75.8	24.0	27.5	8.5	12.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.4		12.0		22.0	18.9	3.0	3.6
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		1.00		1.00	0.06	0.00	0.07

Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	14	1407	318	292	824	823	631	237		16	23	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1899	1893	1810	1613		1810	1656	
Queue Service Time (g _s), s	0.4	63.0	14.3	10.0	37.7	37.9	20.0	16.9		1.0	1.6	
Cycle Queue Clearance Time (g _c), s	0.4	63.0	14.3	10.0	37.7	37.9	20.0	16.9		1.0	1.6	
Green Ratio (g/C)	0.54	0.53	0.53	0.62	0.59	0.59	0.25	0.18		0.07	0.05	
Capacity (c), veh/h	170	998	832	211	1120	1101	437	290		122	83	
Volume-to-Capacity Ratio (X)	0.081	1.411	0.382	1.383	0.736	0.748	1.444	0.818		0.129	0.280	
Back of Queue (Q), ft/ln (95 th percentile)	7.5	2932	226.2	690.5	566.6	569.3	1095.7	298.4		19.9	30.4	
Back of Queue (Q), veh/ln (95 th percentile)	0.3	117.3	9.0	27.6	22.7	22.8	43.8	11.9		0.8	1.2	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	17.6	28.5	17.5	40.5	18.1	17.9	45.6	47.3		52.3	54.9	
Incremental Delay (d ₂), s/veh	0.1	190.9	1.3	199.3	4.3	4.7	212.5	10.6		0.2	0.7	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	17.6	219.4	18.8	239.7	22.4	22.5	258.1	57.9		52.5	55.6	
Level of Service (LOS)	B	F	B	F	C	C	F	E		D	E	
Approach Delay, s/veh / LOS	181.1		F	55.1		E	203.4		F	54.3		D
Intersection Delay, s/veh / LOS	131.0						F					

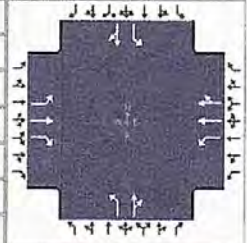
Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.27		B	1.89		B	2.14		B	2.32		B
Bicycle LOS Score / LOS	3.36		C	2.09		B	1.92		B	0.55		A

HCS7 Signalized Intersection Input Data

#6 w/p Am

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project - 7...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information				Signal Diagram															
Cycle, s	120.0	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		2.2	1.8	62.0	2.5	9.5	6.0										
		Yellow		4.0	4.0	4.0	4.0	4.0	4.0										
		Red		2.0	2.0	2.0	2.0	2.0	2.0										

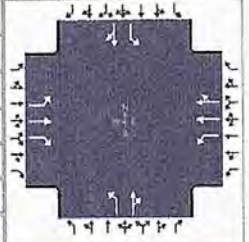
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	260	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (P _g), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	68.0	68.0	12.0	12.0	24.0	21.0	19.0	16.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (I _t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	3.0	2.0	3.0	4.0	2.0	2.0	2.0
Passage (P _T), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (P _C), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary # 6 w/p PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project - 7....				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information				Phase Diagrams								
Cycle, s	140.0	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	1.1	7.9	89.0	0.5	5.5	6.0				
		Yellow	4.0	4.0	4.0	4.0	0.0	4.0				
		Red	2.0	2.0	2.0	2.0	0.0	2.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	7.1	95.0	21.0	108.9	12.0	17.5	6.5	12.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.1		17.0		8.0	13.5	2.2	2.3
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	1.00	0.06	0.64

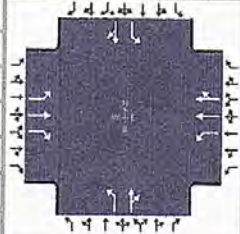
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	1814	544	386	822	822	260	138		2	4	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1900	1810	1610		1810	1674	
Queue Service Time (g _s), s	0.1	89.0	26.0	15.0	28.3	28.3	6.0	11.5		0.2	0.3	
Cycle Queue Clearance Time (g _c), s	0.1	89.0	26.0	15.0	28.3	28.3	6.0	11.5		0.2	0.3	
Green Ratio (g/C)	0.64	0.64	0.64	0.76	0.73	0.73	0.10	0.08		0.05	0.04	
Capacity (c), veh/h	226	1208	1023	245	1396	1396	187	133		58	72	
Volume-to-Capacity Ratio (X)	0.023	1.502	0.532	1.574	0.589	0.589	1.391	1.040		0.037	0.059	
Back of Queue (Q), ft/ln (95 th percentile)	2.5	4282.8	357.1	1051.5	396.3	396.2	557.3	318.2		3.2	6.5	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	171.3	14.3	42.1	15.9	15.8	22.3	12.7		0.1	0.3	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	9.9	25.5	14.0	53.8	8.7	8.7	64.8	64.2		63.9	64.3	
Incremental Delay (d ₂), s/veh	0.0	230.2	2.0	276.9	1.8	1.8	205.3	89.3		0.1	0.1	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	9.9	255.7	16.0	330.7	10.5	10.5	270.1	153.5		64.0	64.4	
Level of Service (LOS)	A	F	B	F	B	B	F	F		E	E	
Approach Delay, s/veh / LOS	199.9		F	71.4		E	229.7		F	64.3		E
Intersection Delay, s/veh / LOS	147.8						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	1.86	B	2.15	B	2.32	B
Bicycle LOS Score / LOS	4.39	D	2.16	B	1.14	A	0.50	A

HCS7 Signalized Intersection Input Data

#6 WIP PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project - 7...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information													
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	1.1	7.9	89.0	0.5	5.5	6.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	0.0	4.0			
				Red	2.0	2.0	2.0	2.0	0.0	2.0			

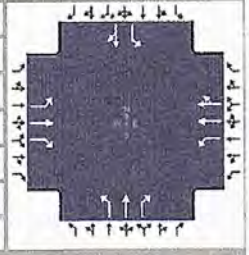
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			0	L		None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	200	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	84.0	95.0	21.0	32.0	12.0	12.0	12.0	12.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _f), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary # 6 w/p FNR AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project - 7....				
Project Description	with Project <i>FNR</i>						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information				Signal Phases													
Cycle, s	120.0	Reference Phase	2														
Offset, s	0	Reference Point	End	Green	2.2	9.1	33.5	2.5	30.7	6.0	Green	2.2	9.1	33.5	2.5	30.7	6.0
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	Yellow	4.0	4.0	4.0	4.0	4.0	4.0
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	2.0	2.0	2.0	Red	2.0	2.0	2.0	2.0	2.0	2.0

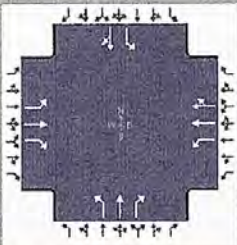
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	8.2	39.5	23.3	54.6	45.2	48.7	8.5	12.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.6		17.0		38.8	15.1	3.0	3.6
Green Extension Time (g _e), s	0.0	0.0	0.3	0.0	0.4	0.5	0.0	0.3
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		0.02		1.00	0.00	0.00	0.02

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	14	1407	318	292	824	823	631	3	234	16	23	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1899	1893	1810	1900	1610	1810	1656	
Queue Service Time (g _s), s	0.6	34.5	21.3	15.0	49.6	49.6	36.8	0.1	13.1	1.0	1.6	
Cycle Queue Clearance Time (g _c), s	0.6	34.5	21.3	15.0	49.6	49.6	36.8	0.1	13.1	1.0	1.6	
Green Ratio (g/C)	0.30	0.29	0.29	0.44	0.41	0.41	0.43	0.36	0.36	0.07	0.05	
Capacity (c), veh/h	93	546	449	321	785	767	756	677	573	169	83	
Volume-to-Capacity Ratio (X)	0.147	2.577	0.707	0.908	1.050	1.074	0.834	0.005	0.407	0.094	0.280	
Back of Queue (Q), ft/ln (95 th percentile)	12.6	4883.3	355.6	306.5	1052.7	1112.3	579.5	2.6	213.9	19.8	30.4	
Back of Queue (Q), veh/ln (95 th percentile)	0.5	195.3	14.2	12.3	42.1	44.5	23.2	0.1	8.6	0.8	1.2	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	34.5	42.8	38.9	35.0	35.2	35.2	30.4	24.9	29.1	52.3	54.9	
Incremental Delay (d ₂), s/veh	0.3	715.1	9.1	15.9	46.0	54.1	7.0	0.0	0.2	0.1	0.7	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	34.8	757.9	47.9	50.8	81.2	89.3	37.4	24.9	29.3	52.4	55.6	
Level of Service (LOS)	C	F	D	D	F	F	D	C	C	D	E	
Approach Delay, s/veh / LOS	622.4		F	80.1		F	35.1		D	54.3		D
Intersection Delay, s/veh / LOS	277.1						F					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.50		B	1.92		B	2.12		B	2.32		B
Bicycle LOS Score / LOS	3.36		C	2.09		B	1.92		B	0.55		A

HCS7 Signalized Intersection Input Data #6 w/P +NBR AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project - 7....				
Project Description	with Project +NBR						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information				Signal Timing (s)							
Cycle, s	120.0	Reference Phase	2								
Offset, s	0	Reference Point	End	Green	2.2	9.1	33.5	2.5	30.7	6.0	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	2.0	2.0	2.0	

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	260	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

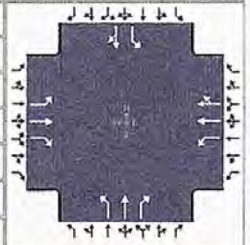
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	14.0	32.0	25.0	43.0	47.0	30.0	33.0	16.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	3.0	2.0	3.0	4.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

6 w/ P + NB R2 PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project - 7....				
Project Description	with Project + NB R2						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information				Phase Diagrams									
Cycle, s	140.0	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	1.1	18.2	64.0	0.5	14.3	6.0			
				Yellow	4.0	4.0	4.0	4.0	4.0	4.0			
				Red	2.0	2.0	2.0	2.0	2.0	2.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	7.1	70.0	31.3	94.2	26.7	32.2	6.5	12.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.2		27.3		20.7	12.7	2.2	2.3
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.1
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		1.00		1.00	0.00	0.00	0.16

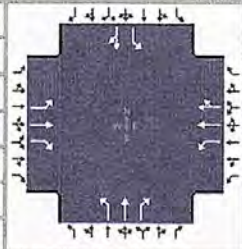
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	1814	544	386	822	822	260	0	138	2	4	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1900	1610	1810	1900	1900	1810	1900	1610	1810	1674	
Queue Service Time (g _s), s	0.2	64.0	38.8	25.3	39.5	39.5	18.7	0.0	10.7	0.2	0.3	
Cycle Queue Clearance Time (g _c), s	0.2	64.0	38.8	25.3	39.5	39.5	18.7	0.0	10.7	0.2	0.3	
Green Ratio (g/C)	0.47	0.46	0.46	0.65	0.63	0.63	0.21	0.19	0.19	0.05	0.04	
Capacity (c), veh/h	169	869	736	378	1197	1196	377	356	302	119	71	
Volume-to-Capacity Ratio (X)	0.031	2.088	0.739	1.022	0.687	0.687	0.689	0.000	0.457	0.018	0.059	
Back of Queue (Q), ft/ln (95 th percentile)	4.1	5878	556.9	645	588.3	588.3	338.5	0	191.1	3.2	6.5	
Back of Queue (Q), veh/ln (95 th percentile)	0.2	235.1	22.3	25.8	23.5	23.5	13.5	0.0	7.6	0.1	0.3	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	21.2	38.0	31.2	49.0	16.9	16.9	51.7	0.0	50.5	63.8	64.3	
Incremental Delay (d ₂), s/veh	0.0	493.6	6.6	51.9	3.2	3.2	3.9	0.0	0.4	0.0	0.1	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	21.2	531.6	37.7	100.9	20.1	20.1	55.5	0.0	50.9	63.8	64.4	
Level of Service (LOS)	C	F	D	F	C	C	E		D	E	E	
Approach Delay, s/veh / LOS	416.7		F	35.5		D	53.9		D	64.2		E
Intersection Delay, s/veh / LOS	224.8						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.39	B	1.89	B	2.14	B	2.32	B
Bicycle LOS Score / LOS	4.39	D	2.16	B	1.14	A	0.50	A

HCS7 Signalized Intersection Input Data

6 WPA + NBR PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project - 7....				
Project Description	with Project + NBR						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information				Signal Timing Diagram											
Cycle, s	140.0	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	1.1	18.2	64.0	0.5	14.3	6.0									
Yellow	4.0	4.0	4.0	4.0	4.0	4.0									
Red	2.0	2.0	2.0	2.0	2.0	2.0									

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			0	L		None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	200	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (P _g), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

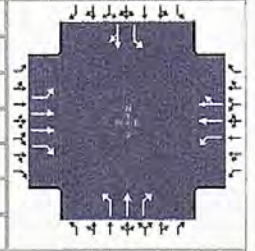
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	20.0	70.0	30.0	80.0	28.0	27.0	13.0	12.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (I _f), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#6 W/P + Imp AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project + I...				
Project Description	with Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information				Phase Diagrams								
Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End	Green	2.2	7.4	49.4	2.5	16.5	6.0		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0		
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	2.0	2.0	2.0	2.0	2.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	8.2	55.4	21.6	68.8	31.0	34.5	8.5	12.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.5		15.2		29.0	17.5	3.0	3.6
Green Extension Time (g _e), s	0.0	0.0	0.4	0.0	0.0	0.5	0.0	0.4
Phase Call Probability	0.37		1.00		1.00	1.00	0.41	1.00
Max Out Probability	0.00		0.00		1.00	0.00	0.00	0.00

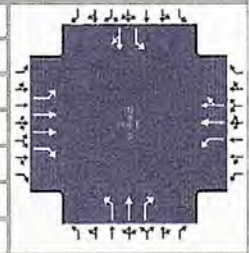
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	14	1407	318	292	824	823	631	3	234	16	23	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1899	1610	1810	1899	1893	1810	1900	1610	1810	1656	
Queue Service Time (g _s), s	0.5	41.0	17.4	13.2	43.1	43.2	27.0	0.2	15.5	1.0	1.6	
Cycle Queue Clearance Time (g _c), s	0.5	41.0	17.4	13.2	43.1	43.2	27.0	0.2	15.5	1.0	1.6	
Green Ratio (g/C)	0.43	0.42	0.42	0.56	0.53	0.53	0.31	0.24	0.24	0.07	0.05	
Capacity (c), veh/h	138	1594	663	322	1010	991	542	452	383	169	83	
Volume-to-Capacity Ratio (X)	0.099	0.883	0.480	0.905	0.816	0.831	1.163	0.007	0.610	0.094	0.280	
Back of Queue (Q), ft/ln (95 th percentile)	9.8	663.2	277.4	358.5	670.9	677	625.4	3.1	251.5	19.8	30.4	
Back of Queue (Q), veh/ln (95 th percentile)	0.4	26.5	11.1	14.3	26.8	27.1	25.0	0.1	10.1	0.8	1.2	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	24.1	32.5	25.9	33.0	23.6	23.3	41.9	34.9	40.8	52.3	54.9	
Incremental Delay (d ₂), s/veh	0.1	7.4	2.5	11.7	7.3	8.1	92.2	0.0	0.6	0.1	0.7	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	24.2	40.0	28.4	44.7	30.9	31.4	134.1	34.9	41.4	52.4	55.6	
Level of Service (LOS)	C	D	C	D	C	C	F	C	D	D	E	
Approach Delay, s/veh / LOS	37.7		D	33.2		C	108.7		F	54.3		D
Intersection Delay, s/veh / LOS	49.4						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.48	B	1.90	B	2.30	B	2.47	B
Bicycle LOS Score / LOS	1.92	B	2.09	B	1.92	B	0.55	A

HCS7 Signalized Intersection Input Data

6W1A+1MP PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - AM - 2035 with Project + I...				
Project Description	with Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18

Signal Information				Signal Timing (s)								Signal Phases			
Cycle, s	120.0	Reference Phase	2	Green	2.2	7.4	49.4	2.5	16.5	6.0	1	2	3	4	
Offset, s	0	Reference Point	End	Yellow	4.0	4.0	4.0	4.0	4.0	4.0	5	6	7	8	
Uncoordinated	No	Simult. Gap E/W	On	Red	2.0	2.0	2.0	2.0	2.0	2.0					
Force Mode	Fixed	Simult. Gap N/S	On												

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	13	1337	302	277	1549	16	599	3	482	15	4	18
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	260	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (P _g), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

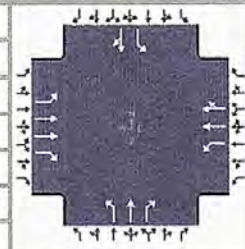
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	31.0	45.0	20.0	34.0	31.0	16.0	39.0	24.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (I _t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	3.0	2.0	3.0	4.0	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#6 W/P + Imp PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1 > 7:00
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project + I...		
Project Description	with Project + Imp				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information				Signal Timing Diagram								
Cycle, s	140.0	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	1.1	19.8	74.1	0.5	2.5	6.0						
Yellow	4.0	4.0	4.0	4.0	4.0	4.0						
Red	2.0	2.0	2.0	2.0	2.0	2.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	4.0	1.1	3.0	1.1	4.0
Phase Duration, s	7.1	80.1	32.9	105.9	15.0	20.5	6.5	12.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	0.0	3.0	0.0	3.0	3.3	3.0	3.3
Queue Clearance Time (g _s), s	2.2		26.2		11.0	13.8	2.2	2.3
Green Extension Time (g _e), s	0.0	0.0	0.7	0.0	0.0	0.2	0.0	0.2
Phase Call Probability	0.19		1.00		1.00	1.00	0.08	1.00
Max Out Probability	0.00		0.00		1.00	0.00	0.00	0.00

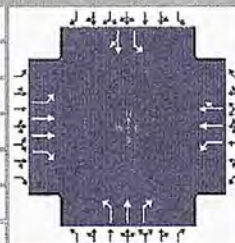
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	5	1814	544	386	822	822	260	0	138	2	4	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1809	1610	1810	1900	1900	1810	1900	1610	1810	1674	
Queue Service Time (g _s), s	0.2	66.2	33.6	24.2	30.6	30.6	9.0	0.0	11.8	0.2	0.3	
Cycle Queue Clearance Time (g _c), s	0.2	66.2	33.6	24.2	30.6	30.6	9.0	0.0	11.8	0.2	0.3	
Green Ratio (g/C)	0.54	0.53	0.53	0.74	0.71	0.71	0.12	0.10	0.10	0.05	0.04	
Capacity (c), veh/h	214	1915	852	414	1356	1356	226	197	167	119	71	
Volume-to-Capacity Ratio (X)	0.025	0.947	0.638	0.933	0.606	0.606	1.152	0.000	0.827	0.018	0.059	
Back of Queue (Q), ft/ln (95 th percentile)	3.5	968.9	472.4	487.1	434.2	434.1	403.2	0	213.3	3.2	6.5	
Back of Queue (Q), veh/ln (95 th percentile)	0.1	38.8	18.9	19.5	17.4	17.4	16.1	0.0	8.5	0.1	0.3	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh	15.2	31.1	23.4	46.9	10.1	10.1	62.8	0.0	61.5	63.8	64.3	
Incremental Delay (d ₂), s/veh	0.0	11.4	3.6	4.3	2.0	2.0	107.2	0.0	3.9	0.0	0.1	
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (d), s/veh	15.2	42.5	27.1	51.2	12.1	12.1	170.0	0.0	65.4	63.8	64.4	
Level of Service (LOS)	B	D	C	D	B	B	F		E	E	E	
Approach Delay, s/veh / LOS	38.9		D	19.6		B	133.8		F	64.2		E
Intersection Delay, s/veh / LOS	38.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.38	B	1.87	B	2.32	B	2.48	B
Bicycle LOS Score / LOS	2.44	B	2.16	B	1.14	A	0.50	A

HCS7 Signalized Intersection Input Data

#6 WP + Imp PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 17, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	East Torino Pkwy	File Name	Torino Pkwy Midway - PM - 2035 with Project + I...				
Project Description	with Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3

Signal Information				Signal Timing (s)								Signal Phases			
Cycle, s	140.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On	Green	1.1	19.8	74.1	0.5	2.5	6.0					
		Simult. Gap N/S	On	Yellow	4.0	4.0	4.0	4.0	4.0	4.0					
Force Mode	Fixed			Red	2.0	2.0	2.0	2.0	2.0	2.0					

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	5	1723	517	367	1561	1	247	0	331	2	1	3
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h		None			None		0	L			None	
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0	0	0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	200	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0	0	0	0	
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	13.0	27.0	74.0	88.0	15.0	22.0	17.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	6	6	6	6	6	6	6
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
	85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

TURNING MOVEMENT VOLUME COUNTS

#7 E

N/S STREET: Selwitz Rd
 FILENAME: Willow Lakes
 COUNT DATE: 2/13/2020
 REPORT DATE:

DAY: Tuesday
 ANALYSIS YEAR: 2020

CITY: St Louis

EW STREET: Midway Rd
 CONTROL: Signalized

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	EBL	EBT	EER	WBL	WBT	WBR	TOTAL	ONE HOUR SUM	
7:00-7:15	45	71	24	13	24	32	32	30	156	33	9	148	21	651	2982	
7:15-7:30	63	81	22	15	32	27	44	183	28	28	18	145	23	681	2958	
7:30-7:45	67	122	22	37	39	22	59	151	32	22	22	213	21	807	2853	
7:45-8:00	74	127	24	19	60	28	53	182	18	18	40	183	26	843	2606	
8:00-8:15	54	52	11	21	31	20	40	173	28	28	16	168	13	627	2305	
8:15-8:30	52	59	23	13	28	20	34	127	26	26	17	167	10	576		
8:30-8:45	60	57	23	12	33	25	30	151	29	29	7	111	22	560		
8:45-9:00	38	39	23	15	15	15	30	150	30	30	10	116	17	502		

AM PEAK HOURS FROM: 7:00AM TO 8:00AM
 Volumes: 249 401 92 83 155 109 109 185 712 111 89 699 91 2982
 Season Factor: 1
 Growth Rate: 1
 Years Growth: 0
 In/Out: IN - - - - - IN - - - - - IN - - - - - IN - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT:

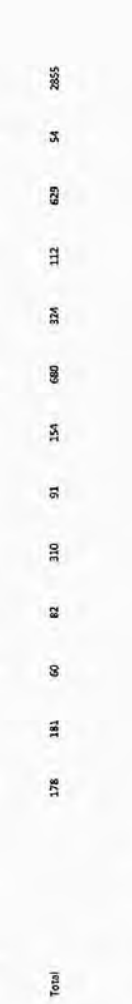
PHF: 0.8843
 Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0



15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	EBL	EBT	EER	WBL	WBT	WBR	TOTAL	ONE HOUR SUM	
4:00-4:15	52	57	12	24	55	39	31	186	58	58	35	173	10	732	2810	
4:15-4:30	72	56	17	15	66	27	36	159	44	44	37	154	16	699	2794	
4:30-4:45	48	49	22	20	69	21	52	151	74	74	26	162	8	702	2853	
4:45-5:00	57	40	13	16	73	22	35	157	75	75	29	144	16	677	2763	
5:00-5:15	24	48	7	33	86	23	16	100	85	85	23	157	14	716	2635	
5:15-5:30	49	44	18	13	82	25	41	182	90	90	34	166	16	760		
5:30-5:45	30	46	6	14	55	22	29	159	64	64	28	143	13	609		
5:45-6:00	44	42	11	11	53	12	25	122	59	59	29	129	13	550		

PM PEAK HOURS FROM: 4:30 PM TO 5:00PM
 Volumes: 178 181 60 82 310 91 154 680 324 112 629 54 2855
 Season Factor: 1
 Growth Rate: 1
 Years Growth: 0
 In/Out: IN - - - - - IN - - - - - IN - - - - - IN - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT:

PHF: 0.9391
 Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0



St. Lucie County

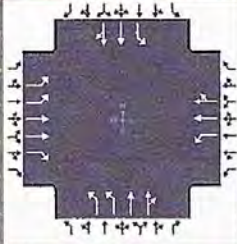

00026 - MIDWAY RD @ SELVITZ RD -- Econolite Type - Cobalt

Controller Timing Plan (MM) 2-1

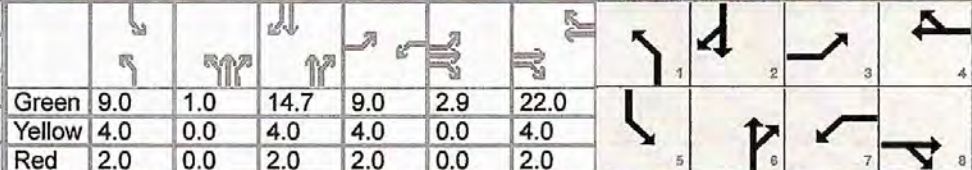
Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	10	10	12	10	10	10	10	10	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	7	0	7	0	7	0	10	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	24	0	26	0	26	0	29	0	16	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	3.0	5.0	5.0	5.0	3.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	14	60	22	24	13	60	16	24	35	35	35	35	35	35	35	35
Max2	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	O'Rourke Engineering & Planning			Duration, h	0.25	
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other	
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.88	
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00	
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - Existing - 6.2.2020.xus			
Project Description	Existing + Committed					

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	185	712	111	89	699	91	249	401	92	89	155	109

Signal Information														
Cycle, s	82.6	Reference Phase	2	Green	9.0	1.0	14.7	9.0	2.9	22.0	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	4.0	0.0	4.0	4.0	0.0	4.0	5	6	7	8
Uncoordinated	Yes	Simult. Gap E/W	On	Red	2.0	0.0	2.0	2.0	0.0	2.0				
Force Mode	Fixed	Simult. Gap N/S	On											

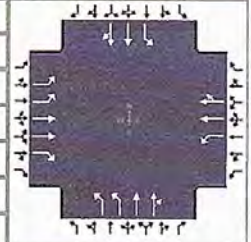
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	17.9	30.9	15.0	28.0	16.0	21.6	15.0	20.7
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Queue Clearance Time (g _s), s	6.5	18.6	6.4	21.3	8.4	14.1	6.4	8.5
Green Extension Time (g _e), s	0.4	2.3	0.1	0.7	0.3	1.5	0.1	1.5
Phase Call Probability	0.99	1.00	0.90	1.00	1.00	1.00	0.90	1.00
Max Out Probability	0.00	0.63	0.00	1.00	0.07	0.00	0.01	0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	210	809	126	101	458	440	283	288	272	101	156	144
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1810	1900	1823	1757	1900	1777	1810	1900	1646
Queue Service Time (g _s), s	4.5	16.6	4.9	4.4	19.2	19.3	6.4	11.9	12.1	4.4	6.1	6.5
Cycle Queue Clearance Time (g _c), s	4.5	16.6	4.9	4.4	19.2	19.3	6.4	11.9	12.1	4.4	6.1	6.5
Green Ratio (g/C)	0.14	0.30	0.30	0.11	0.27	0.27	0.12	0.19	0.19	0.11	0.18	0.18
Capacity (c), veh/h	507	1090	485	198	506	486	425	360	337	198	338	293
Volume-to-Capacity Ratio (X)	0.415	0.742	0.260	0.512	0.905	0.905	0.666	0.799	0.808	0.512	0.461	0.492
Back of Queue (Q), ft/ln (95 th percentile)	81.4	279.4	77.4	83.1	390.8	380.1	116.7	225.4	216.9	83.1	118.4	110.4
Back of Queue (Q), veh/ln (95 th percentile)	3.3	11.2	3.1	3.3	15.6	15.2	4.7	9.0	8.7	3.3	4.7	4.4
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	32.2	26.0	21.9	34.7	29.3	29.3	34.7	32.0	32.0	34.7	30.4	30.6
Incremental Delay (d ₂), s/veh	0.2	2.5	0.1	0.8	16.7	17.3	0.7	1.6	1.8	0.8	0.4	0.5
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	32.4	28.4	22.0	35.5	46.0	46.6	35.4	33.5	33.8	35.5	30.8	31.1
Level of Service (LOS)	C	C	C	D	D	D	D	C	C	D	C	C
Approach Delay, s/veh / LOS	28.4	C		45.2	D		34.2	C		32.1	C	
Intersection Delay, s/veh / LOS	35.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.28	B	2.29	B	2.58	C
Bicycle LOS Score / LOS	1.43	A	1.31	A	1.18	A	0.82	A

HCS7 Signalized Intersection Input Data

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.88		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - Existing - 6.2.2020.xus				
Project Description	Existing + Committed						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	185	712	111	89	699	91	249	401	92	89	155	109

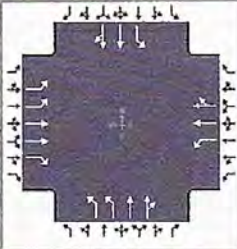
Signal Information													
Cycle, s	82.6	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	9.0	1.0	14.7	9.0	2.9	22.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	0.0	4.0			
				Red	2.0	0.0	2.0	2.0	0.0	2.0			

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	185	712	111	89	699	91	249	401	92	89	155	109
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (S ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

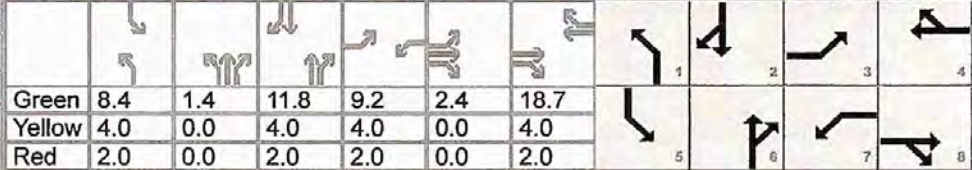
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	22.0	24.0	16.0	24.0	14.0	60.0	13.0	60.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (l), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (PC), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information		
Agency	O'Rourke Engineering & Planning			Duration, h	0.25	
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other	
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.94	
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00	
Intersection	Selvitz Rd	File Name	Selvitz & Midway - PM - Existing - 6.2.2020.xus			
Project Description	Existing					

Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	154	680	324	112	629	54	178	181	60	82	310	91

Signal Information																
Cycle, s	76.0	Reference Phase	2	Green	8.4	1.4	11.8	9.2	2.4	18.7	Yellow	4.0	0.0	4.0	4.0	4.0
Offset, s	0	Reference Point	End	Red	2.0	0.0	2.0	2.0	0.0	2.0	Uncoordinated	Yes	Simult. Gap E/W	On	Force Mode	Fixed
Force Mode	Fixed	Simult. Gap N/S	On													

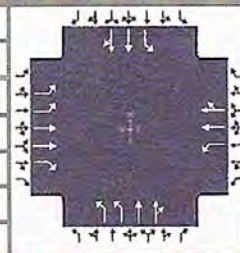
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	17.6	27.2	15.2	24.7	15.8	19.2	14.4	17.8
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Queue Clearance Time (g _s), s	5.1	16.9	6.7	15.8	5.8	6.9	5.4	10.6
Green Extension Time (g _e), s	0.3	2.7	0.1	2.9	0.2	1.2	0.1	1.2
Phase Call Probability	0.97	1.00	0.92	1.00	0.98	1.00	0.84	1.00
Max Out Probability	0.00	0.46	0.00	0.37	0.00	0.00	0.00	0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	164	723	345	119	368	358	189	131	126	87	219	207
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1810	1900	1847	1757	1900	1741	1810	1900	1753
Queue Service Time (g _s), s	3.1	13.7	14.9	4.7	13.8	13.8	3.8	4.6	4.9	3.4	8.4	8.6
Cycle Queue Clearance Time (g _c), s	3.1	13.7	14.9	4.7	13.8	13.8	3.8	4.6	4.9	3.4	8.4	8.6
Green Ratio (g/C)	0.15	0.28	0.28	0.12	0.25	0.25	0.13	0.17	0.17	0.11	0.16	0.16
Capacity (c), veh/h	538	1008	449	219	469	456	454	330	302	201	295	272
Volume-to-Capacity Ratio (X)	0.305	0.718	0.768	0.544	0.786	0.787	0.417	0.397	0.415	0.435	0.744	0.762
Back of Queue (Q), ft/ln (95 th percentile)	55.8	233.2	242.4	88.2	255.1	250.7	67.4	88.8	85.7	64.1	164.3	156.5
Back of Queue (Q), veh/ln (95 th percentile)	2.2	9.3	9.7	3.5	10.2	10.0	2.7	3.6	3.4	2.6	6.6	6.3
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	28.6	24.7	25.2	31.4	26.7	26.8	30.4	27.9	28.0	31.6	30.6	30.7
Incremental Delay (d ₂), s/veh	0.1	1.5	5.2	0.8	3.9	4.1	0.2	0.3	0.3	0.6	1.4	1.7
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	28.7	26.2	30.3	32.2	30.6	30.8	30.7	28.1	28.3	32.1	32.1	32.4
Level of Service (LOS)	C	C	C	C	C	C	C	C	C	C	C	C
Approach Delay, s/veh / LOS	27.7	C		30.9	C		29.3	C		32.2	C	
Intersection Delay, s/veh / LOS	29.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.28	B	2.29	B	2.58	C
Bicycle LOS Score / LOS	1.50	B	1.19	A	0.86	A	0.91	A

HCS7 Signalized Intersection Input Data

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.94		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1 > 7:00		
Intersection	Selvitz Rd	File Name	Selvitz & Midway - PM - Existing - 6.2.2020.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	154	680	324	112	629	54	178	181	60	82	310	91

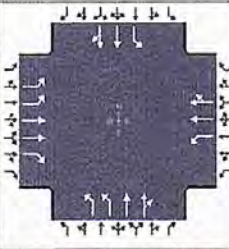
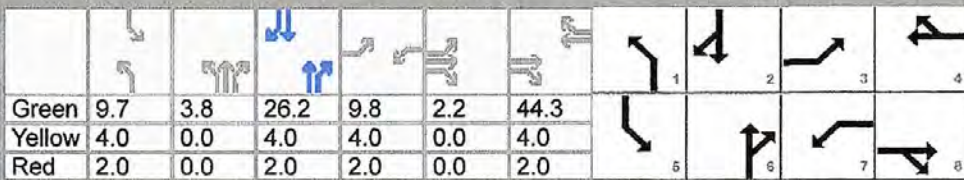
Signal Information													
Cycle, s	76.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	8.4	1.4	11.8	9.2	2.4	18.7			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	0.0	4.0			
				Red	2.0	0.0	2.0	2.0	0.0	2.0			

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	154	680	324	112	629	54	178	181	60	82	310	91
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (P _g), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

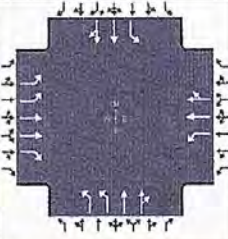
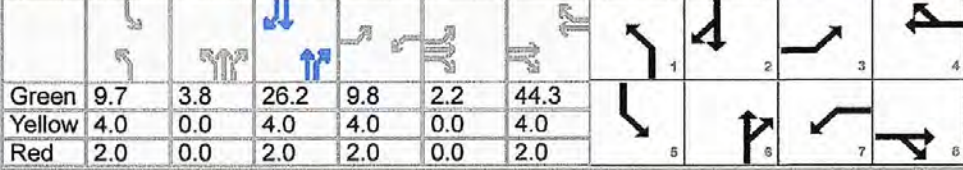
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	22.0	24.0	16.0	24.0	14.0	60.0	13.0	60.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (PC), s		0.0		0.0		0.0		0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

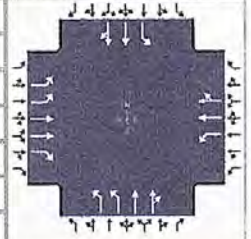
General Information				Intersection Information											
Agency	O'Rourke Engineering & Planning			Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other										
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95										
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00										
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - 2035 w.o. Project - 7.10.2...												
Project Description	without Project														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				205	1035	163	106	1118	102	323	442	105	97	167	132
Signal Information															
Cycle, s	120.0	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	9.7	3.8	26.2	9.8	2.2	44.3									
Yellow	4.0	0.0	4.0	4.0	0.0	4.0									
Red	2.0	0.0	2.0	2.0	0.0	2.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				3	8	7	4	1	6	5	2				
Case Number				2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0				
Phase Duration, s				18.0	52.6	15.8	50.3	19.4	36.0	15.7	32.2				
Change Period, (Y+R _c), s				6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Allow Headway (MAH), s				3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0				
Queue Clearance Time (g _s), s				9.1	33.6	9.2	41.6	13.4		8.6					
Green Extension Time (g _e), s				0.2	5.7	0.1	2.8	0.0	0.0	0.1	0.0				
Phase Call Probability				1.00	1.00	0.98	1.00	1.00		0.97					
Max Out Probability				0.11	0.30	0.10	0.86	1.00		0.06					
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h				216	1089	172	112	651	633	340	296	280	102	164	151
Adjusted Saturation Flow Rate (s), veh/h/ln				1757	1809	1610	1810	1900	1844	1757	1900	1774	1810	1900	1629
Queue Service Time (g _s), s				7.1	31.6	8.8	7.2	39.4	39.6	11.4	16.6	16.8	6.6	8.9	9.5
Cycle Queue Clearance Time (g _c), s				7.1	31.6	8.8	7.2	39.4	39.6	11.4	16.6	16.8	6.6	8.9	9.5
Green Ratio (g/C)				0.10	0.39	0.39	0.08	0.37	0.37	0.11	0.25	0.25	0.08	0.22	0.22
Capacity (c), veh/h				351	1404	625	147	702	681	394	475	443	146	415	356
Volume-to-Capacity Ratio (X)				0.615	0.776	0.275	0.758	0.927	0.930	0.864	0.624	0.631	0.700	0.395	0.423
Back of Queue (Q), ft/ln (95 th percentile)				139.1	490.9	146.1	153.9	701.4	691.1	243.8	326.3	314.1	136.1	194.6	184.2
Back of Queue (Q), veh/ln (95 th percentile)				5.6	19.6	5.8	6.2	28.1	27.6	9.8	13.1	12.6	5.4	7.8	7.4
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh				51.8	32.1	25.1	54.0	36.3	36.3	52.4	40.0	40.1	53.8	40.1	40.4
Incremental Delay (d ₂), s/veh				1.0	2.3	0.1	4.9	17.2	18.0	16.5	6.1	6.7	2.3	2.8	3.7
Initial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh				52.8	34.5	25.2	58.8	53.4	54.3	68.9	46.1	46.7	56.0	42.9	44.0
Level of Service (LOS)				D	C	C	E	D	D	E	D	D	E	D	D
Approach Delay, s/veh / LOS				36.1		D	54.3		D	54.8		D	46.5		D
Intersection Delay, s/veh / LOS				47.2						D					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				2.43		B	2.28		B	2.30		B	2.60		C
Bicycle LOS Score / LOS				1.71		B	1.64		B	1.24		A	0.83		A

HCS7 Signalized Intersection Input Data

General Information					Intersection Information										
Agency	O'Rourke Engineering & Planning				Duration, h	0.25									
Analyst	James Kemp	Analysis Date	Apr 15, 2020		Area Type	Other									
Jurisdiction	St. Lucie	Time Period	AM Peak Hour		PHF	0.95									
Urban Street	Midway Rd	Analysis Year	2035		Analysis Period	1 > 7:00									
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - 2035 w.o. Project + Imp - ...												
Project Description	without Project + Improvements														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				205	1035	163	106	1118	102	323	442	105	97	167	132
Signal Information															
Cycle, s	120.0	Reference Phase	2	Green	9.7	3.8	26.2	9.8	2.2	44.3	1	2	3	4	
Offset, s	0	Reference Point	End	Yellow	4.0	0.0	4.0	4.0	0.0	4.0	5	6	7	8	
Uncoordinated	No	Simult. Gap E/W	On	Red	2.0	0.0	2.0	2.0	0.0	2.0					
Force Mode	Fixed	Simult. Gap N/S	On												
Traffic Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				205	1035	163	106	1118	102	323	442	105	97	167	132
Initial Queue (Q _b), veh/h				0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h				1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h				None			None			None			None		
Heavy Vehicles (P _{HV}), %				0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h				0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h				0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)				3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)				1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft				0	0	0	0	0		0	0		0	0	
Grade (P _g), %				0			0			0			0		
Speed Limit, mi/h				45	45	45	45	45	45	45	45	45	45	45	45
Phase Information				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Maximum Green (G _{max}) or Phase Split, s				20.0	50.0	20.0	50.0	18.0	32.0	18.0	32.0				
Yellow Change Interval (Y), s				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Red Clearance Interval (R _c), s				2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
Minimum Green (G _{min}), s				12	10	10	10	10	10	10	10				
Start-Up Lost Time (l _f), s				2.0	2.0	2.0	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	2.0	2.0	2.0				
Passage (PT), s				2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
Recall Mode				Off	Off	Off	Off	Off	Min	Off	Min				
Dual Entry				No	Yes	No	Yes	No	Yes	No	Yes				
Walk (Walk), s				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Pedestrian Clearance Time (PC), s				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Multimodal Information				EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius				0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft				9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb				0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft				12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking				No	0.50	No	0.50	No	0.50	No	0.50	No	0.50		

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Selvitz Rd	File Name	Selvitz & Midway - PM - 2035 w.o. Project - 7.10....				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	184	1241	409	128	1055	61	232	195	87	93	334	105

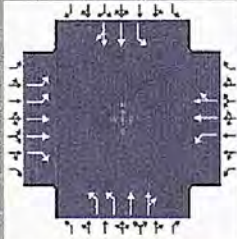
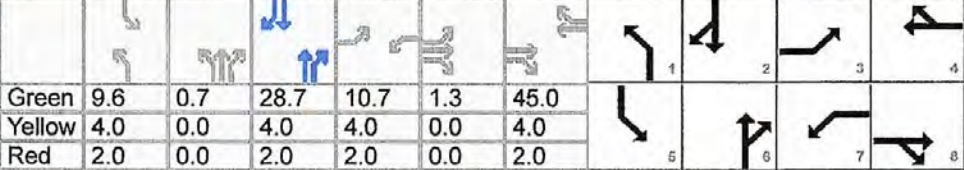
Signal Information				Signal Phases															
Cycle, s	120.0	Reference Phase	2																
Offset, s	0	Reference Point	End																
Uncoordinated	No	Simult. Gap E/W	On																
Force Mode	Fixed	Simult. Gap N/S	On																
		Green		9.6	0.7	28.7	10.7	1.3	45.0										
		Yellow		4.0	0.0	4.0	4.0	0.0	4.0										
		Red		2.0	0.0	2.0	2.0	0.0	2.0										

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	18.0	52.3	16.7	51.0	16.3	35.4	15.6	34.7
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g _s), s	8.3	43.7	10.8	36.1	10.2		8.3	
Green Extension Time (g _e), s	0.2	2.6	0.1	5.5	0.2	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	0.99	1.00	1.00		0.96	
Max Out Probability	0.04	0.95	0.79	0.58	1.00		0.10	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	194	1306	431	135	593	582	244	153	144	98	238	224
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1810	1900	1863	1757	1900	1705	1810	1900	1745
Queue Service Time (g _s), s	6.3	41.7	26.9	8.8	34.0	34.1	8.2	7.9	8.4	6.3	13.1	13.4
Cycle Queue Clearance Time (g _c), s	6.3	41.7	26.9	8.8	34.0	34.1	8.2	7.9	8.4	6.3	13.1	13.4
Green Ratio (g/C)	0.10	0.39	0.39	0.09	0.38	0.38	0.09	0.24	0.24	0.08	0.24	0.24
Capacity (c), veh/h	351	1395	621	162	713	699	303	465	418	145	454	417
Volume-to-Capacity Ratio (X)	0.552	0.937	0.693	0.833	0.832	0.833	0.807	0.328	0.345	0.675	0.525	0.537
Back of Queue (Q), ft/ln (95th percentile)	123.1	669.6	392.1	202.7	575.1	566.9	173.5	172.6	164.9	129.7	266.5	256.1
Back of Queue (Q), veh/ln (95th percentile)	4.9	26.8	15.7	8.1	23.0	22.7	6.9	6.9	6.6	5.2	10.7	10.2
Queue Storage Ratio (RQ) (95th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	51.5	35.5	30.9	53.8	34.1	34.1	53.8	37.2	37.4	53.7	39.7	39.9
Incremental Delay (d ₂), s/veh	0.5	11.5	2.6	15.4	7.5	7.7	7.7	1.9	2.3	2.0	4.3	4.9
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	52.0	47.0	33.6	69.2	41.5	41.7	61.6	39.1	39.6	55.7	44.0	44.8
Level of Service (LOS)	D	D	C	E	D	D	E	D	D	E	D	D
Approach Delay, s/veh / LOS	44.5		D	44.5		D	49.4		D	46.4		D
Intersection Delay, s/veh / LOS	45.3						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.44	B	2.28	B	2.30	B	2.59	C
Bicycle LOS Score / LOS	2.08	B	1.57	B	0.93	A	0.95	A

HCS7 Signalized Intersection Input Data

General Information					Intersection Information											
Agency	O'Rourke Engineering & Planning				Duration, h	0.25										
Analyst	James Kemp	Analysis Date	Apr 15, 2020		Area Type	Other										
Jurisdiction	St. Lucie	Time Period	PM Peak Hour		PHF	0.95										
Urban Street	Midway Rd	Analysis Year	2035		Analysis Period	1> 7:00										
Intersection	Selvitz Rd	File Name	Selvitz & Midway - PM - 2035 w.o. Project - 7.10....													
Project Description	without Project															
Demand Information					EB			WB			NB			SB		
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h					184	1241	409	128	1055	61	232	195	87	93	334	105
Signal Information																
Cycle, s	120.0	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	9.6	0.7	28.7	10.7	1.3	45.0										
Yellow	4.0	0.0	4.0	4.0	0.0	4.0										
Red	2.0	0.0	2.0	2.0	0.0	2.0										
Traffic Information					EB			WB			NB			SB		
Approach Movement					L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h					184	1241	409	128	1055	61	232	195	87	93	334	105
Initial Queue (Q _b), veh/h					0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h					1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h					None			None			None			None		
Heavy Vehicles (P _{HV}), %					0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h					0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h					0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)					3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)					1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft					0	0	0	0	0		0	0		0	0	
Grade (P _g), %					0			0			0			0		
Speed Limit, mi/h					45	45	45	45	45	45	45	45	45	45	45	45
Phase Information					EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Maximum Green (G _{max}) or Phase Split, s					20.0	50.0	20.0	50.0	18.0	32.0	18.0	32.0				
Yellow Change Interval (Y), s					4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Red Clearance Interval (R _c), s					2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
Minimum Green (G _{min}), s					12	10	10	10	10	10	10	10				
Start-Up Lost Time (l _t), s					2.0	2.0	2.0	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	2.0	2.0	2.0				
Passage (PT), s					2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				
Recall Mode					Off	Off	Off	Off	Off	Min	Off	Min				
Dual Entry					No	Yes	No	Yes	No	Yes	No	Yes				
Walk (Walk), s					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Pedestrian Clearance Time (PC), s					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Multimodal Information					EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius					0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft					9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb					0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft					12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking					No	0.50	No	0.50	No	0.50	No	0.50	No	0.50	No	0.50

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#7 w/p

TURNING MOVEMENT VOLUME COUNTS

CONTRACT: Squigline

ENVIRONMENT: McHenry Rd

CITY: St. Louis

DATE: Tuesday

ANALYSIS YEAR: 2015

PROJECT: Willow Lakes

REPORT DATE: 2/13/2020

15 Min Period

7:00-7:15	7:15-7:30	7:30-7:45	7:45-8:00	8:00-8:15	8:15-8:30	8:30-8:45	8:45-9:00
410	145	157	97	185	1337	155	354
750	102	1375	1480	106	106	106	106

15 Min Period

9:00-9:15	9:15-9:30	9:30-9:45	9:45-10:00	10:00-10:15	10:15-10:30	10:30-10:45	10:45-11:00
468	301	301	301	301	301	301	301
301	301	301	301	301	301	301	301

15 Min Period

11:00-11:15	11:15-11:30	11:30-11:45	11:45-12:00	12:00-12:15	12:15-12:30	12:30-12:45	12:45-1:00
450	334	93	185	1638	440	61	1519
450	334	93	185	1638	440	61	1519

15 Min Period

1:00-1:15	1:15-1:30	1:30-1:45	1:45-2:00	2:00-2:15	2:15-2:30	2:30-2:45	2:45-3:00
557	120	334	93	185	1638	440	61
557	120	334	93	185	1638	440	61

15 Min Period

3:00-3:15	3:15-3:30	3:30-3:45	3:45-4:00	4:00-4:15	4:15-4:30	4:30-4:45	4:45-5:00
892	275	135	87	185	1638	440	61
892	275	135	87	185	1638	440	61

15 Min Period

5:00-5:15	5:15-5:30	5:30-5:45	5:45-6:00	6:00-6:15	6:15-6:30	6:30-6:45	6:45-7:00
557	120	334	93	185	1638	440	61
557	120	334	93	185	1638	440	61

15 Min Period

7:00-7:15	7:15-7:30	7:30-7:45	7:45-8:00	8:00-8:15	8:15-8:30	8:30-8:45	8:45-9:00
410	145	157	97	185	1337	155	354
410	145	157	97	185	1337	155	354

15 Min Period

9:00-9:15	9:15-9:30	9:30-9:45	9:45-10:00	10:00-10:15	10:15-10:30	10:30-10:45	10:45-11:00
468	301	301	301	301	301	301	301
468	301	301	301	301	301	301	301

15 Min Period

11:00-11:15	11:15-11:30	11:30-11:45	11:45-12:00	12:00-12:15	12:15-12:30	12:30-12:45	12:45-1:00
450	334	93	185	1638	440	61	1519
450	334	93	185	1638	440	61	1519

15 Min Period

1:00-1:15	1:15-1:30	1:30-1:45	1:45-2:00	2:00-2:15	2:15-2:30	2:30-2:45	2:45-3:00
557	120	334	93	185	1638	440	61
557	120	334	93	185	1638	440	61

15 Min Period

3:00-3:15	3:15-3:30	3:30-3:45	3:45-4:00	4:00-4:15	4:15-4:30	4:30-4:45	4:45-5:00
557	120	334	93	185	1638	440	61
557	120	334	93	185	1638	440	61

15 Min Period

5:00-5:15	5:15-5:30	5:30-5:45	5:45-6:00	6:00-6:15	6:15-6:30	6:30-6:45	6:45-7:00
557	120	334	93	185	1638	440	61
557	120	334	93	185	1638	440	61

15 Min Period

7:00-7:15	7:15-7:30	7:30-7:45	7:45-8:00	8:00-8:15	8:15-8:30	8:30-8:45	8:45-9:00
410	145	157	97	185	1337	155	354
410	145	157	97	185	1337	155	354

15 Min Period

9:00-9:15	9:15-9:30	9:30-9:45	9:45-10:00	10:00-10:15	10:15-10:30	10:30-10:45	10:45-11:00
468	301	301	301	301	301	301	301
468	301	301	301	301	301	301	301

15 Min Period

11:00-11:15	11:15-11:30	11:30-11:45	11:45-12:00	12:00-12:15	12:15-12:30	12:30-12:45	12:45-1:00
450	334	93	185	1638	440	61	1519
450	334	93	185	1638	440	61	1519

15 Min Period

1:00-1:15	1:15-1:30	1:30-1:45	1:45-2:00	2:00-2:15	2:15-2:30	2:30-2:45	2:45-3:00
557	120	334	93	185	1638	440	61
557	120	334	93	185	1638	440	61

15 Min Period

3:00-3:15	3:15-3:30	3:30-3:45	3:45-4:00	4:00-4:15	4:15-4:30	4:30-4:45	4:45-5:00
557	120	334	93	185	1638	440	61
557	120	334	93	185	1638	440	61

15 Min Period

5:00-5:15	5:15-5:30	5:30-5:45	5:45-6:00	6:00-6:15	6:15-6:30	6:30-6:45	6:45-7:00
557	120	334	93	185	1638	440	61
557	120	334	93	185	1638	440	61

15 Min Period

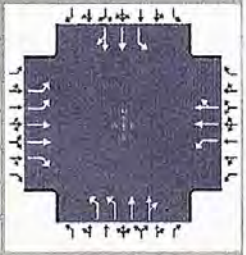
7:00-7:15	7:15-7:30	7:30-7:45	7:45-8:00	8:00-8:15	8:15-8:30	8:30-8:45	8:45-9:00
410	145	157	97	185	1337	155	354
410	145	157	97	185	1337	155	354

15 Min Period

9:00-9:15	9:15-9:30	9:30-9:45	9:45-10:00	10:00-10:15	10:15-10:30	10:30-10:45	10:45-11:00
468	301	301	301	301	301	301	301
468	301	301	301	301	301	301	301

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - 2035 with Project - 7.9.20...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	216	1237	195	106	1375	102	364	432	105	97	167	146

Signal Information														
Cycle, s	120.0	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	9.7	5.6	15.9	9.8	2.2	52.9				
				Yellow	4.0	0.0	4.0	4.0	0.0	4.0				
				Red	2.0	0.0	2.0	2.0	0.0	2.0				

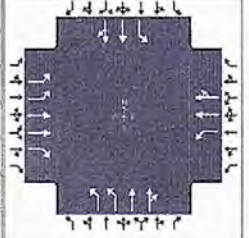
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	18.0	61.1	15.8	58.9	21.3	27.5	15.7	21.9
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g _s), s	9.5	38.5	9.2	49.8	14.8		8.6	
Green Extension Time (g _e), s	0.2	8.0	0.1	3.0	0.5	0.0	0.1	0.0
Phase Call Probability	1.00	1.00	0.98	1.00	1.00		0.97	
Max Out Probability	0.56	0.37	0.00	0.92	0.14		0.00	

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	227	1302	205	112	784	771	383	291	274	102	173	157
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1810	1900	1854	1757	1900	1772	1810	1900	1615
Queue Service Time (g _s), s	7.5	36.5	9.5	7.2	47.1	47.8	12.8	17.8	18.1	6.6	10.4	11.2
Cycle Queue Clearance Time (g _c), s	7.5	36.5	9.5	7.2	47.1	47.8	12.8	17.8	18.1	6.6	10.4	11.2
Green Ratio (g/C)	0.10	0.46	0.46	0.08	0.44	0.44	0.13	0.18	0.18	0.08	0.13	0.13
Capacity (c), veh/h	351	1661	739	147	837	817	447	340	317	146	251	213
Volume-to-Capacity Ratio (X)	0.647	0.784	0.278	0.758	0.936	0.944	0.856	0.856	0.866	0.700	0.687	0.735
Back of Queue (Q), ft/ln (95 th percentile)	149.9	540.2	153.8	150.4	802	804.9	249.3	391	379.7	136.1	244	237.1
Back of Queue (Q), veh/ln (95 th percentile)	6.0	21.6	6.2	6.0	32.1	32.2	10.0	15.6	15.2	5.4	9.8	9.5
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	52.0	27.4	20.1	54.0	32.0	32.2	51.3	47.8	47.9	53.8	49.7	50.1
Incremental Delay (d ₂), s/veh	2.4	2.2	0.1	3.0	16.8	18.5	7.6	23.2	25.7	2.3	14.3	20.1
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	54.4	29.6	20.2	57.0	48.8	50.6	58.9	70.9	73.6	56.0	64.0	70.1
Level of Service (LOS)	D	C	C	E	D	D	E	E	E	E	E	E
Approach Delay, s/veh / LOS	31.7	C		50.2	D		66.9	E			64.3	E
Intersection Delay, s/veh / LOS	48.1						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.27	B	2.31	B	2.60	C
Bicycle LOS Score / LOS	1.92	B	1.86	B	1.27	A	0.84	A

HCS7 Signalized Intersection Input Data

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Selvitz Rd	File Name	Selvitz & Midway - AM - 2035 with Project - 7.9.20...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	216	1237	195	106	1375	102	364	432	105	97	167	146

Signal Information													
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	9.7	5.6	15.9	9.8	2.2	52.9			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	0.0	4.0			
				Red	2.0	0.0	2.0	2.0	0.0	2.0			

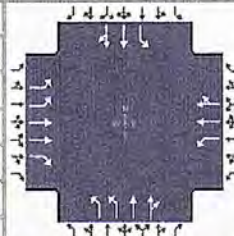
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	216	1237	195	106	1375	102	364	432	105	97	167	146
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	19.0	44.0	34.0	59.0	25.0	16.0	26.0	17.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Selvitz Rd	File Name	Selvitz Midway - PM - 2035 with Project - 7.21.20...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	195	1438	440	128	1330	61	275	195	87	93	334	120

Signal Information				Signal Timing Diagram											
Cycle, s	140.0	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	9.8	3.8	28.9	12.0	0.4	61.1									
Yellow	4.0	0.0	4.0	4.0	0.0	4.0									
Red	2.0	0.0	2.0	2.0	0.0	2.0									

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	4.0	2.0	4.0	2.0	4.0
Phase Duration, s	18.0	67.1	18.4	67.5	19.6	38.7	15.8	34.9
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g _s), s	9.9	58.8	12.3	52.0	13.4		9.4	
Green Extension Time (g _e), s	0.2	2.3	0.2	6.6	0.2	0.0	0.0	0.0
Phase Call Probability	1.00	1.00	0.99	1.00	1.00		0.98	
Max Out Probability	0.01	1.00	0.00	0.71	0.87		0.95	

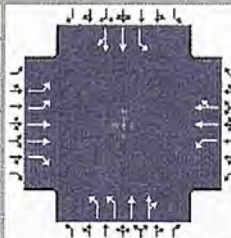
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	205	1514	463	135	736	728	289	153	144	98	247	231
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1810	1900	1870	1757	1900	1705	1810	1900	1729
Queue Service Time (g _s), s	7.9	56.8	31.9	10.3	49.7	50.0	11.4	9.4	9.9	7.4	16.6	17.1
Cycle Queue Clearance Time (g _c), s	7.9	56.8	31.9	10.3	49.7	50.0	11.4	9.4	9.9	7.4	16.6	17.1
Green Ratio (g/C)	0.09	0.44	0.44	0.09	0.44	0.44	0.10	0.23	0.23	0.07	0.21	0.21
Capacity (c), veh/h	301	1578	703	160	835	822	341	444	399	126	393	358
Volume-to-Capacity Ratio (X)	0.682	0.959	0.659	0.840	0.882	0.886	0.850	0.344	0.362	0.775	0.630	0.645
Back of Queue (Q), ft/ln (95 th percentile)	158.8	886.4	450.5	211.2	812	808.4	234.4	203.5	196.5	170.8	334.6	319.9
Back of Queue (Q), veh/ln (95 th percentile)	6.4	35.5	18.0	8.4	32.5	32.3	9.4	8.1	7.9	6.8	13.4	12.8
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	62.1	38.2	31.2	62.8	35.9	36.0	62.2	44.7	44.9	64.0	50.6	50.8
Incremental Delay (d ₂), s/veh	1.0	13.9	1.8	4.4	10.4	10.9	11.4	2.1	2.5	12.0	7.5	8.7
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	63.2	52.1	33.0	67.3	46.3	46.9	73.6	46.8	47.4	76.0	58.1	59.5
Level of Service (LOS)	E	D	C	E	D	D	E	D	D	E	E	E
Approach Delay, s/veh / LOS	49.1		D	48.4		D	60.2		E	61.7		E
Intersection Delay, s/veh / LOS	51.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.28	B	2.31	B	2.60	C
Bicycle LOS Score / LOS	2.29	B	1.81	B	0.97	A	0.96	A

HCS7 Signalized Intersection Input Data

General Information

Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	Apr 15, 2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	Selvitz Rd	File Name	Selvitz Midway - PM - 2035 with Project - 7.21.20...		
Project Description	with Project				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	195	1438	440	128	1330	61	275	195	87	93	334	120

Signal Information

Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap EW	On	Green	9.8	3.8	28.9	12.0	0.4	61.1			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	0.0	4.0			
				Red	2.0	0.0	2.0	2.0	0.0	2.0			

Traffic Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	195	1438	440	128	1330	61	275	195	87	93	334	120
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	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		12.0	12.0	
Turn Bay Length, ft	0	0	0	0	0		0	0		0	0	
Grade (P _g), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	23.0	37.0	49.0	63.0	22.0	36.0	18.0	32.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	12	10	10	10	10	10	10	10
Start-Up Lost Time (I _f), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information

	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

TURNING MOVEMENT VOLUME COUNTS

CONTROL: Signalized

N/S STREET: 5350 St Willow Lakes
 FILENAME: 2/18/2020
 COUNT DATE: 2/18/2020
 REPORT DATE: 2/18/2020
 DAY: Tuesday
 ANALYSIS YEAR: 2020
 E/W STREET: Midway Rd
 CITY: St Lucie

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL			
7:00-7:15	15	133	37	36	83	55	84	82	7	9	85	17	703	3007			
7:15-7:30	15	201	35	23	101	68	91	104	9	10	104	19	790	2978			
7:30-7:45	15	233	46	30	133	71	34	108	10	18	94	13	805	2883			
7:45-8:00	23	180	39	16	67	47	50	124	9	21	126	7	709	2687			
8:00-8:15	5	121	34	23	92	41	50	137	14	34	113	10	674	2595			
8:15-8:30	18	159	55	25	87	39	50	91	18	40	101	12	695				
8:30-8:45	12	121	44	18	79	25	62	101	3	27	101	16	609				
8:45-9:00	12	133	35	21	104	36	58	103	4	23	72	16	617				

AM
 7:00AM TO 8:00AM
 PHF: 0.934
 Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0

Trips In
 259
 418
 35

Trips Out
 718
 712

Total
 68 807 157 105 384 241 259 418 35 68 409 56 3007

AM PEAK HOUR IS FROM:
 Volumes
 Season Factor
 Growth
 In/Out
 Percentage
 PROJECT

15 Min Period Lanes	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL			
4:00-4:15	11	97	42	22	122	56	42	132	19	43	114	15	715	2989			
4:15-4:30	11	87	49	23	141	63	50	137	27	45	105	12	750	3009			
4:30-4:45	20	114	48	20	171	62	41	110	14	31	98	14	743	3050			
4:45-5:00	10	100	43	20	179	53	50	141	23	42	103	17	781	3152			
5:00-5:15	14	90	24	25	166	48	42	148	16	50	106	6	735	3046			
5:15-5:30	14	92	38	20	214	52	58	118	12	51	110	22	801				
5:30-5:45	9	134	47	28	227	63	54	103	16	45	88	15	835				
5:45-6:00	11	109	44	27	121	37	57	103	17	40	92	17	675				

PM
 4:45PM TO 5:45PM
 PHF: 0.944
 Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0

Trips In
 204
 515
 67

Trips Out
 670
 786

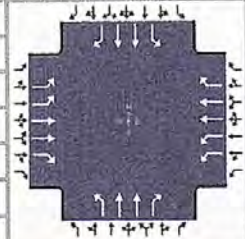
Total
 47 416 152 93 766 216 204 515 67 188 407 61 3152

PM PEAK HOUR IS FROM:
 Volumes
 Season Factor
 Growth
 In/Out
 Percentage
 PROJECT

HCS7 Signalized Intersection Results Summary

#8 EAM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.93
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St & Midway - AM - Existing - 7.9.2020 (2).xus		
Project Description	Existing				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	259	418	35	68	409	56	68	807	157	105	384	241

Signal Information				Phase Diagrams							
Cycle, s	67.5	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	Yes	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On								
Green	5.3	0.9	21.1	5.3	2.5	12.0					
Yellow	4.0	0.0	4.0	4.0	0.0	4.0					
Red	1.0	0.0	1.5	1.0	0.0	1.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	12.7	19.4	10.3	17.0	10.3	26.6	11.2	27.5
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Queue Clearance Time (g _s), s	7.2	9.6	3.3	9.7	4.6	16.7	6.1	10.7
Green Extension Time (g _e), s	0.5	2.2	0.1	2.2	0.1	4.3	0.1	4.3
Phase Call Probability	0.99	1.00	0.75	1.00	0.75	1.00	0.88	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

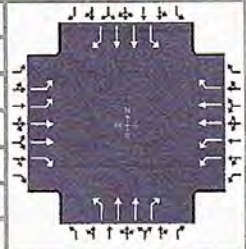
Movement Group Results	EB			WB			NB			SB					
	L	T	R	L	T	R	L	T	R	L	T	R			
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12			
Adjusted Flow Rate (v), veh/h	278	449	38	73	440	60	73	868	169	113	413	259			
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1810	1809	1610	1810	1809	1610			
Queue Service Time (g _s), s	5.2	7.6	1.3	1.3	7.7	2.2	2.6	14.7	5.4	4.1	5.9	8.7			
Cycle Queue Clearance Time (g _c), s	5.2	7.6	1.3	1.3	7.7	2.2	2.6	14.7	5.4	4.1	5.9	8.7			
Green Ratio (g/C)	0.11	0.21	0.21	0.08	0.18	0.18	0.08	0.31	0.31	0.09	0.33	0.33			
Capacity (c), veh/h	403	776	345	274	643	286	141	1134	505	166	1183	527			
Volume-to-Capacity Ratio (X)	0.691	0.579	0.109	0.267	0.684	0.211	0.518	0.765	0.335	0.681	0.349	0.492			
Back of Queue (Q), ft/ln (95 th percentile)	90.9	130.7	19.6	23.5	136.1	33.9	49.1	230.4	80	77.1	95.7	127.8			
Back of Queue (Q), veh/ln (95 th percentile)	3.6	5.2	0.8	0.9	5.4	1.4	2.0	9.2	3.2	3.1	3.8	5.1			
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
Uniform Delay (d ₁), s/veh	28.8	23.9	21.4	29.4	26.1	23.8	30.0	21.0	17.8	29.8	17.3	18.3			
Incremental Delay (d ₂), s/veh	0.8	0.3	0.1	0.2	0.5	0.1	1.1	0.4	0.1	1.8	0.1	0.3			
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Control Delay (d), s/veh	29.6	24.1	21.5	29.6	26.6	23.9	31.1	21.4	18.0	31.6	17.4	18.6			
Level of Service (LOS)	C	C	C	C	C	C	C	C	B	C	B	B			
Approach Delay, s/veh / LOS	26.0			C	26.7			C	21.5			C	19.8		B
Intersection Delay, s/veh / LOS	23.1						C								

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.44	B	2.56	C	2.56	C
Bicycle LOS Score / LOS	1.12	A	0.96	A	1.40	A	1.14	A

HCS7 Signalized Intersection Input Data

#8 E AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.93		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	25th St	File Name	25th St & Midway - AM - Existing - 7.9.2020.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	259	418	35	68	409	56	68	807	157	105	384	241

Signal Information													
Cycle, s	67.5	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	5.3	0.9	21.1	5.3	2.5	12.0			
				Yellow	4.0	0.0	4.0	4.0	0.0	4.0			
Force Mode	Fixed	Simult. Gap N/S	On	Red	1.0	0.0	1.5	1.0	0.0	1.0			

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	259	418	35	68	409	56	68	807	157	105	384	241
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

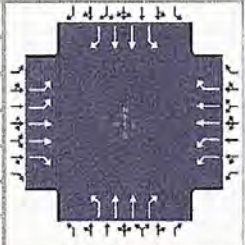
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	24.0	70.0	24.0	70.0	20.0	90.0	20.0	90.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G _{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l _f), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0		0.0		0.0		0.0	
Pedestrian Clearance Time (PC), s	0.0		0.0		0.0		0.0	

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50	No	0.50	No	0.50	No	0.50	No	0.50	No	0.50

HCS7 Signalized Intersection Results Summary

8 E PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.94		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	25th St	File Name	25th St & Midway - PM - Existing - 7.9.2020.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	204	515	67	188	407	61	47	416	152	93	786	216

Signal Information				Signal Timing (s)																				
Cycle, s	65.1	Reference Phase	2	Green	4.2	1.7	18.2	6.9	13.7	0.0	Yellow	4.0	0.0	4.0	4.0	4.0	0.0	Red	1.0	0.0	1.5	1.0	1.0	0.0
Offset, s	0	Reference Point	End																					
Uncoordinated	Yes	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	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	11.9	18.8	11.8	18.7	9.2	23.7	10.9	25.4
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Queue Clearance Time (g _s), s	5.8	11.2	5.5	9.0	3.7	8.6	5.4	15.6
Green Extension Time (g _e), s	0.4	2.5	0.4	2.5	0.0	4.1	0.1	4.1
Phase Call Probability	0.98	1.00	0.97	1.00	0.60	1.00	0.83	1.00
Max Out Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

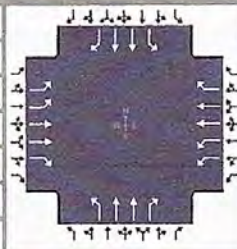
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	217	548	71	200	433	65	50	443	162	99	836	230
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1810	1809	1610	1810	1809	1610
Queue Service Time (g _s), s	3.8	9.2	2.4	3.5	7.0	2.2	1.7	6.6	5.2	3.4	13.6	7.6
Cycle Queue Clearance Time (g _c), s	3.8	9.2	2.4	3.5	7.0	2.2	1.7	6.6	5.2	3.4	13.6	7.6
Green Ratio (g/C)	0.11	0.21	0.21	0.10	0.21	0.21	0.06	0.28	0.28	0.09	0.31	0.31
Capacity (c), veh/h	370	765	341	367	763	339	117	1013	451	163	1105	492
Volume-to-Capacity Ratio (X)	0.587	0.716	0.209	0.544	0.568	0.191	0.428	0.437	0.358	0.608	0.757	0.467
Back of Queue (Q), ft/ln (95 th percentile)	67.2	158.1	36.4	61.5	120	33.1	32.3	108.3	77.8	63.8	215.8	110.4
Back of Queue (Q), veh/ln (95 th percentile)	2.7	6.3	1.5	2.5	4.8	1.3	1.3	4.3	3.1	2.6	8.6	4.4
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	27.9	23.9	21.2	27.8	23.1	21.2	29.4	19.3	18.8	28.6	20.5	18.4
Incremental Delay (d ₂), s/veh	0.6	0.5	0.1	0.5	0.2	0.1	0.9	0.1	0.2	1.4	0.4	0.3
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	28.4	24.4	21.4	28.2	23.4	21.3	30.3	19.4	19.0	30.0	20.9	18.6
Level of Service (LOS)	C	C	C	C	C	C	C	B	B	C	C	B
Approach Delay, s/veh / LOS	25.2		C	24.6		C	20.1		C	21.2		C
Intersection Delay, s/veh / LOS	22.7						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.43	B	2.56	C	2.56	C
Bicycle LOS Score / LOS	1.18	A	1.06	A	1.03	A	1.45	A

HCS7 Signalized Intersection Input Data

8 E PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.94		
Urban Street	Midway Rd	Analysis Year	2020	Analysis Period	1> 7:00		
Intersection	25th St	File Name	25th St & Midway - PM - Existing - 7.9.2020.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	204	515	67	188	407	61	47	416	152	93	786	216

Signal Information														
Cycle, s	65.1	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	Yes	Simult. Gap E/W	On											
Force Mode	Fixed	Simult. Gap N/S	On											
				Green	4.2	1.7	18.2	6.9	13.7	0.0				
				Yellow	4.0	0.0	4.0	4.0	4.0	0.0				
				Red	1.0	0.0	1.5	1.0	1.0	0.0				

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	204	515	67	188	407	61	47	416	152	93	786	216
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (P _g), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	24.0	70.0	24.0	70.0	20.0	90.0	20.0	90.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G _{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (I _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s		0.0		0.0		0.0		0.0
Pedestrian Clearance Time (PC), s		0.0		0.0		0.0		0.0

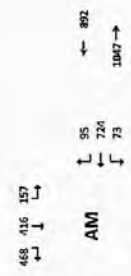
Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

#8 w/o

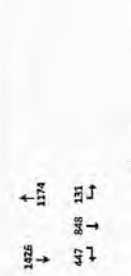
TURNING MOVEMENT VOLUME COUNTS

N/E STREET: 1229-32
 W/BE LAKES: 2/17/2020
 REPORT DATE: 2/17/2020
 DATE: Tuesday
 AMATEUR PARK 2025
 CITY: St. Louis
 COUNTY: St. Louis
 CONTROL: Signalized

S/E Side Period	Northbound				Southbound				Eastbound				Westbound				DKL HOVR SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	EWL	WBT	WBR	TOTAL		
7:00-7:15	15	193	37	35	63	83	15	84	82	7	7	9	85	17	770		
7:15-7:30	15	211	35	23	103	154	15	104	108	15	15	20	104	18	2978		
7:30-7:45	15	233	46	30	133	71	34	138	103	10	10	18	94	13	865		
7:45-8:00	15	188	39	16	67	47	50	134	7	7	7	21	126	7	279		
8:00-8:15	15	223	34	23	47	41	50	137	14	14	14	34	123	19	674		
8:15-8:30	15	159	55	25	47	39	50	91	18	18	18	40	125	12	606		
8:30-8:45	15	123	44	38	79	35	62	103	3	3	3	37	125	15	809		
8:45-9:00	15	133	35	21	108	36	54	100	4	4	4	32	72	18	617		
7:00AM TO 8:00AM																	
Volumes	68	807	157	105	344	244	259	418	35	35	35	68	400	54	3037		
Season Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Growth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PBI/CT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midway %	0.0%				1.0%	2.0%	2.0%	0.0%					2.0%				
W/Be Lakes %	0.0%				5.2%	5.2%	5.8%	0.0%				5.8%					
ITC Branch %	15				95	84	84	13				156			407		
Southern Grove %					0.4%	0.1%	0.1%	0.0%				3.1			57		
Wilson Grove %					0.1%	0.1%	0.1%	0.0%				1.0%			30		
Northland/Kennedy %					0.1%	0.1%	0.2%	0.0%				1.0%			85		
Western Grove %					0.1%	0.1%	0.7%	0.0%				0.3%			114		
Whitman Grove %					0.1%	0.1%	0.0%	0.0%				0.7%			28		
Frontier %					32.0%	32.0%	32.0%	19.0%				19.0%			148		
Frontier %					5	38	38	12				6			68		
Frontier %					25.0%	1.0%	35.0%	60.0%				60.0%			35		
Frontier %					44	2	61	23				25			124		
Total	97	871	158	157	616	468	480	721	65	73	73	73	734	19	4121		



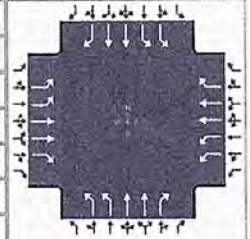
S/E Side Period	Northbound				Southbound				Eastbound				Westbound				DKL HOVR SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	EWL	WBT	WBR	TOTAL		
4:00-4:15	11	37	42	22	122	56	42	125	19	19	19	43	114	15	2989		
4:15-4:30	11	87	49	23	143	62	50	137	27	27	27	45	105	12	3009		
4:30-4:45	10	114	43	29	171	62	41	113	14	14	14	31	88	14	713		
4:45-5:00	10	100	43	20	179	53	50	143	23	23	23	42	103	17	3152		
5:00-5:15	14	90	24	25	166	48	42	148	16	16	16	50	105	6	705		
5:15-5:30	14	34	18	28	244	52	54	118	13	13	13	51	110	22	801		
5:30-5:45	9	134	47	28	227	63	54	108	15	15	15	45	88	16	815		
5:45-6:00	11	109	44	27	123	37	57	100	17	17	17	40	92	17	675		
4:00PM TO 5:45PM																	
Volumes	47	413	152	93	786	216	204	513	67	67	67	108	407	61	1822		
Season Factor	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Growth	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Percentage	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PBI/CT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Midway %	0.4%				2.6%	2.0%	2.7%	0.4%				2.0%					
W/Be Lakes %	0.0%				4.7	4.7	5.3	0.0%				5.3			150		
ITC Branch %	19				95	84	84	13				19			628		
Southern Grove %					0.0%	0.0%	0.0%	0.0%				0.0%			35		
Wilson Grove %					0.1%	0.1%	0.1%	0.0%				0.1%			45		
Northland/Kennedy %					0.1%	0.1%	0.1%	0.0%				0.1%			112		
Western Grove %					0.1%	0.1%	0.7%	0.0%				0.3%			108		
Whitman Grove %					0.1%	0.1%	0.0%	0.0%				0.7%			37		
Frontier %					25.0%	1.0%	35.0%	60.0%				60.0%			93		
Frontier %					21	1	63	23				25			258		
Frontier %					25.0%	1.0%	35.0%	60.0%				60.0%			134		
Total	85	655	164	141	618	467	540	990	111	123	123	79	791	186	4943		



HCS7 Signalized Intersection Results Summary

8 W/O AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	25th St	File Name	25th St Midway - AM - 2035 w.o. Project - 7.9.20....				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	430	721	65	73	724	95	97	871	169	157	416	468

Signal Information				Phase Diagrams											
Cycle, s	120.0	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		6.8	1.0	44.8	6.5	6.0	29.5						
		Yellow		4.0	0.0	4.0	4.0	4.0	4.0						
		Red		1.0	0.0	1.5	1.0	1.0	1.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	22.4	45.5	11.5	34.5	11.8	50.3	12.8	51.3
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g _s), s	17.2	23.1	4.5	26.2	5.4		7.5	
Green Extension Time (g _e), s	0.2	4.1	0.1	3.3	0.2	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	0.92	1.00	0.97		1.00	
Max Out Probability	1.00	0.01	0.00	0.18	0.00		0.00	

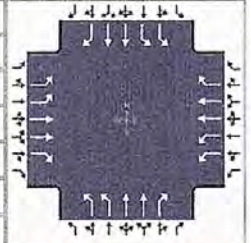
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	453	759	68	77	762	100	102	917	178	165	438	493
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1757	1809	1610	1757	1809	1610
Queue Service Time (g _s), s	15.2	21.1	3.5	2.5	24.2	6.0	3.4	25.5	9.3	5.5	10.2	32.7
Cycle Queue Clearance Time (g _c), s	15.2	21.1	3.5	2.5	24.2	6.0	3.4	25.5	9.3	5.5	10.2	32.7
Green Ratio (g/C)	0.15	0.34	0.34	0.05	0.25	0.25	0.06	0.37	0.37	0.06	0.38	0.38
Capacity (c), veh/h	510	1219	543	189	889	396	198	1351	601	228	1381	615
Volume-to-Capacity Ratio (X)	0.887	0.622	0.126	0.406	0.857	0.253	0.515	0.679	0.296	0.725	0.317	0.801
Back of Queue (Q), ft/ln (95th percentile)	299.3	346.5	59.8	50	411.8	104.1	67	415.3	165.3	110.2	194.4	500.3
Back of Queue (Q), veh/ln (95th percentile)	12.0	13.9	2.4	2.0	16.5	4.2	2.7	16.6	6.6	4.4	7.8	20.0
Queue Storage Ratio (RQ) (95th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	50.3	33.4	27.5	54.9	43.2	36.4	55.0	31.6	26.5	55.1	26.1	33.0
Incremental Delay (d ₂), s/veh	14.3	0.3	0.0	0.5	4.9	0.1	0.8	2.8	1.3	1.7	0.6	10.6
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	64.6	33.7	27.6	55.4	48.1	36.5	55.8	34.3	27.7	56.7	26.7	43.6
Level of Service (LOS)	E	C	C	E	D	D	E	C	C	E	C	D
Approach Delay, s/veh / LOS	44.3		D	47.5		D	35.2		D	38.8		D
Intersection Delay, s/veh / LOS	41.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.58	C	2.59	C	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.54	B	1.26	A	1.47	A	1.39	A

HCS7 Signalized Intersection Input Data

8 w/o AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	25th St	File Name	25th St & Midway - AM - 2035 w.o. Project - 7.9.2...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	430	721	65	73	724	95	97	871	169	157	416	468

Signal Information													
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	6.8	1.0	44.8	6.5	6.0	29.5			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	4.0	4.0			
				Red	1.0	0.0	1.5	1.0	1.0	1.0			

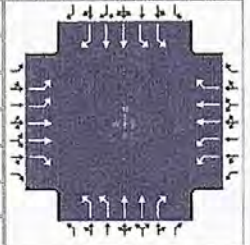
Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	430	721	65	73	724	95	97	871	169	157	416	468
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (P _g), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	24.0	40.0	24.0	40.0	20.0	36.0	20.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G _{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary # 8 w/o PM

General Information				Intersection Information	
Agency	O'Rourke Engineering & Planning			Duration, h	0.25
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00
Intersection	25th St	File Name	25th St Midway - PM - 2035 w.o. Project - 7.21.2...		
Project Description	without Project				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	530	990	111	203	791	190	85	455	164	131	848	447

Signal Information													
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	6.8	0.9	48.3	10.8	9.2	38.5			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	4.0	4.0			
				Red	1.0	0.0	1.5	1.0	1.0	1.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	30.0	57.7	15.8	43.5	11.8	53.8	12.7	54.7
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g _s), s	23.7	37.3	10.4	32.3	5.5		7.4	
Green Extension Time (g _e), s	1.3	6.3	0.5	6.2	0.2	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		1.00	
Max Out Probability	0.00	0.00	0.00	0.01	0.00		0.00	

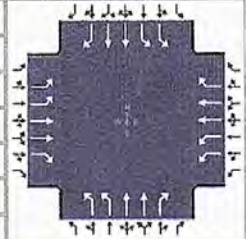
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	558	1042	117	214	833	200	89	479	173	138	893	471
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1757	1809	1610	1757	1809	1610
Queue Service Time (g _s), s	21.7	35.3	6.8	8.4	30.3	14.4	3.5	14.0	11.0	5.4	29.8	37.5
Cycle Queue Clearance Time (g _c), s	21.7	35.3	6.8	8.4	30.3	14.4	3.5	14.0	11.0	5.4	29.8	37.5
Green Ratio (g/C)	0.18	0.38	0.38	0.08	0.28	0.28	0.05	0.35	0.35	0.05	0.35	0.35
Capacity (c), veh/h	627	1362	606	272	996	443	170	1248	556	192	1271	566
Volume-to-Capacity Ratio (X)	0.889	0.765	0.193	0.786	0.836	0.451	0.525	0.384	0.311	0.718	0.703	0.832
Back of Queue (Q), ft/ln (95 th percentile)	366.1	540	117.6	168.7	485.8	238.8	70.1	256.9	198	109.5	485.7	579.4
Back of Queue (Q), veh/ln (95 th percentile)	14.6	21.6	4.7	6.7	19.4	9.6	2.8	10.3	7.9	4.4	19.4	23.2
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	56.1	38.2	29.3	63.4	47.7	42.0	65.0	34.6	33.6	65.1	39.1	41.6
Incremental Delay (d ₂), s/veh	1.8	0.3	0.1	1.9	0.7	0.3	0.9	0.9	1.5	1.9	3.3	13.4
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	57.9	38.6	29.4	65.4	48.5	42.2	66.0	35.5	35.1	67.0	42.4	55.0
Level of Service (LOS)	E	D	C	E	D	D	E	D	D	E	D	E
Approach Delay, s/veh / LOS	44.2		D	50.4		D	39.1		D	48.6		D
Intersection Delay, s/veh / LOS	46.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.58	C	2.60	C	2.59	C	2.59	C
Bicycle LOS Score / LOS	1.90	B	1.52	B	1.10	A	1.73	B

HCS7 Signalized Intersection Input Data

8 w/o PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	25th St	File Name	25th St Midway - PM - 2035 w.o. Project - 7.21.2...				
Project Description	without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	530	990	111	203	791	190	85	455	164	131	848	447

Signal Information													
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	6.8	0.9	48.3	10.8	9.2	38.5			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	4.0	4.0			
				Red	1.0	0.0	1.5	1.0	1.0	1.0			

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	530	990	111	203	791	190	85	455	164	131	848	447
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h		None			None			None		0	L	
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	59.0	36.0	70.0	47.0	16.0	18.0	16.0	18.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G _{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

#8 W/P

TURNING MOVEMENT VOLUME COUNTS

125th St
 WILSON LAKES
 2142000
 REPORT DATE: 01/20/2010
 DATE: JANUARY 2010
 CITY: S LIVER
 CONTROL: Signalized
 STREET: Highway A6



15 Min Period	Northbound				Southbound				Eastbound				Westbound				
	NBL	NBT	NLR	NLL	SBL	SBT	SBR	SLL	EBL	EBT	EBR	EWL	EWB	WBL	WBR	WBL	WBR
7:00-7:15	15	193	37	34	43	55	64	83	7	7	7	9	85	17	703	2007	2007
7:15-7:30	15	201	35	23	103	66	91	104	9	20	104	19	790	19	790	2978	2978
7:30-7:45	15	233	45	38	133	71	38	108	10	18	94	13	805	13	805	2883	2883
7:45-8:00	23	140	39	16	47	47	50	124	9	21	124	7	709	1687	1687	1687	1687
8:00-8:15	5	111	34	21	94	41	50	127	14	34	123	10	524	1255	1255	1255	1255
8:15-8:30	18	159	55	35	97	39	50	96	14	40	101	12	495	12	495	12	495
8:30-8:45	23	121	44	18	79	25	62	101	3	27	101	16	609	16	609	16	609
8:45-9:00	13	133	35	21	104	36	58	103	4	23	72	16	617	16	617	16	617

AM PEAK HOUR BEGINNING
 Volumes: 68 857 117 105 384 241 259 418 35 68 409 56 3027
 Season Factor: 1.005
 Growth Rate: 1.005
 Years Growth: 35
 Without Left: 1.005
 Village at Midway: 1.051 603
 TTC Bands: 1.833 1.024
 Southern Grove: 1.218 1.323
 Wilson Grove: 3.075 1.330
 Riverland/Tremont: 4.791 1.548
 Western Grove: 1.390 2.185
 Fenwick: 31 48
 Fenwick: 58 131

15 Min Period	NBL	NBT	NLR	NLL	SBL	SBT	SBR	SLL	EBL	EBT	EBR	EWL	EWB	WBL	WBR	WBL	WBR
4:00-4:15	11	87	49	23	143	63	50	137	27	45	106	12	750	2897	2897	2897	2897
4:15-4:30	20	314	48	20	171	62	41	150	14	31	96	14	743	3602	3602	3602	3602
4:30-4:45	10	100	43	20	179	53	50	143	23	42	103	17	711	3332	3332	3332	3332
4:45-5:00	14	90	24	25	146	48	42	144	16	59	104	6	735	3042	3042	3042	3042
5:00-5:15	14	111	38	20	124	52	56	135	12	51	113	22	811	22	811	22	811
5:15-5:30	9	134	42	28	127	63	54	108	15	45	88	16	835	16	835	16	835
5:30-5:45	11	129	44	27	111	33	37	103	17	49	93	17	673	17	673	17	673

PM PEAK HOUR BEGINNING
 Volumes: 47 416 152 93 266 216 216 204 155 67 138 427 61 3132
 Season Factor: 1.005
 Growth Rate: 1.005
 Years Growth: 35
 Without Left: 1.005
 Village at Midway: 1.051 603
 TTC Bands: 1.833 1.024
 Southern Grove: 1.218 1.323
 Wilson Grove: 3.075 1.330
 Riverland/Tremont: 4.791 1.548
 Western Grove: 1.390 2.185
 Fenwick: 31 48
 Fenwick: 58 131

15 Min Period	NBL	NBT	NLR	NLL	SBL	SBT	SBR	SLL	EBL	EBT	EBR	EWL	EWB	WBL	WBR	WBL	WBR
4:00-4:15	11	87	49	23	143	63	50	137	27	45	106	12	750	2897	2897	2897	2897
4:15-4:30	20	314	48	20	171	62	41	150	14	31	96	14	743	3602	3602	3602	3602
4:30-4:45	10	100	43	20	179	53	50	143	23	42	103	17	711	3332	3332	3332	3332
4:45-5:00	14	90	24	25	146	48	42	144	16	59	104	6	735	3042	3042	3042	3042
5:00-5:15	14	111	38	20	124	52	56	135	12	51	113	22	811	22	811	22	811
5:15-5:30	9	134	42	28	127	63	54	108	15	45	88	16	835	16	835	16	835
5:30-5:45	11	129	44	27	111	33	37	103	17	49	93	17	673	17	673	17	673

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 Volumes: 47 416 152 93 266 216 216 204 155 67 138 427 61 3132
 Season Factor: 1.005
 Growth Rate: 1.005
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15 Min Period	NBL	NBT	NLR	NLL	SBL	SBT	SBR	SLL	EBL	EBT	EBR	EWL	EWB	WBL	WBR	WBL	WBR
4:00-4:15	11	87	49	23	143	63	50	137	27	45	106	12	750	2897	2897	2897	2897
4:15-4:30	20	314	48	20	171	62	41	150	14	31	96	14	743	3602	3602	3602	3602
4:30-4:45	10	100	43	20	179	53	50	143	23	42	103	17	711	3332	3332	3332	3332
4:45-5:00	14	90	24	25	146	48	42	144	16	59	104	6	735	3042	3042	3042	3042
5:00-5:15	14	111	38	20	124	52	56	135	12	51	113	22	811	22	811	22	811
5:15-5:30	9	134	42	28	127	63	54	108	15	45	88	16	835	16	835	16	835
5:30-5:45	11	129	44	27	111	33	37	103	17	49	93	17	673	17	673	17	673

PM PEAK HOUR BEGINNING
 Volumes: 47 416 152 93 266 216 216 204 155 67 138 427 61 3132
 Season Factor: 1.005
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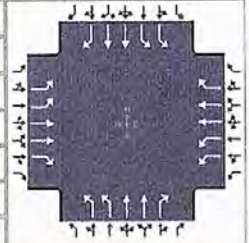
15 Min Period	NBL	NBT	NLR	NLL	SBL	SBT	SBR	SLL	EBL	EBT	EBR	EWL	EWB	WBL	WBR	WBL	WBR
4:00-4:15	11	87	49	23	143	63	50	137	27	45	106	12	750	2897	2897	2897	2897
4:15-4:30	20	314	48	20	171	62	41	150	14	31	96	14	743	3602	3602	3602	3602
4:30-4:45	10	100	43	20	179	53	50	143	23	42	103	17	711	3332	3332	3332	3332
4:45-5:00	14	90	24	25	146	48	42	144	16	59	104	6	735	3042	3042	3042	3042
5:00-5:15	14	111	38	20	124	52	56	135	12	51	113	22	811	22	811	22	811
5:15-5:30	9	134	42	28	127	63	54	108	15	45	88	16	835	16	835	16	835
5:30-5:45	11	129	44	27	111	33	37	103	17	49	93	17	673	17	673	17	673

PM PEAK HOUR BEGINNING
 Volumes: 47 416 152 93 266 216 216 204 155 67 138 427 61 3132
 Season Factor: 1.005
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HCS7 Signalized Intersection Results Summary

8 WIP AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	25th St	File Name	25th St & Midway - AM - 2035 with Project - 7.9.2...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	451	892	75	73	941	95	111	871	169	157	416	495

Signal Information				Phase Diagram								
Cycle, s	120.0	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	6.9	0.8	38.5	6.5	6.6	35.2						
Yellow	4.0	0.0	4.0	4.0	4.0	4.0						
Red	1.0	0.0	1.5	1.0	1.0	1.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	23.1	51.9	11.5	40.2	11.9	44.0	12.7	44.8
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g _s), s	17.9	27.6	4.5	34.0	5.9		7.5	
Green Extension Time (g _e), s	0.2	5.5	0.1	1.3	0.1	0.0	0.2	0.0
Phase Call Probability	1.00	1.00	0.92	1.00	0.98		1.00	
Max Out Probability	1.00	0.07	0.00	1.00	0.00		0.00	

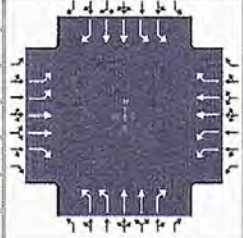
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	475	939	79	77	991	100	117	917	178	165	438	521
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1757	1809	1610	1757	1809	1610
Queue Service Time (g _s), s	15.9	25.6	3.8	2.5	32.0	5.6	3.9	27.7	10.1	5.5	11.1	38.6
Cycle Queue Clearance Time (g _c), s	15.9	25.6	3.8	2.5	32.0	5.6	3.9	27.7	10.1	5.5	11.1	38.6
Green Ratio (g/C)	0.15	0.39	0.39	0.05	0.29	0.29	0.06	0.32	0.32	0.06	0.33	0.33
Capacity (c), veh/h	530	1413	629	189	1062	473	201	1160	516	226	1186	528
Volume-to-Capacity Ratio (X)	0.896	0.665	0.126	0.406	0.933	0.212	0.582	0.790	0.345	0.732	0.369	0.987
Back of Queue (Q), ft/ln (95 th percentile)	315.1	404.6	62.8	50	553.3	96.2	77.1	460.7	183.5	110.3	211	678
Back of Queue (Q), veh/ln (95 th percentile)	12.6	16.2	2.5	2.0	22.1	3.8	3.1	18.4	7.3	4.4	8.4	27.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	50.0	30.1	23.4	54.9	41.2	31.9	55.2	37.1	31.1	55.1	30.9	40.1
Incremental Delay (d ₂), s/veh	16.0	0.9	0.0	0.5	13.6	0.1	1.0	5.5	1.8	1.7	0.9	36.2
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	66.0	31.0	23.5	55.4	54.9	32.0	56.2	42.6	33.0	56.9	31.7	76.3
Level of Service (LOS)	E	C	C	E	D	C	E	D	C	E	C	E
Approach Delay, s/veh / LOS	41.8	D		53.0	D		42.5	D		56.1	E	
Intersection Delay, s/veh / LOS	47.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.58	C	2.59	C	2.58	C	2.58	C
Bicycle LOS Score / LOS	1.72	B	1.45	A	1.49	A	1.42	A

HCS7 Signalized Intersection Input Data

#8 W/P AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	25th St	File Name	25th St & Midway - AM - 2035 with Project - 7.9.2...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	451	892	75	73	941	95	111	871	169	157	416	495

Signal Information													
Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	6.9	0.8	38.5	6.5	6.6	35.2			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	4.0	4.0			
				Red	1.0	0.0	1.5	1.0	1.0	1.0			

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	451	892	75	73	941	95	111	871	169	157	416	495
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (P _g), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

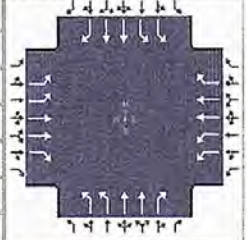
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	24.0	40.0	24.0	40.0	20.0	36.0	20.0	36.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G _{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l _f), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#8 w/p PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	25th St	File Name	25th St Midway - PM - 2035 with Project - 7.21.2...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	550	1156	121	203	1023	190	85	455	164	131	848	476

Signal Information				Signal Timing Diagram															
Cycle, s	140.0	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		6.8	0.9	42.2	10.7	10.1	43.8										
		Yellow		4.0	0.0	4.0	4.0	4.0	4.0										
		Red		1.0	0.0	1.5	1.0	1.0	1.0										

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Phase Duration, s	30.9	63.9	15.7	48.8	11.8	47.7	12.7	48.5
Change Period, (Y+R _c), s	5.0	5.0	5.0	5.0	5.0	5.5	5.0	5.5
Max Allow Headway (MAH), s	3.0	3.0	3.0	3.0	3.0	0.0	3.0	0.0
Queue Clearance Time (g _s), s	24.5	43.1	10.4	42.8	5.5		7.4	
Green Extension Time (g _e), s	1.3	6.8	0.4	1.1	0.2	0.0	0.3	0.0
Phase Call Probability	1.00	1.00	1.00	1.00	0.97		1.00	
Max Out Probability	0.00	0.25	0.00	1.00	0.00		0.00	

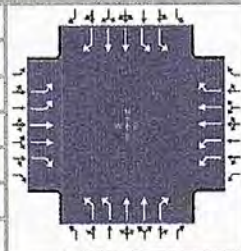
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	579	1217	127	214	1077	200	89	479	173	138	893	501
Adjusted Saturation Flow Rate (s), veh/h/ln	1757	1809	1610	1757	1809	1610	1757	1809	1610	1757	1809	1610
Queue Service Time (g _s), s	22.5	41.1	7.0	8.4	40.8	13.6	3.5	14.9	11.7	5.4	31.8	43.0
Cycle Queue Clearance Time (g _c), s	22.5	41.1	7.0	8.4	40.8	13.6	3.5	14.9	11.7	5.4	31.8	43.0
Green Ratio (g/C)	0.18	0.42	0.42	0.08	0.31	0.31	0.05	0.30	0.30	0.05	0.31	0.31
Capacity (c), veh/h	649	1523	678	269	1132	504	170	1090	485	192	1112	495
Volume-to-Capacity Ratio (X)	0.892	0.799	0.188	0.793	0.951	0.397	0.525	0.440	0.356	0.718	0.803	1.012
Back of Queue (Q), ft/ln (95 th percentile)	377.2	623.6	118.2	169	690.9	227.4	70.1	273.9	211.2	109.5	527.7	768.8
Back of Queue (Q), veh/ln (95 th percentile)	15.1	24.9	4.7	6.8	27.6	9.1	2.8	11.0	8.4	4.4	21.1	30.8
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	55.7	35.4	25.5	63.5	47.0	37.7	65.0	39.4	38.3	65.1	44.6	48.5
Incremental Delay (d ₂), s/veh	1.8	2.8	0.0	2.0	16.0	0.2	0.9	1.3	2.0	1.9	6.2	43.6
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	57.5	38.2	25.5	65.6	63.0	37.9	66.0	40.7	40.3	67.0	50.7	92.0
Level of Service (LOS)	E	D	C	E	E	D	E	D	D	E	D	F
Approach Delay, s/veh / LOS	43.2		D	60.0		E	43.7		D	65.7		E
Intersection Delay, s/veh / LOS	53.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.58	C	2.59	C	2.59	C	2.59	C
Bicycle LOS Score / LOS	2.07	B	1.72	B	1.10	A	1.75	B

HCS7 Signalized Intersection Input Data

8 W/O PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/15/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Midway Rd	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	25th St	File Name	25th St Midway - PM - 2035 with Project - 7.21.2...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	550	1156	121	203	1023	190	85	455	164	131	848	476

Signal Information													
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	6.8	0.9	42.2	10.7	10.1	43.8			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	4.0	4.0			
				Red	1.0	0.0	1.5	1.0	1.0	1.0			

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	550	1156	121	203	1023	190	85	455	164	131	848	476
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h		None			None			None		0	L	
Heavy Vehicles (P _{HV}), %	0	0	0	0	0	0	0	0	0	0	0	0
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	12.0	12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0	0	0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	55.0	51.0	29.0	25.0	35.0	15.0	45.0	25.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.5
Minimum Green (G _{min}), s	7	7	7	7	7	7	7	7
Start-Up Lost Time (l), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Off	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

#95

TURNING MOVEMENT VOLUME COUNTS

CONTROL: Signal

E/W STREET: Overchobee Rd.

Jenkins Rd.

PH/STREET: Overchobee Rd.

CITY: Ft. Pierce

DAY: Wednesday

PRENAME:

ANALYSIS YEAR: 2017

COUNT DATE:

REPORT DATE:

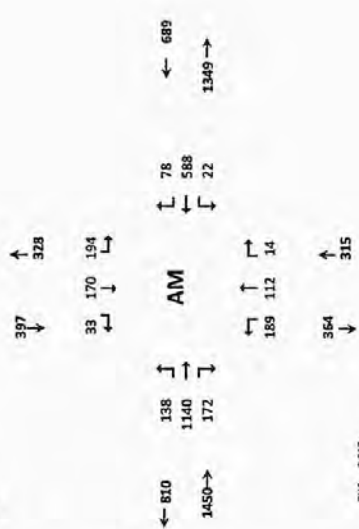
15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EET	EBR	WBL	WBT	WBR	TOTAL		
7:00-7:15	36	19	1	23	25	6	20	154	47	47	2	107	5	445	2349		
7:15-7:30	40	22	6	31	25	8	22	254	28	4	132	18	590	2524			
7:30-7:45	48	25	1	54	41	7	59	224	35	3	115	14	614	2658			
7:45-8:00	48	31	5	35	43	8	25	306	37	6	141	14	700	2533			
8:00-8:15	48	29	2	45	31	6	24	244	49	5	113	23	620	2410			
8:15-8:30	26	16	5	39	38	9	22	253	40	6	151	19	624				
8:30-8:45	43	24	8	34	31	3	16	218	43	8	150	21	579				
8:45-9:00	37	21	12	31	17	6	22	226	55	15	128	7	577				

AM PEAK HOUR IS FROM:

7:50 AM TO 8:00 AM

PH/F: 0.917
Seasonal Factor: 1.11
Trips In: 0
Trips Out: 0
Growth Rate: 1.005
Years Growth:

7:50 AM TO 8:00 AM	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EET	EBR	WBL	WBT	WBR	TOTAL
Volumes	170	101	13	125	153	30	124	2027	155	20	530	70	2458		315
Season Factor	189	112	14	184	170	33	138	1140	172	22	588	78	2850		315
Growth	158	112	-	184	170	33	138	1140	172	22	588	78	2850		315
Trips In	0%	0%	0%	30%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%
Trips Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%



Total 189 112 14 194 170 33 138 1140 172 22 588 78 2851

15 Min Period	Northbound				Southbound				Eastbound				Westbound				ONE HOUR SUM
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EET	EBR	WBL	WBT	WBR	TOTAL		
4:00-4:15	45	19	3	57	31	11	20	160	30	6	210	15	647	2253			
4:15-4:30	37	24	3	62	34	12	33	182	30	3	208	15	683	2810			
4:30-4:45	35	23	0	50	32	10	36	228	52	6	240	28	742	2943			
4:45-5:00	46	19	4	68	37	7	31	200	34	4	213	18	701	2940			
5:00-5:15	41	18	6	54	45	8	22	223	49	5	264	29	764	2859			
5:15-5:30	45	28	2	54	31	3	32	184	45	4	271	34	793				
5:30-5:45	38	24	2	65	28	8	37	175	35	3	248	39	742				
5:45-6:00	34	23	4	46	34	7	23	188	33	2	188	38	620				

PM PEAK HOUR IS FROM:

5:00 PM TO 6:00 PM

PH/F: 0.962
Seasonal Factor: 1.11
Growth Rate: 1.005
Trips In: 0
Trips Out: 0
Years Growth:

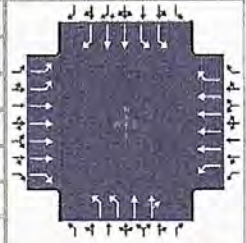
5:00 PM TO 6:00 PM	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EET	EBR	WBL	WBT	WBR	TOTAL
Volumes	158	91	14	219	136	26	114	790	162	34	991	140	2859		294
Season Factor	175	103	16	243	153	29	127	877	180	16	1100	155	3173		294
Growth	175	103	16	243	153	29	127	877	180	16	1100	155	3173		294
Trips In	0%	0%	0%	30%	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%
Trips Out	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Total 175 103 16 243 153 29 127 877 180 16 1100 155 3173

HCS7 Signalized Intersection Results Summary

9 E Am

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2017	Analysis Period	1> 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee & Jenkins - AM Existing 6.11.20 (...)				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	138	1140	172	22	588	78	189	112	14	194	170	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	6.5	3.4	96.9	11.7	0.2	15.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.3	0.0	4.3	4.3	0.0	4.3				
				Red	2.0	0.0	2.0	2.5	0.0	2.5				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	16.3	106.6	12.8	103.2	18.5	21.8	18.7	22.1
Change Period, (Y+R _c), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g _s), s	8.8		4.1		11.3	7.7	11.5	9.9
Green Extension Time (g _e), s	0.6	0.0	0.1	0.0	0.4	1.3	0.4	1.3
Phase Call Probability	1.00		0.65		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.10	0.00	0.13	0.00

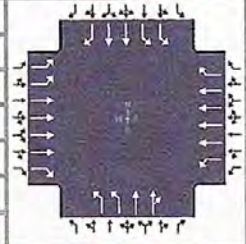
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	150	1239	187	24	639	85	205	69	68	211	185	36
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1798	1730	1781	1585
Queue Service Time (g _s), s	6.8	13.3	8.0	2.1	6.6	3.6	9.3	5.5	5.7	9.5	7.9	3.4
Cycle Queue Clearance Time (g _c), s	6.8	13.3	8.0	2.1	6.6	3.6	9.3	5.5	5.7	9.5	7.9	3.4
Green Ratio (g/C)	0.06	0.63	0.63	0.04	0.61	0.61	0.08	0.09	0.09	0.08	0.10	0.10
Capacity (c), veh/h	216	4259	994	73	4113	960	274	175	169	280	339	151
Volume-to-Capacity Ratio (X)	0.695	0.291	0.188	0.328	0.155	0.088	0.748	0.393	0.404	0.753	0.544	0.237
Back of Queue (Q), ft/ln (95 th percentile)	142	219.2	131.1	45.7	113.7	59.4	193.2	123	120.3	197.6	166.3	63
Back of Queue (Q), veh/ln (95 th percentile)	5.6	8.6	5.2	1.8	4.5	2.3	7.6	4.8	4.8	7.8	6.5	2.5
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	73.5	13.6	12.6	74.6	13.7	13.2	72.1	68.2	68.3	72.0	69.1	67.0
Incremental Delay (d ₂), s/veh	4.0	0.2	0.4	2.6	0.1	0.2	4.1	1.4	1.6	4.3	1.4	0.8
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	77.5	13.8	13.0	77.2	13.8	13.3	76.2	69.6	69.8	76.3	70.4	67.8
Level of Service (LOS)	E	B	B	E	B	B	E	E	E	E	E	E
Approach Delay, s/veh / LOS	19.8	B		15.8	B		73.6	E		73.1	E	
Intersection Delay, s/veh / LOS	32.2						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.41	B		2.55	C		2.99	C		3.10	C	
Bicycle LOS Score / LOS	1.14	A		0.80	A		0.77	A		0.84	A	

HCS7 Signalized Intersection Input Data

9 E P M

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2017	Analysis Period	1> 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee & Jenkins - AM Existing 6.11.20....				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	138	1140	172	22	588	78	189	112	14	194	170	33

Signal Information				Signal Timing (s)													
Cycle, s	160.0	Reference Phase	2	Green		6.5	3.4	96.9	11.7	0.2	15.0	Yellow		4.3	0.0	4.3	4.3
Offset, s	0	Reference Point	End	Red		2.0	0.0	2.0	2.5	0.0	2.5	Green		6.5	3.4	96.9	11.7
Uncoordinated	No	Simult. Gap E/W	On	Yellow		4.3	0.0	4.3	4.3	0.0	4.3	Red		2.0	0.0	2.0	2.5
Force Mode	Fixed	Simult. Gap N/S	On	Red		2.0	0.0	2.0	2.5	0.0	2.5	Green		6.5	3.4	96.9	11.7

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	138	1140	172	22	588	78	189	112	14	194	170	33
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

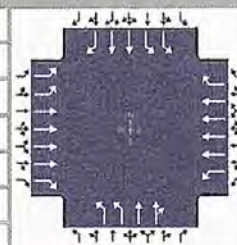
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
	Maximum Green (G _{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0
Yellow Change Interval (Y), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G _{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (l), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (PT), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	7.0		7.0		5.0		5.0	
Pedestrian Clearance Time (PC), s	37.0		37.0		35.0		34.0	

Multimodal Information	EB			WB			NB			SB		
	0	No	25	0	No	25	0	No	25	0	No	25
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

#9 E PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2017	Analysis Period	1> 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee & Jenkins - PM Existing.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	127	877	180	16	1100	155	175	103	16	243	153	29

Signal Information				Phase Diagrams										
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	5.4	4.6	94.5	11.0	3.4	15.0	1		2		3		4	
Yellow	4.3	0.0	4.3	4.3	0.0	4.3	5		6		7		8	
Red	2.0	0.0	2.0	2.5	0.0	2.5								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	16.3	105.4	11.7	100.8	17.8	21.8	21.1	25.2
Change Period, (Y+R _c), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g _s), s	8.2		3.5		10.6	7.4	14.0	8.9
Green Extension Time (g _e), s	0.5	0.0	0.0	0.0	0.4	1.2	0.4	1.2
Phase Call Probability	1.00		0.54		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.05	0.00	0.86	0.00

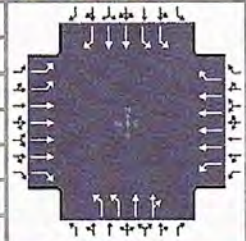
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	138	953	196	17	1196	168	190	65	64	264	166	32
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1784	1730	1781	1585
Queue Service Time (g _s), s	6.2	9.9	8.6	1.5	14.0	7.8	8.6	5.2	5.4	12.0	6.9	2.9
Cycle Queue Clearance Time (g _c), s	6.2	9.9	8.6	1.5	14.0	7.8	8.6	5.2	5.4	12.0	6.9	2.9
Green Ratio (g/C)	0.06	0.62	0.62	0.03	0.59	0.59	0.07	0.09	0.09	0.10	0.11	0.11
Capacity (c), veh/h	216	4206	981	60	4011	936	259	175	167	332	408	182
Volume-to-Capacity Ratio (X)	0.640	0.227	0.199	0.290	0.298	0.180	0.734	0.371	0.384	0.796	0.407	0.173
Back of Queue (Q), ft/ln (95 th percentile)	129.7	171.2	141.9	33.6	232.8	131	179.4	116	113.2	241.5	144.4	53.6
Back of Queue (Q), veh/ln (95 th percentile)	5.1	6.7	5.6	1.3	9.2	5.2	7.1	4.6	4.5	9.5	5.7	2.1
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	73.3	13.5	13.2	75.4	16.3	15.0	72.4	68.1	68.2	70.8	65.8	64.0
Incremental Delay (d ₂), s/veh	3.1	0.1	0.5	2.6	0.2	0.4	4.0	1.3	1.4	8.4	0.7	0.4
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	76.4	13.6	13.7	78.1	16.5	15.4	76.4	69.4	69.6	79.1	66.4	64.4
Level of Service (LOS)	E	B	B	E	B	B	E	E	E	E	E	E
Approach Delay, s/veh / LOS	20.4		C	17.1		B	73.6		E	73.6		E
Intersection Delay, s/veh / LOS	31.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.41	B	2.56	C	2.99	C	3.10	C
Bicycle LOS Score / LOS	1.02	A	1.06	A	0.75	A	0.87	A

HCS7 Signalized Intersection Input Data

#9EPM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2017	Analysis Period	1> 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee & Jenkins - PM Existing.xus				
Project Description	Existing						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	127	877	180	16	1100	155	175	103	16	243	153	29

Signal Information				Signal Timing (s)													
Cycle, s	160.0	Reference Phase	2														
Offset, s	0	Reference Point	End	Green	5.4	4.6	94.5	11.0	3.4	15.0	Yellow	4.3	0.0	4.3	4.3	0.0	4.3
Uncoordinated	No	Simult. Gap E/W	On	Red	2.0	0.0	2.0	2.5	0.0	2.5	Red	2.0	0.0	2.0	2.5	0.0	2.5
Force Mode	Fixed	Simult. Gap N/S	On														

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	127	877	180	16	1100	155	175	103	16	243	153	29
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (Y), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G _{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (PT), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	7.0		7.0		5.0		5.0	
Pedestrian Clearance Time (PC), s	37.0		37.0		35.0		34.0	

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

#9 WO

TURNING MOVEMENT VOLUME COUNTS

CONTROL: Signal

E/W STREET, Oneocobee Rd.

Jenkins Rd.

DATE: Wednesday
ANALYSIS YEAR: 2035

CITY: Ft. Pierce

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	36	19	1	23	25	6	6	20	154	47	47	2	107	5	445	2369
7:15-7:30	40	22	6	31	25	8	22	254	28	4	132	4	132	18	590	2524
7:30-7:45	48	25	1	54	41	7	53	224	29	3	115	14	614	14	614	2568
7:45-8:00	48	31	5	36	49	8	35	306	37	6	141	14	700	14	700	2533
8:00-8:15	48	29	2	46	31	6	24	244	49	5	113	23	620	23	620	2410
8:15-8:30	36	16	5	39	38	9	22	253	40	6	161	19	634	19	634	2410
8:30-8:45	43	24	8	34	31	3	16	218	43	8	130	21	579	21	579	2410
8:45-9:00	37	21	12	31	17	6	22	226	55	15	128	7	577	7	577	2410

AM
←1230
227
1395
1896→
137
727
32
896
1664→

Seasonal Factor: 1.11
Trips Origin: 18
Growth Rate: 1.005
Years Crown: 18

AM PEAK HOUR IS FROM:
7:00 AM TO 8:00 AM
Volumes: 170 101 13 13 175 153 30 124 1077 155 20 530 70 2545
Season Factor: 189 123 14 194 170 33 138 1160 172 22 588 78 2850
Growth: 206 123 16 212 186 36 151 1247 188 24 644 85 3118

Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
PROJECT: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Mariner Cove: 36 8 16 0 0 2 0 0 0 0 0 0 0 0 0 0
Campfire World: 0 0 0 4 0 4 0 2 8 0 0 0 0 0 0 0 0
39 Acre Residential: 36 7 3 0 4 1 0 0 0 0 0 0 0 0 0 0
Whispering Oaks: 0 5 0 17 17 35 9 0 0 0 0 0 0 0 0 0 0
SLCC: 0 28 0 5 5 5 0 0 0 0 0 0 0 28 28 0 0
WWs: 11 3 0 4 3 0 4 3 0 0 18 5 4 12 4 4
Palm Swazes: 0 0 0 0 7 0 4 2 0 0 0 0 0 0 0 0
Celebration Pointe: 0 0 0 0 0 0 0 72 24 0 0 0 0 0 0 0
Bent Creek: 0 0 0 0 0 0 0 36 12 0 0 0 0 0 0 0
Sebosa: 15 9 0 0 0 3 0 0 0 0 0 0 0 0 0 0
Creekside: 7 0 0 0 0 0 0 7 21 126 21 0 43 0 0
Total: 311 183 19 269 217 192 32 237 1396 273 32 727 137 3963

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	45	19	3	57	31	11	11	20	180	30	30	6	210	35	647	2753
4:15-4:30	37	24	3	62	34	12	12	33	182	30	3	208	35	663	2870	
4:30-4:45	35	23	0	50	32	10	36	238	52	8	240	28	742	28	742	2340
4:45-5:00	46	19	4	68	37	7	31	200	34	4	213	38	701	38	701	2340
5:00-5:15	41	18	6	54	45	8	22	223	49	5	264	29	764	29	764	2858
5:15-5:30	45	28	2	54	31	3	32	184	45	4	271	34	733	34	733	2858
5:30-5:45	38	24	2	65	28	8	37	195	35	3	268	39	742	39	742	2858
5:45-6:00	34	23	4	46	34	7	23	190	33	2	189	30	620	30	620	2858

PM
←1854
323
1122
1786→
226
1376
39
1641
1498→

Seasonal Factor: 1.11
Trips Origin: 18
Growth Rate: 1.005
Years Crown: 18

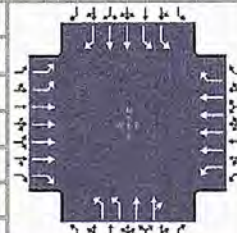
PM PEAK HOUR IS FROM:
5:00 PM TO 6:00 PM
Volumes: 158 91 14 129 138 26 114 790 182 14 991 140 2859
Season Factor: 175 103 16 243 153 22 127 877 180 16 1100 155 3173
Growth: 192 113 17 286 168 22 138 959 197 17 1283 170 3472

Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
PROJECT: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Mariner Cove: 17 4 8 0 0 8 0 0 0 0 0 0 0 0 0 0
Campfire World: 0 0 0 24 0 16 0 0 0 0 0 0 0 0 0 0
39 Acre Residential: 0 17 0 9 9 20 0 0 0 0 0 0 0 0 0 0
Whispering Oaks: 0 10 0 39 0 0 0 0 0 0 0 0 0 0 0 0
SLCC: 0 13 0 4 4 4 0 0 0 0 0 0 0 0 0 0
WWs: 23 6 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Palm Swazes: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Sebosa: 31 6 0 0 0 10 0 0 0 0 0 0 0 0 0 0
Bent Creek: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Celebration Pointe: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Total: 295 157 27 349 244 163 323 1122 341 1376 226 4862

HCS7 Signalized Intersection Results Summary

9 W/O A M

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - AM - 2035 - Backgrou...				
Project Description	Background without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	227	1396	273	32	727	137	311	183	19	249	217	192

Signal Information				Signal Timing (s)										
Cycle, s	160.0	Reference Phase	2	Green	7.9	6.2	77.5	14.6	2.8	24.8	1	2	3	4
Offset, s	0	Reference Point	End	Yellow	4.3	0.0	4.3	4.3	0.0	4.3	5	6	7	8
Uncoordinated	No	Simult. Gap E/W	On	Red	2.0	0.0	2.0	2.5	0.0	2.5				
Force Mode	Fixed	Simult. Gap N/S	On											

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	20.4	90.0	14.2	83.8	24.3	34.4	21.4	31.6
Change Period, (Y+R _c), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g _s), s	13.2		5.0		17.3	10.5	14.3	22.5
Green Extension Time (g _e), s	0.9	0.0	0.1	0.0	0.1	2.5	0.4	2.2
Phase Call Probability	1.00		0.79		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.02

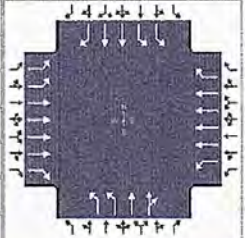
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	247	1517	297	35	790	149	338	111	109	271	236	209
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1809	1730	1781	1585
Queue Service Time (g _s), s	11.2	21.9	17.6	3.0	10.9	8.6	15.3	8.3	8.5	12.3	9.6	20.5
Cycle Queue Clearance Time (g _c), s	11.2	21.9	17.6	3.0	10.9	8.6	15.3	8.3	8.5	12.3	9.6	20.5
Green Ratio (g/C)	0.09	0.52	0.52	0.05	0.48	0.48	0.12	0.17	0.17	0.10	0.15	0.15
Capacity (c), veh/h	304	3554	829	88	3291	768	399	322	312	338	551	245
Volume-to-Capacity Ratio (X)	0.811	0.427	0.358	0.397	0.240	0.194	0.847	0.343	0.350	0.801	0.428	0.851
Back of Queue (Q), ft/ln (95 th percentile)	224.7	343.9	278.5	66	197.9	150.9	304.9	181.1	176.1	246.8	196.8	349.2
Back of Queue (Q), veh/ln (95 th percentile)	8.8	13.5	11.0	2.6	7.8	5.9	12.0	7.1	7.0	9.7	7.7	13.7
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	71.7	23.4	22.4	73.8	24.1	23.5	69.4	58.2	58.3	70.7	61.2	65.8
Incremental Delay (d ₂), s/veh	5.2	0.4	1.2	2.9	0.2	0.6	14.6	0.6	0.7	8.9	0.5	10.2
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	76.8	23.8	23.6	76.7	24.2	24.0	84.0	58.9	59.0	79.5	61.7	76.0
Level of Service (LOS)	E	C	C	E	C	C	F	E	E	E	E	E
Approach Delay, s/veh / LOS	30.1		C	26.1		C	74.1		E	72.6		E
Intersection Delay, s/veh / LOS	42.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.57	C	2.98	C	3.10	C
Bicycle LOS Score / LOS	1.34	A	0.89	A	0.95	A	1.08	A

HCS7 Signalized Intersection Input Data

9 w/o AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - AM - 2035 - Backgrou...				
Project Description	Background without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	227	1396	273	32	727	137	311	183	19	249	217	192

Signal Information				Signal Timing (s)								Signal Phases			
Cycle, s	160.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	7.9	6.2	77.5	14.6	2.8	24.8					
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.3	0.0	4.3	4.3	0.0	4.3					
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.0	0.0	2.0	2.5	0.0	2.5					

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	227	1396	273	32	727	137	311	183	19	249	217	192
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h		None			None			None			None	
Heavy Vehicles (P _{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (Y), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G _{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (l _f), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (PT), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	7.0	0.0	7.0	0.0	5.0	0.0	5.0
Pedestrian Clearance Time (PC), s	0.0	37.0	0.0	37.0	0.0	35.0	0.0	34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary

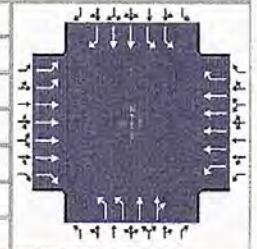
9 w/o PM

General Information

Agency	O'Rourke Engineering & Planning		
Analyst	James Kemp	Analysis Date	May 5, 2020
Jurisdiction	St. Lucie County	Time Period	PM
Urban Street	Okeechobee Road	Analysis Year	2035
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - PM - 2035 - Backgrou...
Project Description	Background without Project		

Intersection Information

Duration, h	0.25
Area Type	Other
PHF	0.92
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	323	1122	341	39	1376	226	295	157	27	349	244	163

Signal Information

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	8.5	4.4	76.2	16.8	1.4	20.2
Yellow	4.3	4.3	4.3	4.3	0.0	4.3
Red	2.0	2.0	2.0	2.5	0.0	2.5

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	25.5	93.2	14.8	82.5	23.6	27.0	25.0	28.5
Change Period, (Y+R _c), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g _s), s	17.9		5.7		16.5	10.3	19.3	19.4
Green Extension Time (g _e), s	1.3	0.0	0.1	0.0	0.2	2.4	0.0	2.3
Phase Call Probability	1.00		0.85		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.00

Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	351	1220	371	42	1496	246	321	101	99	379	265	177
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1776	1730	1781	1585
Queue Service Time (g _s), s	15.9	16.0	22.3	3.7	23.7	15.4	14.5	8.0	8.3	17.3	11.1	17.4
Cycle Queue Clearance Time (g _c), s	15.9	16.0	22.3	3.7	23.7	15.4	14.5	8.0	8.3	17.3	11.1	17.4
Green Ratio (g/C)	0.12	0.54	0.54	0.05	0.48	0.48	0.11	0.13	0.13	0.12	0.14	0.14
Capacity (c), veh/h	415	3688	861	94	3233	754	384	237	225	415	483	215
Volume-to-Capacity Ratio (X)	0.846	0.331	0.431	0.449	0.463	0.326	0.835	0.427	0.441	0.914	0.549	0.825
Back of Queue (Q), ft/ln (95 th percentile)	295.5	264.4	336.7	80.4	371.6	253.6	289.6	175.8	170.3	352.9	222.4	301.7
Back of Queue (Q), veh/ln (95 th percentile)	11.6	10.4	13.3	3.2	14.6	10.0	11.4	6.9	6.8	13.9	8.8	11.9
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	69.0	20.4	21.8	73.5	28.2	26.0	69.7	64.5	64.6	69.6	64.6	67.3
Incremental Delay (d ₂), s/veh	4.8	0.2	1.6	3.3	0.5	1.1	13.0	1.2	1.4	24.4	1.0	7.7
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	73.8	20.6	23.4	76.8	28.6	27.1	82.7	65.7	66.0	94.0	65.6	75.1
Level of Service (LOS)	E	C	C	E	C	C	F	E	E	F	E	E
Approach Delay, s/veh / LOS	30.8		C	29.6		C	76.2		E	80.7		F
Intersection Delay, s/veh / LOS	43.1						D					

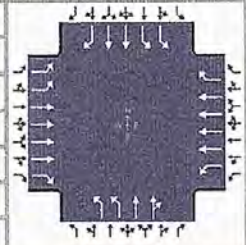
Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.42		B	2.58		C	2.99		C	3.10		C
Bicycle LOS Score / LOS	1.29		A	1.22		A	0.92		A	1.17		A

HCS7 Signalized Intersection Input Data

9 w/o PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - PM - 2035 - Backgrou...				
Project Description	Background without Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	323	1122	341	39	1376	226	295	157	27	349	244	163

Signal Information																						
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	8.5	4.4	76.2	16.8	1.4	20.2												
				Yellow	4.3	4.3	4.3	4.3	0.0	4.3												
				Red	2.0	2.0	2.0	2.5	0.0	2.5												

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	323	1122	341	39	1376	226	295	157	27	349	244	163
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h		None			None			None			None	
Heavy Vehicles (P _{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (P _g), %		0			0			0			0	
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (Y), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G _{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (l), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (PT), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	7.0	0.0	7.0	0.0	5.0	0.0	5.0
Pedestrian Clearance Time (PC), s	0.0	37.0	0.0	37.0	0.0	35.0	0.0	34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

TURNING MOVEMENT VOLUME COUNTS

449 w/

7/16/2020

N/S STREET: Jenkins Rd. CONTROL: Signal
 E/W STREET: Occobee Rd. CITY: Ft. Pierce
 ANALYSIS YEAR: 2025 DAY: Wednesday

REPORT DATE: 5/5/2020
 COUNTY DATE: 6/15/2017
 COUNTY NAME: FLEMING

15 Min Period	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
7:00-7:15	36	19	1	23	25	6	20	154	47	2	307	5	445	2349		
7:15-7:30	40	22	6	31	25	8	22	254	28	4	132	18	590	2324		
7:30-7:45	48	25	1	54	41	7	53	224	29	3	115	14	614	2568		
7:45-8:00	48	31	5	36	43	8	25	306	37	6	141	14	700	2533		
8:00-8:15	48	29	2	46	31	6	24	244	40	5	113	23	620	2410		
8:15-8:30	26	16	5	39	38	9	22	253	40	6	161	19	634			
8:30-8:45	43	24	8	34	31	3	16	218	43	8	130	21	579			
8:45-9:00	37	21	12	31	17	6	22	226	55	15	128	7	577			

AM PEAK HOUR IS FROM: 7:00 AM TO 8:00 AM
 Volumes: 170 101 13 13 175 153 30 124 1027 155 20 530 70 2568
 Season Factor: 1.11
 Growth: 1.11
 In/Out: In - - - - - In - - - - - In - - - - - In - - - - -
 PROJECT: 1% 0% 0% 0% 0% 0% 0% 1% 1% 2% 1% 0% 0% 0% 0% 0% 0%
 Mariner Cove: 35 8 0 0 4 0 2 0 0 0 0 0 0 0 0 0 0
 Campfire World: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 39 Acre Residential: 0 5 0 0 17 35 9 0 0 0 0 0 0 0 0 0 0
 Whispering Oaks: 11 3 0 0 4 3 0 0 18 5 4 12 4 4 2 0 0
 WYWA: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Palm Breezes: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Celebration Pointe: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Bent Creek: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Seelona: 15 9 0 0 0 0 3 0 0 0 0 0 0 0 0 0 0
 Creekside: 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Total: 325 183 19 249 217 206 237 1670 264 1072 117 4629

Seasonal Factor: 1.11
 Trips In: 1327
 Trips Out: 1052
 Growth Rate: 1.005
 Years Crown: 18

15 Min Period lanes	Northbound				Southbound				Eastbound				Westbound			
	NBL	NBT	NBR	NBL	SBL	SBT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	TOTAL	ONE HOUR SUM
4:00-4:15	45	19	3	57	31	11	20	180	30	6	210	35	647	2753		
4:15-4:30	37	24	3	62	34	12	33	182	30	3	208	35	663	2870		
4:30-4:45	35	21	0	59	32	10	36	238	52	8	240	28	742	2940		
4:45-5:00	46	19	4	63	37	7	31	200	34	4	213	38	701	3040		
5:00-5:15	41	18	6	54	45	8	22	223	49	5	254	29	764	2859		
5:15-5:30	45	28	2	54	31	3	32	194	45	4	271	34	713			
5:30-5:45	38	24	2	65	28	8	37	156	35	3	268	30	742			
5:45-6:00	34	23	4	46	34	7	23	188	33	2	160	36	620			

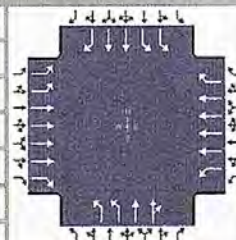
PM PEAK HOUR IS FROM: 5:00 PM TO 6:00 PM
 Volumes: 158 99 14 219 118 26 114 790 162 14 991 140 2859
 Season Factor: 1.11
 Growth: 1.005
 In/Out: In - - - - - In - - - - - In - - - - - In - - - - -
 PROJECT: 1% 0% 0% 0% 0% 0% 0% 1% 1% 2% 1% 0% 0% 0% 0% 0% 0%
 Mariner Cove: 17 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Campfire World: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 39 Acre Residential: 0 17 0 0 9 20 6 0 0 0 0 0 0 0 0 0
 Whispering Oaks: 0 10 0 0 33 0 0 0 31 0 0 0 0 0 0 0
 WYWA: 11 3 0 0 4 3 0 0 18 5 4 12 4 4 2 0 0
 Palm Breezes: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Celebration Pointe: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Bent Creek: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Seelona: 31 6 0 0 0 0 10 0 0 0 0 0 0 0 0 0
 Creekside: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Total: 309 157 27 349 244 177 1389 1389 351 1751 206 5353

Seasonal Factor: 1.11
 Trips In: 1441
 Trips Out: 1037
 Growth Rate: 1.005
 Years Crown: 18

HCS7 Signalized Intersection Results Summary

9 W/P AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - AM - 2035 - with Proje...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	237	1670	284	32	1072	137	325	183	19	249	217	206

Signal Information				Signal Timing (s)											
Cycle, s	160.0	Reference Phase	2	Green		Yellow		Red		Green		Yellow		Red	
Offset, s	0	Reference Point	End	7.9	0.4	4.3	4.3	2.0	2.0	74.9	14.6	3.4	26.2	2.0	2.5
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	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	20.9	88.0	14.2	81.2	24.9	36.4	21.4	33.0
Change Period, (Y+R _c), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g _s), s	13.7		5.0		18.0	10.4	14.3	24.0
Green Extension Time (g _e), s	0.9	0.0	0.1	0.0	0.0	2.6	0.4	2.2
Phase Call Probability	1.00		0.79		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.04

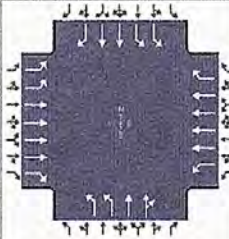
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	258	1815	309	35	1165	149	353	111	109	271	236	224
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1809	1730	1781	1585
Queue Service Time (g _s), s	11.7	28.6	18.9	3.0	17.6	8.8	16.0	8.2	8.4	12.3	9.5	22.0
Cycle Queue Clearance Time (g _c), s	11.7	28.6	18.9	3.0	17.6	8.8	16.0	8.2	8.4	12.3	9.5	22.0
Green Ratio (g/C)	0.09	0.51	0.51	0.05	0.47	0.47	0.12	0.19	0.19	0.10	0.16	0.16
Capacity (c), veh/h	315	3467	809	88	3182	742	412	347	335	338	584	260
Volume-to-Capacity Ratio (X)	0.817	0.524	0.382	0.397	0.366	0.201	0.857	0.319	0.325	0.801	0.404	0.862
Back of Queue (Q), ft/ln (95 th percentile)	232.3	430.8	297.4	66	292.3	156.4	318.5	177.6	172.8	246.8	194.9	375.7
Back of Queue (Q), veh/ln (95 th percentile)	9.1	17.0	11.7	2.6	11.5	6.2	12.5	7.0	6.9	9.7	7.7	14.8
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	71.4	26.2	23.8	73.8	27.3	24.9	69.1	56.4	56.5	70.7	59.9	65.1
Incremental Delay (d ₂), s/veh	5.2	0.6	1.4	2.9	0.3	0.6	16.1	0.5	0.6	8.9	0.5	12.8
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	76.6	26.7	25.2	76.7	27.6	25.6	85.2	57.0	57.1	79.5	60.3	77.9
Level of Service (LOS)	E	C	C	E	C	C	F	E	E	E	E	E
Approach Delay, s/veh / LOS	31.9		C	28.7		C	74.4		E	72.8		E
Intersection Delay, s/veh / LOS	41.8						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.58	C	2.98	C	3.10	C
Bicycle LOS Score / LOS	1.47	A	1.04	A	0.96	A	1.09	A

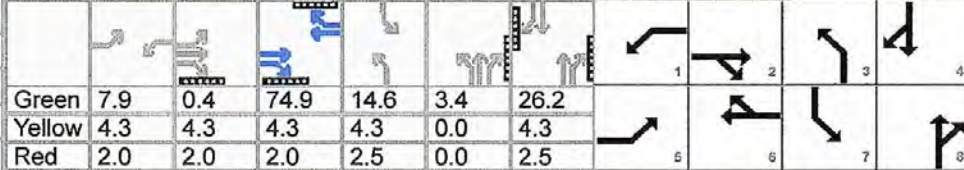
HCS7 Signalized Intersection Input Data

#9 w/P AM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	AM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - AM - 2035 - with Proje...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	237	1670	284	32	1072	137	325	183	19	249	217	206

Signal Information				Signal Timing (s)																				
Cycle, s	160.0	Reference Phase	2	Green	7.9	0.4	74.9	14.6	3.4	26.2	Yellow	4.3	4.3	4.3	4.3	0.0	4.3	Red	2.0	2.0	2.0	2.5	0.0	2.5
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	237	1670	284	32	1072	137	325	183	19	249	217	206
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

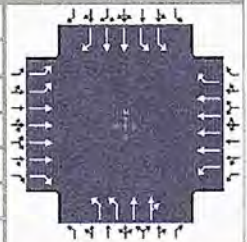
Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (Y), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G _{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (l), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (PT), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	7.0	0.0	7.0	0.0	5.0	0.0	5.0
Pedestrian Clearance Time (PC), s	0.0	37.0	0.0	37.0	0.0	35.0	0.0	34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50	No	0.50	No	0.50	No	0.50	No	No	0.50	No

HCS7 Signalized Intersection Results Summary

9 WSP PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1 > 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - PM - 2035 - with Proje...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	334	1389	351	39	1751	226	309	157	27	349	244	177

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		8.5	4.9	73.5	17.4	0.8	22.4						
		Yellow		4.3	4.3	4.3	4.3	0.0	4.3						
		Red		2.0	2.0	2.0	2.5	0.0	2.5						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	2.0	3.0	2.0	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	26.0	91.1	14.8	79.8	24.2	29.2	25.0	30.0
Change Period, (Y+R _c), s	6.3	6.3	6.3	6.3	6.8	6.8	6.8	6.8
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0	4.0	4.0	4.0	4.0
Queue Clearance Time (g _s), s	18.4		5.7		17.2	10.1	19.3	20.9
Green Extension Time (g _e), s	1.3	0.0	0.1	0.0	0.1	2.5	0.0	2.3
Phase Call Probability	1.00		0.85		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		1.00	0.00	1.00	0.01

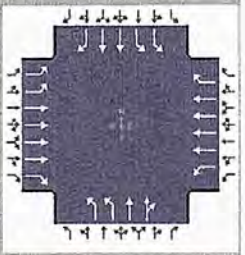
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	363	1510	382	42	1903	246	336	101	99	379	265	192
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1698	1585	1781	1698	1585	1730	1870	1776	1730	1781	1585
Queue Service Time (g _s), s	16.4	21.5	23.9	3.7	33.7	15.9	15.2	7.9	8.1	17.3	11.0	18.9
Cycle Queue Clearance Time (g _c), s	16.4	21.5	23.9	3.7	33.7	15.9	15.2	7.9	8.1	17.3	11.0	18.9
Green Ratio (g/C)	0.12	0.53	0.53	0.05	0.46	0.46	0.11	0.14	0.14	0.12	0.14	0.14
Capacity (c), veh/h	427	3598	840	94	3121	728	397	261	248	415	516	230
Volume-to-Capacity Ratio (X)	0.851	0.420	0.454	0.449	0.610	0.337	0.845	0.386	0.399	0.914	0.514	0.837
Back of Queue (Q), ft/ln (95 th percentile)	303.5	337.7	357.4	80.4	502.6	261.3	302.8	172.4	166.9	352.9	219.9	322.4
Back of Queue (Q), veh/ln (95 th percentile)	11.9	13.3	14.1	3.2	19.8	10.3	11.9	6.8	6.7	13.9	8.7	12.7
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d ₁), s/veh	68.7	22.7	23.3	73.5	32.5	27.7	69.4	62.6	62.7	69.6	63.2	66.6
Incremental Delay (d ₂), s/veh	4.9	0.4	1.8	3.3	0.9	1.3	14.4	0.9	1.0	24.4	0.8	7.9
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	73.6	23.1	25.1	76.8	33.4	28.9	83.8	63.5	63.7	94.0	64.0	74.4
Level of Service (LOS)	E	C	C	E	C	C	F	E	E	F	E	E
Approach Delay, s/veh / LOS	31.6		C	33.7		C	76.3		E	80.0		E
Intersection Delay, s/veh / LOS	43.5						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.43	B	2.58	C	2.99	C	3.10	C
Bicycle LOS Score / LOS	1.42	A	1.39	A	0.93	A	1.18	A

HCS7 Signalized Intersection Input Data

9 w/ P PM

General Information				Intersection Information			
Agency	O'Rourke Engineering & Planning			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	May 5, 2020	Area Type	Other		
Jurisdiction	St. Lucie County	Time Period	PM	PHF	0.92		
Urban Street	Okeechobee Road	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Okeechobee & Jenkins	File Name	C3 Okeechobee Jenkins - PM - 2035 - with Proje...				
Project Description	with Project						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	334	1389	351	39	1751	226	309	157	27	349	244	177

Signal Information				Signal Timing (s)																				
Cycle, s	160.0	Reference Phase	2	Green	8.5	4.9	73.5	17.4	0.8	22.4	Yellow	4.3	4.3	4.3	4.3	0.0	4.3	Red	2.0	2.0	2.0	2.5	0.0	2.5
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

Traffic Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	334	1389	351	39	1751	226	309	157	27	349	244	177
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	None			None			None			None		
Heavy Vehicles (P _{HV}), %	2	2	2	2	2	2	2	2		2	2	2
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (I)	1.00	1.00	1.00	1.00	1.00	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	12.0		12.0	12.0	12.0
Turn Bay Length, ft	0	0	0	0	0	0	0	0		0	0	0
Grade (Pg), %	0			0			0			0		
Speed Limit, mi/h	45	45	45	45	45	45	45	45	45	45	45	45

Phase Information	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	25.0	65.0	25.0	65.0	25.0	45.0	25.0	45.0
Yellow Change Interval (Y), s	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.5	2.5	2.5	2.5
Minimum Green (G _{min}), s	10	15	10	15	10	15	10	15
Start-Up Lost Time (I), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of Effective Green (e), s	2.0	2.0	2.0	2.0	3.0	2.0	3.0	2.0
Passage (PT), s	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Off	Min	Off	Min	Off	Off	Off	Off
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	7.0	0.0	7.0	0.0	5.0	0.0	5.0
Pedestrian Clearance Time (PC), s	0.0	37.0	0.0	37.0	0.0	35.0	0.0	34.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

TURNING MOVEMENT VOLUME COUNTS

#10 E

N/S STREET: Glades Cutoff Rd
 FILENAME: Willow Lakes
 COUNT DATE: 2/20/2020
 REPORT DATE:

E/W STREET: Commerce Centre Dr
 CITY: St Lucie

CONTROL: TWSC

DAY: Thursday
 ANALYSIS YEAR: 2020

15 Min Period	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL
7:00-7:15	0	69	53	9	63	0	0	0	0	69	0	6	269	913
7:15-7:30	0	72	78	15	57	0	0	0	0	46	0	11	279	794
7:30-7:45	0	60	43	24	39	0	0	0	0	24	0	6	196	644
7:45-8:00	0	40	35	9	46	0	0	0	0	31	0	8	169	557
8:00-8:15	0	38	32	7	42	0	0	0	0	27	0	4	150	499
8:15-8:30	0	35	27	6	35	0	0	0	0	23	0	3	129	
8:30-8:45	0	37	27	8	21	0	0	0	0	20	0	6	119	
8:45-9:00	0	21	21	7	26	0	0	0	0	23	0	3	101	

AM PEAK HOUR IS FROM:
 Volumes: 0 241 209 57 205 0 0 0 0 0 170 0 0 31 913
 Season Factor: 0 241 209 57 205 0 0 0 0 0 170 0 0 31 913
 Growth: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 In/Out: - IN - - - - - - - - - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT:

PHF: 0.818
 Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0
 Trips In: 1,327
 Trips Out: 1,052
 Willow Lakes:

F-179

Total: 0 241 209 57 205 0 0 0 0 0 170 0 0 31 913

15 Min Period Lines	Northbound			Southbound			Eastbound			Westbound			ONE HOUR SUM	
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR		TOTAL
4:00-4:15	0	32	20	11	21	0	0	0	0	25	0	8	117	524
4:15-4:30	0	33	18	14	34	0	0	0	0	19	0	12	130	564
4:30-4:45	0	35	24	7	26	0	0	0	0	28	0	21	141	564
4:45-5:00	0	21	34	6	30	0	0	0	0	29	0	16	136	580
5:00-5:15	0	36	31	9	31	0	0	0	0	40	0	10	157	547
5:15-5:30	0	39	24	3	22	0	0	0	0	35	0	7	130	
5:30-5:45	0	45	38	14	25	0	0	0	0	32	0	3	157	
5:45-6:00	0	22	25	4	20	0	0	0	0	23	0	5	103	

PM PEAK HOUR IS FROM:
 Volumes: 0 141 127 32 108 0 0 0 0 0 136 0 0 36 580
 Season Factor: 0 141 127 32 108 0 0 0 0 0 136 0 0 36 580
 Growth: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 In/Out: - IN - - - - - - - - - - - - -
 Percentage: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%
 PROJECT:

PHF: 0.924
 Seasonal Factor: 1
 Growth Rate: 1
 Years Growth: 0
 Trips In: 244
 Trips Out: 268
 Willow Lakes:

Total: 0 141 127 32 108 0 0 0 0 0 136 0 0 36 580

St. Lucie County



00022 - MIDWAY RD @ GLADES CUT OFF - - Econolite Type - Cobalt

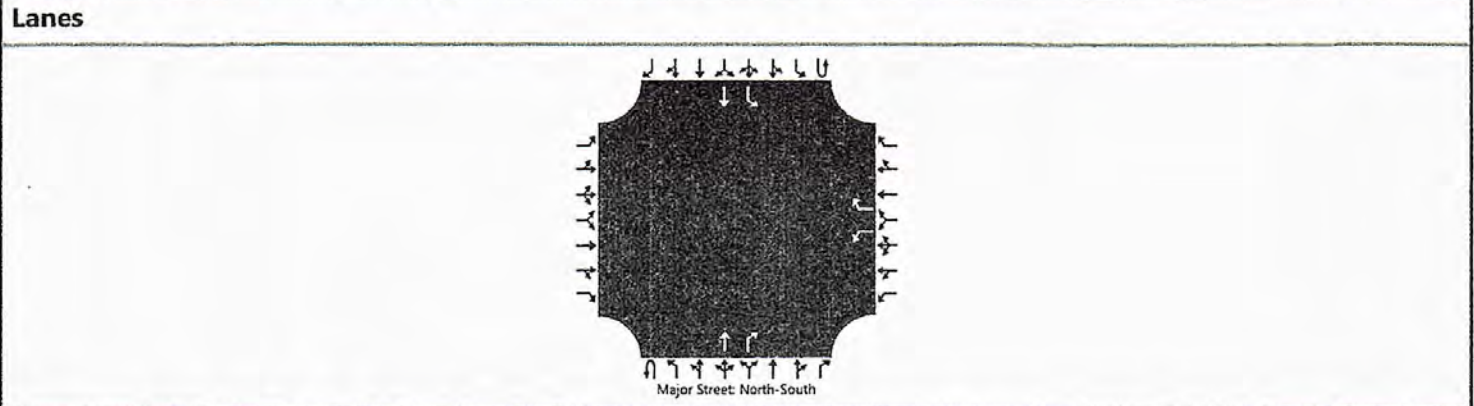
Controller Timing Plan (MM) 2-1

Plan 1 - ""

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	N-L	S-T	E-L	W-T	S-L	N-T	W-L	E-T	N	N	N	N	N	N	N	N
Min Green	15	10	7	7	10	10	7	7	5	5	5	5	5	5	5	5
Bk Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	7	0	0	0	0	0	7	0	0	0	10	0	10	0	10
Walk2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	20	0	0	0	0	0	20	0	0	0	16	0	16	0	16
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max1	25	60	20	25	25	60	10	25	35	35	35	35	35	35	35	35
Max2	0	0	0	0	0	0	0	0	40	40	40	40	40	40	40	40
Max3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dym Step	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Red Clear	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Act B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sec/Act	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPTDuc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TTReduc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	James Kemp	Intersection	Glades Cut Off & Commerce
Agency/Co.	O'Rourke Engineering	Jurisdiction	St. Lucie
Date Performed	4/1/2020	East/West Street	Commerce Centre Dr
Analysis Year	2020	North/South Street	Glades Cut Off Rd
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	Existing		



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																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1		0	1	1		0	1	1
Configuration						L		R			T	R			L	T
Volume (veh/h)						170		31			241	209			57	205
Percent Heavy Vehicles (%)						3		3							3	
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized							No				No					
Median Type Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1	
Critical Headway (sec)						6.43		6.23							4.13	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.53		3.33							2.23	

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						179		33							60	
Capacity, c (veh/h)						443		783							1083	
v/c Ratio						0.40		0.04							0.06	
95% Queue Length, Q ₉₅ (veh)						1.9		0.1							0.2	
Control Delay (s/veh)						18.5		9.8							8.5	
Level of Service (LOS)						C		A							A	
Approach Delay (s/veh)								17.2								1.9
Approach LOS								C								

HCS7 Two-Way Stop-Control Report

General Information

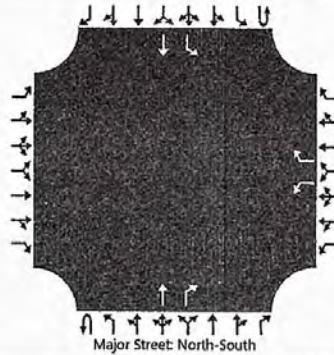
Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/1/2020
Analysis Year	2020
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	Existing

Site Information

#10 E PM

Intersection	Glades Cut Off & Commerce
Jurisdiction	St. Lucie
East/West Street	Commerce Centre Dr
North/South Street	Glades Cut Off Rd
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

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																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1		0	1	1		0	1	0
Configuration						L		R			T	R		L	T	
Volume (veh/h)						136		36			141	127		32	108	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized							No				No					
Median Type Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1	
Critical Headway (sec)						6.43		6.23							4.13	
Base Follow-Up Headway (sec)						3.5		3.3							2.2	
Follow-Up Headway (sec)						3.53		3.33							2.23	

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						148		39							35	
Capacity, c (veh/h)						636		890							1265	
v/c Ratio						0.23		0.04							0.03	
95% Queue Length, Q ₉₅ (veh)						0.9		0.1							0.1	
Control Delay (s/veh)						12.4		9.2							7.9	
Level of Service (LOS)						B		A							A	
Approach Delay (s/veh)							11.7									1.8
Approach LOS							B									

TURNING MOVEMENT VOLUME COUNTS

NPS STREET: Glade Cliff Rd
 FEEDWAY NAME: Willow Lakes
 PROJECT NO: 27407020
 COUNTY: TAMU
 CITY: Slidell
 ANALYSIS YEAR: 2015
 DAY: Thursday
 REPORT DATE: 7/10/2020
 CONTROL: TWAY

15 Min Period	Northbound				Southbound				Eastbound				Westbound				
	NBL	NRT	NLR	NBL	SBL	SRT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	WBL	WBT	WBR
7:00-7:15	0	58	53	9	63	0	0	0	0	0	0	69	0	0	6	239	913
7:15-7:30	0	72	76	15	57	0	0	0	0	0	0	46	0	0	11	379	794
7:30-7:45	0	60	43	24	39	0	0	0	0	0	0	24	0	0	6	196	644
7:45-8:00	0	40	35	9	46	0	0	0	0	0	0	31	0	0	8	169	567
8:00-8:15	0	48	32	7	42	0	0	0	0	0	0	27	0	0	4	150	499
8:15-8:30	0	35	27	6	35	0	0	0	0	0	0	23	0	0	3	129	429
8:30-8:45	0	37	27	8	21	0	0	0	0	0	0	20	0	0	6	119	389
8:45-9:00	0	21	21	7	25	0	0	0	0	0	0	23	0	0	3	101	311
AM	377	0	301	57	245	0	0	0	0	0	0	301	0	0	183	282	499
9:00-9:15	0	622	778	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	424	0	587	132	403	0	0	0	0	0	0	403	0	0	348	346	534
Total	55	654	225	61	383	0	0	245	57	183	282	310	0	0	147	348	29

15 Min Period	Northbound				Southbound				Eastbound				Westbound				
	NBL	NRT	NLR	NBL	SBL	SRT	SBR	SBL	EBL	EBT	EBR	WBL	WBT	WBR	WBL	WBT	WBR
4:00-4:15	0	32	20	11	21	0	0	0	0	0	0	25	0	0	8	117	524
4:15-4:30	0	33	18	14	34	0	0	0	0	0	0	19	0	0	12	130	564
4:30-4:45	0	35	24	7	25	0	0	0	0	0	0	28	0	0	31	141	564
4:45-5:00	0	21	34	6	30	0	0	0	0	0	0	29	0	0	15	135	580
5:00-5:15	0	35	31	9	31	0	0	0	0	0	0	40	0	0	10	151	547
5:15-5:30	0	30	24	3	22	0	0	0	0	0	0	35	0	0	7	130	500
5:30-5:45	0	45	38	14	25	0	0	0	0	0	0	32	0	0	3	157	517
5:45-6:00	0	22	28	4	20	0	0	0	0	0	0	23	0	0	5	103	468
PM	424	0	587	132	403	0	0	0	0	0	0	403	0	0	348	346	534
Total	75	386	137	34	401	0	0	455	132	147	348	29	0	0	2156	2156	2156

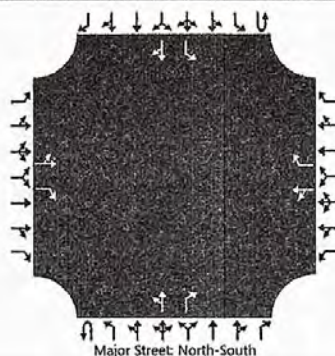
15 Min Period
 Lane
 Volume
 Season Factor
 Growth Rate
 Years Growth
 Willow Lakes
 PREDICT
 Village at Midway
 LTC Ranch
 Southern Grove
 Southern Grove
 Willow Groves
 Riverland/Kennedy
 Riverland/Kennedy
 Western Grove
 Western Grove

Seasonal Factor 1
 Growth Rate 1.00%
 Years Growth 15
 Willow Lakes
 Village at Midway 776 1.824
 LTC Ranch 2,330 2,970
 Southern Grove 5,908 10,071
 Willow Groves 4,543 5,602
 Riverland/Kennedy 2,695 7,277
 Western Grove 2,310 2,661

HCS7 Two-Way Stop-Control Report

General Information				Site Information #10 w/o AM			
Analyst	James Kemp			Intersection	Glades Cut Off & Commerce		
Agency/Co.	O'Rourke Engineering			Jurisdiction	St. Lucie		
Date Performed	4/1/2020			East/West Street	Commerce Centre Dr		
Analysis Year	2035			North/South Street	Glades Cut Off Rd		
Time Analyzed	AM Peak Hour			Peak Hour Factor	0.95		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	without Project						

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																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	1		0	1	1		0	1	1		0	1	1	
Configuration		LT		R		LT		R		LT		R		L		TR	
Volume (veh/h)		0	245	57		183	282	33		95	454	225		61	383	0	
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized		No				No					No						
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

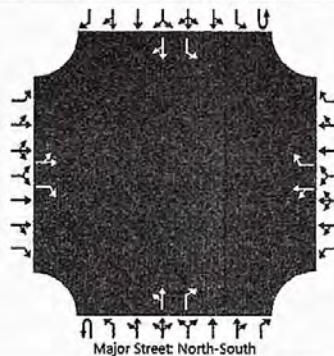
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		258		60		489		35		100				64		
Capacity, c (veh/h)				645				585		1150				881		
v/c Ratio				0.09				0.06		0.09				0.07		
95% Queue Length, Q ₉₅ (veh)				0.3				0.2		0.3				0.2		
Control Delay (s/veh)				11.2				11.5		8.4				9.4		
Level of Service (LOS)				B				B		A				A		
Approach Delay (s/veh)										1.6				1.3		
Approach LOS																

HCS7 Two-Way Stop-Control Report

General Information				Site Information #10 w/o PM			
Analyst	James Kemp			Intersection	Glades Cut Off & Commerce		
Agency/Co.	O'Rourke Engineering			Jurisdiction	St. Lucie		
Date Performed	4/1/2020			East/West Street	Commerce Centre Dr		
Analysis Year	2035			North/South Street	Glades Cut Off Rd		
Time Analyzed	PM Peak Hour			Peak Hour Factor	0.95		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	without Project						

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	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	1		0	1	1		0	1	1		0	1	1	0
Configuration		LT		R		LT		R		LT		R		L		TR	
Volume (veh/h)		0	455	132		147	348	39		75	386	137		34	403	0	
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized		No				No					No						
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

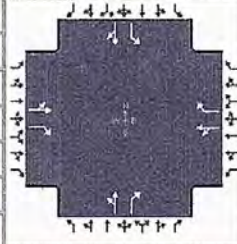
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		479		139		521		41		79				36		
Capacity, c (veh/h)				628				642		1130				1014		
v/c Ratio				0.22				0.06		0.07				0.04		
95% Queue Length, Q ₉₅ (veh)				0.8				0.2		0.2				0.1		
Control Delay (s/veh)				12.4				11.0		8.4				8.7		
Level of Service (LOS)				B				B		A				A		
Approach Delay (s/veh)										1.5				0.7		
Approach LOS																

HCS7 Signalized Intersection Results Summary

10 w.o. + 1 Imp AM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	PHF	0.95		
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Commerce Centre Dr	File Name	Glades Cut Off & Commerce - AM - 2035 w.o. Pro...				
Project Description	without Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	0	245	57	183	282	33	95	454	225	61	383	0

Signal Information												
Cycle, s	95.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	Yes	Simult. Gap E/W	On	Green	40.0	40.0	0.0	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	4.0	0.0	0.0	0.0	0.0		
				Red	3.0	3.0	0.0	0.0	0.0	0.0		

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		7.0		7.0		7.0		6.0
Phase Duration, s		47.0		47.0		48.0		48.0
Change Period, (Y+R _c), s		7.0		7.0		8.0		8.0
Max Allow Headway (MAH), s		3.2		3.2		3.2		3.2
Queue Clearance Time (g _s), s		10.6		40.6		42.0		42.0
Green Extension Time (g _e), s		1.8		0.0		0.0		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		1.00		1.00		1.00

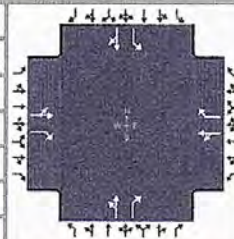
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h		0	60		489	35		578	237	64	0	
Adjusted Saturation Flow Rate (s), veh/h/ln		0	1610		1197	1610		1263	1610	931	0	
Queue Service Time (g _s), s		0.0	2.1		30.0	1.2		25.2	9.5	0.0	0.0	
Cycle Queue Clearance Time (g _c), s		0.0	2.1		38.6	1.2		40.0	9.5	40.0	0.0	
Green Ratio (g/C)			0.42		0.42	0.42		0.42	0.42	0.42		
Capacity (c), veh/h			678		557	678		576	678	76		
Volume-to-Capacity Ratio (X)		0.000	0.089		0.879	0.051		1.003	0.349	0.847	0.000	
Back of Queue (Q), ft/ln (95 th percentile)		0	34.2		479.3	20.6		660.4	152.8	117.7	0	
Back of Queue (Q), veh/ln (95 th percentile)		0.0	1.4		19.2	0.8		26.4	6.1	4.7	0.0	
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.00	
Uniform Delay (d ₁), s/veh			16.5		31.0	16.3		31.7	18.7	47.5		
Incremental Delay (d ₂), s/veh		0.0	0.0		17.7	0.1		38.1	0.1	53.3	0.0	
Initial Queue Delay (d ₃), s/veh		0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	
Control Delay (d), s/veh			16.6		48.8	16.4		69.8	18.8	100.8		
Level of Service (LOS)			B		D	B		F	B	F		
Approach Delay, s/veh / LOS	18.1		B	46.6		D	55.0		D	31.5		C
Intersection Delay, s/veh / LOS	42.2						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	1.91	B	1.91	B
Bicycle LOS Score / LOS	1.01	A	1.35	A	1.83	B	1.26	A

HCS7 Signalized Intersection Results Summary

#10 w/o Imp PM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Commerce Centre Dr	File Name	Glades Cut Off Commerce - PM - 2035 w.o. Proj...				
Project Description	without Project + Imp						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	0	455	132	147	348	39	75	386	137	34	403	0

Signal Information												
Cycle, s	100.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	Yes	Simult. Gap E/W	On	Green	40.0	45.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	5.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	3.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4		6		2
Case Number		7.0		7.0		7.0		6.0
Phase Duration, s		52.0		52.0		48.0		48.0
Change Period, (Y+R _c), s		7.0		7.0		8.0		8.0
Max Allow Headway (MAH), s		3.3		3.3		3.2		3.2
Queue Clearance Time (g _s), s		20.5		47.0		40.9		42.0
Green Extension Time (g _e), s		2.8		0.0		0.0		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		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	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	0	139		521	41		485	144		36	0	
Adjusted Saturation Flow Rate (s), veh/h/ln	0	1449		923	1610		1246	1610		995	0	
Queue Service Time (g _s), s	0.0	5.8		26.5	1.4		21.6	5.9		1.1	0.0	
Cycle Queue Clearance Time (g _c), s	0.0	5.8		45.0	1.4		38.9	5.9		40.0	0.0	
Green Ratio (g/C)		0.45		0.45	0.45		0.40	0.40		0.40		
Capacity (c), veh/h		652		462	725		540	644		83		
Volume-to-Capacity Ratio (X)	0.000	0.213		1.127	0.057		0.898	0.224		0.430	0.000	
Back of Queue (Q), ft/ln (95 th percentile)	0	84.6		800.3	24.4		496.6	97.1		41	0	
Back of Queue (Q), veh/ln (95 th percentile)	0.0	3.4		32.0	1.0		19.9	3.9		1.6	0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh		16.7		36.0	15.5		31.9	19.8		49.8		
Incremental Delay (d ₂), s/veh		0.0	0.1	81.6	0.1		17.3	0.1		1.3	0.0	
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (d), s/veh		16.8		117.6	15.7		49.2	19.8		51.1		
Level of Service (LOS)		B		F	B		D	B		D		
Approach Delay, s/veh / LOS	19.8	B		110.1	F		42.5	D		25.9	C	
Intersection Delay, s/veh / LOS	49.7						D					

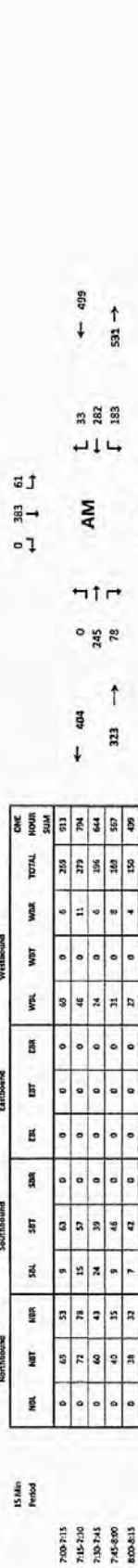
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	1.91	B	1.91	B
Bicycle LOS Score / LOS	1.51	B	1.42	A	1.53	B	1.25	A

#10 W/P

TURNING MOVEMENT VOLUME COUNTS

W/S STREET: 604 STREET, COMMERCIAL CENTER DR, CITY: SUITE, CONTROL: THVC

DATE: 7/20/2010, TIME: 7:00 AM, REPORT DATE: 7/20/2010



15 Min Period	Northbound	Southbound	Eastbound	Westbound	ONE HOUR TOTAL SUM
7:00-7:15	0	63	0	0	63
7:15-7:30	0	77	0	0	77
7:30-7:45	0	60	0	0	60
7:45-8:00	0	40	0	0	40
8:00-8:15	0	38	0	0	38
8:15-8:30	0	35	0	0	35
8:30-8:45	0	37	0	0	37
8:45-9:00	0	21	0	0	21

AM HOUR TOTAL SUM

Volume	Seasonal Factor	Seasonal Factor	Seasonal Factor	Seasonal Factor
644	1.000	1.000	1.000	1.000
800	1.000	1.000	1.000	1.000
813	1.000	1.000	1.000	1.000
854	1.000	1.000	1.000	1.000
864	1.000	1.000	1.000	1.000
889	1.000	1.000	1.000	1.000
899	1.000	1.000	1.000	1.000
1189	1.000	1.000	1.000	1.000
1031	1.000	1.000	1.000	1.000

Volume	Seasonal Factor	Seasonal Factor	Seasonal Factor	Seasonal Factor
644	1.000	1.000	1.000	1.000
800	1.000	1.000	1.000	1.000
813	1.000	1.000	1.000	1.000
854	1.000	1.000	1.000	1.000
864	1.000	1.000	1.000	1.000
889	1.000	1.000	1.000	1.000
899	1.000	1.000	1.000	1.000
1189	1.000	1.000	1.000	1.000
1031	1.000	1.000	1.000	1.000

Volume	Seasonal Factor	Seasonal Factor	Seasonal Factor	Seasonal Factor
644	1.000	1.000	1.000	1.000
800	1.000	1.000	1.000	1.000
813	1.000	1.000	1.000	1.000
854	1.000	1.000	1.000	1.000
864	1.000	1.000	1.000	1.000
889	1.000	1.000	1.000	1.000
899	1.000	1.000	1.000	1.000
1189	1.000	1.000	1.000	1.000
1031	1.000	1.000	1.000	1.000

Volume	Seasonal Factor	Seasonal Factor	Seasonal Factor	Seasonal Factor
644	1.000	1.000	1.000	1.000
800	1.000	1.000	1.000	1.000
813	1.000	1.000	1.000	1.000
854	1.000	1.000	1.000	1.000
864	1.000	1.000	1.000	1.000
889	1.000	1.000	1.000	1.000
899	1.000	1.000	1.000	1.000
1189	1.000	1.000	1.000	1.000
1031	1.000	1.000	1.000	1.000

Volume	Seasonal Factor	Seasonal Factor	Seasonal Factor	Seasonal Factor
644	1.000	1.000	1.000	1.000
800	1.000	1.000	1.000	1.000
813	1.000	1.000	1.000	1.000
854	1.000	1.000	1.000	1.000
864	1.000	1.000	1.000	1.000
889	1.000	1.000	1.000	1.000
899	1.000	1.000	1.000	1.000
1189	1.000	1.000	1.000	1.000
1031	1.000	1.000	1.000	1.000

Volume	Seasonal Factor	Seasonal Factor	Seasonal Factor	Seasonal Factor
644	1.000	1.000	1.000	1.000
800	1.000	1.000	1.000	1.000
813	1.000	1.000	1.000	1.000
854	1.000	1.000	1.000	1.000
864	1.000	1.000	1.000	1.000
889	1.000	1.000	1.000	1.000
899	1.000	1.000	1.000	1.000
1189	1.000	1.000	1.000	1.000
1031	1.000	1.000	1.000	1.000

Volume	Seasonal Factor	Seasonal Factor	Seasonal Factor	Seasonal Factor
644	1.000	1.000	1.000	1.000
800	1.000	1.000	1.000	1.000
813	1.000	1.000	1.000	1.000
854	1.000	1.000	1.000	1.000
864	1.000	1.000	1.000	1.000
889	1.000	1.000	1.000	1.000
899	1.000	1.000	1.000	1.000
1189	1.000	1.000	1.000	1.000
1031	1.000	1.000	1.000	1.000

HCS7 Two-Way Stop-Control Report

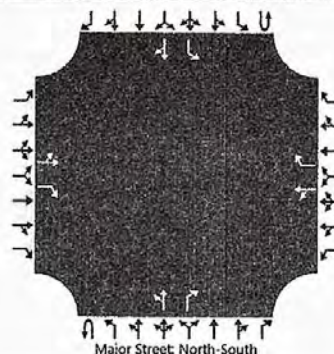
General Information

Site Information

#10 W/ P A-M

Analyst	James Kemp	Intersection	Glades Cut Off & Commerce
Agency/Co.	O'Rourke Engineering	Jurisdiction	St. Lucie
Date Performed	4/1/2020	East/West Street	Commerce Centre Dr
Analysis Year	2035	North/South Street	Glades Cut Off Rd
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.95
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	with Project		

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																		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	1		0	1	1		0	0	1	1		0	1	1	0
Configuration		LT		R		LT		R		LT		R		L		TR		
Volume (veh/h)		0	245	78		183	282	33		122	454	225		61	383	0		
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3				
Proportion Time Blocked																		
Percent Grade (%)		0				0												
Right Turn Channelized		No				No					No							
Median Type Storage		Undivided																

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1						4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13						4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2						2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		258		82		489		35		128						64		
Capacity, c (veh/h)				645				585		1150						881		
v/c Ratio				0.13				0.06		0.11						0.07		
95% Queue Length, Q ₉₅ (veh)				0.4				0.2		0.4						0.2		
Control Delay (s/veh)				11.4				11.5		8.5						9.4		
Level of Service (LOS)				B				B		A						A		
Approach Delay (s/veh)										2.0				1.3				
Approach LOS																		

HCS7 Two-Way Stop-Control Report

General Information

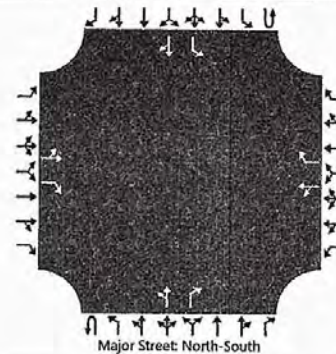
Analyst	James Kemp
Agency/Co.	O'Rourke Engineering
Date Performed	4/1/2020
Analysis Year	2035
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	with Project

Site Information

#10 W/P PM

Intersection	Glades Cut Off & Commerce
Jurisdiction	St. Lucie
East/West Street	Commerce Centre Dr
North/South Street	Glades Cut Off Rd
Peak Hour Factor	0.95
Analysis Time Period (hrs)	0.25

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																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	1		0	1	1		0	1	1		0	1	1	
Configuration		LT		R		LT		R		LT		R		L		TR	
Volume (veh/h)		0	455	153		147	348	39		104	386	137		34	403	0	
Percent Heavy Vehicles (%)		3	3	3		3	3	3		3				3			
Proportion Time Blocked																	
Percent Grade (%)		0				0											
Right Turn Channelized		No				No					No						
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2		7.1	6.5	6.2		4.1				4.1		
Critical Headway (sec)		7.13	6.53	6.23		7.13	6.53	6.23		4.13				4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33		3.53	4.03	3.33		2.23				2.23		

Delay, Queue Length, and Level of Service

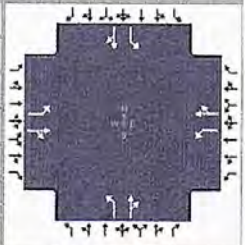
Flow Rate, v (veh/h)		479		161		521		41		109				36			
Capacity, c (veh/h)				628				642		1130				1014			
v/c Ratio				0.26				0.06		0.10				0.04			
95% Queue Length, Q ₉₅ (veh)				1.0				0.2		0.3				0.1			
Control Delay (s/veh)				12.7				11.0		8.5				8.7			
Level of Service (LOS)				B				B		A				A			
Approach Delay (s/veh)										2.1				0.7			
Approach LOS																	

HCS7 Signalized Intersection Results Summary

#10 WIP + imp AM

General Information

Agency	O'Rourke Engineering			Intersection Information	
Analyst	James Kemp	Analysis Date	4/17/2020	Duration, h	0.25
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	Area Type	Other
Urban Street	Glades Cut Off Rd	Analysis Year	2035	PHF	0.95
Intersection	Commerce Centre Dr	File Name	Glades Cut Off & Commerce - AM - 2035 with Pro...		
Project Description	with Project + Improvements				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	0	245	78	183	282	33	122	454	225	61	383	0

Signal Information

Cycle, s	120.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap EW	On											
Force Mode	Fixed	Simult. Gap N/S	On											
		Green	5.3	1.2	53.5	0.0	7.0	29.0						
		Yellow	4.0	0.0	4.0	4.0	4.0	4.0						
		Red	2.0	0.0	2.0	2.0	2.0	2.0						

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	0.0	35.0	13.0	48.0	12.5	60.7	11.3	59.5
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	0.0	3.1	3.1	3.1	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s		22.9	9.0	18.9	6.6		4.3	
Green Extension Time (g _e), s	0.0	0.9	0.0	1.3	0.0	0.0	0.1	0.0
Phase Call Probability		1.00	1.00	1.00	0.99		0.88	
Max Out Probability		0.23	1.00	0.00	1.00		0.00	

Movement Group Results

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	0	340		193	332		128	715		64	0	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1821		1810	1865		1810	1793		1810	0	
Queue Service Time (g _s), s	0.0	20.9		7.0	16.9		4.6	43.3		2.3	0.0	
Cycle Queue Clearance Time (g _c), s	0.0	20.9		7.0	16.9		4.6	43.3		2.3	0.0	
Green Ratio (g/C)	0.19	0.24		0.32	0.35		0.50	0.46		0.49		
Capacity (c), veh/h	266	440		236	653		454	818		199		
Volume-to-Capacity Ratio (X)	0.000	0.773		0.815	0.508		0.283	0.874		0.323	0.000	
Back of Queue (Q), ft/ln (95 th percentile)	0	385.8		156.7	315.9		84.8	703.9		42.4	0	
Back of Queue (Q), veh/ln (95 th percentile)	0.0	15.4		6.3	12.6		3.4	28.2		1.7	0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	0.0	42.4		39.6	30.8		17.7	29.5		25.0		
Incremental Delay (d ₂), s/veh	0.0	7.5		18.1	2.8		0.1	12.5		0.3	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	0.0	50.0		57.7	33.7		17.8	42.1		25.4		
Level of Service (LOS)		D		E	C		B	D		C		
Approach Delay, s/veh / LOS	50.0		D	42.5		D	38.4		D	25.3		C
Intersection Delay, s/veh / LOS	38.4			38.4			D			D		

Multimodal Results

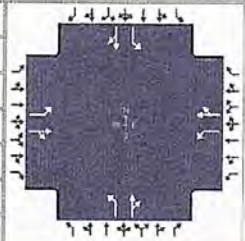
	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.94	B	1.93	B	1.91	B	1.91	B
Bicycle LOS Score / LOS	1.05	A	1.35	A	1.88	B	1.26	A

HCS7 Signalized Intersection Input Data

#10 WIP + IMA AM

General Information

Agency	O'Rourke Engineering			Intersection Information	
Analyst	James Kemp	Analysis Date	4/17/2020	Duration, h	0.25
Jurisdiction	St. Lucie	Time Period	AM Peak Hour	Area Type	Other
Urban Street	Glades Cut Off Rd	Analysis Year	2035	PHF	0.95
Intersection	Commerce Centre Dr	File Name	Glades Cut Off & Commerce - AM - 2035 with Pro...		
Project Description	with Project + Improvements				



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	0	245	78	183	282	33	122	454	225	61	383	0

Signal Information

Cycle, s	120.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	5.3	1.2	53.5	0.0	7.0	29.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	4.0	4.0			
				Red	2.0	0.0	2.0	2.0	2.0	2.0			

Traffic Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	0	245	78	183	282	33	122	454	225	61	383	0
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h	0	L			None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	0
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	
Turn Bay Length, ft	0	0		0	0		0	0		0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	35	35	35	35	35	35	35

Phase Information

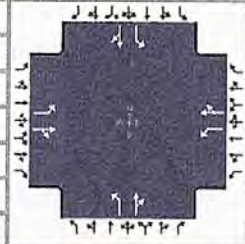
	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Maximum Green (G _{max}) or Phase Split, s	13.0	35.0	13.0	35.0	15.0	16.0	56.0	57.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	7	6	7	6	10	6	10
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Max	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information

	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	

HCS7 Signalized Intersection Results Summary #10 WIP + IMP PM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Commerce Centre Dr	File Name	Glades Cut Off Commerce - PM - 2035 with Proj...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	0	455	153	147	348	39	104	386	137	34	403	0

Signal Information														
Cycle, s	140.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap EW	On	Green	4.5	2.5	44.0	0.0	9.6	55.5	5	6	7	8
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	4.0	4.0				
				Red	2.0	0.0	2.0	2.0	2.0	2.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0
Phase Duration, s	0.0	61.5	15.6	77.0	13.0	52.5	10.5	50.0
Change Period, (Y+R _c), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	0.0	3.1	3.1	3.1	3.1	0.0	3.1	0.0
Queue Clearance Time (g _s), s		56.3	9.3	21.3	7.7		3.8	
Green Extension Time (g _e), s	0.0	0.0	0.3	2.2	0.0	0.0	0.0	0.0
Phase Call Probability		1.00	1.00	1.00	0.99		0.75	
Max Out Probability		1.00	0.00	0.00	1.00		0.99	

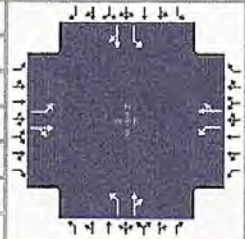
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	0	640		155	407		109	551		36	0	
Adjusted Saturation Flow Rate (s), veh/h/ln	1810	1636		1810	1866		1810	1814		1810	0	
Queue Service Time (g _s), s	0.0	54.3		7.3	19.3		5.7	40.7		1.8	0.0	
Cycle Queue Clearance Time (g _c), s	0.0	54.3		7.3	19.3		5.7	40.7		1.8	0.0	
Green Ratio (g/C)	0.35	0.40		0.48	0.51		0.36	0.33		0.35		
Capacity (c), veh/h	404	648		181	947		257	602		134		
Volume-to-Capacity Ratio (X)	0.000	0.987		0.853	0.430		0.426	0.914		0.266	0.000	
Back of Queue (Q), ft/ln (95 th percentile)	0	893.4		151.4	339.6		114.6	728.8		37.3	0	
Back of Queue (Q), veh/ln (95 th percentile)	0.0	35.7		6.1	13.6		4.6	29.2		1.5	0.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	0.0	41.9		35.5	21.7		33.2	44.9		36.5		
Incremental Delay (d ₂), s/veh	0.0	32.0		4.3	1.4		0.4	20.7		0.4	0.0	
Initial Queue Delay (d ₃), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	0.0	73.9		39.8	23.2		33.6	65.6		36.9		
Level of Service (LOS)		E		D	C		C	E		D		
Approach Delay, s/veh / LOS	73.9	E		27.7	C		60.3	E		48.6	D	
Intersection Delay, s/veh / LOS				53.8						D		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.93	B	1.91	B	1.94	B	1.94	B
Bicycle LOS Score / LOS	1.54	B	1.42	A	1.58	B	1.25	A

HCS7 Signalized Intersection Input Data

#10 W1 + IMP PM

General Information				Intersection Information			
Agency	O'Rourke Engineering			Duration, h	0.25		
Analyst	James Kemp	Analysis Date	4/17/2020	Area Type	Other		
Jurisdiction	St. Lucie	Time Period	PM Peak Hour	PHF	0.95		
Urban Street	Glades Cut Off Rd	Analysis Year	2035	Analysis Period	1> 7:00		
Intersection	Commerce Centre Dr	File Name	Glades Cut Off & Commerce - PM - 2035 with Pro...				
Project Description	with Project + Improvements						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	0	455	153	147	348	39	104	386	137	34	403	0

Signal Information				Signal Timing Diagram								
Cycle, s	140.0	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	4.5	2.5	44.0	0.0	9.6	55.5						
Yellow	4.0	0.0	4.0	4.0	4.0	4.0						
Red	2.0	0.0	2.0	2.0	2.0	2.0						

Traffic Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	0	455	153	147	348	39	104	386	137	34	403	0
Initial Queue (Q _b), veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Base Saturation Flow Rate (s ₀), veh/h	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Parking (N _m), man/h		R	0		None			None			None	
Heavy Vehicles (P _{HV}), %	0	0		0	0		0	0		0	0	
Ped / Bike / RTOR, /h	0	0	0	0	0	0	0	0	0	0	0	
Buses (N _b), buses/h	0	0	0	0	0	0	0	0	0	0	0	0
Arrival Type (AT)	3	3	3	3	3	3	3	3	3	3	3	3
Upstream Filtering (f)	1.00	1.00	1.00	1.00	1.00	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	12.0	
Turn Bay Length, ft	0	0		0	0		0	0		0	0	
Grade (Pg), %		0			0			0			0	
Speed Limit, mi/h	35	35	35	35	35	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	63.0	14.0	63.0	14.0	13.0	50.0	13.0	50.0
Yellow Change Interval (Y), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Red Clearance Interval (R _c), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Minimum Green (G _{min}), s	6	7	6	7	6	10	6	10
Start-Up Lost Time (l _t), s	2.0	2.0	2.0	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	2.0	2.0	2.0
Passage (PT), s	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Recall Mode	Off	Off	Off	Max	Off	Min	Off	Min
Dual Entry	No	Yes	No	Yes	No	Yes	No	Yes
Walk (Walk), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Clearance Time (PC), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Multimodal Information	EB			WB			NB			SB		
85th % Speed / Rest in Walk / Corner Radius	0	No	25	0	No	25	0	No	25	0	No	25
Walkway / Crosswalk Width / Length, ft	9.0	12	0	9.0	12	0	9.0	12	0	9.0	12	0
Street Width / Island / Curb	0	0	No	0	0	No	0	0	No	0	0	No
Width Outside / Bike Lane / Shoulder, ft	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0	12	5.0	2.0
Pedestrian Signal / Occupied Parking	No	0.50		No	0.50		No	0.50		No	0.50	