



AGENDA REPORT
November 13, 2018

**Approval Re: Transportation Impact Fee Credit Agreement w/ Picerne
Development Corp. & City of West Melbourne**

SUBJECT:

Approval Re: Transportation Impact Fee Credit Agreement with Picerne Development Corporation of Florida and the City of West Melbourne.

FISCAL IMPACT:

FY18/19 – Historically, transportation impact fees collected within the City of West Melbourne have been appropriated by the Board of County Commissioners to projects located within the City. The use of transportation impact fees paid by these developers to fund improvements within the City is consistent with previous appropriations and would not represent a fiscal impact to Brevard County.

DEPT/OFFICE:

Planning and Development

REQUESTED ACTION:

It is requested that the Board of County Commissioners consider a request from Picerne Development Corporation of Florida to award a transportation impact fee credit of up to \$752,396.00 in exchange for constructing roadway improvements to connect South John Rodes Boulevard with Coastal Lane and construct turn lanes at the intersection of John Rodes Blvd with the new connector road. If approved, it is requested that the Chair be authorized to execute the Agreement on behalf of Brevard County, and authorize the County Manager to approve any necessary budget changes.

SUMMARY EXPLANATION and BACKGROUND:

Picerne Development Corporation of Florida plans to develop a 21.78 acre tract in West Melbourne as a 316 unit apartment complex. As a condition of site plan approval by the City of West Melbourne, they are required to construct a public roadway on the south end of their property to connect South John Rodes Boulevard with Coastal Lane and construct turn lanes the intersection of John Rodes Boulevard with the new connector road. They are requesting a transportation impact fee credit in the amount of \$752,396.00 or the actual cost of constructing the required improvements whichever is less. This amount reflects the total cost of the proposed improvements less the proportionate fair share utilized by the development.

The City of West Melbourne will hear the request at their November 20, 2018, meeting.

CLERK TO THE BOARD INSTRUCTIONS:

Execute three originals of the transportation impact fee credit agreement and return them to Planning & Development for recording.

ATTACHMENTS:

Description

- ▣ **Agreement - Final**
- ▣ **Exhibit B - Traffic Impact Study**
- ▣ **Exhibit C - Estimated Cost of Improvements**
- ▣ **Location Map**



Tammy Rowe, Clerk to the Board, 400 South Street • P.O. Box 999, Titusville, Florida 32781-0999

Telephone: (321) 637-2001
Fax: (321) 264-6972
Tammy.Rowe@brevardclerk.us

November 14, 2018

MEMORANDUM

TO: Tad Calkins, Planning and Development Director

RE: Item F.4., Approval of Transportation Impact Fee Credit Agreement with Picerne Development Corporation and City of West Melbourne

The Board of County Commissioners, in regular session on November 13, 2018, approved the Transportation Impact Fee Credit Agreement with Picerne Development Corporation of Florida of up to \$752,396 in exchange for constructing roadway improvements to connect South John Rodes Boulevard with Coastal Lane and construct turn lanes at the intersection of John Rodes Boulevard with the new connector road; authorized the Chair to execute the Agreement; and authorized the County Manager to approve any necessary budget change requests. Enclosed are three fully-executed Agreements.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Rowe

Tammy Rowe, Deputy Clerk

/kp

Encls. (3)

cc: County Manager
Finance
Budget



BOARD OF COUNTY COMMISSIONERS

Planning & Development Department

2725 Judge Fran Jamieson Way

Building A, Room 114

Viera, Florida 32940

Inter-Office Memo

TO: Tammy Rowe, Deputy Clerk

FROM: Stephen M. Swanke, Program Manager
Planning & Development Department

DATE: December 18, 2018

SUBJECT: Traffic Impact Fee Credit Agreement – Oasis at West Melbourne

I am returning one of the original documents for the above referenced agreement. It has been executed by the City of West Melbourne and the Developer. Please have the document executed by the County and retain it in the Official Minutes of the November 13' 2018 Board meeting.

TRAFFIC IMPACT FEE CREDIT AGREEMENT – OASIS AT WEST MELBOURNE

PROVIDING FOR TRANSPORTATION IMPACT FEE CREDIT FOR OASIS AT WEST MELBOURNE MULTIFAMILY DEVELOPMENT COMMUNITY.

THIS TRANSPORTATION IMPACT FEE CREDIT AGREEMENT for the Oasis at West Melbourne project ("the **Agreement**") is entered into this 20th day of November, 2018, by and between the **BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA**, a political subdivision of the State of Florida, whose address is 2725 Judge Fran Jamieson Way, Viera, Florida 32940, (hereinafter referred to as "**County**"), the **CITY OF WEST MELBOURNE, FLORIDA**, a municipal corporation, whose address is 2240 Minton Road, West Melbourne, Florida 32904 (hereinafter referred to as "**City**"), and **PICERNE DEVELOPMENT CORPORATION OF FLORIDA**, a Florida corporation registered to do business in the State of Florida, whose address is 247 N. Westmonte Drive, Altamonte Springs, Florida 32714 (hereinafter referred to as "**Developer**"), is based on the following premises:

RECITALS:

WHEREAS, Larry R. McGuire and Royal Poinciana Estates, LLC, are the current owners and Developer is the contract purchaser of that certain property located north of West New Haven Avenue, between South John Rodes Boulevard and Coastal Lane (f.k.a. Dike Road), which is located in the City of West Melbourne and more particularly described in the attached **Exhibit "A"**, and which is approximately 21.78 acres (hereinafter referred to collectively as the "**Property**"); and

WHEREAS, the City has adopted a Comprehensive Plan and Zoning Regulations that are applicable within its corporate limits; and

WHEREAS, the City has established a Future Land Use Map designation of Urban Density Residential and has established the R-3: Multifamily Dwelling Residential Zoning District on the Property; and

WHEREAS, the Future Land Use designation of Urban Density Residential and the Zoning of R-3 Multifamily Dwelling Residential Zoning District permits single family dwellings, multiple-family dwellings, planned unit developments, accessory uses and limited retail and service establishments and as otherwise described in section 98-317, West Melbourne Land Development Regulations, and limits residential density to 15 dwelling units per acre and a maximum height of 60 feet; and

WHEREAS, public facilities servicing the Development include the improvements described herein, potable water and sewer service available to the Property from the City, and other public facilities currently in place; and

WHEREAS, Developer has prepared a development program to construct a 316-unit residential apartment complex on the Property (hereinafter referred to as the "Project"); and

WHEREAS, the City has determined the Project to be consistent with the City's Comprehensive Plan; and

WHEREAS, Developer retained Lassiter Transportation Group, Inc. to perform a traffic study to determine the impact of the Project on the surrounding road network; and

WHEREAS, Lassiter Transportation Group, Inc. performed such traffic study and reported its results in that certain "Oasis at West Melbourne Traffic Impact Study" dated May 9, 2018 (the "Traffic Impact Study"), a copy of which is attached hereto as **Exhibit "B"** and incorporated by reference herein; and

WHEREAS, the Traffic Impact Study, which has been approved by the County and the City, states that the Project will generate a total of 191 new p.m. peak-hour trips, with 124 entering and 67 exiting, and 2,039 average daily trips; and,

WHEREAS, pursuant to its home rule powers and the Brevard County Charter, Brevard County has imposed transportation impact fees pursuant to Article V, Division 4 of Chapter 62, Brevard County Land Development Regulations, and is commonly known as the "Brevard County Transportation Impact Fee Ordinance;" (hereinafter referred to as the "**Ordinance**"); and

WHEREAS, the Ordinance includes a schedule of Impact Fees assessable against the users of property for the public purpose of requiring new developments to pay their fair share of the impacts attributable to said development on the transportation network of Brevard County; and

WHEREAS, the Ordinance provides a mechanism for credits against Transportation Impact Fees for qualifying contributions towards off-site roadway improvements, and further provides that no credit shall exceed the assessed transportation impact fee for the land development activity awarded the credit; and

WHEREAS, the provisions of the Ordinance are applicable within the incorporated limits of the City including the Property; and

WHEREAS, the County and the City entered into an interlocal agreement, executed on April 11, 1989 by the City and May 16, 1989 by the County, providing for the participation by the City in the program created by the Ordinance; and

WHEREAS, the City and County have also entered into an Interlocal Agreement regarding collection and distribution of Transportation Impact Fees; and

WHEREAS, provisions of the interlocal agreement stipulate that the City shall require the presentation of an impact fee voucher that affirmatively states that the applicant has paid the applicable impact fee for the particular structure or development; and

WHEREAS, with the understanding that it shall be awarded Transportation Impact Fee Credits, Developer agrees to make certain Public Access roadway improvements in connection with development of the Project as described herein; and

WHEREAS, the Roadway Improvements to be constructed and dedicated by Developer are expected to further increase the capacity of and improve traffic safety on South John Rodes Boulevard and the additional capacity will accommodate traffic that is not generated by the Project; and

WHEREAS, the City will be responsible for issuance of building permits on the Property; and

WHEREAS, a traffic concurrency evaluation of the proposed development for the Property was conducted by the City and a City concurrency evaluation and approval occurred as part of the development process; and

WHEREAS, the City and County have broad home rule powers to give assurances that developers will be able to implement their development programs subject to certain conditions, and thereby to encourage a stronger commitment to capital facilities planning, ensure the provisions of adequate public facilities for development, encourage the efficient use of resources, encourage private participation in comprehensive planning, and reduce the economic cost of development; and

WHEREAS, the design, construction and conveyance of the Roadway Improvements is consistent with and serves to implement the goals, objectives, and policies of the City's Comprehensive Plan; and

WHEREAS, the City and County endorse the Developer's request for a credit against transportation impact fees; and

NOW THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged by all parties, the parties hereto agree as follows:

1. **Recitals.** The above recitals are hereby incorporated and made a part of this Agreement.

2. **Roadway Improvements.**

a. Developer shall be responsible for, construct and dedicate to the City a public road between and connecting South John Rodes Boulevard (a County road) and Coastal Lane (a City street) at the southern end of the Property, construction of turn lanes on South John Rodes Boulevard to provide access to the new public road and certain roadway improvements to Coastal Lane, all as set forth in **Exhibit "C"**, prepared by Construction Engineering Group and attached hereto and incorporated herein by this reference ("**Roadway Improvements**") Such Roadway Improvements are further described in the conceptual plans prepared by Construction Engineering Group, dated June 6, 2018 ("Conceptual Plans"). The Developer, subject to the consent of the City and the County Public Works Director, may make revisions to the design and construction of the Conceptual Plans in order to address the City's and County's roadway design standards.

b. Prior to commencement of construction of the Roadway Improvements, Developer shall submit final design and construction plans ("Final Plans") consistent with the Conceptual Plans as approved and amended by the Developer, City and County pursuant to this Agreement, which Final Plans shall be subject to administrative review and approval by the City and County.

c. The Developer shall commence construction of the Roadway Improvements within twenty-four (24) months of the approval of Final Plans by the City and County subject only to the Developer obtaining all of the necessary government permits for the Roadway Improvements, and finish within eighteen (18) months thereafter. In the event that any party shall be delayed or prevented from performing any act required by this Agreement by reasons of acts of God, strikes, lockouts, labor troubles, inability to procure materials, failure of power, riots, insurrection, wars or other reason of a like nature not the fault of the hindered party, then performance of such acts shall be excused for the period of delay and the period for the performance of such acts shall be extended for a period equivalent to the period of delay provided, however, that any such extension shall not extend the ten (10) year duration of this Agreement as set forth in Paragraph 12 therein. Prior to the commencement of any work on the Project, Developer shall notify the County and City that it is ready to proceed.

d. The parties agree that the Roadway Improvements are not site-related for purposes of obtaining credit against impact fees, mobility fees or other mitigation for transportation or mobility impacts. However, in accordance with Brevard County's Land Development Regulations, partial credit is being recognized for the Roadway Improvements, as specified in section 7 below. The Roadway Improvements specifically exclude the driveways into and out of the Developer's Project.

3. **Engineer's Opinion of Costs.** The Engineer's Opinion of Costs (hereinafter the "Estimated Costs") for completing the non-site related Roadway Improvements in accordance with the requirements of this Agreement and the Plans are itemized in **Exhibit "C"** attached hereto and by this reference made a part hereof. For the purpose of calculating the amount of transportation impact fee credit due Developer, the Engineer's Opinion of Costs shall have the same meaning as estimated costs in the Ordinance. The estimated costs of \$903,410.90 as

itemized in **Exhibit "C"** are those costs associated with the completion of the non-site related improvements and which are eligible for a traffic impact fee credit.

4. **Delivery by Developer's Certificate of Completion.** Upon the delivery by Developer and/or its agents of its Certificate of Completion and request for final inspection of the Roadway Improvements, and the issuance of final "As Built" plans, the City and County within five (5) working days thereafter shall conduct its remaining inspections, if any, and shall each issue its Certificate of Completion or in the event of any deficiencies state in writing the specifics of the deficiencies, and Developer shall within forty five (45) days thereafter commence to satisfy any deficiencies, and diligently pursue correction of said deficiencies. After correction of the deficiencies the City and County shall each issue its Certificate of Completion within five (5) working days of the additional submittal. Construction of the turn lanes on South John Rodes Boulevard shall be inspected by the County's Development Inspection Group, and Developer shall pay all fees associated with such review.

5. **Dedication.** Upon issuance of the Certificates of Completion by the City and County, the Developer shall dedicate the area of the Roadway Improvements to the City as a public right of way.

6. **Statement of Actual Costs.** Within sixty (60) days from the date that the County and City issue their respective Certificates of Completion for the Roadway Improvements, Developer shall provide to the City and County a statement of the actual total cost of the Roadway Improvements including the non-site related portion thereof, which statement shall be certified by the Engineer of Record (the "Engineer"). The County and City shall have thirty (30) days to review the costs for eligibility and reasonableness and approve the Engineer's certification. In the event the City or County does not approve the Engineer's certification of cost, the parties shall, within fifteen (15) days of rejection of Engineer's certification, choose a mutually acceptable engineer familiar with road design and construction to review all relevant information and provide a final determination of the actual total cost of eligible improvements. The parties shall share equally the cost for such engineer's services and shall be bound by said engineer's final determination.

7. **Impact Fee Credit.** In consideration of the financial expenses associated with the construction of the Roadway Improvements required to be constructed by Developer under

this Agreement, City and County agree that Developer and its assignees and successors in interest shall enjoy the benefit of a credit against any Transportation Impact Fees, mobility fees, or other charges imposed by the City and/or County for mitigation of transportation or mobility impacts that may be assessed (hereinafter referred to as the "Impact Fee Credit") on new construction on the Property. The amount of the Impact Fee Credit shall equal a percentage of the actual cost of construction of the non-site related eligible Roadway Improvements, (including, but not limited to, engineering, design, permitting, soil preparation, paving (including repaving of the turn lane area of John Rodes Boulevard), right of way and geotechnical engineering). In accordance with section 62-815(b)(2) of the Brevard County Land Development Regulations, the percentage Impact Fee Credit shall be equal to the ratio of excess capacity to total capacity of the Roadway Improvements as follows: for the turn lane on John Rodes Boulevard, credit shall be equal to 74.5% of the actual cost of construction; for the remainder of the Roadway Improvements, credit shall be equal to 84.04% of the actual cost of construction. However, in no event shall the amount of Impact Fee Credit exceed the actual cumulative amount of Transportation Impact Fees assessed (or successor traffic mitigation fee equivalent) for new construction on the Property or \$752,396.00, whichever is less. The estimated cost of constructing the non-site related eligible Roadway Improvements (including right of way) is \$903,410.90.

8. **Non-Transferability of Impact Fee Credit.** Pursuant to current County Code provisions, the Impact Fee Credit shall be applicable only against Transportation Impact Fees that are assessed for development of the Property or any portion thereof within ten (10) years from the Effective Date of this Agreement, as hereafter defined. In the event that the County Code is amended in the future to allow transfer of Transportation Impact Fees credits to other properties, any portion of the Impact Fee Credit remaining at such time shall be transferable in accordance with such amended County Code provisions. In no event shall Developer or its assigns enjoy the benefit of the Impact Fee Credit more than ten (10) years from the Effective Date of this Agreement and any unused portion of the Impact Fee Credit shall thereafter be forfeited and of no value.

9. **Use of Impact Fee Credit.** The parties agree that it is their intent that Impact Fee Credit under this Agreement be redeemed by the Developer in the form of a voucher executed by

420 South Orange Ave., Ste. 1200
Orlando, FL 32801-4904
Telephone: 407-423-4000
Facsimile: 407-254-4251
Email: jim.mcneil@akerman.com

If to City: City of West Melbourne
Attn: Scott Morgan, City Manager
2240 Minton Road
West Melbourne, FL 32904-4928
Telephone: 321-727-7700
Facsimile: 321-768-2390
Email: smorgan@westmelbourne.org

With a copy to: Morris Richardson, City Attorney
City of West Melbourne
2240 Minton Road
West Melbourne, FL 32904-4928
Telephone: 321-727-7700
Facsimile: 321-768-2390
Email: mrichardson@westmelbourne.org

If to County: Brevard County
Attn: Frank Abbate, County Manager
2725 Judge Fran Jamieson Way
Viera, FL 32940
Telephone: 321-633-2000
Facsimile: 321-633-2115
Email: frank.abbate@brevardfl.gov

With a copy to: Brevard County Public Works Department
Attn: Andrew Holmes
2725 Judge Fran Jamieson Way
Viera, FL 32940
Telephone: 321-617-7202
Facsimile: 321-617-7208
Email: John.Denninghoff@brevardcounty.us

14. **Miscellaneous.** The execution of this Agreement has been duly authorized by the appropriate body of each of the parties hereto. Each party has complied with all the applicable requirements of law and has full power and authority, to comply with the terms and conditions of this Agreement. The venue of any litigation arising out of this Agreement shall be Brevard

County, Florida. The exhibits attached hereto and incorporated by reference herein are by such attachment and incorporation made a part of this Agreement for all purposes. The fact that one of the parties to this Agreement may be deemed to have drafted or structured the provisions of this Agreement, whether in whole or in part, shall not be considered in construing or interpreting any particular provision hereof, whether in favor of or against such party. The terms and conditions of this Agreement shall bind and inure to the benefit of the parties hereto and their respective successors and assigns. This Agreement is solely for the benefit the parties hereto and their respective successors and assigns, and no right or cause of action shall accrue upon or result by reason hereof or for the benefit of any third party not a formal party hereto. Nothing in this Agreement whether express or implied, is intended or shall be construed to confer upon any person other than the parties hereto any right, remedy, or claim under or by reason of this Agreement or any of the provisions hereof. This Agreement may not be changed, amended, or modified in any respect whatsoever except through in writing signed by all of the parties, nor may any covenant, condition, agreement, requirement, provision, or obligation contained herein be waived except in a signed writing.

15. **Attorneys' Fees/Hold Harmless/Indemnification** Should any litigation arise between the parties, each party shall bear its own attorneys' fees and costs. In the event of litigation or claims against the County and/or City from third parties arising from this Agreement or the construction described herein, Developer shall indemnify and hold harmless the County and/or City, as the case may be, from any such litigation or claims; provided, however, nothing contained herein shall be deemed to be a waiver by the County or the City of their respective sovereign immunity. Nothing in this Agreement shall inure to the benefit of any third party for the purpose of allowing any claim which would otherwise be barred by sovereign immunity or operation of law. Developer acknowledges that specific consideration has been paid and other good and sufficient consideration has been received for this indemnification provision.

16. **Captions**. Headings of a particular paragraph of this Agreement are inserted only for convenience and are in no way to be construed as part of the Agreement or as a limitation of the scope of the paragraphs to which they refer.

17. **Severability**. If any part of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall nevertheless

continue in full force without being impaired or invalidated in any way. If any party's joinder in or execution of this Agreement is deemed invalid for any particular purpose, the sections for which the joinder or execution is valid shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed and their corporate seals affixed as of the day and year first above written.

[SIGNATURES ON THE FOLLOWING PAGES]

Signed, sealed and delivered
in the presence of:

DEVELOPER:

**PICERNE DEVELOPMENT
CORPORATION OF FLORIDA, a
Florida corporation**

[Signature]
Witness 1
Supranal Ennis
Print Name of Witness 1

[Signature]
Witness 2
STEPHEN R. NOJACKI
Print Name of Witness 2

By: [Signature]
Richard R. Haley
Vice President

STATE OF FLORIDA
COUNTY OF Seminole

The foregoing instrument was acknowledged before me this 19th day of November, 2018, by Richard R. Haley as Vice President of Picerne Development Corporation of Florida, Inc., a Florida corporation. He is [X] personally known to me or [] produced _____ as identification.

My commission expires:

[Signature]
Notary Public

SEAL
Commission No.:

Marcia A. Mejia
(Name typed, printed or stamped)



ATTEST:



CITY OF WEST MELBOURNE, a chartered municipal corporation

Cynthia S. Hansson
City Clerk

Hal J. Rose
Hal J. Rose, Mayor

(SEAL)

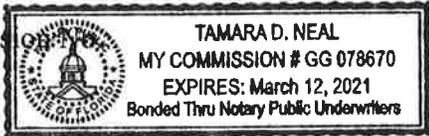
**STATE OF FLORIDA
COUNTY OF BREVARD**

The foregoing instrument was acknowledged before me this 20th day of November, 2018, by **Hal J. Rose, Mayor** of The City of West Melbourne, Florida, a chartered municipal Corporation, on behalf of the City. He is [] personally known to me or [] produced _____ as identification.

My commission expires:

Tamara D. Neal
Notary Public

SEAL
Commis



Tamara D. Neal
(Name typed, printed or stamped)

ATTEST:



Scott Ellis, Clerk

(SEAL)

**BOARD OF COUNTY COMMISSIONERS
OF BREVARD COUNTY, FLORIDA, a
political subdivision of the State of Florida**



Rita Pritchett, Chair

As approved by the Board on 11/13/18

**STATE OF FLORIDA
COUNTY OF BREVARD**

The foregoing instrument was acknowledged before me this 13 day of November, 2018, by Rita Pritchett, Chair of the Board of County Commissioners of Brevard County, Florida, a political subdivision of the State of Florida, who is [] personally known to me or [] produced _____ as identification.

My commission expires:
SEAL

Commission No.:

Notary Public

DEBORAH W. THOMAS

(Name typed, printed or stamped)

LIST OF EXHIBITS

- A. Legal Description for Property
- B. Traffic Impact Study by Lassiter Transportation Group, Inc.
- C. Engineer's Opinion of Total Costs and Percentage of Non-Site Related Costs

EXHIBIT "A"

LEGAL DESCRIPTION FOR "PROPERTY"

The land referred to herein below is situated in the County of Brevard, State of Florida, and is described as follows:

PARCEL NO. 1:

Begin at a spike in the centerline of New Haven Avenue and on the West Section line of Section 2, Township 28 South, Range 36 East, run N. 0 degrees, 00'03" W. along the West section line of aforementioned Section 2, for a distance of 2,282.75 feet to a chipped concrete monument, being the place and point of beginning.

Begin at the point-of-beginning and run S. 0 degrees 00'03" E, along the West boundary of Section 2, Township 28 South, Range 36 East, for a distance of 1,122.79 feet to a point on the West right-of-way of L-13 canal; thence run N 89 degrees, 59'57" E. for a distance of 50.0 feet, to an iron pin; thence run still N. 89 degrees, 59'57" E. for a distance of 611.64 ft. to a 4" x 4" concrete monument; thence run N. 0 degrees, 00'03" W. for a distance of 1,122.79 feet to an iron pin on the South right-of-way of the M-1 canal; thence S. 89 degrees 59'57" W. along the South right-of-way of said M-1 canal, for a distance of 611.64 feet to an iron pin; thence run still S. 89 degrees, 59'57" W. for a distance of 50.0 ft to a concrete monument being the place and point-of-beginning.

EXCEPTING:

The L-13 canal right-of-way described as follows: Begin at the place and point-of-beginning and run S. 0 degrees, 00' 03" E. along the West boundary of Section 2, Township 28 S., Range. 36 E., for a distance of 1,122.79 ft. to a point; thence run N. 89 degrees, 59'57" E. for a distance of 50.0 ft. to an iron pin; thence run N. 0 degrees, 00' 03" W., parallel with the West boundary of Section 2, Township 28 South, Range. 36 East, for a distance of 1,122.79 ft. to an iron pin; thence run S. 89 degrees, 59' 57" W. for a distance of 50.0 ft. to a concrete monument being the place and point-of-beginning.

PARCEL NO. 2:

The North 289.35 feet of Lots 23 & 24 lying West of Lake Washington Road, Florida Indian River Land Co., subdivision of Section 2, Township 28 South, Range 36 East, as recorded in Plat Book 2, Page 80 of the Public Records of Brevard County, Florida, SUBJECT to right of way for existing roads and canals, and EXCEPTING therefrom land as described in Official Records Books 185, Page 47, of the Public Records of Brevard County, Florida. More particularly described as follows: Commence at the West 1/4 corner of Section 2, Township 28 South, Range

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Oasis at West Melbourne

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36 East; Thence N 00°02'09" W along the West line of said Section 2, a distance of 1128.73 feet; Thence N 89°53'09" E a distance of 53.00 feet to a point on the East Right of Way of the L-13 Drainage Canal being the Point of Beginning, thence N 89°53'09" E a distance of 973.95 feet to the West Right of Way line of John Rhodes Boulevard; Thence South along said West Right of Way a distance of 139.50 feet; Thence S 89°53'30" W a distance of 260.00 feet, Thence S 00°03'33" W a distance of 150.00 feet, Thence S 89°53'01" W a distance of 713.61 feet to the East right of way of the L-13 Drainage Canal, Thence N 00°02'09" W along said East right of way a distance of 289.50 feet to the point of beginning.

PARCEL NO. 3

HISTORIC LEGAL DESCRIPTION:

BEGIN 864.34 FEET NORTH OF THE SOUTH LINE OF LOT 23, SECTION 2, TOWNSHIP 28 SOUTH, RANGE 36 EAST, OF THE FLORIDA INDIAN RIVER LAND COMPANY PLAT AND THE WEST RIGHT OF WAY OF LAKE WASHINGTON ROAD (RHODES BLVD.) RUN THENCE NORTH ALONG THE WEST RIGHT OF WAY OF LAKE WASHINGTON ROAD 150 FEET, THENCE SOUTH 89 33'30" WEST 260.00 FEET, THENCE SOUTH 150.00 FEET, THENCE NORTH 89 33'30" EAST 260.00 FEET TO THE POINT OF BEGINNING.

PARCEL NO. 3 BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A TRACT OF LAND LYING IN SECTION 2, TOWNSHIP 28 SOUTH, RANGE 36 EAST, BEING A PORTION OF THE LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 3031, PAGE 1482 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF ROGERS PLACE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 29, PAGE 11 OF SAID PUBLIC RECORDS; THENCE RUN NORTH 00°08'26" WEST, ALONG THE WEST RIGHT-OF-WAY LINE OF SOUTH JOHN RODES BOULEVARD, 50.86 FEET TO THE SOUTHEAST CORNER OF SAID LANDS AND THE POINT OF BEGINNING; THENCE DEPARTING SAID WEST RIGHT-OF-WAY LINE RUN SOUTH 89°34'01" WEST, ALONG THE SOUTH LINE OF SAID LANDS, 259.32 FEET TO THE SOUTHWEST CORNER THEREOF; THENCE RUN NORTH 00°10'01" WEST, ALONG THE WEST LINE OF SAID LANDS, 150.00 FEET TO THE NORTHWEST CORNER THEREOF; THENCE RUN NORTH 89°34'01" EAST, ALONG THE NORTH LINE OF SAID LANDS, 259.39 FEET TO THE NORTHEAST CORNER THEREOF, SAID POINT LIES ON THE AFORESAID WEST RIGHT-OF-WAY LINE; THENCE RUN SOUTH 00°08'26" EAST, ALONG SAID WEST RIGHT-OF-WAY LINE, 150.00 FEET TO THE POINT OF BEGINNING.

EXHIBIT "B"

TRAFFIC IMPACT STUDY BY LASSITER GROUP, INC.

EXHIBIT "C"

**ENGINEER'S OPINION OF COSTS FOR
NON-SITE RELATED IMPROVEMENTS**

**OASIS OF WEST MELBOURNE OFF SITE IMPROVEMENTS
ENGINEER'S COST ESTIMATE - CONNECTOR ROAD**

ITEM DESCRIPTION	UNIT	UNIT COST	QTY	SUBTOTAL
Mobilization	LS	\$15,000.00	1	\$15,000.00
Geotechnical Investigation	LS	\$5,000.00	1	\$5,000.00
Engineering	LS	\$27,000.00	1	\$27,000.00
Erosion and Sediment Control Incl. Monitoring	LS	\$20,000.00	1	\$20,000.00
Sawcut & Demo	LS	\$3,500.00	1	\$3,500.00
Relocate existing monument sign	LS	\$2,750.00	--	--
Rough Grade and Finish	LS	\$54,000.00	1	\$54,000.00
Maintenance of Traffic	LS	\$16,000.00	1	\$16,000.00
Construction Entrance	EA	\$4,500.00	2	\$9,000.00
2" Type S-111 Asphaltic Concrete	SY	\$16.00	4039	\$64,624.00
10" Limerock Base	SY	\$18.00	4039	\$72,702.00
12" Stabilized Base	SY	\$6.50	4039	\$26,253.50
Concrete Flume	EA	\$900.00	2	\$1,800.00
Type F Curb	LF	\$17.50	2989	\$52,307.50
Ribbon Curb	LF	\$14.50	41	\$594.50
Stem Wall and D Curb	LF	\$80.00	303	\$24,240.00
Handicap Ramp with Truncated Domes	EA	\$960.00	9	\$8,640.00
Raised Concrete Sidewalk	SF	\$5.50	8398	\$46,189.00
Import Fill	CY	\$16.50	6800	\$112,200.00
Clearing and Grubbing	AC	\$13,500.00	2	\$27,000.00
Type 4 Inlet	EA	\$5,700.00	9	\$51,300.00
Stormwater Manhole	EA	\$2,700.00	1	\$2,700.00
18" RCP	LF	\$49.00	71	\$3,479.00
24" RCP	LF	\$71.00	103	\$7,313.00
Sod & Final Grade Ditch Line	LS	\$14,500.00	1	\$14,500.00
Signage and Striping	LS	\$10,000.00	1	\$10,000.00
Staking	LS	\$7,500.00	1	\$7,500.00
Clean, Sweep, and Trash Removal	LS	\$6,500.00	1	\$6,500.00
Testing & Certified As-Built Survey	LS	\$20,000.00	1	\$20,000.00
Overhead	LS	\$64,500.00	1	\$64,500.00
TOTAL				\$ 773,842.50
CONTINGENCY - 3%				\$ 23,215.28
LAND VALUE				\$ 40,000.00
GRAND TOTAL				\$ 837,057.78

NOTES:

1. This estimate only includes improvements which are impact fee creditable: 1280 LF of new roadway (235 lf of extending Costal Lane, 1045 LF of connecting Costal Lane and John Rodes Blvd,) and associated drainage, striping, and new sidewalk along connector road only.
2. This estimate of conceptual cost was developed to determine a reasonable cost to construct the improvements as indicated on the Conceptual Intersection Improvement Plan.
3. Estimate shall not be used as a basis for bids or the preparation of bid documents.
4. Estimate does not include costs for replacement or repair of any miscellaneous items not indicated on the submitted plan.
5. Estimate assumes existing soils are adequate.

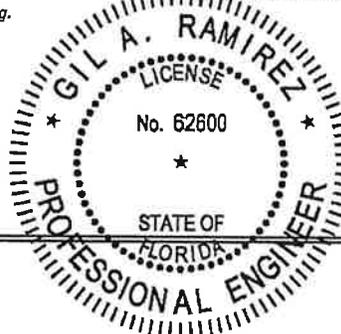
I affirm, by affixing my signature below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.

Name: Gil Ramirez, P.E.

Gilberto A Ramirez

Signature: 2018.11.05 12:23:54 -05'00'

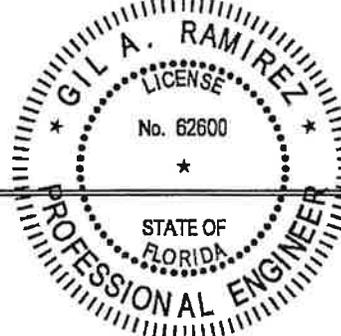
Date: November 5, 2018



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EXH C p 1 of 2

OASIS OF WEST MELBOURNE OFF SITE IMPROVEMENTS				
ENGINEER'S COST ESTIMATE - JOHN RODES TURN LANES				
ITEM DESCRIPTION	UNIT	UNIT COST	QTY	SUBTOTAL
Survey/Engineering	LS	\$3,000.00	1	\$3,000.00
Relocate existing monument sign	LS	\$2,750.00	1	\$2,750.00
Milling and Resurfacing	LS	\$15,000.00	1	\$15,000.00
Rough Grade and Finish	LS	\$4,000.00	1	\$4,000.00
Maintenance of Traffic	LS	\$14,500.00	1	\$14,500.00
2" Type 5-111 Asphaltic Concrete	SY	\$16.00	461	\$7,376.00
10" Limerock Base	SY	\$18.00	461	\$8,298.00
12" Stabilized Base	SY	\$6.50	461	\$2,996.50
Signage and Striping	LS	\$6,500.00	1	\$6,500.00
TOTAL				\$ 64,420.50
CONTINGENCY - 3%				\$ 1,932.62
GRAND TOTAL				\$ 66,353.12
NOTES:				
1. This estimate only includes improvements which are impact fee creditable: additional pavement for widening for the installation of a left turn bay and the installation of a 260 LF right turn lane, including the associated milling & resurfacing and striping.				
2. This estimate of conceptual cost was developed to determine a reasonable cost to construct the improvements as indicated on the Conceptual Roadway Plan.				
3. Estimate shall not be used as a basis for bids or the preparation of bid documents.				
4. Estimate does not include costs for replacement or repair of any miscellaneous items not indicated on the submitted plan.				
5. Estimate assumes existing soils are adequate.				
I affirm, by affixing my signature below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.				
Name:	<u>Gil Ramirez, P.E.</u>			
Signature:	Gilberto A Ramirez			
Date:	<u>2018.11.05 12:24:37 -05'00'</u>			
Date:	<u>November 5, 2018</u>			



This item has been electronically signed and sealed by: Gil A. Ramirez, PE on 11/5/18 using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

EXH C p. 2 of 2

**Oasis of West Melbourne
West Melbourne, Florida**

Traffic Impact Study

**Prepared for: Picerne Real Estate Group
By: LTG, Inc.
REVISED – September 2018**



PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with LTG, Inc., a corporation authorized to operate as an engineering business, EB 0009227, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: Oasis of West Melbourne – Traffic Impact Analysis
LOCATION: West Melbourne, Florida
CLIENT: Picerne Real Estate Group
JOB #: 4397.03

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.

Prepared by:
LTG, Inc.
1450 W. Granada Blvd, Suite 2
Ormond Beach, FL 32174
Certificate of Authorization 9227
386/257-2571

*THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:*

**George
A Galan** Digitally signed by
George A Galan
Date: 2018.09.04
13:59:58 -04'00'

ON THE DATE ADJACENT TO THE SEAL

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ORMOND BEACH, FL 32174
CERTIFICATE OF AUTHORIZATION 9227
GEORGE A GALAN P.E. NO 60080

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1

INTRODUCTION

LTG, Inc. (LTG) has been retained by Picerne Real Estate Group to prepare a Traffic Impact Study (TIS) for the proposed Oasis of West Melbourne in the City of West Melbourne, Florida. The development consists of a 316-unit apartment complex on 21.75 acres of land. The proposed development is located on John Rodes Boulevard just north of US 192. Figure 1 shows the location of the project relative to the surrounding roadway network. The anticipated build-out year is 2019. A preliminary site plan showing the layout of the site is attached as Appendix A. The approved methodology identifying the study parameters is attached in Appendix B.

Study Area

The study area includes the intersections and roadway segments listed below:

Intersections

1. John Rodes Boulevard at US 192
2. John Rodes Boulevard at Sheridan Road
3. John Rodes Boulevard at Project Frontage Road (build-out only)
4. John Rodes Boulevard at Ellis Road
5. US 192 at SB I-95 Ramp
6. US 192 at NB I-95 Ramp
7. US 192 at Coastal Lane
8. Coastal Lane at Project Frontage Road (build-out only)

Roadway Segments

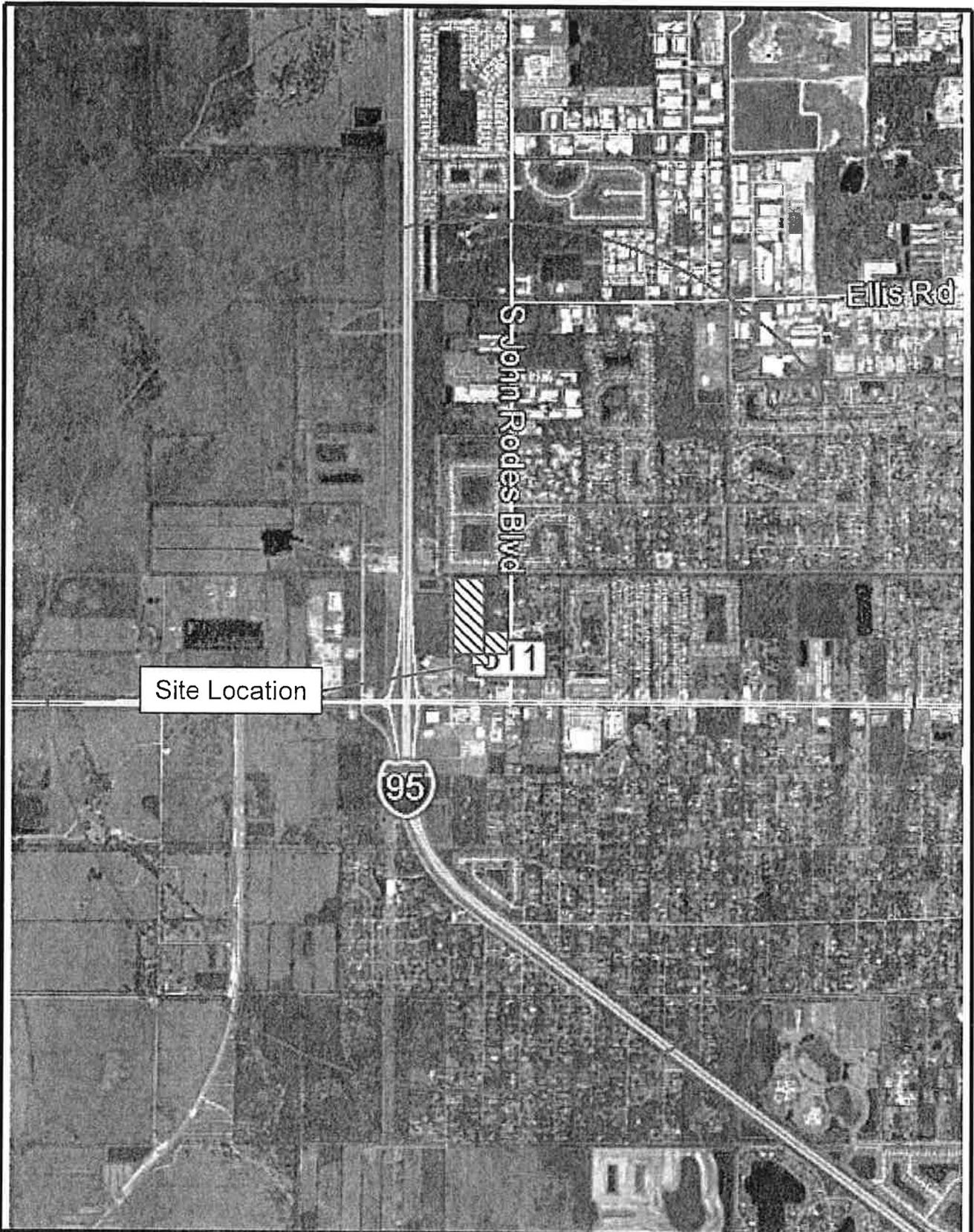
- US 192 from I-95 to John Rodes Boulevard
- John Rodes Boulevard from US 192 to Sheridan Road
- John Rodes Boulevard from Sheridan Road to Ellis Road

Study Procedures

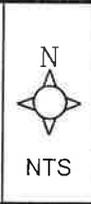
Standard engineering and planning procedures were used to determine the impacts of the proposed project. Reference data were obtained from the Space Coast Transportation Planning Organization (Space Coast TPO), Brevard County, the City of Palm Bay, the Institute of Transportation Engineers (ITE), and the Florida Department of Transportation (FDOT).

Planned Roadway Improvements

FDOT's Five Year Work Program, Space Coast TPO, Brevard County, and the City of West Melbourne were consulted to ascertain if there were any programmed or planned roadway improvements within the study area. Based on information available, there are no programmed or planned roadway improvements within the study area.



Oasis of West
Melbourne



Site Location Map

Project No.: 4397.03 Figure: 1

LTG *Engineering & Planning*

1970 Dairy Road, W. Melbourne, FL 32904
 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

2

EXISTING ROADWAY ANALYSIS

Weekday AM and PM peak-hour turning movement counts (TMCs) were conducted at each of the study area intersections on October 18 and October 19, 2017, and April 26, 2018. FDOT's peak season factors for Brevard County and the intersection's associated **peak-hour factors** were applied to the raw traffic counts. Figures 2a and 2b graphically depict the factored existing AM and PM peak-hour turning movements at the study area intersections. The factored turning movement counts and the raw TMC summaries are provided in Appendix C.

Signalized Intersection Analysis

The LOS at a signalized intersection is based on the average control delay per vehicle for the various movements within the intersection. The operating conditions at the signalized intersection was evaluated using the Brevard County Agencies' signal timings and *Highway Capacity Software 7, Version 7.5 (HCS)*. This software utilizes the procedures outlined in Chapter 19 of the *Highway Capacity Manual, 6th Edition*, titled "Signalized Intersections".

Table 1 shows the existing AM and PM peak-hour LOS at the signalized intersections. The HCS summary sheets are located in Appendix D and the signal timing sheets are located in Appendix E. As indicated in Table 1, the signalized intersections currently operate within the adopted LOS and with a v/c ratio less than 1.0 with the exception of John Rodes Boulevard at US 192.

Table 1
Existing AM and PM Peak-Hour LOS – Signalized Intersections
Oasis of West Melbourne

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
1. John Rodes Blvd at US 192	D	54.0	D	Yes	82.9	F	Yes
2. John Rodes Blvd at Sheridan Rd	D	39.2	D	No	9.6	A	No
4. John Rodes Blvd at Ellis Rd	D	30.5	C	No	13.5	B	No
5. US 192 at SB I-95 Ramp	D	30.9	C	No	30.2	C	No
6. US 192 at NB I-95 Ramp	D	28.3	C	No	14.1	B	No
7. US 192 at Coastal Ln	D	8.0	A	No	14.9	B	No

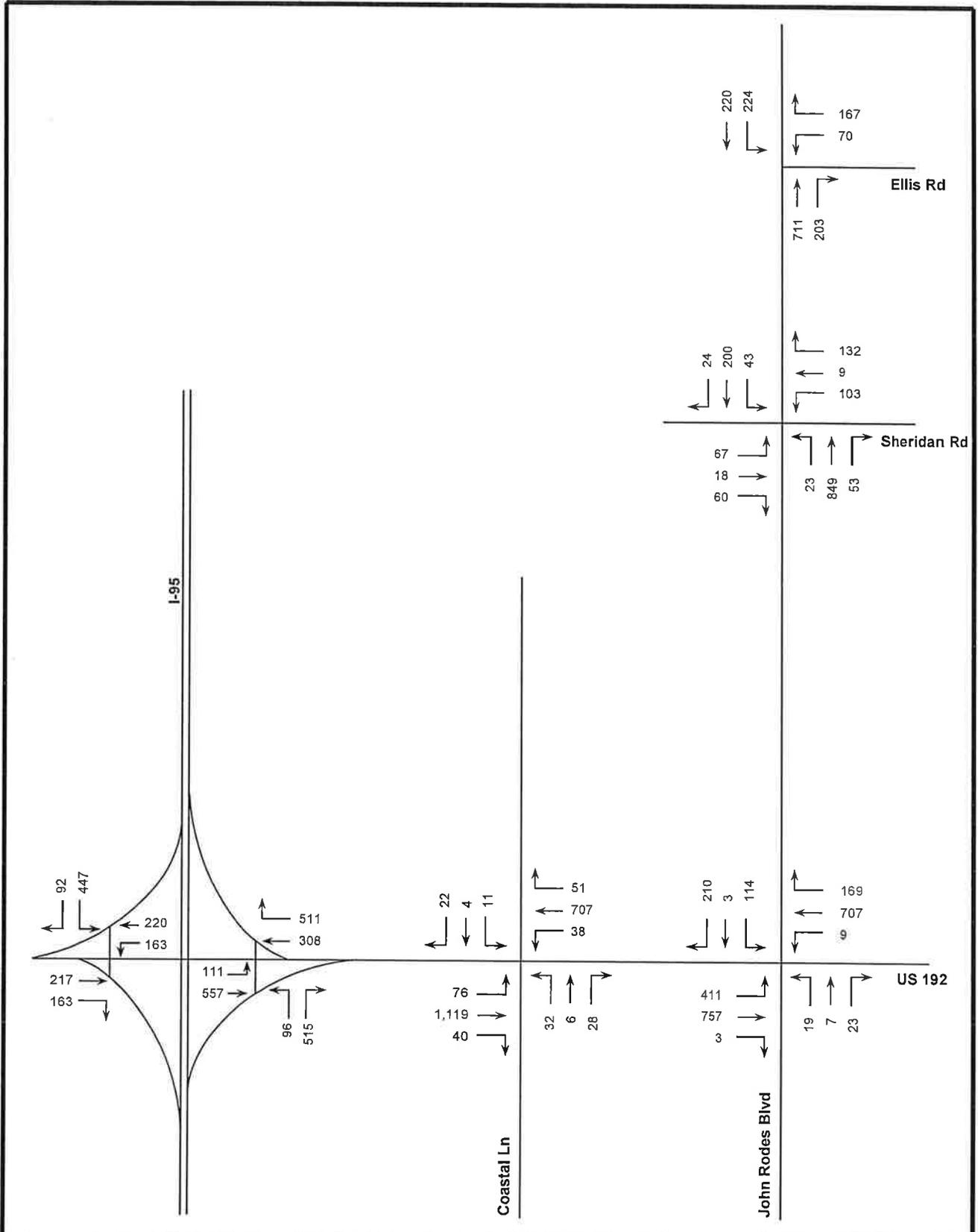
Recommended Intersection Improvements for Existing Conditions

Under existing conditions, the following improvement is recommended in order to achieve acceptable LOS and v/c ratios less than 1.0:

1. John Rodes Boulevard at US 192:
 - Optimize the signal timing splits

The LOS and/or v/c ratios will be exceeded due to background conditions without the addition of project trips; therefore, in accordance with Florida Statute 163.3180, the project is not responsible for mitigating the deficiencies.

Table 2 depicts the PM peak-hour LOS under the background conditions with the proposed intersection improvement. With the proposed improvement, the signalized intersection of John Rodes Boulevard at US 192 is expected to operate with an acceptable LOS and with v/c ratios less than 1.0. The HCS summary sheet is located in Appendix F.



Oasis of West Melbourne



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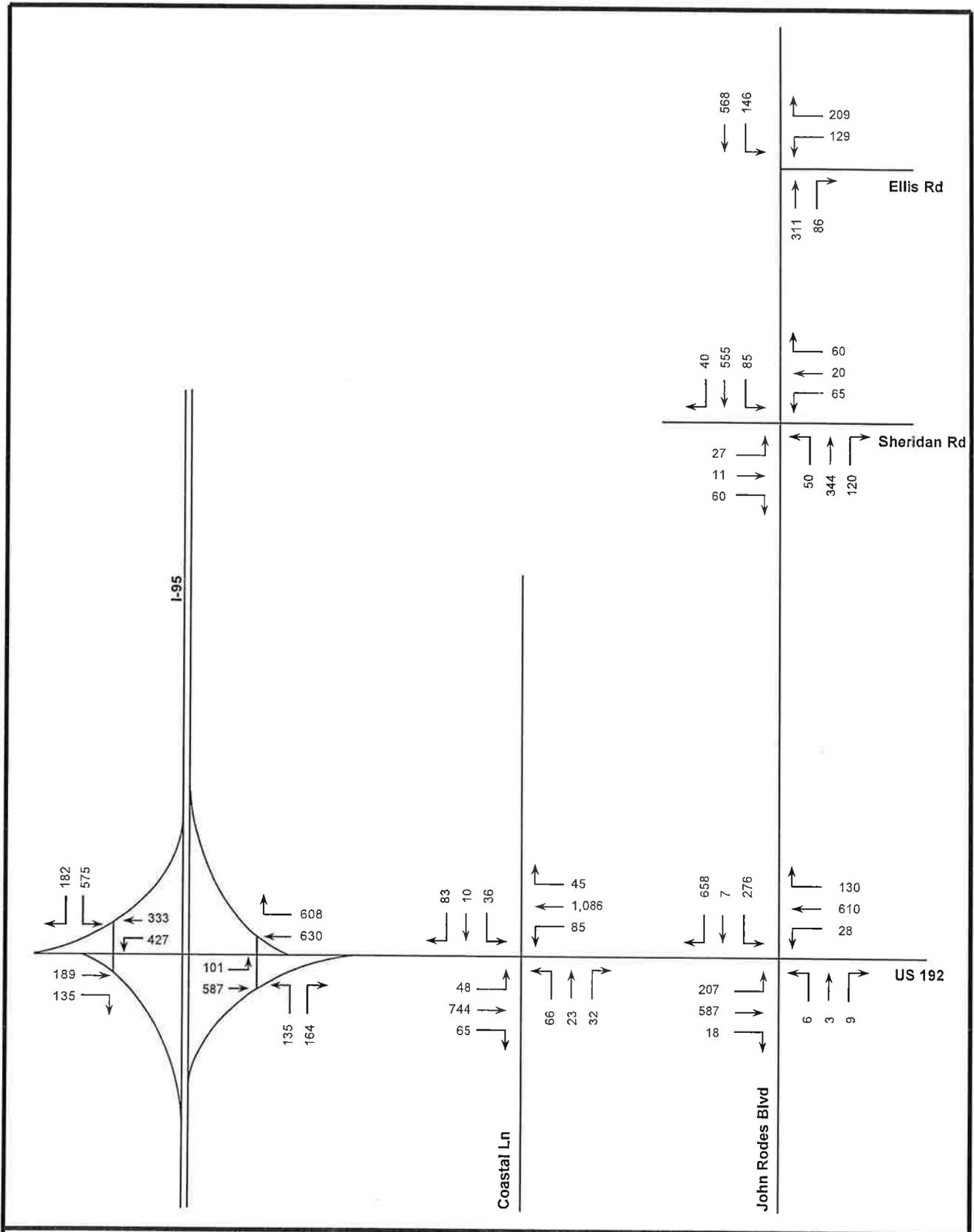
Existing AM Peak-Hour Factored Volumes

Project No.: 4397.03

Figure: 2a



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Oasis of West Melbourne



Existing PM Peak-Hour Factored Volumes

Project No.: 4397.03 Figure: 2b

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Table 2
Existing PM Peak-Hour LOS - Signalized Intersection Improved
Oasis of West Melbourne

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
1. John Rodes Blvd at US 192	D	33.4	C	No	46.0	D	No

Roadway Segment Analysis

Roadway level of service describes the operating condition determined from the number of vehicles passing over a given section of roadway during a specified time period. It is a qualitative measure of several factors which include: speed, travel time, traffic interruptions, freedom to maneuver, driver comfort, convenience, safety and vehicle operating costs. Six levels of service have been established as standards by which to gauge roadway performance, designated by the letters A through F. The level of service categories are defined as follows:

- Level of Service A:* Free flow, individual users virtually unaffected by the presence of others
- Level of Service B:* Stable flow with a high degree of freedom to select operating conditions
- Level of Service C:* Flow remains stable, but with significant interactions with others
- Level of Service D:* High-density stable flow in which the freedom to maneuver is severely restricted
- Level of Service E:* This condition represents the capacity level of the road
- Level of Service F:* Forced flow in which the traffic exceeds the amount that can be served

The 2016 AADT for the study roadway segments were obtained from Space Coast TPO Transportation Data Management System. The existing PM peak-hour two-way LOS for the study area roadway segments are shown in Table 3. As indicated in Table 3, all study roadway segments currently operate within the adopted level of service. Figure 3 graphically depicts the roadway lane configuration of the roadway network.

Table 3
Existing PM Peak-Hour Two-Way LOS - Roadway Segments
Oasis of West Melbourne

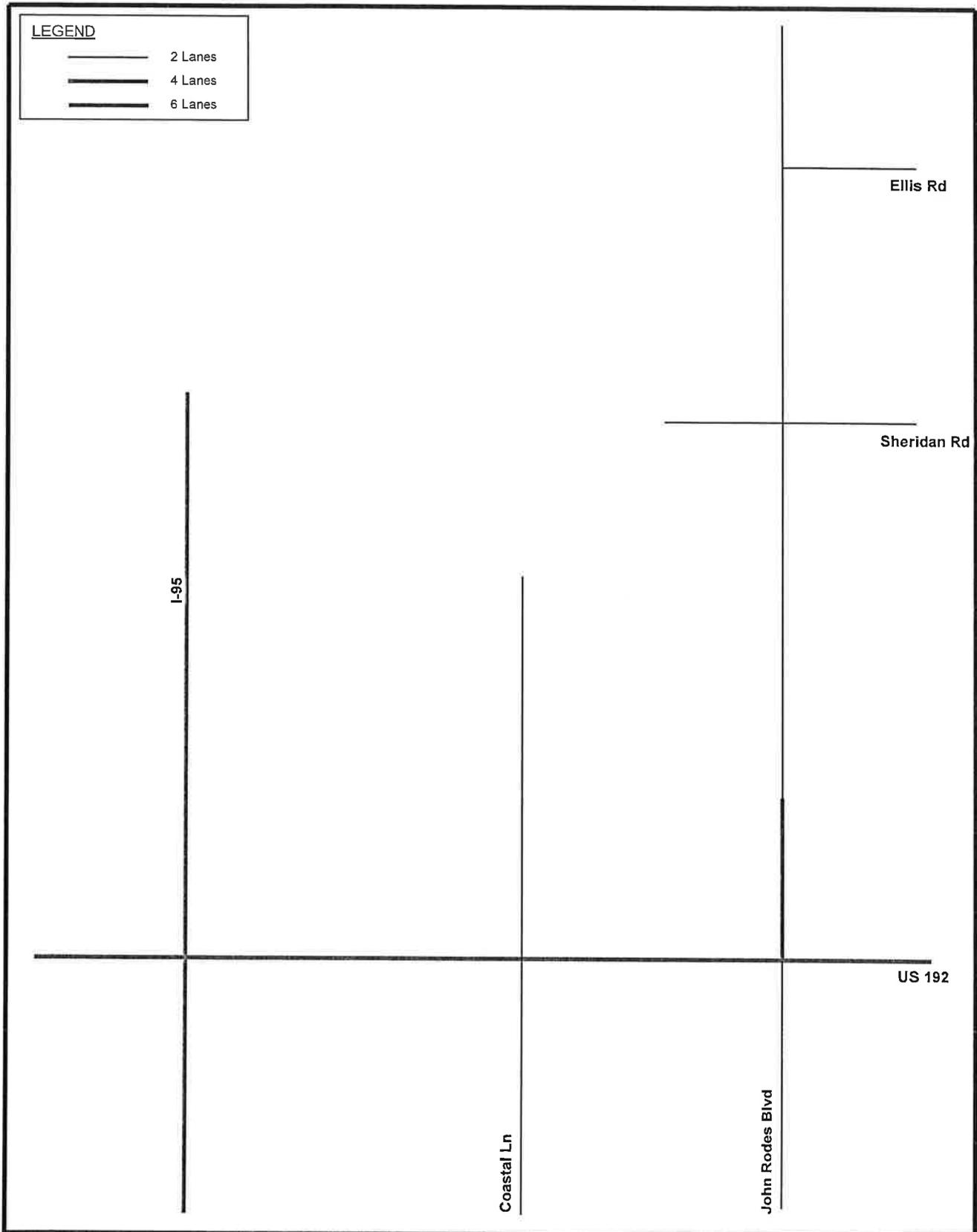
Roadway	Segment		No. of Lanes	Adopted LOS	Current MAV	Current MAV Peak-Hour Two-Way ¹	2016 AADT	Existing PM Peak-Hour Two-Way Volume ¹	Existing LOS
US 192	I-95	John Rodes Blvd	4	D	39,800	3,580	30,180	2,716	C
John Rodes Blvd	US 192	Sheridan Rd	2	D	17,700	1,600	11,520	1,037	C
John Rodes Blvd*	Sheridan Rd	Ellis Rd	2	D	17,700	1,600	10,990	989	C

*Most recent AADT data available is for the year 2015

¹Determined using a K-factor of 0.09

LEGEND

-  2 Lanes
-  4 Lanes
-  6 Lanes



Oasis of West
Melbourne



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**Roadway Lane
Configuration**

Project No.: 4397.03

Figure: 3



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3

BACKGROUND ROADWAY ANALYSIS

The critical intersections and roadway segments were analyzed to determine potential impacts based on the mitigation of existing conditions. The following documents the procedures used to determine the background traffic in 2019.

Background Traffic Growth Rates

Historical growth rates were used to determine the background traffic. FDOT *Traffic Trends* software was used to calculate historical growth rates using the past five years of data obtained from the Space Coast Transportation Planning Organization (see Appendix G). The historical and applied growth rates are identified in Table 4.

Table 4
Historical Growth Rates
Oasis of West Melbourne

Roadway	Segment		Average Annual Growth Rate	Applied Growth Rate
US 192	I-95	John Rodes Blvd	5.02%	5.02%
John Rodes Blvd	US 192	Sheridan Rd	1.62%	2.00%
John Rodes Blvd	Sheridan Rd	Ellis Rd	0.26%	2.00%

Vested Traffic Trips from Adjacent Land Developments

The adjacent land developments were reviewed to ascertain if there were any programmed or planned land developments within the study area. Based on information available, the Coastal Commerce development is still under development and will be either constructed or under construction in 2019. The number of project trips associated with the remainder of the Coastal Commerce development was developed by comparing the existing, built portion of the development with the total planned development. This remaining portion of the development project trips will be included as vested trips for background conditions. The US 192 Coastal Commerce Technical Memorandum from June 11, 2009 was used as the basis for the vested trip development and is contained in Appendix H and the remaining trip bank calculations are contained in Appendix I.

Background Signalized Intersection Analysis

The signalized intersection was analyzed to determine the operational LOS under background conditions during the AM and PM peak-hours in 2019. As indicated in Table 5, all signalized intersections are expected to operate at an acceptable LOS with the exception of John Rodes Boulevard at Sheridan Road, John Rodes Boulevard at Ellis Road, and US 192 at Coastal Lane. The expected v/c ratio will be greater than 1 for the PM peak-hour. The HCS summary sheets are located in Appendix J.

**Table 5
Background AM and PM Peak-Hour LOS – Signalized Intersections
Oasis of West Melbourne**

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
1. John Rodes Blvd at US 192	D	33.8	C	No	50.2	D	No
2. John Rodes Blvd at Sheridan Rd	D	50.1	D	Yes	9.7	A	No
4. John Rodes Blvd at Ellis Rd	D	42.1	D	Yes	14.3	B	No
5. US 192 at SB I-95 Ramp	D	30.9	C	No	29.8	C	No
6. US 192 at NB I-95 Ramp	D	28.5	C	No	14.6	B	No
7. US 192 at Coastal Ln	D	8.2	A	No	37.6	D	Yes

Recommended Intersection Improvements for Background Conditions

Under background conditions, the following improvement is recommended in order for all study area intersections to achieve acceptable levels of service and v/c ratios less than 1.0:

2. John Rodes Boulevard at Sheridan Road:
 - Optimize the signal timing splits in the AM peak-hour
4. John Rodes Boulevard at Ellis Road:
 - Optimize the signal timing splits in the AM peak-hour
7. US 192 at Coastal Lane:
 - Optimize the signal timing splits in the PM peak-hour

The LOS and/or v/c ratios will be exceeded due to background conditions without the addition of project trips; therefore, in accordance with Florida Statute 163.3180, the project is not responsible for mitigating the deficiencies.

Table 6 depicts the PM peak-hour LOS under the background conditions with the proposed intersection improvements. With the proposed improvements, all signalized intersections are expected to operate with an acceptable LOS and with v/c ratios less than 1.0. The HCS summary sheet is located in Appendix K.

Table 6
Background PM Peak-Hour LOS - Signalized Intersection Improved
Oasis of West Melbourne

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
2. John Rodes Blvd at Sheridan Rd	D	15.4	B	No	-	-	-
4. John Rodes Blvd at Ellis Rd	D	26.1	C	No	-	-	-
7. US 192 at Coastal Ln	D	-	-	-	23.2	C	No

Roadway Segment Analysis

The background PM peak-hour two-way LOS for the study area road segments are shown in Table 7. As indicated in Table 7, the study roadway segments are expected to operate with an acceptable level of service under 2019 background conditions.

Table 7
Background PM Peak-Hour Two-Way LOS - Roadway Segments
Oasis of West Melbourne

Roadway	Segment		No. of Lanes	Adopted LOS	Current MAV	Current MAV Peak-Hour Two-Way ¹	Existing PM Peak-Hour Two-Way Volume ¹	2019 Growth Factor	Vested Trips	2019 Background Traffic	2019 Background Projected LOS
US 192	I-95	John Rodes Blvd	4	D	39,800	3,580	2,716	1.15	233	3,358	C
John Rodes Blvd	US 192	Sheridan Rd	2	D	17,700	1,600	1,037	1.06	32	1,131	C
John Rodes Blvd*	Sheridan Rd	Ellis Rd	2	D	17,700	1,600	989	1.08	32	1,100	C

*Most recent AADT data available is for the year 2015

¹Determined using a K-factor of 0.09

4

BUILD-OUT ROADWAY ANALYSIS

The study intersections and road segments were analyzed based on the build-out roadway conditions in 2019 to determine potential impacts and to investigate mitigation requirements.

Trip Generation

The trip generation for this development was determined using the trip generation rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 9th Edition*. The total daily, AM and PM peak-hour trip generation is presented Table 8.

Table 8
2019 Trip Generation
Oasis of West Melbourne

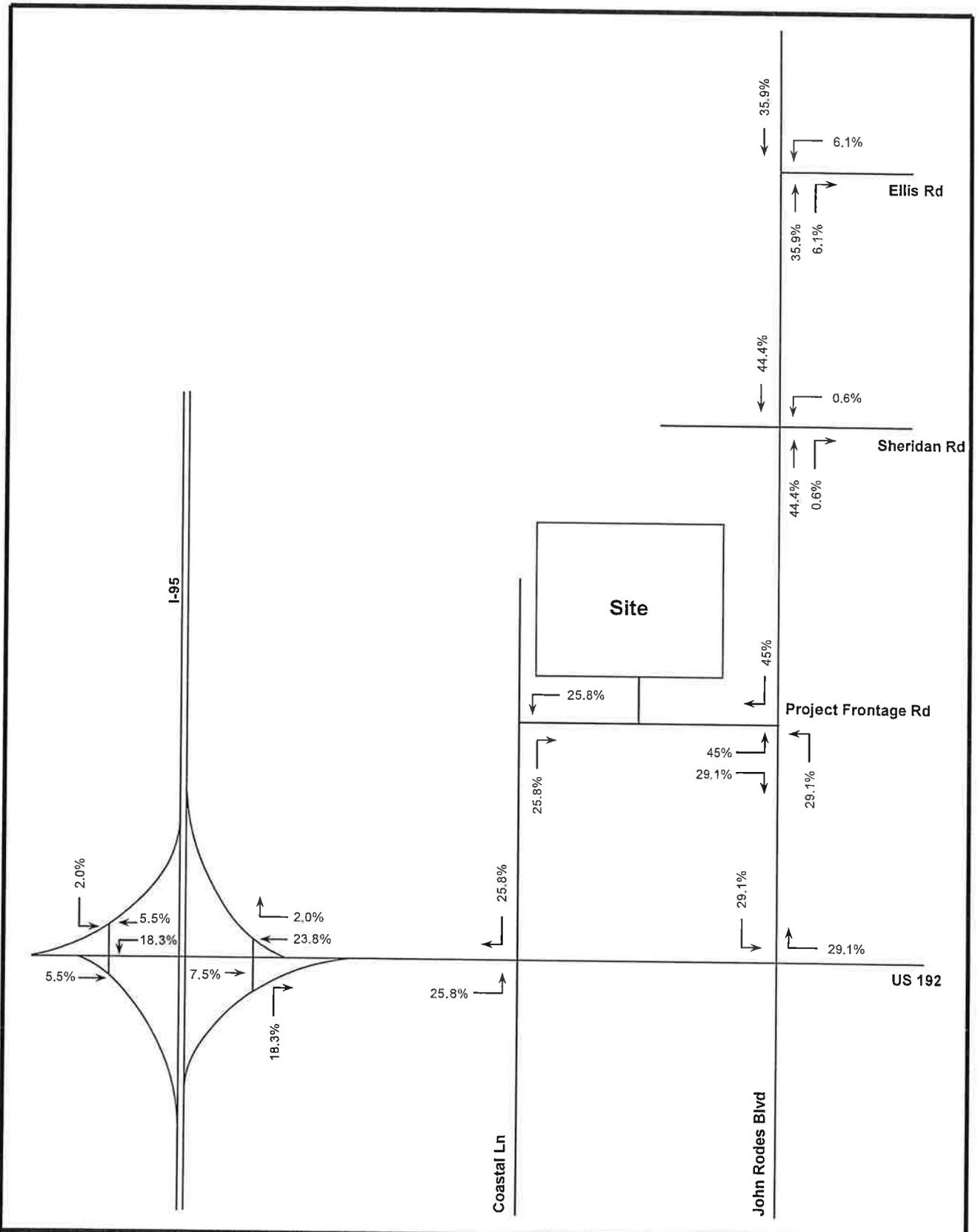
Time Period	Land Use	Land Use Code	Trip Rate Equation	Size	Units	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting	Total Trips
Daily	Apartment	220	$T=6.06(X)+123.56$	316	DU	50%	50%	1,019	1,019	2,039
AM Peak-Hour	Apartment	220	$T=0.49(X)+3.73$	316	DU	20%	80%	32	127	159
PM Peak-Hour	Apartment	220	$T=0.55(X)+17.65$	316	DU	65%	35%	124	67	191

Trip Distribution

The process of determining the directional flow of traffic associated with a new development is called trip distribution. The Central Florida Regional Planning Model (CFRPM) Version 6.1, was used to determine the trip distribution for this project. The trip distribution is graphically illustrated in Figure 4. The 2019 model year distribution is contained in Appendix L.

Trip Assignment

The final step in the analysis was to assign the project traffic to the roadway network. Figures 5a and 5b graphically depict build-out AM and PM peak-hour project trip assignment for the proposed development.



Oasis of West Melbourne



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Trip Distribution

Project No.: 4397.03

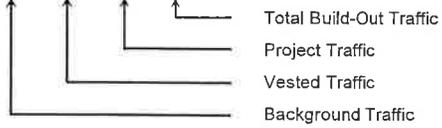
Figure: 4



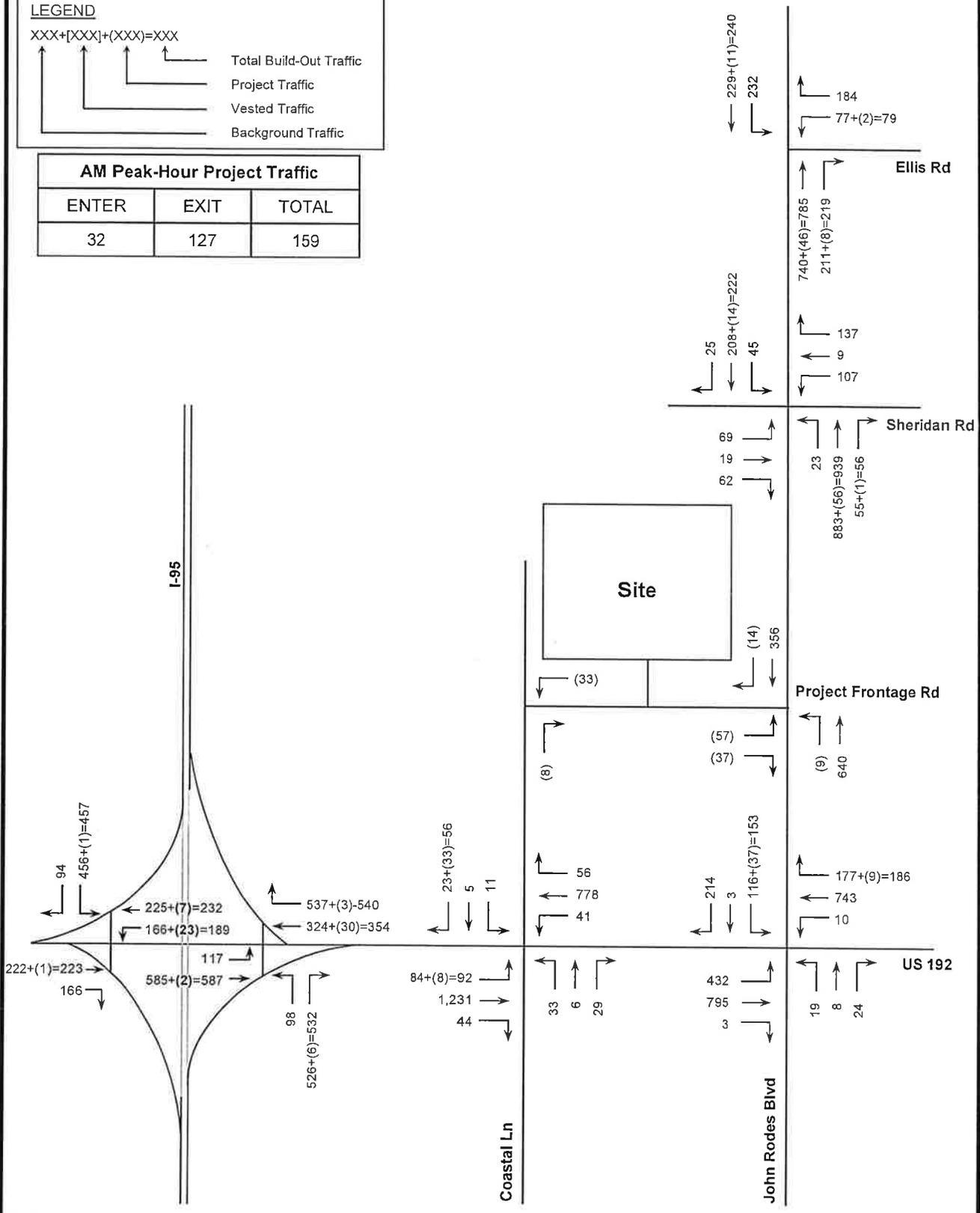
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LEGEND

$XXX+[XXX]+(XXX)=XXX$



AM Peak-Hour Project Traffic		
ENTER	EXIT	TOTAL
32	127	159



Oasis of West Melbourne



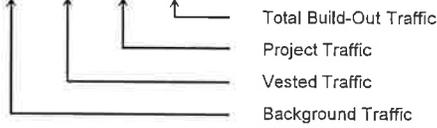
Build-Out Traffic – AM Peak Hour

Project No.: 4397.03 Figure: 5a

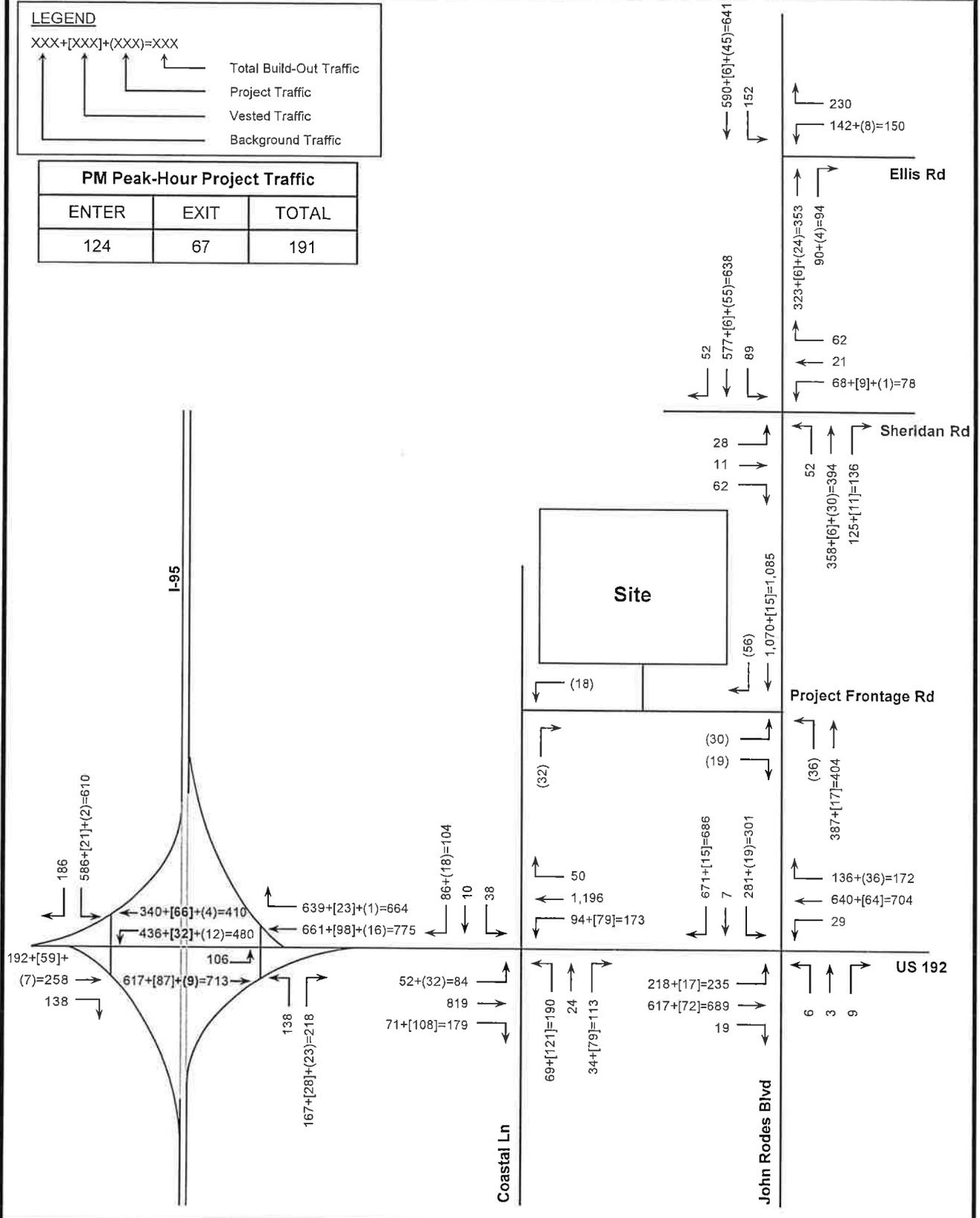
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 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

LEGEND

$XXX+[XXX]+(XXX)=XXX$



PM Peak-Hour Project Traffic		
ENTER	EXIT	TOTAL
124	67	191



Oasis of West Melbourne



NTS

Build-Out Traffic – PM Peak Hour



Project No.: 4397.03 Figure: 5b

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Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

2019 Build-Out Unsignalized Intersection Analysis

The operating conditions at the unsignalized study area intersection was analyzed to determine the operational LOS under build-out conditions using the *Highway Capacity Software 7, Version 7.5 (HCS)*. This software utilizes the procedures outlined in Chapter 20 of the *Highway Capacity Manual, Sixth Edition*, titled "Two-Way Stop-Controlled Intersections". Table 9 shows the projected LOS for the unsignalized intersection at build-out during the AM and PM peak-hours. The HCS summary sheet is contained in Appendix M. As indicated in the table, the unsignalized intersection is anticipated to operate with an acceptable LOS in 2019.

**Table 9
Build-Out AM and PM Peak-Hour LOS – Unsignalized Intersection
Oasis of West Melbourne**

Intersection	Adopted LOS	Build-Out Conditions					
		AM Peak-Hour			PM Peak-Hour		
		Critical Approach	Delay	LOS	Critical Approach	Delay	LOS
3. John Rodes Blvd at Project Frontage Rd	D	EB	14.7	B	EB	23.1	C
8. Coastal Ln at Project Frontage Rd	D	WB	9.0	A	WB	9.0	A

2019 Build-Out Signalized Intersection Analysis

The signalized intersection was analyzed to determine the operational LOS at the time of build-out in 2019, including all improvements recommended in existing and background conditions and the results are presented in Table 10. The HCS summary sheets are contained in Appendix M. As indicated in the table, all signalized intersections are anticipated to operate with an acceptable LOS and with v/c ratio less than 1.0 under 2019 build-out conditions.

**Table 10
Build-Out AM and PM Peak-Hour LOS – Signalized Intersection
Oasis of West Melbourne**

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
1. John Rodes Blvd at US 192	D	35.0	D	No	51.4	D	No
2. John Rodes Blvd at Sheridan Rd	D	17.3	B	No	10.2	B	No
4. John Rodes Blvd at Ellis Rd	D	32.6	C	No	14.5	B	No
5. US 192 at SB I-95 Ramp	D	30.5	C	No	29.8	C	No
6. US 192 at NB I-95 Ramp	D	28.5	C	No	15.4	B	No
7. US 192 at Coastal Ln	D	10.1	B	No	24.3	C	No

Roadway Segment Analysis

As indicated in Table 11, the study roadway segments are expected to operate with an acceptable LOS under build-out conditions during the PM peak-hour.

**Table 11
Build-Out PM Peak-Hour Two-Way LOS - Roadway Segments
Oasis of West Melbourne**

Roadway	Segment		No. of Lanes	Adopted LOS	Current MAV	Current MAV Peak-Hour Two-Way ¹	Existing PM Peak-Hour Two-Way Volume ¹	2019 Background Traffic	Project Distribution	Project Trips	2019 Build-Out Traffic	2019 Build-Out Projected LOS
US 192	I-95	John Rodes Blvd	4	D	39,800	3,580	2,716	3,358	25.8%	49	3,407	C
John Rodes Blvd	US 192	Project Frontage Rd	2	D	17,700	1,600	1,037	1,131	29.1%	56	1,187	C
John Rodes Blvd	Project Frontage Rd	Sheridan Rd	2	D	17,700	1,600	1,037	1,131	45.0%	86	1,217	C
John Rodes Blvd*	Sheridan Rd	Ellis Rd	2	D	17,700	1,600	989	1,100	44.4%	85	1,185	C

¹Most recent AADT data available is for the year 2015
¹Determined using a K-factor of 0.09

Access Review

Site access is proposed via one full access frontage roadway (Project Frontage Drive) that connects to John Rodes Boulevard to the east and Coastal Lane to the west. Along this access frontage roadway will be the main entrance full access driveway connecting to the project site where all project traffic will enter and exit. The requirement for a northbound left-turn lane and a southbound right-turn lane at the intersection of the project frontage roadway with John Rodes Boulevard was evaluated using NCHRP Report 457, and FDOT Designed Standard Index 301. NCHRP summary sheets are included as Appendix N. The results of the turn lane evaluation are provided below:

John Rodes Boulevard at Project Frontage Drive:

The recommended geometry of the ingress and egress at the intersections will consist of:

- Northbound: Add an exclusive northbound left-turn lane of 265 feet minimum at the intersection
- Southbound: Add an exclusive southbound right-turn lane of 240 feet minimum at the intersection

As mentioned, an exclusive northbound left-turn lane is warranted under build-out condition due to NCHRP Report 457. FDOT Design Standard Index No. 301 recommends a minimum length of 240 feet for a 50-mph design speed (posted speed limit of 45 mph). A minimum queue length of 25 feet is recommended for the northbound left-turn lane, resulting in a recommended total length of 265 feet.

5

CONCLUSIONS

This study was conducted to evaluate the impact of the proposed Oasis of West Melbourne. The development will consist of a 316-unit apartment complex that will generate 159 project trips in the AM peak-hour and 191 project trips in the PM peak-hour. The results of the study are summarized below:

Existing Conditions

- All signalized intersections operate within the adopted level of service with the exception of John Rodes Boulevard at US. The following improvement is recommended:
 1. John Rodes Boulevard at US 192:
 - Optimize the signal timing splits

Note: The LOS and/or v/c ratios will be exceeded due to background conditions without the addition of project trips; therefore, in accordance with Florida Statute 163.3180, the project is not responsible for mitigating this deficiency.

- All study area roadway segments operate within the adopted level of service.

Background Conditions

- All signalized intersections are expected to operate with an acceptable LOS with the exception of John Rodes Boulevard at Sheridan Road, John Rodes Boulevard at Ellis Road, and US 192 at Coastal Lane. The following improvements are recommended:
 2. John Rodes Boulevard at Sheridan Road:
 - Optimize the signal timing splits in the AM peak-hour
 4. John Rodes Boulevard at Ellis Road:
 - Optimize the signal timing splits in the AM peak-hour
 7. US 192 at Coastal Lane:
 - Optimize the signal timing splits in the PM peak-hour

Note: The LOS and/or v/c ratios will be exceeded due to background conditions without the addition of project trips; therefore, in accordance with Florida Statute 163.3180, the project is not responsible for mitigating this deficiency.

- All study area roadway segments are expected to operate with an acceptable LOS.

Build-Out Conditions

- The unsignalized intersection is anticipated to operate with an acceptable LOS.
- All signalized intersections are anticipated to operate with an acceptable LOS with the improvements proposed in existing and background conditions.
- All study roadway segments are expected to operate with an acceptable LOS.

Access

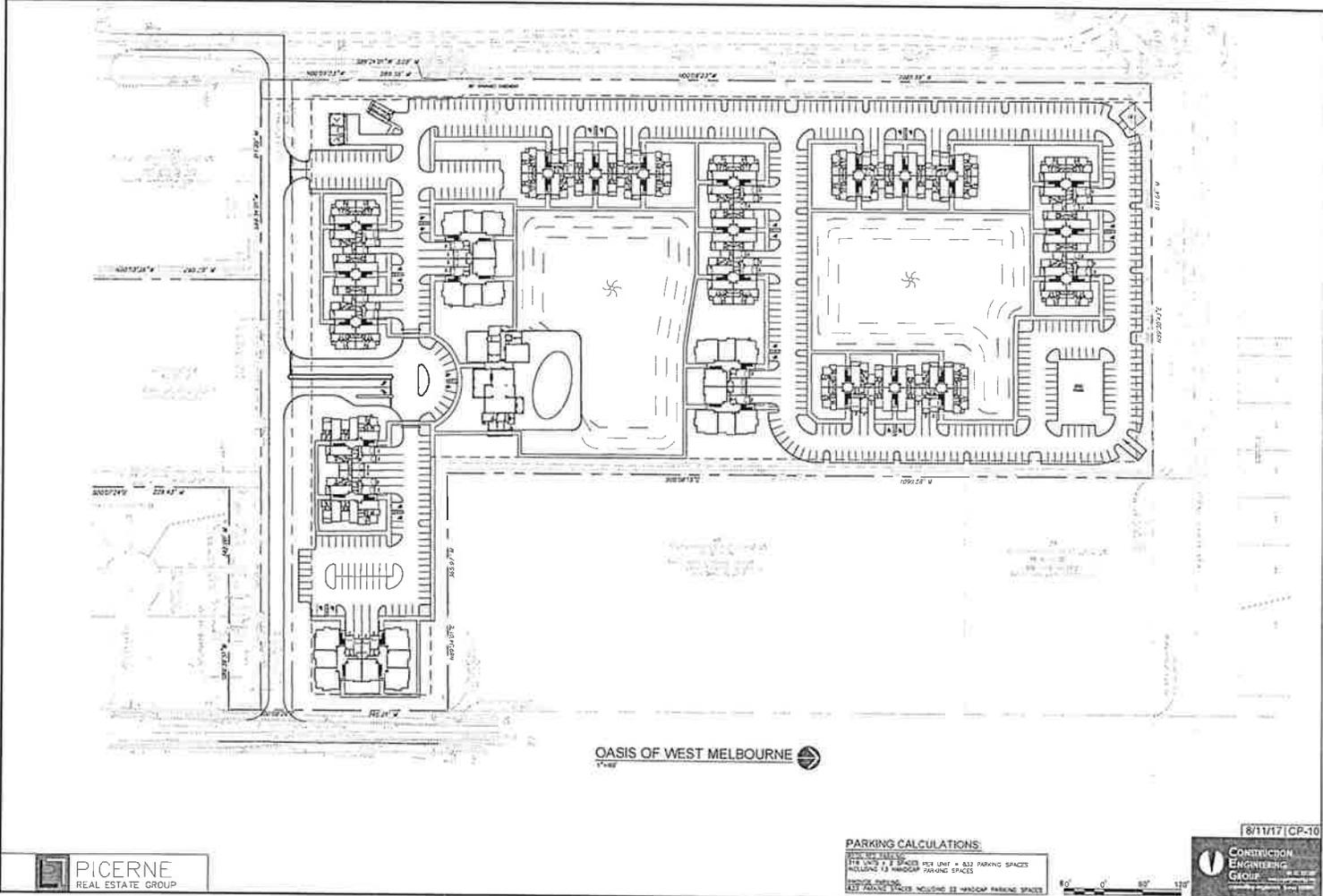
The recommended geometry of the ingress and egress at the project driveway intersections will consist of:

- Northbound: Add an exclusive northbound left-turn lane of 265 feet minimum at the intersection
- Southbound: Add an exclusive southbound right-turn lane of 240 feet minimum at the intersection

Based on the results of this study and the recommendations provided above, the Oasis of West Melbourne project is recommended for approval.

APPENDICES

APPENDIX A
SITE PLAN



OASIS OF WEST MELBOURNE

PARKING CALCULATIONS:

1. THE UNIT IS 2 SPACES PER UNIT + 632 PARKING SPACES INCLUDING 13 WINDOW PARKING SPACES

2. TOTAL PARKING 632 PARKING SPACES INCLUDING 13 WINDOW PARKING SPACES



8/11/17/CP-10



APPENDIX B

METHODOLOGY



Via Email: (cfischer@westmelbourne.org)

Ref: 4397.01

October 2, 2017

Christy Fischer
Planning and Economic Development Director
City of West Melbourne
2240 Minton Road
West Melbourne, FL 32904

RE: Picerne Real Estate Group – Oasis of West Melbourne - Traffic Impact Study (TIS) Methodology
W. Melbourne, Florida

Dear Ms. Fischer:

LTG, Inc. (LTG) has been retained by Picerne Real Estate Group to prepare a Traffic Impact Study for the proposed Oasis of West Melbourne residential development. The proposed Oasis of West Melbourne development consists of a 316-unit apartment complex. The proposed development is located on John Rodes Boulevard just north of US 192 in the City of West Melbourne, Florida. The proposed build-out year is 2019. Figure 1 shows the location and influence area of the project relative to the surrounding road network. A concept plan showing the layout of the site is attached as Appendix A.

Trip Generation

The daily, a.m. and p.m. peak-hour trip generation for the build-out of the development was determined using the Institute of Transportation Engineers (ITE) 9th edition of the Trip Generation Manual. The trip generation for the development is summarized in Table 1.

Table 1
Trip Generation
Oasis of West Melbourne

Time Period	Land Use	ITE Land Use Code	Trip Rate Equation	Units (X) DUs	Total Trips	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting
Daily	Apartment	220	$T = 6.06(X) + 123.56$	316	2,039	50%	50%	1,020	1,019
A.M. Peak-hour	Apartment	220	$T = 0.49 (X) + 3.73$	316	159	20%	80%	32	127
P.M. Peak-hour	Apartment	220	$T = 0.55 (X) + 17.65$	316	191	65%	35%	124	67

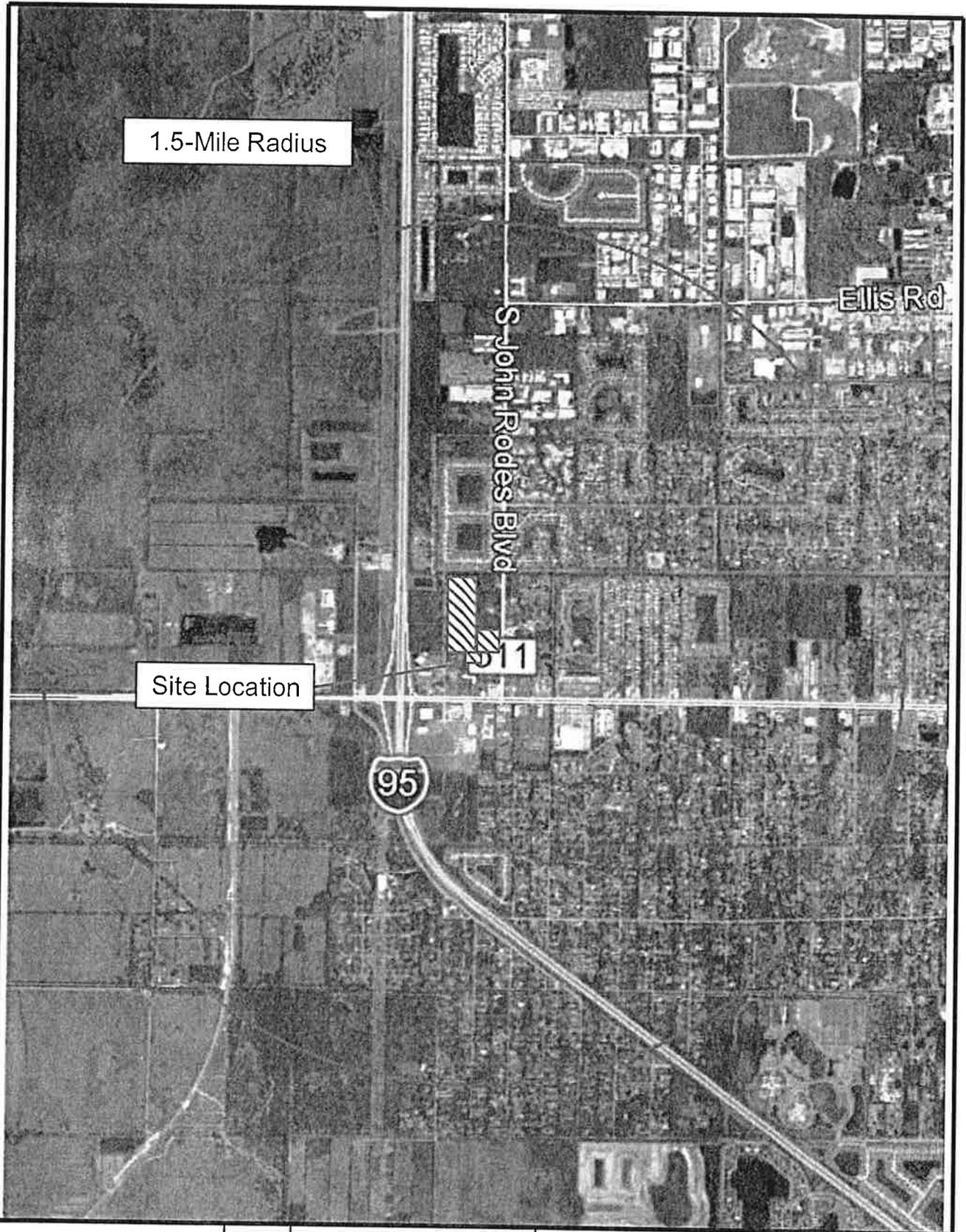
Source: ITE, Trip Generation 9th Edition

Trip Distribution

The Central Florida Regional Planning Model version 6.1 will be used to obtain trip distribution and will be manually modified where appropriate. Figure 2 shows the proposed distribution of traffic along the surrounding road network.

Trip Assignment

Traffic will be assigned to the study area roadways using the peak-hour trip generation and the project trip distribution identified by the model.



Oasis of West
Melbourne



NTS

Site Location Map

Project No.: 4397.01

Figure: 1

 **LTG** *Engineering
& Planning*

1970 Dairy Road, W. Melbourne, FL 32904
Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

Study Area

The City of West Melbourne Traffic Study Guidelines were used to determine the project study area. Based on the trip generation criteria the study area for the project was determined to be a 1.5-mile radius from the project.

The following intersections and road segments will be included in the analysis:

Intersections:

- John Rodes Boulevard at US 192 / W New Haven Avenue
- John Rodes Boulevard at Sheridan Road
- John Rodes Boulevard at Project Frontage Road
- John Rodes Boulevard at Ellis Road
- US 192 at SB I-95 Ramp
- US 192 at NB I-95 Ramp
- Dike Road at US 192 / W New Haven Avenue
- Dike Road at Project Frontage Road

Roadway Segments:

- US 192 / W New Haven Avenue from I-95 Northbound Ramp to John Rodes Boulevard
- John Rodes Boulevard from US 192 / W New Haven Avenue to Sheridan Road
- John Rodes Boulevard from Sheridan Road to Ellis Road

Analysis Period

Roadway segments will be analyzed based on p.m. peak-hour traffic and intersections will be analyzed for the a.m. and p.m. peak-hours. The analysis will be conducted under 2017 existing conditions and 2019 build-out conditions.

Traffic Concurrency Spreadsheet

The analysis will be based on the latest concurrency information as obtained from the Florida Department of Transportation (FDOT), the Space Coast Transportation Planning Organization (SCTPO), the City of West Melbourne, and Brevard County Planning Department.

Traffic Count Procedures

Manual turning movement counts will be conducted on a Tuesday, Wednesday or Thursday during a.m. and p.m. peak hours at each study intersection. Turning movement counts will not be older than one year.

Build-Out Traffic

The build-out traffic will be developed by the sum of the background traffic derived from growth rates plus vested traffic and the estimated project traffic. Growth rates for each study area roadway segment will be determined by historic growth trends calculated based upon five years of historic count data. A minimum annual growth rate of two percent shall be used unless otherwise documented. In no case shall a negative growth rate be used. Vested traffic will be coordinated with the City of West Melbourne. All improvements funded for construction within the first three years of the five-year work program will be considered in the analysis.

Christy Fisher
October 2, 2017
Page 5

Segment Analysis – Existing and Build-Out Conditions

If the future projected volume is expected to exceed the maximum service volume of a roadway segment, an additional transportation analysis may be conducted (requires client authorization) to determine the service volume specific to that segment. The procedures documented in the latest version of the FDOT *Quality/Level of Service Handbook* will be used to determine specific capacity, if default capacities are exceeded and if detailed, site-specific capacity analysis has the potential to yield a higher capacity calculation.

Improvements

If warranted, appropriate roadway and intersection improvements will be identified. Conditions will be analyzed for improvements that are required for mitigation. Site access needs will be addressed. The need for auxiliary lanes will be assessed using the methodology provided by NCHRP Report 457, HCS, and the latest version of the FDOT Design Standards.

Please review and advise if the City of West Melbourne is in agreement with this proposed methodology or provide comments relating to preferred revisions. If you have any questions, please contact me at 786.236.2857.

Sincerely,

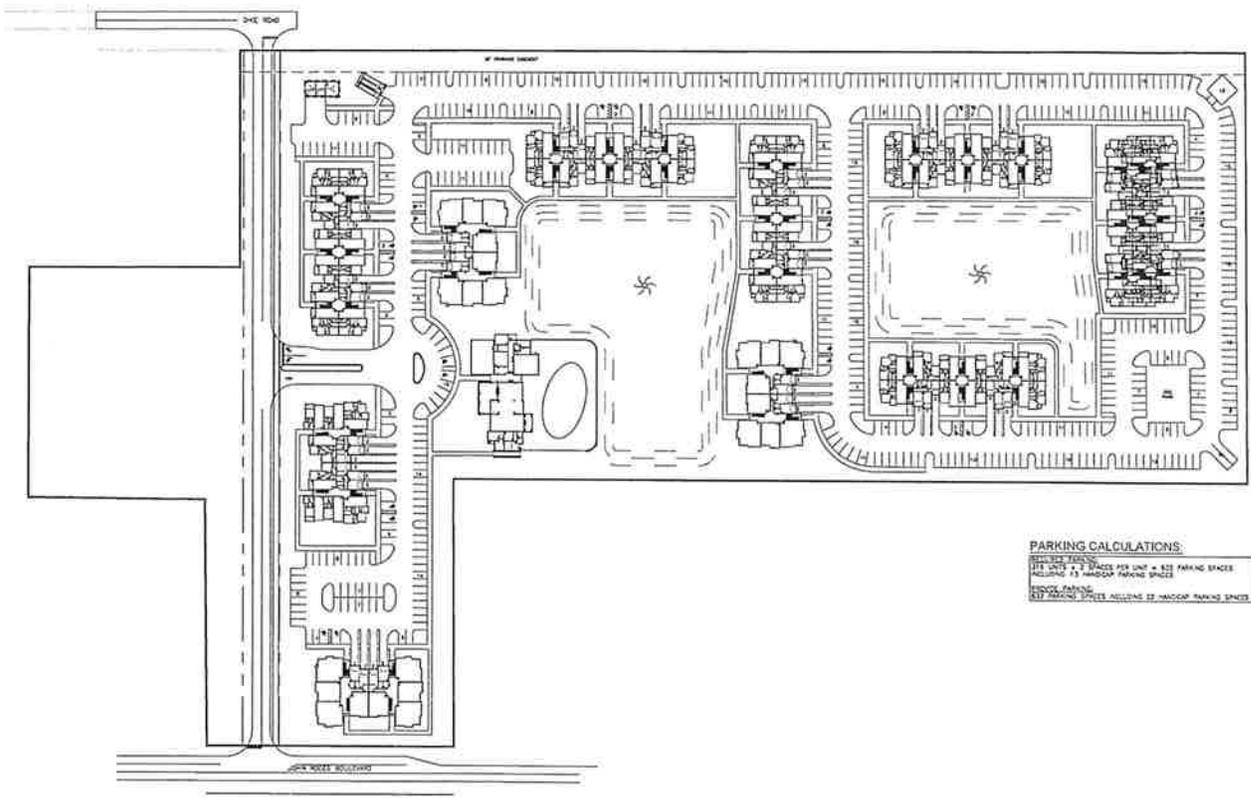
LTG, INC.



George Galan, P.E.
Senior Project Manager

c: Gil A. Ramirez, PE

Appendix A



PARKING CALCULATIONS:
 RESIDENT PARKING:
 215 UNITS x 2 SPACES PER UNIT = 432 PARKING SPACES
 INCLUDING 13 HANDICAP PARKING SPACES
 VISITOR PARKING:
 150 PARKING SPACES INCLUDING 22 HANDICAP PARKING SPACES

OASIS OF WEST MELBOURNE

APPENDIX C
FACTORED TURNING MOVEMENT COUNTS
AND RAW TURNING MOVEMENT COUNTS

AM Peak-Hour Factored TMC's

Ext	Intersection	Approach	Mvmt	Existing Traffic				Background Traffic			Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
1. John Rodas Blvd at US 192	Eastbound	U-Turn			0.97	0.52	0	0%	9			0	0
		Left	390	13	0.97	0.52	411	3%	412			0	432
		Through	718	14	0.97	0.52	757	2%	755			0	795
	Westbound	Right	3	0	0.97	0.52	3	0%	3			0	3
		U-Turn			0.97	0.52	0	0%	0			0	0
		Left	9	2	0.97	0.52	9	22%	10			0	10
	Northbound	Through	671	16	0.97	0.52	707	2%	743			0	743
		Right	160	6	0.97	0.52	169	4%	177	29.1%	in	9	188
		U-Turn			0.97	0.52	0	0%	0			0	0
	Southbound	Left	18	0	0.97	0.52	19	0%	19			0	19
		Through	7	0	0.97	0.52	7	0%	8			0	8
		Right	22	2	0.97	0.52	23	9%	24			0	24
		U-Turn			0.97	0.52	0	0%	0			0	0
		Left	108	2	0.97	0.52	114	2%	116	29.1%	out	37	153
		Through	3	0	0.97	0.52	3	0%	3			0	3
	Right	199	6	0.97	0.52	210	3%	214			0	214	

Ext	Intersection	Approach	Mvmt	Existing Traffic				Background Traffic			Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
2. John Rodas Blvd at Sheridan Rd	Eastbound	U-Turn			1.05	0.93	0	0%	0			0	0
		Left	59	1	1.05	0.93	67	2%	69			0	69
		Through	18	0	1.05	0.93	18	0%	19			0	19
	Westbound	Right	53	1	1.05	0.93	60	2%	62			0	62
		U-Turn			1.05	0.93	0	0%	0			0	0
		Left	91	1	1.05	0.93	103	1%	107	0.6%	in	0	107
	Northbound	Through	8	2	1.05	0.93	9	25%	9			0	9
		Right	117	1	1.05	0.93	132	1%	137			0	137
		U-Turn			1.05	0.93	0	0%	0			0	0
	Southbound	Left	20	0	1.05	0.93	23	0%	23			0	23
		Through	752	14	1.05	0.93	849	2%	883	44.1%	Out	56	939
		Right	47	1	1.05	0.93	53	2%	55	0.6%	Out	1	59
		U-Turn			1.05	0.93	0	0%	0			0	0
		Left	38	1	1.05	0.93	43	3%	45			0	45
		Through	177	16	1.05	0.93	200	9%	208	44.4%	in	14	221
	Right	21	0	1.05	0.93	24	0%	25			0	25	

Ext	Intersection	Approach	Mvmt	Existing Traffic				Background Traffic			Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
3. John Rodas Blvd at Project Frontage Rd	Eastbound	U-Turn			1.05	0.95	0	0%	0			0	0
		Left			1.05	0.95	0	0%	0	45.0%	Out	57	57
		Through			1.05	0.95	0	0%	0			0	0
	Westbound	Right			1.05	0.95	0	0%	0	29.1%	Out	37	37
		U-Turn			1.05	0.95	0	0%	0			0	0
		Left			1.05	0.95	0	0%	0			0	0
	Northbound	Through			1.05	0.95	0	0%	0			0	0
		Right			1.05	0.95	0	0%	0	29.1%	in	9	9
		U-Turn	557	19	1.05	0.95	618	3%	640			0	640
	Southbound	Through			1.05	0.95	0	0%	0			0	0
		Left			1.05	0.95	0	0%	0			0	0
		Right	310	8	1.05	0.95	343	3%	358			0	356
		U-Turn			1.05	0.95	0	0%	0	45.0%	in	14	14

Est		Existing Traffic							Background Traffic			Build-Out	
Intersection	Approach	Mvmt't	Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
4. John Rodas Blvd at Ellis Rd	Eastbound	U-Turn	0	0	1.05	0.93	0	0%	0			0	0
		Left	0	0	1.05	0.93	0	0%	0			0	0
		Through	0	0	1.05	0.93	0	0%	0			0	0
	Westbound	Right	0	0	1.05	0.93	0	0%	0			0	0
		U-Turn			1.05	0.93	0	0%	0			0	0
		Left	62	1	1.05	0.93	70	2%	77	8.1%	In	2	79
	Northbound	Through	0	0	1.05	0.93	0	0%	0			0	0
		Right	148	9	1.05	0.93	167	8%	184			0	184
		U-Turn			1.05	0.93	0	0%	0			0	0
	Southbound	Left	0	0	1.05	0.93	0	0%	0			0	0
		Through	630	9	1.05	0.93	711	1%	740	35.9%	Cut	46	765
		Right	180	4	1.05	0.93	203	2%	211	9.1%	Cut	8	219

Est		Existing Traffic							Background Traffic			Build-Out	
Intersection	Approach	Mvmt't	Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
5. US 192 at SB I-95 Ramp	Eastbound	U-Turn	0	0	0.98	0.95	0	0%	0			0	0
		Left	215	18	0.98	0.95	217	8%	222	5.5%	In	2	223
		Right	181	1	0.98	0.95	183	1%	188			0	188
	Westbound	U-Turn			0.98	0.95	0	0%	0			0	0
		Left	161	2	0.98	0.95	163	1%	168	18.3%	Out	23	189
		Through	218	16	0.98	0.95	220	7%	225	5.5%	Out	7	232
	Northbound	Right	0	0	0.98	0.95	0	0%	0			0	0
		U-Turn			0.98	0.95	0	0%	0			0	0
		Left	0	0	0.98	0.95	0	0%	0			0	0
	Southbound	Through	0	0	0.98	0.95	0	0%	0			0	0
		Right	0	0	0.98	0.95	0	0%	0			0	0
		U-Turn	442	1	0.98	0.95	447	0%	458	2.0%	In	1	457

Est		Existing Traffic							Background Traffic			Build-Out	
Intersection	Approach	Mvmt't	Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
6. US 192 at NB I-95 Ramp	Eastbound	U-Turn	0	0	0.98	0.95	0	0%	0			0	0
		Left	110	7	0.98	0.95	111	6%	117			0	117
		Through	551	7	0.98	0.95	557	1%	565	7.5%	In	2	567
	Westbound	Right	0	0	0.98	0.95	0	0%	0			0	0
		U-Turn			0.98	0.95	0	0%	0			0	0
		Left	0	0	0.98	0.95	0	0%	0			0	0
	Northbound	Through	305	17	0.98	0.95	308	6%	324	23.8%	Out	30	354
		Right	506	4	0.98	0.95	511	1%	537	2.0%	Out	3	540
		U-Turn			0.98	0.95	0	0%	0			0	0
	Southbound	Left	95	5	0.98	0.95	96	5%	98			0	98
		Through	0	0	0.98	0.95	0	0%	0			0	0
		Right	510	5	0.98	0.95	515	1%	528	18.3%	In	6	532

Ext													
Intersection	Approach	Mvmt	Existing Traffic					Background Traffic			Build-Out		
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
7. US 192 at Coastal Ln	Eastbound	U-Turn			1.05	0.55	0	0%	0			0	0
		Left	69	1	1.05	0.55	76	1%	84	25.8%	in	8	92
		Through	1012	12	1.05	0.55	1119	1%	1,231			0	1,231
	Westbound	Right	36	1	1.05	0.55	40	3%	44			0	44
		U-Turn			1.05	0.55	0	0%	0			0	0
		Left	34	1	1.05	0.55	38	3%	41			0	41
	Northbound	Through	640	12	1.05	0.55	707	2%	778			0	778
		Right	46	0	1.05	0.55	51	0%	58			0	58
		U-Turn			1.05	0.55	0	0%	0			0	0
	Southbound	Left	29	0	1.05	0.55	32	0%	33			0	33
		Through	5	0	1.05	0.55	6	0%	6			0	6
		Right	25	0	1.05	0.55	28	0%	29			0	29
	Southbound	U-Turn			1.05	0.55	0	0%	0			0	0
		Left	16	0	1.05	0.55	11	0%	11			0	11
		Through	4	0	1.05	0.55	4	0%	5			0	5
	Right	20	0	1.05	0.55	22	0%	23	25.8%	out	33	58	

PM Peak-Hour Factored TMC's

Ext	Intersection	Approach	Mvmt's	Existing Traffic				Background Traffic				Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
1. John Rodas Blvd at US 192	Eastbound	U-Turn			0.97	0.95	0	0%	0	0	0%	0	0	0
		Left	203	5	0.97	0.95	207	2%	17	235	0%	0	0	235
		Through	575	18	0.97	0.95	587	3%	72	659	0%	0	0	689
	Westbound	Right	18	0	0.97	0.95	18	0%	0	19	0%	0	0	19
		U-Turn			0.97	0.95	0	0%	0	0	0%	0	0	0
		Left	27	0	0.97	0.95	28	0%	0	29	0%	0	0	29
	Northbound	Through	597	20	0.97	0.95	610	3%	84	704	0%	0	0	704
		Right	127	2	0.97	0.95	130	2%	0	136	28%	In	35	172
		U-Turn			0.97	0.95	0	0%	0	0	0%	0	0	0
	Southbound	Left	6	1	0.97	0.95	6	17%	0	6	0%	0	0	6
		Through	3	0	0.97	0.95	3	0%	0	3	0%	0	0	3
		Right	9	0	0.97	0.95	9	0%	0	9	0%	0	0	9
	Southbound	U-Turn			0.97	0.95	0	0%	0	0	0%	0	0	0
		Left	270	3	0.97	0.95	278	1%	0	281	29%	Out	19	301
		Through	7	0	0.97	0.95	7	0%	0	7	0%	0	0	7
		Right	844	5	0.97	0.95	858	1%	15	886	0%	0	0	886

Ext	Intersection	Approach	Mvmt's	Existing Traffic				Background Traffic				Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
2. John Rodas Blvd at Sheridan Rd	Eastbound	U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	24	0	1.05	0.95	27	0%	0	28	0%	0	0	28
		Through	10	1	1.05	0.95	11	10%	0	11	0%	0	0	11
	Westbound	Right	54	1	1.05	0.95	60	2%	0	62	0%	0	0	62
		U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	59	1	1.05	0.95	65	2%	9	77	1%	In	1	78
	Northbound	Through	18	0	1.05	0.95	20	0%	0	21	0%	0	0	21
		Right	54	1	1.05	0.95	60	2%	0	62	0%	0	0	62
		U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
	Southbound	Left	45	0	1.05	0.95	50	0%	0	52	0%	0	0	52
		Through	311	14	1.05	0.95	344	5%	6	364	44%	Out	30	394
		Right	109	1	1.05	0.95	120	1%	11	136	1%	Out	0	136
	Southbound	U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	77	0	1.05	0.95	85	0%	0	89	0%	0	0	89
		Through	502	11	1.05	0.95	555	2%	8	583	44%	In	55	638
		Right	45	1	1.05	0.95	50	2%	0	52	0%	0	0	52

Ext	Intersection	Approach	Mvmt's	Existing Traffic				Background Traffic				Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
3. John Rodas Blvd at Project Frontage Rd	Eastbound	U-Turn			1.05	0.94	0	0%	0	0	0%	0	0	0
		Left			1.05	0.94	0	0%	0	0	45%	Out	30	30
		Through			1.05	0.94	0	0%	0	0	0%	0	0	0
	Westbound	Right			1.05	0.94	0	0%	0	0	23%	Out	19	19
		U-Turn			1.05	0.94	0	0%	0	0	0%	0	0	0
		Left			1.05	0.94	0	0%	0	0	0%	0	0	0
	Northbound	Through			1.05	0.94	0	0%	0	0	0%	0	0	0
		Right			1.05	0.94	0	0%	0	0	0%	0	0	0
		U-Turn			1.05	0.94	0	0%	0	0	0%	0	0	0
	Southbound	Left			1.05	0.94	0	0%	0	0	29%	In	36	36
		Through	333	7	1.05	0.94	372	2%	17	404	0%	0	0	404
		Right			1.05	0.94	0	0%	0	0	0%	0	0	0
	Southbound	U-Turn			1.05	0.94	0	0%	0	0	0%	0	0	0
		Left			1.05	0.94	0	0%	0	0	0%	0	0	0
		Through	921	8	1.05	0.94	1029	1%	15	1085	0%	0	0	1085
		Right			1.05	0.94	0	0%	0	45%	In	56	56	

Intersection	Approach	Mvmt	Existing Traffic					Background Traffic					Build-Out	
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
4. John Rhodes Blvd at Ellis Rd	Eastbound	U-Turn	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Through	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
	Westbound	U-Turn	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	117	0	1.05	0.95	129	5%	0	142	6%	In	3	150
		Through	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
	Northbound	U-Turn	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	281	4	1.05	0.95	311	1%	0	329	36%	Out	24	353
		Through	79	2	1.05	0.95	86	3%	0	90	6%	Out	4	94
	Southbound	U-Turn	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	132	3	1.05	0.95	146	2%	0	152	0%	0	0	152
		Through	514	8	1.05	0.95	568	2%	0	586	36%	In	45	641
		Right	0	0	1.05	0.95	0	0%	0	0%	0	0	0	

Intersection	Approach	Mvmt	Existing Traffic					Background Traffic					Build-Out	
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
5. US 192 at SB I-95 Ramp	Eastbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Through	187	11	0.96	0.95	189	6%	59	251	8%	In	7	258
	Westbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	423	5	0.96	0.95	427	1%	32	468	18%	Out	12	480
		Through	330	14	0.96	0.95	333	4%	66	408	6%	Out	4	410
	Northbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Through	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
	Southbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	589	7	0.96	0.95	575	1%	21	607	2%	In	2	610
		Through	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Right	180	9	0.96	0.95	182	5%	0	188	0%	0	188	

Intersection	Approach	Mvmt	Existing Traffic					Background Traffic					Build-Out	
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
6. US 192 at NB I-95 Ramp	Eastbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	160	10	0.96	0.95	101	10%	0	108	0%	0	0	108
		Through	581	11	0.96	0.95	587	2%	87	704	8%	In	9	713
	Westbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Through	623	17	0.96	0.95	630	3%	98	759	24%	Out	16	775
	Northbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	134	6	0.96	0.95	135	4%	0	138	0%	0	0	138
		Through	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
	Southbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	162	1	0.96	0.95	164	1%	28	195	18%	In	23	218
		Through	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Right	0	0	0.96	0.95	0	0%	0	0%	0	0	0	

Intersection	Approach	Mvmt	Existing Traffic					Background Traffic				Build-Out		
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
7, US 192 at Coastal Ln	Eastbound	U-Turn			1.05	0.95	0	0%	0	0	0%	in	0	0
		Left	43	2	1.05	0.95	48	5%	0	52	26%	in	0	84
		Through	673	10	1.05	0.95	744	1%	0	819	0%	in	0	819
	Westbound	Right	59	2	1.05	0.95	65	3%	108	179	0%	in	0	179
		U-Turn			1.05	0.95	0	0%	0	0	0%	in	0	0
		Left	77	1	1.05	0.95	85	1%	79	173	0%	in	0	173
	Northbound	Through	983	13	1.05	0.95	1086	1%	0	1,196	0%	in	0	1,196
		Right	41	0	1.05	0.95	45	0%	0	50	0%	in	0	50
		U-Turn			1.05	0.95	0	0%	0	0	0%	in	0	0
	Southbound	Left	60	3	1.05	0.95	66	5%	121	190	0%	in	0	190
		Through	21	1	1.05	0.95	23	5%	0	24	0%	in	0	24
		Right	29	1	1.05	0.95	32	3%	79	113	0%	in	0	113
	Eastbound	U-Turn			1.05	0.95	0	0%	0	0	0%	out	0	0
		Left	33	0	1.05	0.95	36	0%	0	36	0%	out	0	36
		Through	9	0	1.05	0.95	10	0%	0	10	0%	out	0	10
Westbound	Right	75	2	1.05	0.95	83	3%	0	86	26%	out	16	104	

DE TRAFFIC

http:de-traffic.com
John Rodes Blvd at US 192
Brevard County, FL

File Name : John at US 192_Rep
Site Code : 00000001
Start Date : 5/1/2018
Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	John Rodes Blvd Southbound				US 192 Westbound				John Rodes Blvd Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	19	1	33	53	1	146	37	184	3	3	4	10	86	129	1	216	463
07:15 AM	25	2	54	81	3	158	41	202	5	2	5	12	80	188	0	268	563
07:30 AM	29	0	47	76	2	144	38	184	4	2	6	12	105	168	0	273	545
07:45 AM	28	1	54	83	2	201	44	247	5	1	6	12	102	184	1	287	629
Total	101	4	188	293	8	649	160	817	17	8	21	46	373	669	2	1044	2200
08:00 AM	26	0	44	70	2	168	37	207	4	2	5	11	103	178	2	283	571
08:15 AM	28	1	54	83	4	128	46	178	1	1	5	7	104	169	1	274	542
08:30 AM	34	1	56	91	5	147	36	188	5	1	5	11	88	180	2	270	560
08:45 AM	30	0	40	70	6	165	37	208	2	1	3	6	81	147	3	231	515
Total	118	2	194	314	17	608	156	781	12	5	18	35	376	674	8	1058	2188
04:00 PM	44	1	99	144	4	194	27	225	1	1	2	4	39	135	1	175	548
04:15 PM	53	0	102	155	5	221	34	260	3	2	2	7	44	159	0	203	625
04:30 PM	47	2	124	173	2	200	41	243	2	1	1	4	54	137	2	193	613
04:45 PM	64	2	142	208	5	160	35	200	1	0	2	3	51	144	4	199	610
Total	208	5	467	680	16	775	137	928	7	4	7	18	188	575	7	770	2396
05:00 PM	69	2	166	237	6	147	30	183	2	2	3	7	64	130	5	199	626
05:15 PM	63	2	174	239	9	133	32	174	1	0	2	3	44	158	4	206	622
05:30 PM	74	1	162	237	7	157	30	194	2	1	2	5	44	143	5	192	628
05:45 PM	57	2	128	187	5	139	32	176	2	1	2	5	37	145	2	184	552
Total	263	7	630	900	27	576	124	727	7	4	9	20	189	576	16	781	2428
Grand Total	690	18	1479	2187	68	2608	577	3253	43	21	55	119	1126	2494	33	3653	9212
Apprch %	31.6	0.8	67.6		2.1	80.2	17.7		36.1	17.6	46.2		30.8	68.3	0.9		
Total %	7.5	0.2	16.1	23.7	0.7	28.3	6.3	35.3	0.5	0.2	0.6	1.3	12.2	27.1	0.4	39.7	

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 John Rodes Blvd at US 192
 Brevard County, FL

File Name : John at US 192_Rej
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 2

Groups Printed- Automobiles - Commercial

Factor	John Rodes Blvd Southbound				US 192 Westbound				John Rodes Blvd Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Automobiles	678	18	1455	2151	66	2539	567	3172	41	21	52	114	1093	2434	33	3560	8997
% Automobiles	98.3	100	98.4	98.4	97.1	97.4	98.3	97.5	95.3	100	94.5	95.8	97.1	97.6	100	97.5	97.7
Commercial	12	0	24	36	2	69	10	81	2	0	3	5	33	60	0	93	215
% Commercial	1.7	0	1.6	1.6	2.9	2.6	1.7	2.5	4.7	0	5.5	4.2	2.9	2.4	0	2.5	2.3

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 John Rodes Blvd at US 192
 Brevard County, FL

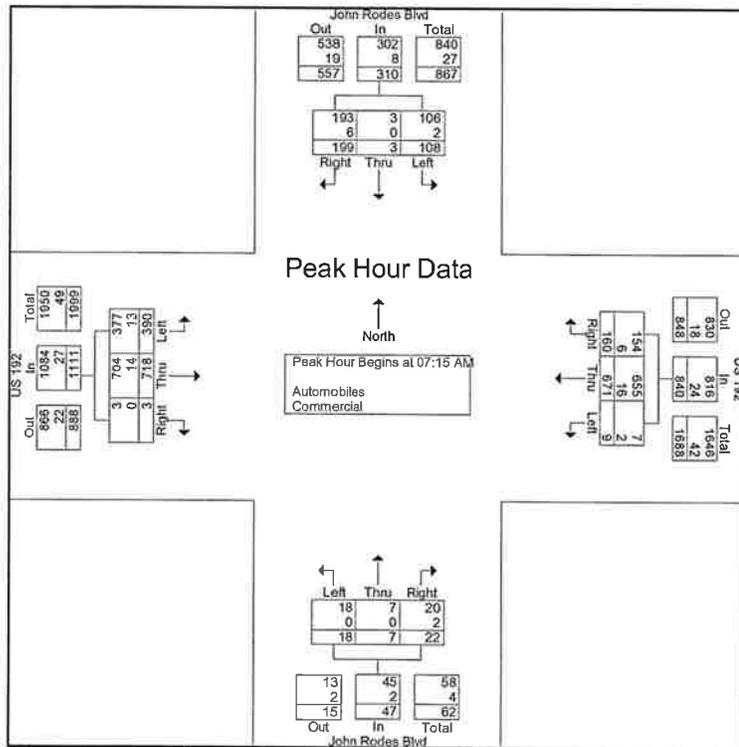
File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 3

Start Time	John Rodes Blvd Southbound				US 192 Westbound				John Rodes Blvd Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	25	2	54	81	3	158	41	202	5	2	5	12	80	188	0	268	563
07:30 AM	29	0	47	76	2	144	38	184	4	2	6	12	105	168	0	273	545
07:45 AM	28	1	54	83	2	201	44	247	5	1	6	12	102	184	1	287	629
08:00 AM	26	0	44	70	2	168	37	207	4	2	5	11	103	178	2	283	571
Total Volume	108	3	199	310	9	671	160	840	18	7	22	47	390	718	3	1111	2308
% App. Total	34.8	1	64.2		1.1	79.9	19		38.3	14.9	46.8		35.1	64.6	0.3		
PHF	.931	.375	.921	.934	.750	.835	.909	.850	.900	.875	.917	.979	.929	.955	.375	.968	.917
Automobiles	106	3	193	302	7	655	154	816	18	7	20	45	377	704	3	1084	2247
% Automobiles	98.1	100	97.0	97.4	77.8	97.6	96.3	97.1	100	100	90.9	95.7	96.7	98.1	100	97.6	97.4
Commercial	2	0	6	8	2	16	6	24	0	0	2	2	13	14	0	27	61
% Commercial	1.9	0	3.0	2.6	22.2	2.4	3.8	2.9	0	0	9.1	4.3	3.3	1.9	0	2.4	2.6

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 John Rodes Blvd at US 192
 Brevard County, FL

File Name : John at US 192_Rep
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 Start Date : 5/1/2018
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 John Rodes Blvd at US 192
 Brevard County, FL

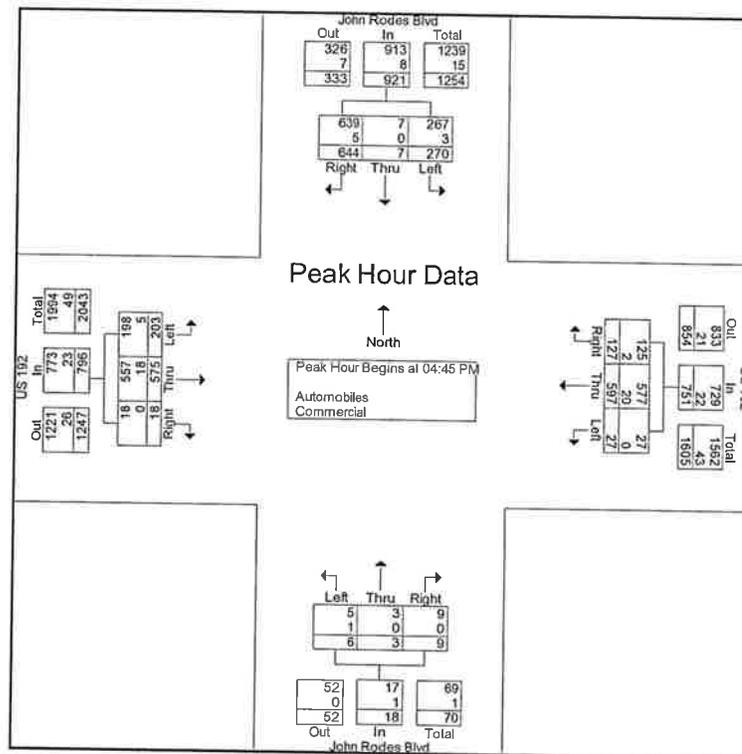
File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 5

Start Time	John Rodes Blvd Southbound				US 192 Westbound				John Rodes Blvd Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	64	2	142	208	5	160	35	200	1	0	2	3	51	144	4	199	610
05:00 PM	69	2	166	237	6	147	30	183	2	2	3	7	64	130	5	199	626
05:15 PM	63	2	174	239	9	133	32	174	1	0	2	3	44	158	4	206	622
05:30 PM	74	1	162	237	7	157	30	194	2	1	2	5	44	143	5	192	628
Total Volume	270	7	644	921	27	597	127	751	6	3	9	18	203	575	18	796	2486
% App. Total	29.3	0.8	69.9		3.6	79.5	16.9		33.3	16.7	50		25.5	72.2	2.3		
PHF	.912	.875	.925	.963	.750	.933	.907	.939	.750	.375	.750	.643	.793	.910	.900	.966	.990
Automobiles	267	7	639	913	27	577	125	729	5	3	9	17	198	557	18	773	2432
% Automobiles	98.9	100	99.2	99.1	100	96.6	98.4	97.1	83.3	100	100	94.4	97.5	96.9	100	97.1	97.8
Commercial	3	0	5	8	0	20	2	22	1	0	0	1	5	18	0	23	54
% Commercial	1.1	0	0.8	0.9	0	3.4	1.6	2.9	16.7	0	0	5.6	2.5	3.1	0	2.9	2.2

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 John Rodes Blvd at US 192
 Brevard County, FL

File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 6



DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at US 192
 Brevard County, FL

File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 7

Groups Printed- Peds

Start Time	John Rodes Blvd Southbound					US 192 Westbound					John Rodes Blvd Northbound					US 192 Eastbound					InL Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	5
08:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3
04:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
05:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
05:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	1	1	4
05:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	3	3	11
Grand Total	0	0	0	2	2	0	0	0	9	9	0	0	0	0	0	0	0	0	10	10	21
Apprch %	0	0	0	100		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	9.5	9.5	0	0	0	42.9	42.9	0	0	0	0	0	0	0	0	47.6	47.6	

DE TRAFFIC

http:de-traffic.com
John Rodes Blvd at Sheridan Rd
Brevard County, FL

File Name : John at Sheridan
Site Code : 00000003
Start Date : 10/18/2017
Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	John Rodes Blvd Southbound				Sheridan Rd Westbound				John Rodes Blvd Northbound				Sorento Circle Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	4	31	4	39	19	0	20	39	3	146	9	158	9	2	9	20	256
07:15 AM	6	36	7	49	19	3	24	46	4	155	7	166	14	2	11	27	288
07:30 AM	9	45	5	59	21	1	31	53	4	166	11	181	15	2	14	31	324
07:45 AM	9	44	6	59	29	3	29	61	5	200	13	218	20	4	15	39	377
Total	28	156	22	206	88	7	104	199	16	667	40	723	58	10	49	117	1245
08:00 AM	11	45	5	61	21	2	32	55	6	205	10	221	11	5	14	30	367
08:15 AM	9	43	5	57	20	2	25	47	5	181	13	199	13	5	10	28	331
08:30 AM	11	43	5	59	21	2	30	53	5	136	16	157	11	6	10	27	296
08:45 AM	14	42	5	61	17	4	34	55	6	105	16	127	9	3	8	20	263
Total	45	173	20	238	79	10	121	210	22	627	55	704	44	19	42	105	1257
04:00 PM	20	129	11	160	10	6	12	28	9	74	25	108	4	1	11	16	312
04:15 PM	24	117	10	151	11	4	15	30	11	85	19	115	6	0	10	16	312
04:30 PM	16	137	9	162	14	2	16	32	12	79	24	115	2	2	14	18	327
04:45 PM	21	138	12	171	14	4	10	28	10	86	26	122	5	1	15	21	342
Total	81	521	42	644	49	16	53	118	42	324	94	460	17	4	50	71	1293
05:00 PM	19	123	13	155	15	8	14	37	9	68	34	111	8	2	13	23	326
05:15 PM	21	104	11	136	16	4	14	34	14	78	25	117	9	5	12	26	313
05:30 PM	19	116	15	150	16	5	19	40	15	53	24	92	9	5	14	28	310
05:45 PM	24	107	13	144	13	6	19	38	13	50	19	82	7	4	10	21	285
Total	83	450	52	585	60	23	66	149	51	249	102	402	33	16	49	98	1234
Grand Total	237	1300	136	1673	276	56	344	676	131	1867	291	2289	152	49	190	391	5029
Approch %	14.2	77.7	8.1		40.8	8.3	50.9		5.7	81.6	12.7		38.9	12.5	48.6		
Total %	4.7	25.9	2.7	33.3	5.5	1.1	6.8	13.4	2.6	37.1	5.8	45.5	3	1	3.8	7.8	

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 2

Groups Printed- Automobiles - Commercial

Factor	John Rodes Blvd Southbound				Sheridan Rd Westbound				John Rodes Blvd Northbound				Sorento Circle Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Automobiles	230	1249	132	1611	271	52	338	661	128	1817	287	2232	148	48	185	381	4885
% Automobiles	97	96.1	97.1	96.3	98.2	92.9	98.3	97.8	97.7	97.3	98.6	97.5	97.4	98	97.4	97.4	97.1
Commercial	7	51	4	62	5	4	6	15	3	50	4	57	4	1	5	10	144
% Commercial	3	3.9	2.9	3.7	1.8	7.1	1.7	2.2	2.3	2.7	1.4	2.5	2.6	2	2.6	2.6	2.9

DE TRAFFIC

http://de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

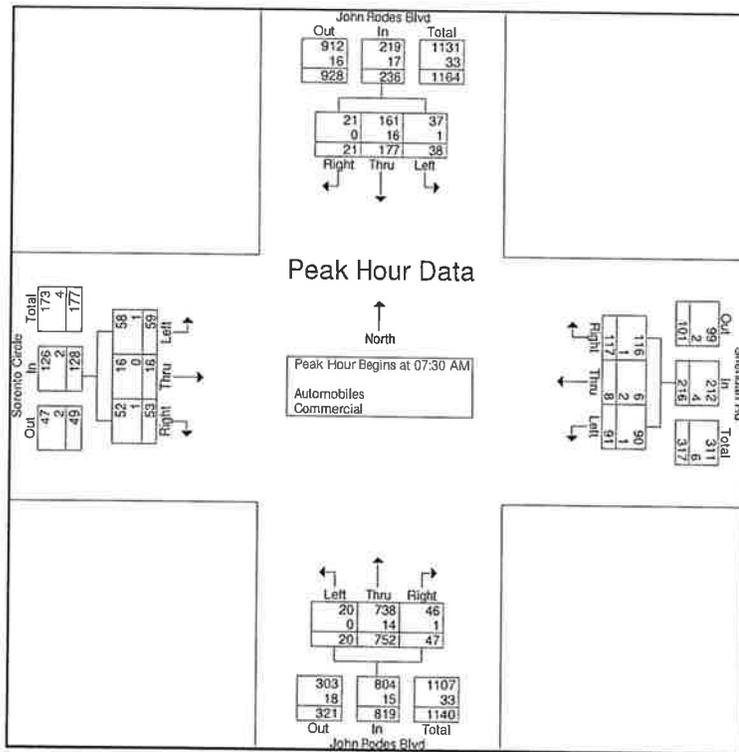
File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 3

Start Time	John Rodes Blvd Southbound				Sheridan Rd Westbound				John Rodes Blvd Northbound				Sorento Circle Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	45	5	59	21	1	31	53	4	166	11	181	15	2	14	31	324
07:45 AM	9	44	6	59	29	3	29	61	5	200	13	218	20	4	15	39	377
08:00 AM	11	45	5	61	21	2	32	55	6	205	10	221	11	5	14	30	367
08:15 AM	9	43	5	57	20	2	25	47	5	181	13	199	13	5	10	28	331
Total Volume	38	177	21	236	91	8	117	216	20	752	47	819	59	16	53	128	1399
% App. Total	16.1	75	8.9		42.1	3.7	54.2		2.4	91.8	5.7		46.1	12.5	41.4		
PHF	.864	.983	.875	.967	.784	.667	.914	.885	.833	.917	.904	.926	.738	.800	.883	.821	.928
Automobiles	37	161	21	219	90	6	116	212	20	738	46	804	58	16	52	126	1361
% Automobiles	97.4	91.0	100	92.8	98.9	75.0	99.1	98.1	100	98.1	97.9	98.2	98.3	100	98.1	98.4	97.3
Commercial	1	16	0	17	1	2	1	4	0	14	1	15	1	0	1	2	38
% Commercial	2.6	9.0	0	7.2	1.1	25.0	0.9	1.9	0	1.9	2.1	1.8	1.7	0	1.9	1.6	2.7

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 4



DE TRAFFIC

http://de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

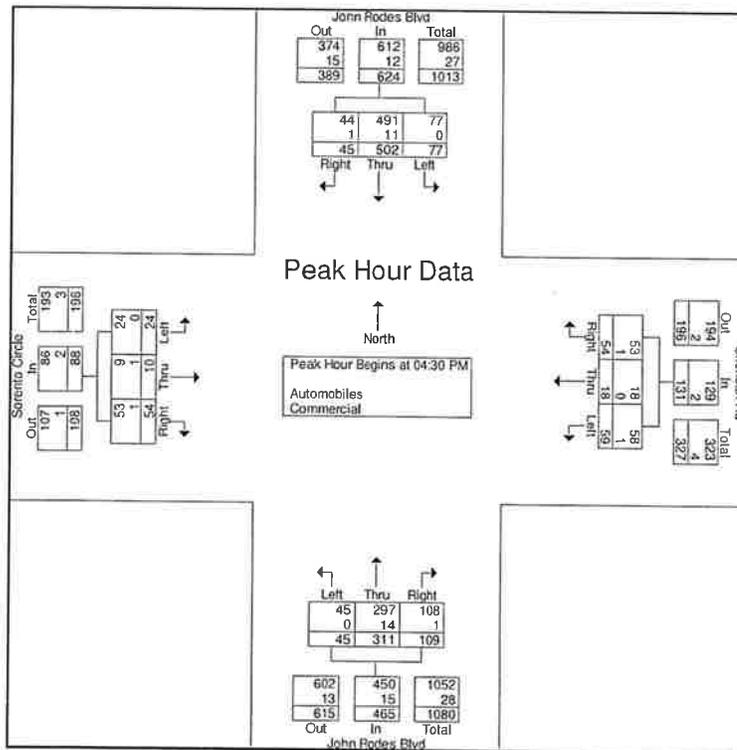
File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 5

Start Time	John Rodes Blvd Southbound				Sheridan Rd Westbound				John Rodes Blvd Northbound				Sorento Circle Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	16	137	9	162	14	2	16	32	12	79	24	115	2	2	14	18	327
04:45 PM	21	138	12	171	14	4	10	28	10	86	26	122	5	1	15	21	342
05:00 PM	19	123	13	155	15	8	14	37	9	68	34	111	8	2	13	23	326
05:15 PM	21	104	11	136	16	4	14	34	14	78	25	117	9	5	12	26	313
Total Volume	77	502	45	624	59	18	54	131	45	311	109	465	24	10	54	88	1308
% App. Total	12.3	80.4	7.2		45	13.7	41.2		9.7	66.9	23.4		27.3	11.4	61.4		
PHF	.917	.909	.865	.912	.922	.563	.844	.885	.804	.904	.801	.953	.667	.500	.900	.846	.956
Automobiles	77	491	44	612	58	18	53	129	45	297	108	450	24	9	53	86	1277
% Automobiles	100	97.8	97.8	98.1	98.3	100	98.1	98.5	100	95.5	99.1	96.8	100	90.0	98.1	97.7	97.6
Commercial	0	11	1	12	1	0	1	2	0	14	1	15	0	1	1	2	31
% Commercial	0	2.2	2.2	1.9	1.7	0	1.9	1.5	0	4.5	0.9	3.2	0	10.0	1.9	2.3	2.4

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 6



DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 7

Groups Printed- Peds

Start Time Factor	John Rodes Blvd Southbound					Sheridan Rd Westbound					John Rodes Blvd Northbound					Sorento Circle Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
05:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	2	2	5
Grand Total	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	3	3	7
Apprch %	0	0	0	0		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	57.1	57.1	0	0	0	0	0	0	0	0	42.9	42.9	

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	John Rodes Blvd Southbound				Ellis Rd Westbound				John Rodes Blvd Northbound				N/A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	46	42	0	88	20	0	21	41	0	125	39	164	0	0	0	0	293
07:15 AM	56	55	0	111	21	0	25	46	0	143	41	184	0	0	0	0	341
07:30 AM	63	61	0	124	18	0	31	49	0	153	54	207	0	0	0	0	380
07:45 AM	42	48	0	90	19	0	37	56	0	135	44	179	0	0	0	0	325
Total	207	206	0	413	78	0	114	192	0	556	178	734	0	0	0	0	1339
08:00 AM	51	43	0	94	11	0	43	54	0	165	43	208	0	0	0	0	356
08:15 AM	42	43	0	85	14	0	37	51	0	177	39	216	0	0	0	0	352
08:30 AM	54	56	0	110	15	0	36	51	0	143	42	185	0	0	0	0	346
08:45 AM	44	64	0	108	12	0	41	53	0	123	35	158	0	0	0	0	319
Total	191	206	0	397	52	0	157	209	0	608	159	767	0	0	0	0	1373
04:00 PM	29	93	0	122	31	0	42	73	0	62	11	73	0	0	0	0	268
04:15 PM	34	102	0	136	35	0	63	98	0	72	19	91	0	0	0	0	325
04:30 PM	19	90	0	109	42	0	55	97	0	83	15	98	0	0	0	0	304
04:45 PM	24	116	0	140	34	0	35	69	0	78	13	91	0	0	0	0	300
Total	106	401	0	507	142	0	195	337	0	295	58	353	0	0	0	0	1197
05:00 PM	27	126	0	153	26	0	44	70	0	87	18	105	0	0	0	0	328
05:15 PM	35	108	0	143	34	0	55	89	0	68	22	90	0	0	0	0	322
05:30 PM	41	144	0	185	27	0	43	70	0	72	19	91	0	0	0	0	346
05:45 PM	29	136	0	165	30	0	47	77	0	54	19	73	0	0	0	0	315
Total	132	514	0	646	117	0	189	306	0	281	78	359	0	0	0	0	1311
Grand Total	636	1327	0	1963	389	0	655	1044	0	1740	473	2213	0	0	0	0	5220
Approch %	32.4	67.6	0		37.3	0	62.7		0	78.6	21.4		0	0	0		
Total %	12.2	25.4	0	37.6	7.5	0	12.5	20	0	33.3	9.1	42.4	0	0	0	0	

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 2

Groups Printed- Automobiles - Commercial

	John Rodes Blvd Southbound				Ellis Rd Westbound				John Rodes Blvd Northbound				N/A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	630	1294	0	1924	375	0	628	1003	0	1714	465	2179	0	0	0	0	5106
% Automobiles	99.1	97.5	0	98	96.4	0	95.9	96.1	0	98.5	98.3	98.5	0	0	0	0	97.8
Commercial	6	33	0	39	14	0	27	41	0	26	8	34	0	0	0	0	114
% Commercial	0.9	2.5	0	2	3.6	0	4.1	3.9	0	1.5	1.7	1.5	0	0	0	0	2.2

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

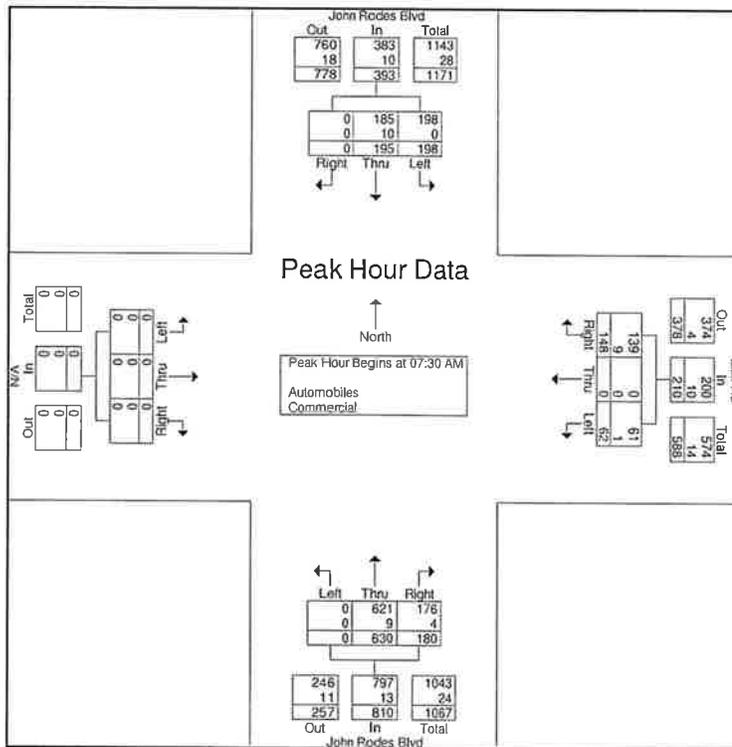
File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 3

Start Time	John Rodes Blvd Southbound				Ellis Rd Westbound				John Rodes Blvd Northbound				N/A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	63	61	0	124	18	0	31	49	0	153	54	207	0	0	0	0	380
07:45 AM	42	48	0	90	19	0	37	56	0	135	44	179	0	0	0	0	325
08:00 AM	51	43	0	94	11	0	43	54	0	165	43	208	0	0	0	0	356
08:15 AM	42	43	0	85	14	0	37	51	0	177	39	216	0	0	0	0	352
Total Volume	198	195	0	393	62	0	148	210	0	630	180	810	0	0	0	0	1413
% App. Total	50.4	49.6	0		29.5	0	70.5		0	77.8	22.2		0	0	0		
PHF	.786	.799	.000	.792	.816	.000	.860	.938	.000	.890	.833	.938	.000	.000	.000	.000	.930
Automobiles	198	185	0	383	61	0	139	200	0	621	176	797	0	0	0	0	1380
% Automobiles	100	94.9	0	97.5	98.4	0	93.9	95.2	0	98.6	97.8	98.4	0	0	0	0	97.7
Commercial	0	10	0	10	1	0	9	10	0	9	4	13	0	0	0	0	33
% Commercial	0	5.1	0	2.5	1.6	0	6.1	4.8	0	1.4	2.2	1.6	0	0	0	0	2.3

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 4



DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 5

Start Time	John Rodes Blvd Southbound				Ellis Rd Westbound				John Rodes Blvd Northbound				N/A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	27	126	0	153	26	0	44	70	0	87	18	105	0	0	0	0	328
05:15 PM	35	108	0	143	34	0	55	89	0	68	22	90	0	0	0	0	322
05:30 PM	41	144	0	185	27	0	43	70	0	72	19	91	0	0	0	0	346
05:45 PM	29	136	0	165	30	0	47	77	0	54	19	73	0	0	0	0	315
Total Volume	132	514	0	646	117	0	189	306	0	281	78	359	0	0	0	0	1311
% App. Total	20.4	79.6	0		38.2	0	61.8		0	78.3	21.7		0	0	0		
PHF	.805	.892	.000	.873	.860	.000	.859	.860	.000	.807	.886	.855	.000	.000	.000	.000	.947
Automobiles	129	506	0	635	111	0	181	292	0	277	76	353	0	0	0	0	1280
% Automobiles	97.7	98.4	0	98.3	94.9	0	95.8	95.4	0	98.6	97.4	98.3	0	0	0	0	97.6
Commercial	3	8	0	11	6	0	8	14	0	4	2	6	0	0	0	0	31
% Commercial	2.3	1.6	0	1.7	5.1	0	4.2	4.6	0	1.4	2.6	1.7	0	0	0	0	2.4

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

File Name : John at Elli
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 7

Groups Printed- Peds

Start Time	John Rodes Blvd Southbound					Ellis Rd Westbound					John Rodes Blvd Northbound					N/A Eastbound					Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total		
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0			
07:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
08:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
Total	0	0	0	3	3	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	4
05:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	3
Grand Total	0	0	0	5	5	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	9
Apprch %	0	0	0	100		0	0	0	0		0	0	0	100		0	0	0	0		0	
Total %	0	0	0	55.6	55.6	0	0	0	0	0	0	0	0	44.4	44.4	0	0	0	0	0	0	

DE TRAFFIC

http:de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	I-95 SB Ramp Southbound				US 192 Westbound				N/A Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	82	0	15	97	28	39	0	67	0	0	0	0	0	50	36	86	250
07:15 AM	96	0	16	112	31	44	0	75	0	0	0	0	0	53	48	101	288
07:30 AM	115	0	21	136	44	48	0	92	0	0	0	0	0	49	37	86	314
07:45 AM	106	0	26	132	37	55	0	92	0	0	0	0	0	54	42	96	320
Total	399	0	78	477	140	186	0	326	0	0	0	0	0	206	163	369	1172
08:00 AM	124	0	20	144	44	50	0	94	0	0	0	0	0	48	38	86	324
08:15 AM	113	0	23	136	39	62	0	101	0	0	0	0	0	49	42	91	328
08:30 AM	99	0	22	121	41	51	0	92	0	0	0	0	0	64	39	103	316
08:45 AM	92	0	13	105	37	47	0	84	0	0	0	0	0	69	32	101	290
Total	428	0	78	506	161	210	0	371	0	0	0	0	0	230	151	381	1258
04:00 PM	116	0	43	159	92	93	0	185	0	0	0	0	0	55	31	86	430
04:15 PM	136	0	37	173	102	78	0	180	0	0	0	0	0	44	31	75	428
04:30 PM	143	0	44	187	108	86	0	194	0	0	0	0	0	55	34	89	470
04:45 PM	153	0	54	207	96	81	0	177	0	0	0	0	0	45	41	86	470
Total	548	0	178	726	398	338	0	736	0	0	0	0	0	199	137	336	1798
05:00 PM	137	0	45	182	117	85	0	202	0	0	0	0	0	43	28	71	455
05:15 PM	107	0	44	151	108	76	0	184	0	0	0	0	0	47	33	80	415
05:30 PM	102	0	36	138	100	71	0	171	0	0	0	0	0	41	30	71	380
05:45 PM	99	0	33	132	78	61	0	139	0	0	0	0	0	60	28	88	359
Total	445	0	158	603	403	293	0	696	0	0	0	0	0	191	119	310	1609
Grand Total	1820	0	492	2312	1102	1027	0	2129	0	0	0	0	0	826	570	1396	5837
Apprch %	78.7	0	21.3		51.8	48.2	0		0	0	0	0	0	59.2	40.8		
Total %	31.2	0	8.4	39.6	18.9	17.6	0	36.5	0	0	0	0	0	14.2	9.8	23.9	

DE TRAFFIC

http:de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
 Page No : 2

Groups Printed- Automobiles - Commercial

	I-95 SB Ramp Southbound				US 192 Westbound				N/A Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	1806	0	457	2263	1083	975	0	2058	0	0	0	0	0	778	559	1337	5658
% Automobiles	99.2	0	92.9	97.9	98.3	94.9	0	96.7	0	0	0	0	0	94.2	98.1	95.8	96.9
Commercial	14	0	35	49	19	52	0	71	0	0	0	0	0	48	11	59	179
% Commercial	0.8	0	7.1	2.1	1.7	5.1	0	3.3	0	0	0	0	0	5.8	1.9	4.2	3.1

DE TRAFFIC

http:de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

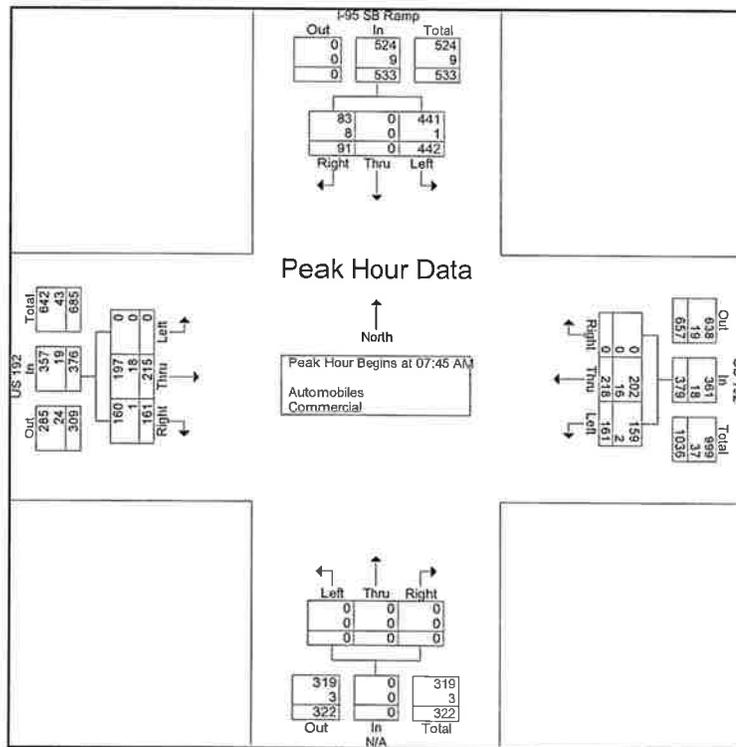
File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
 Page No : 3

Start Time	I-95 SB Ramp Southbound				US 192 Westbound				N/A Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	106	0	26	132	37	55	0	92	0	0	0	0	0	54	42	96	320
08:00 AM	124	0	20	144	44	50	0	94	0	0	0	0	0	48	38	86	324
08:15 AM	113	0	23	136	39	62	0	101	0	0	0	0	0	49	42	91	328
08:30 AM	99	0	22	121	41	51	0	92	0	0	0	0	0	64	39	103	316
Total Volume	442	0	91	533	161	218	0	379	0	0	0	0	0	215	161	376	1288
% App. Total	82.9	0	17.1		42.5	57.5	0		0	0	0	0	0	57.2	42.8		
PHF	.891	.000	.875	.925	.915	.879	.000	.938	.000	.000	.000	.000	.000	.840	.958	.913	.982
Automobiles	441	0	83	524	159	202	0	361	0	0	0	0	0	197	160	357	1242
% Automobiles	99.8	0	91.2	98.3	98.8	92.7	0	95.3	0	0	0	0	0	91.6	99.4	94.9	96.4
Commercial	1	0	8	9	2	16	0	18	0	0	0	0	0	18	1	19	46
% Commercial	0.2	0	8.8	1.7	1.2	7.3	0	4.7	0	0	0	0	0	8.4	0.6	5.1	3.6

DE TRAFFIC

http:de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
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DE TRAFFIC

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 I-95 SB Ramp at US 192
 Brevard County, FL

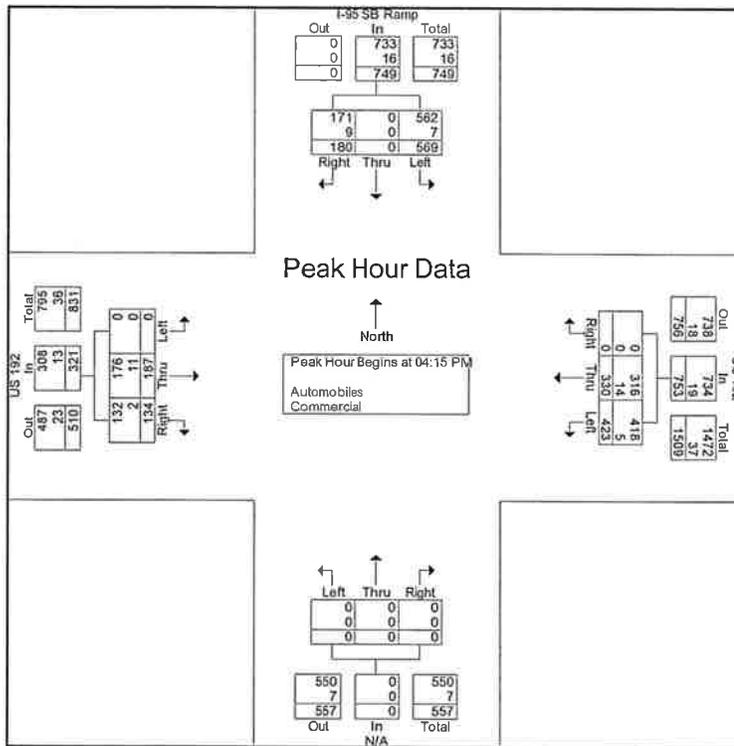
File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
 Page No : 5

Start Time	I-95 SB Ramp Southbound				US 192 Westbound				N/A Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	136	0	37	173	102	78	0	180	0	0	0	0	0	44	31	75	428
04:30 PM	143	0	44	187	108	86	0	194	0	0	0	0	0	55	34	89	470
04:45 PM	153	0	54	207	96	81	0	177	0	0	0	0	0	45	41	86	470
05:00 PM	137	0	45	182	117	85	0	202	0	0	0	0	0	43	28	71	455
Total Volume	569	0	180	749	423	330	0	753	0	0	0	0	0	187	134	321	1823
% App. Total	76	0	24		56.2	43.8	0		0	0	0	0	0	58.3	41.7		
PHF	.930	.000	.833	.905	.904	.959	.000	.932	.000	.000	.000	.000	.000	.850	.817	.902	.970
Automobiles	562	0	171	733	418	316	0	734	0	0	0	0	0	176	132	308	1775
% Automobiles	98.8	0	95.0	97.9	98.8	95.8	0	97.5	0	0	0	0	0	94.1	98.5	96.0	97.4
Commercial	7	0	9	16	5	14	0	19	0	0	0	0	0	11	2	13	48
% Commercial	1.2	0	5.0	2.1	1.2	4.2	0	2.5	0	0	0	0	0	5.9	1.5	4.0	2.6

DE TRAFFIC

http:de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
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DE TRAFFIC

http://de-traffic.com
 I-95 NB Ramp at US 192
 Brevard County, FL

File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	N/A Southbound				US 192 Westbound				I 95 Ramp Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	0	0	0	0	0	67	102	169	20	0	115	135	13	102	0	115	419
07:15 AM	0	0	0	0	0	83	122	205	26	0	141	167	19	117	0	136	508
07:30 AM	0	0	0	0	0	78	107	185	19	0	137	156	21	127	0	148	489
07:45 AM	0	0	0	0	0	87	153	240	24	0	124	148	23	134	0	157	545
Total	0	0	0	0	0	315	484	799	89	0	517	606	76	480	0	556	1961
08:00 AM	0	0	0	0	0	80	121	201	28	0	143	171	25	137	0	162	534
08:15 AM	0	0	0	0	0	70	107	177	22	0	125	147	28	149	0	177	501
08:30 AM	0	0	0	0	0	68	125	193	21	0	118	139	34	131	0	165	497
08:45 AM	0	0	0	0	0	50	147	197	22	0	107	129	27	131	0	158	484
Total	0	0	0	0	0	268	500	768	93	0	493	586	114	548	0	662	2016
04:00 PM	0	0	0	0	0	139	154	293	32	0	38	70	25	126	0	151	514
04:15 PM	0	0	0	0	0	155	154	309	26	0	41	67	21	153	0	174	550
04:30 PM	0	0	0	0	0	146	174	320	31	0	36	67	26	147	0	173	560
04:45 PM	0	0	0	0	0	140	155	295	35	0	46	81	29	136	0	165	541
Total	0	0	0	0	0	580	637	1217	124	0	161	285	101	562	0	663	2165
05:00 PM	0	0	0	0	0	182	119	301	42	0	39	81	24	145	0	169	551
05:15 PM	0	0	0	0	0	168	141	309	25	0	41	66	21	144	0	165	540
05:30 PM	0	0	0	0	0	156	135	291	28	0	39	67	22	155	0	177	535
05:45 PM	0	0	0	0	0	147	125	272	32	0	38	70	20	128	0	148	490
Total	0	0	0	0	0	653	520	1173	127	0	157	284	87	572	0	659	2116
Grand Total	0	0	0	0	0	1816	2141	3957	433	0	1328	1761	378	2162	0	2540	8258
Apprch %	0	0	0		0	45.9	54.1		24.6	0	75.4		14.9	85.1	0		
Total %	0	0	0		0	22	25.9	47.9	5.2	0	16.1	21.3	4.6	26.2	0	30.8	

DE TRAFFIC

http:de-traffic.com
 I-95 NB Ramp at US 192
 Brevard County, FL

File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 2

Groups Printed- Automobiles - Commercial

Factor	N/A Southbound				US 192 Westbound				I 95 Ramp Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Automobiles	0	0	0	0	0	1755	2125	3880	411	0	1316	1727	350	2127	0	2477	8084
% Automobiles	0	0	0	0	0	96.6	99.3	98.1	94.9	0	99.1	98.1	92.6	98.4	0	97.5	97.9
Commercial	0	0	0	0	0	61	16	77	22	0	12	34	28	35	0	63	174
% Commercial	0	0	0	0	0	3.4	0.7	1.9	5.1	0	0.9	1.9	7.4	1.6	0	2.5	2.1

DE TRAFFIC

http://de-traffic.com
 I-95 NB Ramp at US 192
 Brevard County, FL

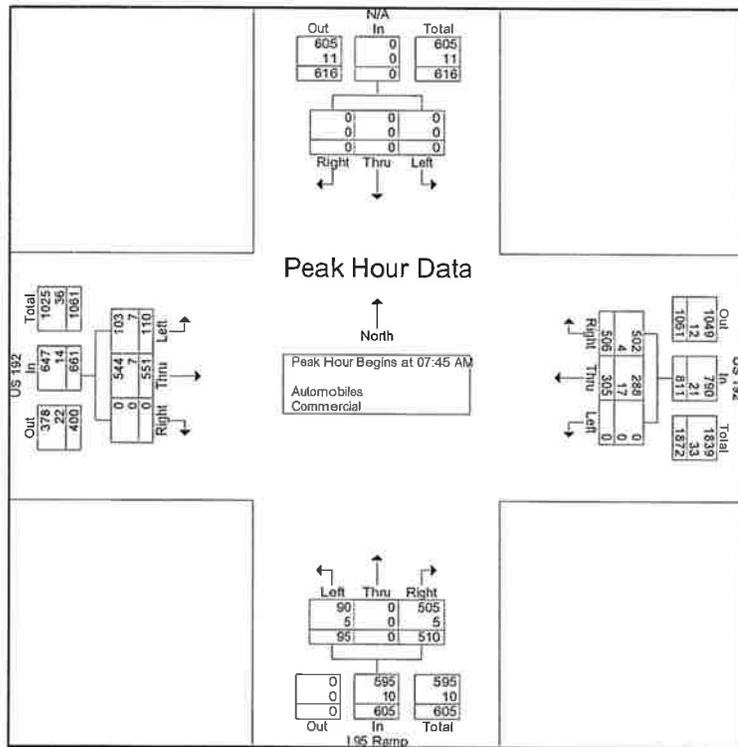
File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 3

Start Time	N/A Southbound				US 192 Westbound				I 95 Ramp Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	87	153	240	24	0	124	148	23	134	0	157	545
08:00 AM	0	0	0	0	0	80	121	201	28	0	143	171	25	137	0	162	534
08:15 AM	0	0	0	0	0	70	107	177	22	0	125	147	28	149	0	177	501
08:30 AM	0	0	0	0	0	68	125	193	21	0	118	139	34	131	0	165	497
Total Volume	0	0	0	0	0	305	506	811	95	0	510	605	110	551	0	661	2077
% App. Total	0	0	0	0	0	37.6	62.4		15.7	0	84.3		16.6	83.4	0		
PHF	.000	.000	.000	.000	.000	.876	.827	.845	.848	.000	.892	.885	.809	.924	.000	.934	.953
Automobiles	0	0	0	0	0	288	502	790	90	0	505	595	103	544	0	647	2032
% Automobiles	0	0	0	0	0	94.4	99.2	97.4	94.7	0	99.0	98.3	93.6	98.7	0	97.9	97.8
Commercial	0	0	0	0	0	17	4	21	5	0	5	10	7	7	0	14	45
% Commercial	0	0	0	0	0	5.6	0.8	2.6	5.3	0	1.0	1.7	6.4	1.3	0	2.1	2.2

DE TRAFFIC

http:de-traffic.com
 I-95 NB Ramp at US 192
 Brevard County, FL

File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 4



DE TRAFFIC

http:de-traffic.com
 I-95 NB Ramp at US 192
 Brevard County, FL

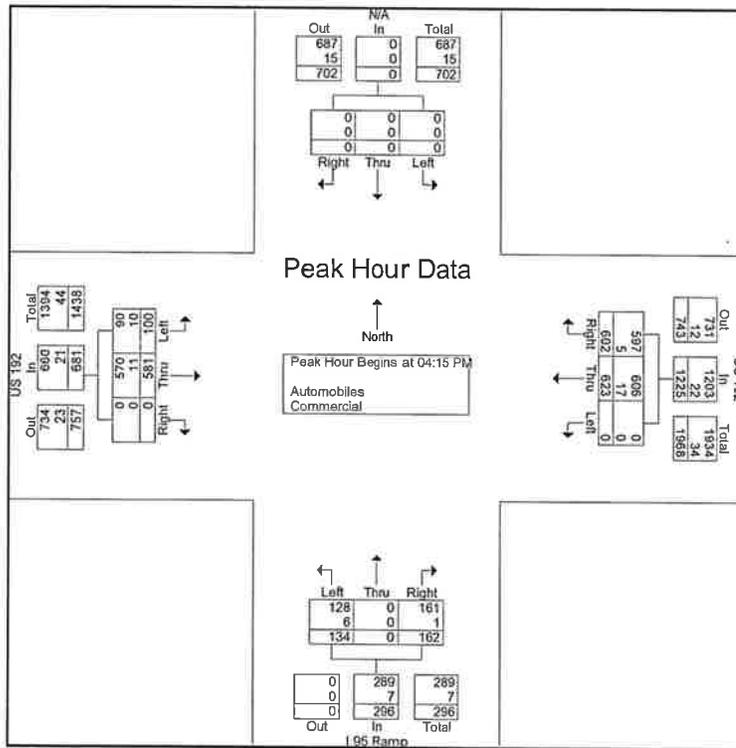
File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 5

Start Time	N/A Southbound				US 192 Westbound				I 95 Ramp Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	155	154	309	26	0	41	67	21	153	0	174	550
04:30 PM	0	0	0	0	0	146	174	320	31	0	36	67	26	147	0	173	560
04:45 PM	0	0	0	0	0	140	155	295	35	0	46	81	29	136	0	165	541
05:00 PM	0	0	0	0	0	182	119	301	42	0	39	81	24	145	0	169	551
Total Volume	0	0	0	0	0	623	602	1225	134	0	162	296	100	581	0	681	2202
% App. Total	0	0	0	0	0	50.9	49.1		45.3	0	54.7		14.7	85.3	0		
PHF	.000	.000	.000	.000	.000	.856	.865	.957	.798	.000	.880	.914	.862	.949	.000	.978	.983
Automobiles	0	0	0	0	0	606	597	1203	128	0	161	289	90	570	0	660	2152
% Automobiles	0	0	0	0	0	97.3	99.2	98.2	95.5	0	99.4	97.6	90.0	98.1	0	96.9	97.7
Commercial	0	0	0	0	0	17	5	22	6	0	1	7	10	11	0	21	50
% Commercial	0	0	0	0	0	2.7	0.8	1.8	4.5	0	0.6	2.4	10.0	1.9	0	3.1	2.3

DE TRAFFIC

http://de-traffic.com
 I-95 NB Ramp at US 192
 Brevard County, FL

File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 6



DE TRAFFIC

http:de-traffic.com
 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	Dike Rd Southbound				US 192 Westbound				Coastal Ln Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	4	0	4	8	4	117	4	125	2	0	1	3	11	203	4	218	354
07:15 AM	3	0	2	5	5	145	8	158	2	2	4	8	17	226	2	245	416
07:30 AM	3	0	5	8	9	158	9	176	6	1	9	16	18	248	7	273	473
07:45 AM	2	1	4	7	9	143	11	163	9	2	6	17	20	248	9	277	464
Total	12	1	15	28	27	563	32	622	19	5	20	44	66	925	22	1013	1707
08:00 AM	3	1	5	9	8	165	10	183	7	0	5	12	16	265	9	290	494
08:15 AM	2	2	6	10	8	174	16	198	7	2	5	14	15	251	11	277	499
08:30 AM	2	0	5	7	13	126	16	155	4	0	4	8	11	240	15	266	436
08:45 AM	4	1	4	9	11	120	11	142	6	1	10	17	13	205	15	233	401
Total	11	4	20	35	40	585	53	678	24	3	24	51	55	961	50	1066	1830
04:00 PM	4	1	11	16	19	228	9	256	9	2	9	20	9	182	0	191	483
04:15 PM	6	4	15	25	16	247	11	274	10	4	4	18	13	169	12	194	511
04:30 PM	2	2	20	24	18	245	10	273	16	4	5	25	10	183	20	213	535
04:45 PM	4	2	21	27	19	243	9	271	16	5	7	28	9	166	16	191	517
Total	16	9	67	92	72	963	39	1074	51	15	25	91	41	700	48	789	2046
05:00 PM	11	2	20	33	19	239	8	266	11	6	9	26	9	179	8	196	521
05:15 PM	16	3	14	33	21	256	14	291	17	6	8	31	15	145	15	175	530
05:30 PM	13	2	17	32	19	236	15	270	13	5	10	28	15	157	18	190	520
05:45 PM	13	2	19	34	23	200	14	237	10	5	7	22	14	139	19	172	465
Total	53	9	70	132	82	931	51	1064	51	22	34	107	53	620	60	733	2036
Grand Total	92	23	172	287	221	3042	175	3438	145	45	103	293	215	3206	180	3601	7619
Apprch %	32.1	8	59.9		6.4	88.5	5.1		49.5	15.4	35.2		6	89	5		
Total %	1.2	0.3	2.3	3.8	2.9	39.9	2.3	45.1	1.9	0.6	1.4	3.8	2.8	42.1	2.4	47.3	

DE TRAFFIC

http:de-traffic.com
 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192a
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 2

Groups Printed- Automobiles - Commercial

	Dike Rd Southbound				US 192 Westbound				Coastal Ln Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	91	23	169	283	219	2992	174	3385	141	43	101	285	208	3159	175	3542	7495
% Automobiles	98.9	100	98.3	98.6	99.1	98.4	99.4	98.5	97.2	95.6	98.1	97.3	96.7	98.5	97.2	98.4	98.4
Commercial	1	0	3	4	2	50	1	53	4	2	2	8	7	47	5	59	124
% Commercial	1.1	0	1.7	1.4	0.9	1.6	0.6	1.5	2.8	4.4	1.9	2.7	3.3	1.5	2.8	1.6	1.6

DE TRAFFIC

http:de-traffic.com
 Dike Rd at US 192
 Brevard County, FL

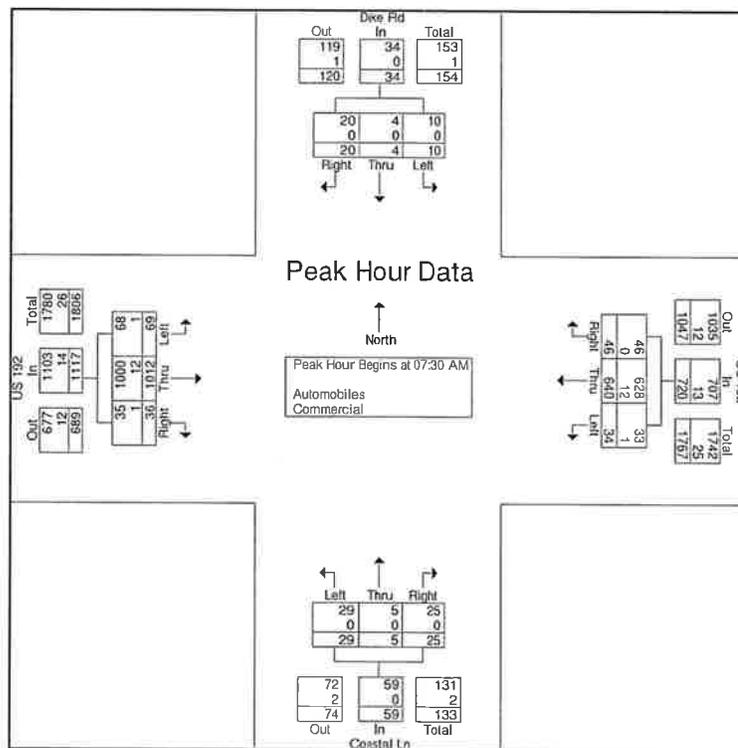
File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 3

Start Time	Dike Rd Southbound				US 192 Westbound				Coastal Ln Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	0	5	8	9	158	9	176	6	1	9	16	18	248	7	273	473
07:45 AM	2	1	4	7	9	143	11	163	9	2	6	17	20	248	9	277	464
08:00 AM	3	1	5	9	8	165	10	183	7	0	5	12	16	265	9	290	494
08:15 AM	2	2	6	10	8	174	16	198	7	2	5	14	15	251	11	277	499
Total Volume	10	4	20	34	34	640	46	720	29	5	25	59	69	1012	36	1117	1930
% App. Total	29.4	11.8	58.8		4.7	88.9	6.4		49.2	8.5	42.4		6.2	90.6	3.2		
PHF	.833	.500	.833	.850	.944	.920	.719	.909	.806	.625	.694	.868	.863	.955	.818	.963	.967
Automobiles	10	4	20	34	33	628	46	707	29	5	25	59	68	1000	35	1103	1903
% Automobiles	100	100	100	100	97.1	98.1	100	98.2	100	100	100	100	98.6	98.8	97.2	98.7	98.6
Commercial	0	0	0	0	1	12	0	13	0	0	0	0	1	12	1	14	27
% Commercial	0	0	0	0	2.9	1.9	0	1.8	0	0	0	0	1.4	1.2	2.8	1.3	1.4

DE TRAFFIC

http:de-traffic.com
 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 4



DE TRAFFIC

http://de-traffic.com
 Dike Rd at US 192
 Brevard County, FL

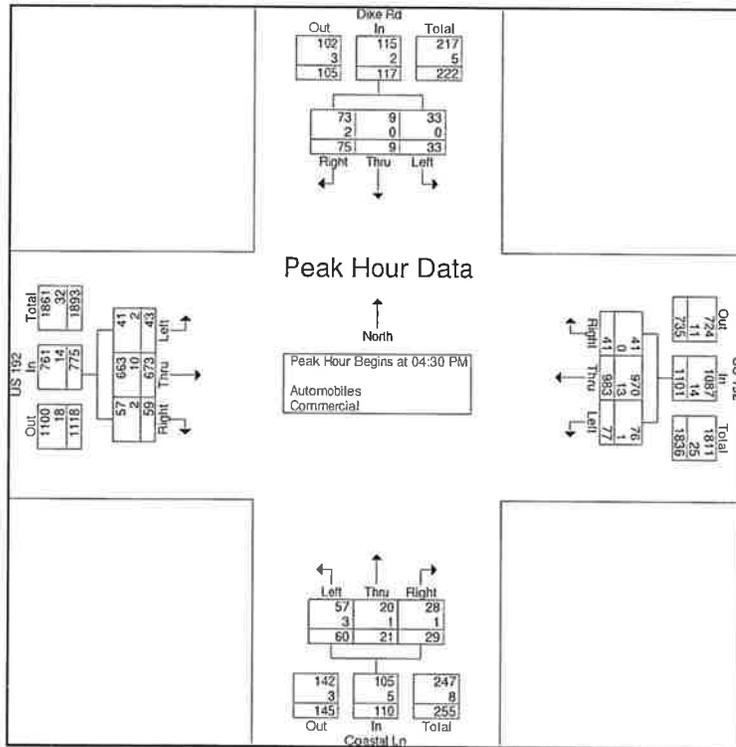
File Name : Dike at 192a
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 5

Start Time	Dike Rd Southbound				US 192 Westbound				Coastal Ln Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	2	20	24	18	245	10	273	16	4	5	25	10	183	20	213	535
04:45 PM	4	2	21	27	19	243	9	271	16	5	7	28	9	166	16	191	517
05:00 PM	11	2	20	33	19	239	8	266	11	6	9	26	9	179	8	196	521
05:15 PM	16	3	14	33	21	256	14	291	17	6	8	31	15	145	15	175	530
Total Volume	33	9	75	117	77	983	41	1101	60	21	29	110	43	673	59	775	2103
% App. Total	28.2	7.7	64.1		7	89.3	3.7		54.5	19.1	26.4		5.5	86.8	7.6		
PHF	.516	.750	.893	.886	.917	.960	.732	.946	.882	.875	.806	.887	.717	.919	.738	.910	.983
Automobiles	33	9	73	115	76	970	41	1087	57	20	28	105	41	663	57	761	2068
% Automobiles	100	100	97.3	98.3	98.7	98.7	100	98.7	95.0	95.2	96.6	95.5	95.3	98.5	96.6	98.2	98.3
Commercial	0	0	2	2	1	13	0	14	3	1	1	5	2	10	2	14	35
% Commercial	0	0	2.7	1.7	1.3	1.3	0	1.3	5.0	4.8	3.4	4.5	4.7	1.5	3.4	1.8	1.7

DE TRAFFIC

http:de-traffic.com
 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 6



DE TRAFFIC

http:de-traffic.com
 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 7

Groups Printed- Peds

Start Time	Dike Rd Southbound					US 192 Westbound					Coastal Ln Northbound					US 192 Eastbound					Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total		
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0			
04:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	3
Apprch %	0	0	0	0		0	0	0	100		0	0	0	0		0	0	0	0			
Total %	0	0	0	0		0	0	0	100	100	0	0	0	0		0	0	0	0			



NB Approach



SB Approach



EB Approach



WB Approach



John Rodes Blvd
at US 192

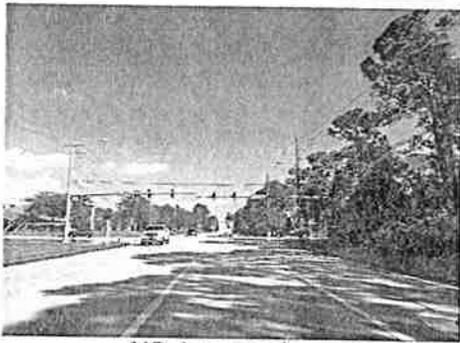
Brevard County

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299 McGregor Rd. DeLand FL. 32720

Project
Number: L17-058

Sheet
Number: 4



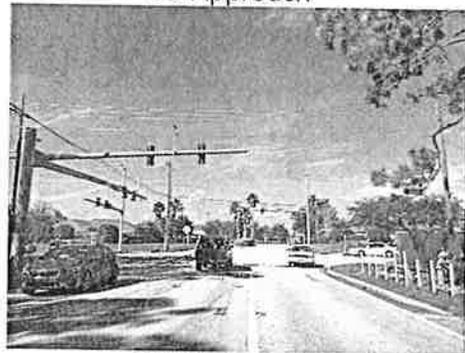
NB Approach



SB Approach



EB Approach



WB Approach



John Rodes Blvd
at Sheridan Rd

Brevard County

www.de-traffic.com

299 McGregor Rd. DeLand Fl. 32720

Project
Number: L17-058

Sheet
Number: 5



NB Approach



SB Approach



WB Approach



John Rodes Blvd
at Ellis Rd

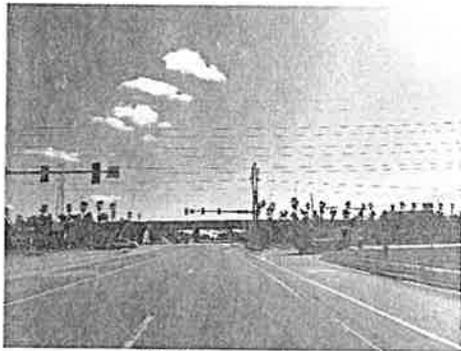
Brevard County

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299 McGregor Rd. DeLand FL 32720

Project
Number: L17-058

Sheet
Number: 6



EB Approach



SB Approach



WB Approach

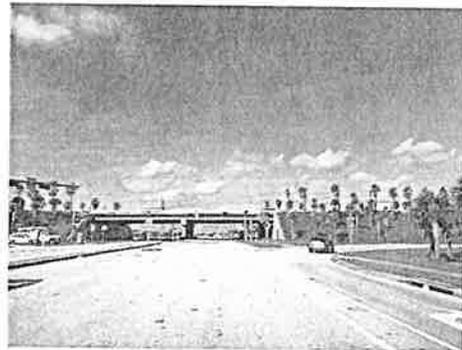
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	www.de-traffic.com		Project Number: L17-058	Sheet Number: 1
	299 McGregor Rd. DeLand Fl. 32720			



NB Approach



EB Approach



WB Approach



I-95 NB Ramp
at US 192

Brevard County

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299 McGregor Rd. DeLand Fl. 32720

Project
Number: L17-058

Sheet
Number: 2



299 McGregor Rd. Deland FL 32720

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Project

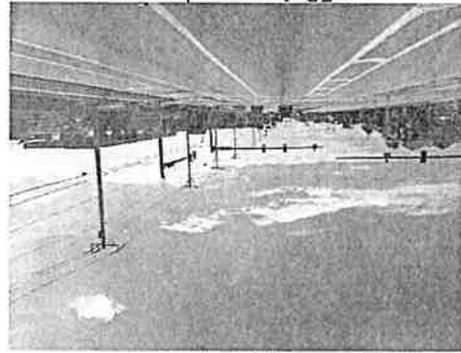
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Sheet
Number: 3

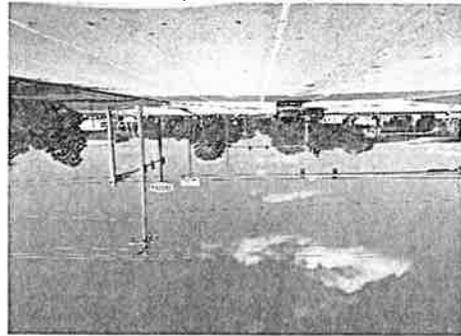
Dike Rd
at US 192

Brevard County

EB Approach



NB Approach



WB Approach



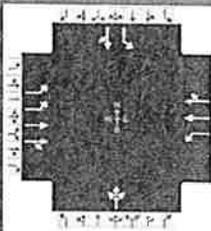
SB Approach



APPENDIX D
HCS SUMMARY SHEETS – EXISTING
CONDITIONS

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP			Analysis Date	Aug 31, 2018		
Jurisdiction	Brevard			Area Type	Other		
Urban Street	US 192			Time Period	AM Peak Hour		
Intersection	John Rodes Blvd at US...			PHF	1.00		
Project Description	4397.02			Analysis Year	2018		
				Analysis Period	1 > 7:00		
				File Name	1. John Rodes Blvd at US 192 - AM Existing.xus		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	411	757	3	9	707	169	19	7	23	114	3	210

Signal Information														
Cycle, s	150.0	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	1.6	5.6	88.4	8.1	9.0	0.0				
				Yellow	4.8	4.8	4.8	4.8	4.8	0.0				
				Red	2.8	2.8	2.8	2.1	2.8	0.0				

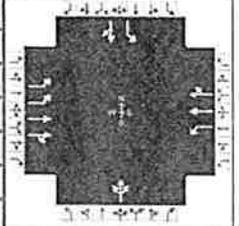
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	22.4	109.2	9.2	96.0		16.6	15.0	31.6
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	16.7		2.9			8.8	10.1	21.5
Green Extension Time (g _e), s	0.0	0.0	0.0	0.0		0.2	0.0	0.4
Phase Call Probability	1.00		0.31			1.00	0.99	1.00
Max Out Probability	1.00		0.00			1.00	1.00	0.70

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	411	380	380	9	453	423	49			114	213	
Adjusted Saturation Flow Rate (s), veh/h/ln	1716	1870	1868	1499	1870	1745	1153			1781	1588	
Queue Service Time (g _s), s	14.7	12.4	12.4	0.9	19.7	19.7	2.3			8.1	19.5	
Cycle Queue Clearance Time (g _c), s	14.7	12.4	12.4	0.9	19.7	19.7	6.8			8.1	19.5	
Green Ratio (g/C)	0.10	0.68	0.68	0.01	0.59	0.59	0.06			0.13	0.16	
Capacity (c), veh/h	337	1267	1265	16	1102	1028	103			165	255	
Volume-to-Capacity Ratio (X)	1.218	0.300	0.300	0.576	0.411	0.411	0.477			0.691	0.837	
Back of Queue (Q), ft/ln (95 th percentile)	489.7	217.9	214.6	24.8	335.4	313.2	88.1			203.4	354.2	
Back of Queue (Q), veh/ln (95 th percentile)	19.1	8.6	8.6	0.8	13.2	12.5	3.5			8.0	13.9	
Queue Storage Ratio (RQ) (95 th percentile)	0.82	0.00	0.00	0.15	0.00	0.00	0.00			0.00	0.00	
Uniform Delay (d ₁), s/veh	67.6	9.8	9.8	73.9	16.7	16.7	69.2			62.1	61.1	
Incremental Delay (d ₂), s/veh	122.1	0.6	0.6	29.3	1.1	1.2	3.4			11.6	18.2	
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	
Control Delay (d), s/veh	189.7	10.4	10.4	103.2	17.8	17.9	72.6			73.7	79.2	
Level of Service (LOS)	F	B	B	F	B	B	E			E	E	
Approach Delay, s/veh / LOS	73.3		E	18.7		B	72.6		E	77.3		E
Intersection Delay, s/veh / LOS	54.0						D					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	1.65	B	2.09	B
Bicycle LOS Score / LOS	1.45	A	1.22	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2018	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - PM Existing.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	207	587	18	28	610	130	6	3	9	276	7	658

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	3.3	7.1	62.4	20.1	17.4	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	0.0	4.8	4.8	4.8	0.0			
				Red	2.8	0.0	2.8	2.1	2.8	0.0			

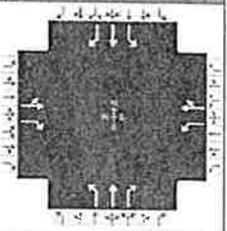
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	18.0	77.1	10.9	70.0		25.0	27.0	52.0
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	10.2		4.2			19.4	20.4	46.4
Green Extension Time (g _e), s	0.2	0.0	0.0	0.0		0.0	0.0	0.0
Phase Call Probability	1.00		0.66			1.00	1.00	1.00
Max Out Probability	1.00		0.74			1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	207	304	301	28	381	359	18			276	665	
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1856	1836	1781	1856	1742	383			1781	1588	
Queue Service Time (g _s), s	8.2	13.8	13.8	2.2	20.1	20.1	0.0			18.4	44.4	
Cycle Queue Clearance Time (g _c), s	8.2	13.8	13.8	2.2	20.1	20.1	17.4			18.4	44.4	
Green Ratio (g/C)	0.07	0.50	0.50	0.02	0.45	0.45	0.12			0.28	0.32	
Capacity (c), veh/h	257	921	911	42	827	776	82			307	504	
Volume-to-Capacity Ratio (X)	0.806	0.330	0.330	0.663	0.461	0.462	0.220			0.898	1.321	
Back of Queue (Q), ft/ln (95 th percentile)	183.6	259.1	251.3	53.5	358	334.1	26.8			394.2	1469.4	
Back of Queue (Q), veh/ln (95 th percentile)	7.2	10.1	10.1	2.1	14.0	13.4	1.1			15.5	57.8	
Queue Storage Ratio (RQ) (95 th percentile)	0.31	0.00	0.00	0.32	0.00	0.00	0.00			0.00	0.00	
Uniform Delay (d ₁), s/veh	63.8	21.2	21.2	67.8	27.1	27.1	54.9			44.0	47.8	
Incremental Delay (d ₂), s/veh	12.5	1.0	1.0	16.4	1.8	2.0	1.3			27.3	157.8	
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	
Control Delay (d), s/veh	76.3	22.2	22.2	84.2	28.9	29.1	56.2			71.3	205.6	
Level of Service (LOS)	E	C	C	F	C	C	E			E	F	
Approach Delay, s/veh / LOS	36.0		D	31.0		C	56.2		E	166.2		F
Intersection Delay, s/veh / LOS	82.9						F					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.69		B	2.11		B	2.32		B	2.45		B
Bicycle LOS Score / LOS	1.16		A	1.12		A	0.52		A	2.04		B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP			Analysis Date	May 7, 2018		
Jurisdiction	Brevard			Time Period	AM Peak Hour		
Urban Street	John Rodes Blvd			Analysis Year	2017		
Intersection	John Rodes Blvd at She...			File Name	2. John Rodes Blvd at Sheridan Rd - AM Existing....		
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	67	18	60	103	9	132	23	849	53	43	200	24

Signal Information													
Cycle, s	57.1	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	18.8	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	2.0	2.5	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		6		8		4
Case Number		7.0		6.0		5.0		5.0
Phase Duration, s		25.6		25.6		31.5		31.5
Change Period, (Y+R _c), s		6.8		6.8		6.5		6.5
Max Allow Headway (MAH), s		7.3		7.3		4.0		4.0
Queue Clearance Time (g _s), s		9.5		14.2		27.0		27.0
Green Extension Time (g _e), s		4.8		4.7		0.0		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.01		1.00		1.00

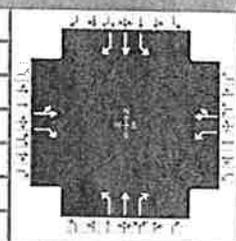
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	85	49	103	141			23	849	2	43	200	0
Adjusted Saturation Flow Rate (s), veh/h/ln	1013	1585	1395	1309			1182	1870	1585	644	1767	1585
Queue Service Time (g _s), s	2.2	1.2	3.7	4.6			0.7	25.0	0.0	0.3	4.1	0.0
Cycle Queue Clearance Time (g _c), s	7.5	1.2	12.2	4.6			4.6	25.0	0.0	25.0	4.1	0.0
Green Ratio (g/C)	0.33	0.33	0.33	0.33			0.44	0.44	0.44	0.44	0.44	0.44
Capacity (c), veh/h	446	520	377	430			564	820	695	130	775	695
Volume-to-Capacity Ratio (X)	0.191	0.094	0.273	0.328			0.041	1.035	0.003	0.330	0.258	0.000
Back of Queue (Q), ft/ln (95 th percentile)	41.7	19.8	58.1	76.5			7.1	622.2	0.5	26.7	59.7	0
Back of Queue (Q), veh/ln (95 th percentile)	1.6	0.8	2.3	2.6			0.3	24.5	0.0	1.0	2.2	0.0
Queue Storage Ratio (RQ) (95 th percentile)	0.00	0.18	0.31	0.00			0.03	0.00	0.00	0.10	0.00	0.00
Uniform Delay (d ₁), s/veh	16.2	13.3	20.7	14.4			11.5	16.0	9.0	28.5	10.1	0.0
Incremental Delay (d ₂), s/veh	0.7	0.3	1.4	1.6			0.0	40.9	0.0	1.5	0.2	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	17.0	13.6	22.1	16.0			11.6	56.9	9.0	30.0	10.3	0.0
Level of Service (LOS)		B	B	C	B		B	F	A	C	B	
Approach Delay, s/veh / LOS	15.7		B	18.6		B	55.6		E	13.8		B
Intersection Delay, s/veh / LOS	39.2						D					

Multimodal Results	EB			WB			NB			SB		
	Pedestrian LOS Score / LOS	2.16		B	2.12		B	1.89		B	1.90	
Bicycle LOS Score / LOS	0.71		A	0.89		A	1.93		B	0.89		A

HCS7 Signalized Intersection Results Summary

General Information

Agency	LTG	Intersection Information	
Analyst	ACP	Duration, h	0.25
Jurisdiction	Brevard	Analysis Date	May 7, 2018
Urban Street	John Rodes Blvd	Time Period	PM Peak Hour
Intersection	John Rodes Blvd at She...	PHF	1.00
Project Description	4397.02	Analysis Year	2017
		Analysis Period	1> 7:00
		File Name	2. John Rodes Blvd at Sheridan Rd - PM 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	27	11	60	65	20	60	50	344	120	85	555	50

Signal Information

Cycle, s	37.9	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	8.0	16.6	0.0	0.0	0.0	0.0	1		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.0	0.0	0.0	0.0	0.0	2		
				Red	2.0	2.5	0.0	0.0	0.0	0.0	3		

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		7.0		6.0		5.0		5.0
Phase Duration, s		14.8		14.8		23.1		23.1
Change Period, (Y+R _c), s		6.8		6.8		6.5		6.5
Max Allow Headway (MAH), s		7.3		7.3		4.1		4.1
Queue Clearance Time (g _s), s		3.5		5.0		12.9		11.0
Green Extension Time (g _e), s		2.7		2.6		3.8		4.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		0.27		0.20

Movement Group Results

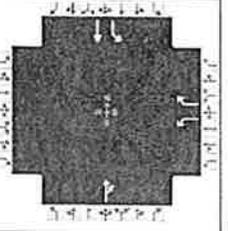
Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h		38	35	65	80		50	344	88	85	555	37
Adjusted Saturation Flow Rate (s), veh/h/ln		1275	1585	1404	1648		854	1826	1585	1037	1870	1585
Queue Service Time (g _s), s		0.0	0.7	1.5	1.5		1.9	4.9	1.3	2.3	9.0	0.5
Cycle Queue Clearance Time (g _c), s		1.5	0.7	3.0	1.5		10.9	4.9	1.3	7.4	9.0	0.5
Green Ratio (g/C)		0.21	0.21	0.21	0.21		0.44	0.44	0.44	0.44	0.44	0.44
Capacity (c), veh/h		432	335	434	349		359	798	693	506	817	693
Volume-to-Capacity Ratio (X)		0.088	0.104	0.150	0.230		0.139	0.431	0.127	0.168	0.679	0.053
Back of Queue (Q), ft/ln (95 th percentile)		12	10.9	21.2	26.1		12.5	50.3	10.8	16.9	95.7	4.4
Back of Queue (Q), veh/ln (95 th percentile)		0.4	0.4	0.8	1.0		0.5	1.9	0.4	0.7	3.8	0.2
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.10	0.11	0.00		0.05	0.00	0.04	0.06	0.00	0.02
Uniform Delay (d ₁), s/veh		12.0	12.0	13.6	12.4		12.9	7.4	6.3	10.0	8.5	6.1
Incremental Delay (d ₂), s/veh		0.3	0.5	0.6	1.2		0.2	0.4	0.1	0.2	1.0	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		12.3	12.5	14.1	13.6		13.1	7.8	6.4	10.1	9.5	6.2
Level of Service (LOS)		B	B	B	B		B	A	A	B	A	A
Approach Delay, s/veh / LOS	12.4	B		13.8	B		8.1	A		9.4	A	
Intersection Delay, s/veh / LOS	9.6						A					

Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.13	B		2.11	B		1.87	B		1.90	B	
Bicycle LOS Score / LOS	0.61	A		0.73	A		1.28	A		1.60	B	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - AM Existing.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				70		167		711	203	224	220	

Signal Information													
Cycle, s	85.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap EW	On	Green	7.5	45.3	12.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0			
				Red	2.0	2.0	2.5	0.0	0.0	0.0			

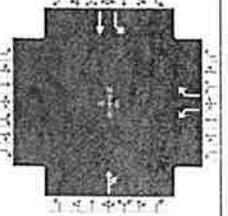
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				18.5		52.1	14.3	66.5
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				10.9		43.2	6.9	5.5
Green Extension Time (g _e), s				1.1		2.0	0.6	3.9
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				0.00		0.50	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		14		6	16	5	2	
Adjusted Flow Rate (v), veh/h				70		167		914		224	220	
Adjusted Saturation Flow Rate (s), veh/h/ln				1781		1535		1798		1781	1826	
Queue Service Time (g _s), s				3.0		8.9		41.2		4.9	3.5	
Cycle Queue Clearance Time (g _c), s				3.0		8.9		41.2		4.9	3.5	
Green Ratio (g/C)				0.14		0.14		0.53		0.65	0.70	
Capacity (c), veh/h				253		218		959		273	1283	
Volume-to-Capacity Ratio (X)				0.277		0.767		0.953		0.820	0.172	
Back of Queue (Q), ft/ln (95 th percentile)				59.7		171.3		645.9		119.9	41.9	
Back of Queue (Q), veh/ln (95 th percentile)				2.4		6.5		25.4		4.7	1.6	
Queue Storage Ratio (RQ) (95 th percentile)				0.15		0.00		0.00		0.31	0.00	
Uniform Delay (d ₁), s/veh				32.7		35.3		18.9		20.7	4.3	
Incremental Delay (d ₂), s/veh				0.7		6.7		16.5		6.0	0.0	
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0	0.0	
Control Delay (d), s/veh				33.4		42.0		35.4		26.7	4.3	
Level of Service (LOS)				C		D		D		C	A	
Approach Delay, s/veh / LOS	0.0			39.5		D	35.4		D	15.6		B
Intersection Delay, s/veh / LOS	30.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.73	B	1.95	B	1.89	B	0.65	A
Bicycle LOS Score / LOS				F	2.00	B	1.22	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - PM Existing.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				129		209		311	86	146	568	

Signal Information												
Cycle, s	49.1	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	Yes	Simult. Gap EW	On	Green	4.3	15.0	9.7	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0	0.0	0.0
				Red	2.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0

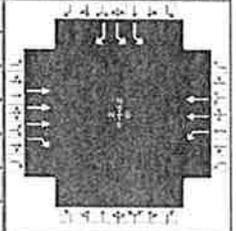
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				16.2		21.8	11.1	32.9
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				8.1		11.6	4.5	12.0
Green Extension Time (g _e), s				1.6		2.7	0.4	2.7
Phase Call Probability				0.99		1.00	0.86	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				7		14	6	16	5	2		
Adjusted Flow Rate (v), veh/h				129		209	397		146	568		
Adjusted Saturation Flow Rate (s), veh/h/ln				1739		1560	1800		1781	1870		
Queue Service Time (g _s), s				3.2		6.1	9.6		2.5	10.0		
Cycle Queue Clearance Time (g _c), s				3.2		6.1	9.6		2.5	10.0		
Green Ratio (g/C)				0.20		0.20	0.31		0.43	0.53		
Capacity (c), veh/h				342		307	550		411	995		
Volume-to-Capacity Ratio (X)				0.377		0.680	0.721		0.355	0.571		
Back of Queue (Q), ft/ln (95 th percentile)				54.8		100.2	146.5		32.6	109.5		
Back of Queue (Q), veh/ln (95 th percentile)				2.1		3.9	5.8		1.3	4.3		
Queue Storage Ratio (RQ) (95 th percentile)				0.14		0.00	0.00		0.08	0.00		
Uniform Delay (d ₁), s/veh				17.1		18.3	15.2		10.2	7.7		
Incremental Delay (d ₂), s/veh				0.8		3.2	1.3		0.5	0.4		
Initial Queue Delay (d ₃), s/veh				0.0		0.0	0.0		0.0	0.0		
Control Delay (d), s/veh				17.9		21.5	16.5		10.7	8.1		
Level of Service (LOS)				B		C	B		B	A		
Approach Delay, s/veh / LOS	0.0			20.1		C	16.5		B	8.6		A
Intersection Delay, s/veh / LOS				13.5					B			

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.94	B	1.90	B	0.67	A
Bicycle LOS Score / LOS				F	1.14	A	1.67	B

HCS7 Signalized Intersection Results Summary

General Information					Intersection Information		
Agency	LTG				Duration, h	0.25	
Analyst	ACP	Analysis Date	Aug 31, 2018		Area Type	Other	
Jurisdiction	Brevard	Time Period	AM Peak Hour		PHF	1.00	
Urban Street	US 192	Analysis Year	2018		Analysis Period	1 > 7:00	
Intersection	US 192 at SB I-95	File Name	5. US 192 at SB I-95 - AM Existing.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		217	163	163	220						447	92

Signal Information														
Cycle, s	150.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap EW	On											
Force Mode	Fixed	Simult. Gap N/S	On											
				Green	7.5	99.3	23.1	0.0	0.0	0.0				
				Yellow	4.8	4.8	3.7	0.0	0.0	0.0				
				Red	2.1	2.1	2.6	0.0	0.0	0.0				

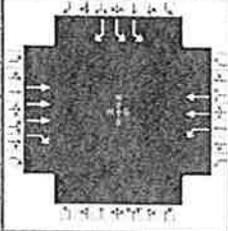
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6				4
Case Number		7.3	1.0	4.0				9.0
Phase Duration, s		106.2	14.4	120.6				29.4
Change Period, (Y+R _c), s		6.9	6.9	6.9				6.3
Max Allow Headway (MAH), s		0.0	6.1	0.0				4.2
Queue Clearance Time (g _s), s			6.1					20.8
Green Extension Time (g _e), s		0.0	1.4	0.0				2.2
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		2	12	1	6					7		14
Adjusted Flow Rate (v), veh/h		217	163	163	220					447		92
Adjusted Saturation Flow Rate (s), veh/h/ln		1618	1585	1781	1710					1730		1497
Queue Service Time (g _s), s		2.4	5.8	4.1	2.5					18.8		8.3
Cycle Queue Clearance Time (g _c), s		2.4	5.8	4.1	2.5					18.8		8.3
Green Ratio (g/C)		0.66	0.66	0.73	0.76					0.15		0.15
Capacity (c), veh/h		3213	1049	890	2593					532		230
Volume-to-Capacity Ratio (X)		0.068	0.155	0.183	0.085					0.840		0.400
Back of Queue (Q), ft/ln (95 th percentile)		40.3	95.3	70.3	40					338.1		155.5
Back of Queue (Q), veh/ln (95 th percentile)		1.5	3.8	2.8	1.5					13.3		5.8
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		9.0	9.5	6.3	4.7					61.7		57.2
Incremental Delay (d ₂), s/veh		0.0	0.3	0.2	0.1					3.7		1.1
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0					0.0		0.0
Control Delay (d), s/veh		9.0	9.9	6.5	4.7					65.3		58.3
Level of Service (LOS)		A	A	A	A					E		E
Approach Delay, s/veh / LOS	9.4	A		5.5	A		0.0				64.2	E
Intersection Delay, s/veh / LOS	30.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.37	A	1.86	B	2.49	B	2.49	B
Bicycle LOS Score / LOS	0.70	A	0.80	A				F

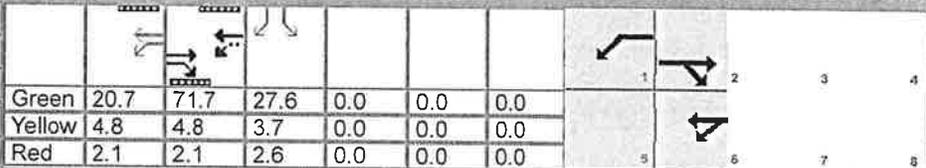
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP			Analysis Date	Aug 31, 2018		
Jurisdiction	Brevard			Time Period	PM Peak Hour		
Urban Street	US 192			Analysis Year	2018		
Intersection	US 192 at SB I-95			File Name	5. US 192 at SB I-95 - PM Existing.xus		
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		189	135	427	333					575		182

Signal Information			
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



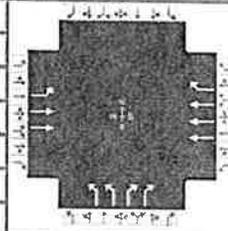
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6				4
Case Number		7.3	1.0	4.0				9.0
Phase Duration, s		78.6	27.6	106.1				33.9
Change Period, (Y+R _c), s		6.9	6.9	6.9				6.3
Max Allow Headway (MAH), s		0.0	6.1	0.0				4.2
Queue Clearance Time (g _s), s			16.4					24.4
Green Extension Time (g _e), s		0.0	4.3	0.0				3.1
Phase Call Probability			1.00					1.00
Max Out Probability			0.00					0.02

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						7		14
Adjusted Flow Rate (v), veh/h	189	135	427	333						575		182
Adjusted Saturation Flow Rate (s), veh/h/ln	1644	1585	1781	1752						1730		1547
Queue Service Time (g _s), s	2.7	6.4	14.4	4.3						22.4		15.0
Cycle Queue Clearance Time (g _c), s	2.7	6.4	14.4	4.3						22.4		15.0
Green Ratio (g/C)	0.51	0.51	0.67	0.71						0.20		0.20
Capacity (c), veh/h	2525	811	902	2484						681		305
Volume-to-Capacity Ratio (X)	0.075	0.166	0.473	0.134						0.844		0.597
Back of Queue (Q), ft/ln (95 th percentile)	49.7	111.7	239.7	72						387.7		259.1
Back of Queue (Q), veh/ln (95 th percentile)	1.9	4.4	9.4	2.8						15.3		10.0
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	17.3	18.2	9.9	6.6						54.2		51.2
Incremental Delay (d ₂), s/veh	0.1	0.4	0.8	0.1						3.9		1.9
Initial Queue Delay (d ₃), s/veh	0.0	0.0	0.0	0.0						0.0		0.0
Control Delay (d), s/veh	17.4	18.7	10.7	6.7						58.0		53.0
Level of Service (LOS)		B	B	B	A					E		D
Approach Delay, s/veh / LOS	17.9		B	9.0		A	0.0			56.8		E
Intersection Delay, s/veh / LOS	30.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.39	A	1.87	B	2.48	B	2.48	B
Bicycle LOS Score / LOS	0.67	A	1.11	A				F

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018		Area Type	Other	
Jurisdiction	Brevard	Time Period	AM Peak Hour		PHF	1.00	
Urban Street	US 192	Analysis Year	2018		Analysis Period	1 > 7:00	
Intersection	US 192 at NB I-95		File Name	6. US 192 at NB I-95 - AM Existing.xus			
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	111	557			308	511	96		515			

Signal Information				Signal Timing (s)									
Cycle, s	150.0	Reference Phase	2	Green	5.9	92.8	31.4	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	4.8	4.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	2.3	2.3	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On										

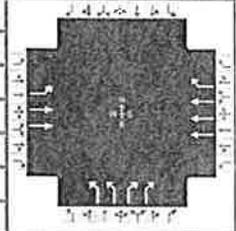
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		7.3		9.0		
Phase Duration, s	13.0	112.9		99.9		37.1		
Change Period, (Y+R _c), s	7.1	7.1		7.1		5.7		
Max Allow Headway (MAH), s	5.0	0.0		0.0		6.2		
Queue Clearance Time (g _s), s	5.4					28.7		
Green Extension Time (g _e), s	0.5	0.0		0.0		2.7		
Phase Call Probability	0.99					1.00		
Max Out Probability	0.00					0.94		

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2	12	7		14			
Adjusted Flow Rate (v), veh/h	111	557			308	511	96		515			
Adjusted Saturation Flow Rate (s), veh/h/ln	1725	1781			1644	1585	1689		1403			
Queue Service Time (g _s), s	3.4	8.2			3.8	27.2	3.5		26.7			
Cycle Queue Clearance Time (g _c), s	3.4	8.2			3.8	27.2	3.5		26.7			
Green Ratio (g/C)	0.67	0.71			0.62	0.62	0.21		0.21			
Capacity (c), veh/h	731	2512			3053	981	707		587			
Volume-to-Capacity Ratio (X)	0.152	0.222			0.101	0.521	0.136		0.877			
Back of Queue (Q), ft/ln (95 th percentile)	57.9	134.5			64.5	380.5	68.8		397.6			
Back of Queue (Q), veh/ln (95 th percentile)	2.2	5.3			2.5	15.0	2.6		15.7			
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	8.8	7.7			11.6	16.1	48.3		57.4			
Incremental Delay (d ₂), s/veh	0.1	0.2			0.1	2.0	0.2		13.4			
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (d), s/veh	8.9	7.9			11.7	18.0	48.4		70.9			
Level of Service (LOS)	A	A			B	B	D		E			
Approach Delay, s/veh / LOS	8.1	A		15.7	B		67.3	E		0.0		
Intersection Delay, s/veh / LOS	28.3						C					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.06 / B	1.38 / A	2.49 / B	2.49 / B
Bicycle LOS Score / LOS	1.04 / A	0.94 / A	F	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2018	Analysis Period	1 > 7:00		
Intersection	US 192 at NB I-95		File Name	6. US 192 at NB I-95 - PM Existing.xus			
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	101	587			630	608	135		164			

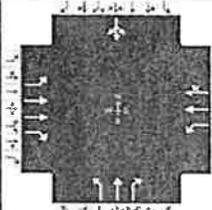
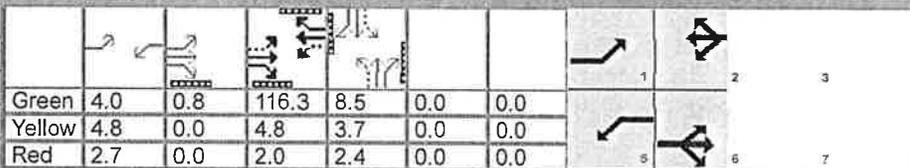
Signal Information				Signal Timing (s)										
Cycle, s	140.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	4.9	104.0	11.2	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	3.7	0.0	0.0	0.0				
				Red	2.3	2.3	2.0	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		7.3		9.0		
Phase Duration, s	12.0	123.1		111.1		16.9		
Change Period, (Y+R _c), s	7.1	7.1		7.1		5.7		
Max Allow Headway (MAH), s	5.0	0.0		0.0		6.2		
Queue Clearance Time (g _s), s	3.9					10.0		
Green Extension Time (g _e), s	0.5	0.0		0.0		1.2		
Phase Call Probability	0.98					1.00		
Max Out Probability	0.00					0.95		

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	12	7		14			
Adjusted Flow Rate (v), veh/h	101	587			630	608	135		164			
Adjusted Saturation Flow Rate (s), veh/h/ln	1668	1781			1685	1585	1702		1403			
Queue Service Time (g _s), s	1.9	4.7			5.1	22.4	5.3		8.0			
Cycle Queue Clearance Time (g _c), s	1.9	4.7			5.1	22.4	5.3		8.0			
Green Ratio (g/C)	0.79	0.83			0.74	0.74	0.08		0.08			
Capacity (c), veh/h	637	2951			3756	1178	272		224			
Volume-to-Capacity Ratio (X)	0.159	0.199			0.168	0.516	0.497		0.733			
Back of Queue (Q), ft/ln (95 th percentile)	24.7	52.4			72.8	284	110.4		141.8			
Back of Queue (Q), veh/ln (95 th percentile)	0.9	2.1			2.8	11.2	4.3		5.6			
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	3.4	2.5			5.3	7.5	61.7		63.0			
Incremental Delay (d ₂), s/veh	0.2	0.2			0.1	1.6	3.0		9.5			
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (d), s/veh	3.6	2.6			5.4	9.1	64.7		72.4			
Level of Service (LOS)	A	A			A	A	E		E			
Approach Delay, s/veh / LOS	2.8	A			7.2	A	69.0		E		0.0	
Intersection Delay, s/veh / LOS	14.1						B					

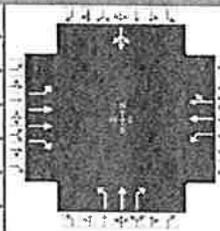
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.02	B	1.34	A	2.48	B	2.48	B
Bicycle LOS Score / LOS	1.06	A	1.17	A		F		

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP			Analysis Date	Aug 31, 2018			Area Type	Other						
Jurisdiction	Brevard			Time Period	AM Peak Hour			PHF	1.00						
Urban Street	US 192			Analysis Year	2017			Analysis Period	1 > 7:00						
Intersection	US 192 at Coastal Ln			File Name	7. US 192 at Coastal Ln - AM Existing.xus										
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				76	1119	40	38	707	51	32	6	28	11	4	22
Signal Information															
Cycle, s	150.0	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	4.0	0.8	116.3	8.5	0.0	0.0									
Yellow	4.8	0.0	4.8	3.7	0.0	0.0									
Red	2.7	0.0	2.0	2.4	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				1	6	5	2		4		8				
Case Number				1.1	3.0	1.1	4.0		5.0		8.0				
Phase Duration, s				12.3	124.0	11.5	123.1		14.6		14.6				
Change Period, (Y+R _c), s				7.5	6.8	7.5	6.8		6.1		6.1				
Max Allow Headway (MAH), s				4.0	0.0	4.0	0.0		4.3		4.3				
Queue Clearance Time (g _s), s				3.3		2.7			8.6		5.2				
Green Extension Time (g _e), s				0.2	0.0	0.0	0.0		0.1		0.2				
Phase Call Probability				0.96		0.79			0.97		0.97				
Max Out Probability				0.00		0.00			0.02		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				1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h				76	1119	24	38	383	375	32	6	9		37	
Adjusted Saturation Flow Rate (s), veh/h/ln				1781	1781	1572	1767	1870	1826	1385	1870	1585		1602	
Queue Service Time (g _s), s				1.3	15.1	0.5	0.7	8.7	8.7	3.4	0.5	0.8		0.2	
Cycle Queue Clearance Time (g _c), s				1.3	15.1	0.5	0.7	8.7	8.7	6.6	0.5	0.8		3.2	
Green Ratio (g/C)				0.81	0.78	0.78	0.80	0.78	0.78	0.06	0.06	0.06		0.06	
Capacity (c), veh/h				612	2781	1228	428	1450	1416	97	106	90		122	
Volume-to-Capacity Ratio (X)				0.124	0.402	0.020	0.089	0.264	0.265	0.329	0.057	0.100		0.304	
Back of Queue (Q), ft/ln (95 th percentile)				16.8	210.5	6.7	8.8	135.3	130.8	58.2	10.3	15.6		65.2	
Back of Queue (Q), veh/ln (95 th percentile)				0.7	8.3	0.3	0.3	5.3	5.2	2.3	0.4	0.6		2.6	
Queue Storage Ratio (RQ) (95 th percentile)				0.04	0.00	0.02	0.02	0.00	0.00	0.21	0.00	0.07		0.00	
Uniform Delay (d ₁), s/veh				3.2	5.3	3.7	4.0	4.8	4.8	71.4	67.0	67.1		68.2	
Incremental Delay (d ₂), s/veh				0.1	0.4	0.0	0.1	0.4	0.5	1.9	0.2	0.5		1.4	
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	
Control Delay (d), s/veh				3.3	5.7	3.7	4.1	5.2	5.2	73.3	67.2	67.6		69.6	
Level of Service (LOS)				A	A	A	A	A	A	E	E	E		E	
Approach Delay, s/veh / LOS				5.5	A		5.2	A		71.5	E		69.6	E	
Intersection Delay, s/veh / LOS				8.0						A					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				2.07	B		1.63	B		2.33	B		2.50	C	
Bicycle LOS Score / LOS				1.49	A		1.14	A		0.57	A		0.55	A	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	US 192 at Coastal Ln	File Name	7. US 192 at Coastal Ln - PM Existing.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	48	744	65	85	1086	45	66	23	32	36	10	83

Signal Information				Signal Timing (s)										
Cycle, s	140.0	Reference Phase	2	Green	4.2	0.6	95.9	18.9	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	4.8	0.0	4.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	2.7	0.0	2.0	2.4	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	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	11.7	102.7	12.3	103.3		25.0		25.0
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3		4.3
Queue Clearance Time (g _s), s	3.1		4.0			19.8		12.6
Green Extension Time (g _e), s	0.0	0.0	0.1	0.0		0.0		0.4
Phase Call Probability	0.85		0.96			1.00		1.00
Max Out Probability	0.18		0.01			1.00		0.29

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	48	744	32	85	569	562	66	23	0		129	
Adjusted Saturation Flow Rate (s), veh/h/ln	1739	1781	1572	1781	1870	1844	1272	1826	1572		1574	
Queue Service Time (g _s), s	1.1	11.7	0.9	2.0	19.1	19.1	7.2	1.5	0.0		6.1	
Cycle Queue Clearance Time (g _c), s	1.1	11.7	0.9	2.0	19.1	19.1	17.8	1.5	0.0		10.6	
Green Ratio (g/C)	0.72	0.68	0.68	0.72	0.69	0.69	0.13	0.13	0.13		0.13	
Capacity (c), veh/h	366	2439	1077	544	1289	1271	127	246	212		245	
Volume-to-Capacity Ratio (X)	0.131	0.305	0.030	0.156	0.442	0.442	0.521	0.093	0.000		0.526	
Back of Queue (Q), ft/ln (95 th percentile)	18	192.1	13.8	30.8	300.3	292.9	116.1	34.1	0		201.1	
Back of Queue (Q), veh/ln (95 th percentile)	0.7	7.6	0.5	1.2	11.8	11.7	4.5	1.3	0.0		7.9	
Queue Storage Ratio (RQ) (95 th percentile)	0.04	0.00	0.04	0.08	0.00	0.00	0.41	0.00	0.00		0.00	
Uniform Delay (d ₁), s/veh	7.5	8.8	7.1	6.3	9.7	9.7	65.4	53.0	0.0		56.9	
Incremental Delay (d ₂), s/veh	0.2	0.3	0.1	0.1	1.1	1.1	3.8	0.2	0.0		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	
Control Delay (d), s/veh	7.7	9.1	7.1	6.5	10.8	10.8	69.2	53.2	0.0		58.9	
Level of Service (LOS)	A	A	A	A	B	B	E	D			E	
Approach Delay, s/veh / LOS	9.0		A	10.5		B	65.0		E	58.9		E
Intersection Delay, s/veh / LOS	14.9						B					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.11	B	2.32	B
Bicycle LOS Score / LOS	1.17	A	0.63	A

APPENDIX E

SIGNAL TIMINGS

Location Details			
Signal ID:	119	Date:	February 23, 2018
Major Street:	US 192	Orientation:	E-W
Minor Street:	John Rodes Blvd (CR 511)	Orientation:	N-S

Controller Timings (seconds)

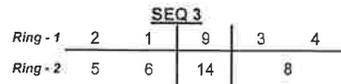
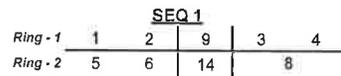
Movement # (Controller Phase Ø)	Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16	Notes
Direction	EBLT	WB	SBLT	NB	WBLT	EB		SB	EBLT					EB			
Turn Type	Prot		Prot Perm		Prot				Prot								
Min Green	5	12	5	7	5	12		7	5					12			
Ext	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0					3.0			
Yellow	4.8	4.8	4.8	4.8	4.8	4.8		4.8	4.8					4.8			
All Red	2.8	2.8	2.1	2.8	2.8	2.8		2.8	2.8					2.8			
Max I	15	60	20	15	15	60		20	15					60			
Max II	15	60	20	15	15	60		20	15					60			
Walk		7		7		7		7									
Flashing Don't Walk		16		29		25		29									
Detector Memory		ON				ON			ON					ON			
Det. Switching to:			Ø8														
Recall		MIN				MIN											
CNA																	

Coordination Timings (seconds)

Pattern	C-S-O	Cycle Length	Splits																Offset	Seq	Coord Ø
			Ø1	Ø2	Ø3	Ø4	Ø5	Ø6	Ø7	Ø8	Ø9	Ø10	Ø11	Ø12	Ø13	Ø14	Ø15	Ø16			
1		150	20	61 MAX	15	19	16	65 MAX		34	35 ENB					35 ENB		134	1	2	
2		110	20	54 MAX	17	19	16	58 MAX		36								98	3	6	
3		140	20	68 MAX	27	25	16	72 MAX		52								61	1	2	
4		90	16	40 MAX	15	19	16	40 MAX		34								11	3	6	

Offset Reference Point	Phase Mode
End of Green	USER

- Notes:
- 1) Use 'Max I' during FREE Operation.
 - 2) Max recall Ø2 and Ø6 during coordination.
 - 3) Redirect calls from Ø3 to Ø8 when Ø4 is green.



Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green		8		5		8		5
Gap, Ext		6		3		6		3
Max 1		50		25		50		25
Max 2		50		50		50		50
Yel Clearance		4.8		4		4.8		4
Red Clearance		2		2.5		2		2.5
Walk		7						7
Ped Clearance		20						15
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Auto Flash Parm [1.4.1]

Flash Parameter	Clearance Time
Mode CHANNEL Yellow	35
Red	15

Auto Flash, Phases/Overlaps [1.4.2]

Yel (phases)								
Yel (overlaps)								

**John Rodes Blvd & Sheridan (ID 349) (Standard File)
10/16/17**

Phase Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable		1		1		1		1
Min Recall		1				1		
Max Recall		1				1		
Ped Recall								
Soft Recall								
Lock Calls		1				1		
Auto Flash Entry				1				1
Auto Flash Exit		1				1		
Dual Entry		1		1		1		1
Enable Simul Gap		1		1		1		1
Gaurant Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Phase Options+ [1.1.3]

Reservice								
Walk Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Conflicting Phase								
Conflicting Phase	#N/A							
Omit Yellow								
Ped Out/Olap								
Start Yel, Next Ph								

Inhibit Phases [1.1.5]

Phase	Inhibit Phases							
	1	2	3	4	5	6	7	8
1								
2								
3								
4								
5								
6								
7								
8								

Call Phases, Call Redirection [1.1.5]

Phase	Call Phases				Redirection			
	1	2	3	4	From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Overlap Program Parameters [1.5.2.1]

	Extend Green	Yellow	Red	Type
Overlap A(1)	4	3.5	1	#NAME?
Overlap B(2)		3.5	1.5	NORMAL

Overlap Program Parameters [1.5.2.1]

	Extend Green	Yellow	Red	Type
Overlap C(3)		3.5	1.5	NORMAL
Overlap D(4)		3.5	1.5	NORMAL

Overlap A (1) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap C (3) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap B (2) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap D (4) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap Program Parameters [1.5.2.1]

Overlap	Green	Yellow	Red	Type
E(5)		3.5	1.5	NORMAL
F(6)		3.5	1.5	NORMAL
G(7)		3.5	1.5	NORMAL
H(8)		3.5	1.5	NORMAL

Overlap	Green	Yellow	Red	Type
I(9)		3.5	1.5	NORMAL
J(10)		3.5	1.5	NORMAL
K(11)		3.5	1.5	NORMAL
L(12)		3.5	1.5	NORMAL

Overlap	Green	Yellow	Red	Type
M(13)		3.5	1.5	NORMAL
N(14)		3.5	1.5	NORMAL
O(15)		3.5	1.5	NORMAL
P(16)		3.5	1.5	NORMAL

Overlap E (5) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap K (11) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap F (6) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap L (12) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap G (7) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap M (13) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap H (8) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap N (14) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap I (9) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap O (15) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap J (10) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Overlap P (16) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases									
Modifier Phases									
Conflicting Peds									

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green		15		6	5	15		
Gap, Ext		2.5		3.5	3	2.5		
Max 1		50		35	20	50		
Max 2		50		50	35	50		
Yel Clearance		4.8		4	4.8	4.8		
Red Clearance		2		2.5	2	2		
Walk								
Ped Clearance								
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Auto Flash Parm [1.4.1]

Flash Parameter	Clearance Time
Mode <input type="text" value="VOT_MON"/> Yellow	45
Red	30

Auto Flash, Phases/Overlaps [1.4.2]

Yel (phases)	2	6						
Yel (overlaps)								

**Ellis Rd & John Rode (ID 361) (Standard File)
10/16/17**

Phase Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable		1		1	1	1		
Min Recall		1				1		
Max Recall								
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry				1				
Auto Flash Exit		1				1		
Dual Entry		1				1		
Enable Simul Gap		1				1		
Gaurant Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Phase Options+ [1.1.3]

Reservice								
Walk Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Conflicting Phase								
Conflicting Phase	#N/A							
Omit Yellow								
Ped Out/Olap								
Start Yel, Next Ph								

Inhibit Phases [1.1.5]

Phase	Inhibit Phases							
	1	2	3	4	5	6	7	8
1								
2								
3								
4								
5								
6								
7								
8								

Call Phases, Call Redirection [1.1.5]

Phase	Call Phases				Redirection			
					From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Overlap Program Parameters [1.5.2.1]

	Extend Green	Yellow	Red	Type
Overlap A(1)		3.5	1.5	NORMAL
Overlap B(2)		3.5	1.5	NORMAL

Overlap Program Parameters [1.5.2.1]

	Extend Green	Yellow	Red	Type
Overlap C(3)		3.5	1.5	NORMAL
Overlap D(4)		3.5	1.5	NORMAL

Overlap A (1) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap C (3) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap B (2) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

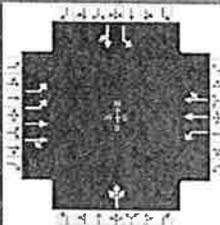
Overlap D (4) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

APPENDIX F
HCS SUMMARY SHEETS – EXISTING
CONDITIONS WITH IMPROVEMENTS

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2018	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - AM Existing Impr...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	411	757	3	9	707	169	19	7	23	114	3	210

Signal Information				Signal Timing Diagram															
Cycle, s	150.0	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		1.6	12.0	80.7	10.8	7.6	0.0										
		Yellow		4.8	4.8	4.8	4.8	4.8	0.0										
		Red		2.8	2.8	2.8	2.1	2.8	0.0										

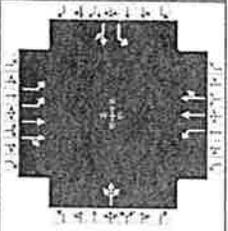
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	28.8	107.9	9.2	88.3		15.2	17.7	32.9
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	19.5		2.9			6.7	10.9	21.3
Green Extension Time (g _e), s	1.7	0.0	0.0	0.0		0.9	0.1	0.9
Phase Call Probability	1.00		0.31			1.00	0.99	1.00
Max Out Probability	0.00		0.00			0.00	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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	411	380	380	9	453	423		49		114	213	
Adjusted Saturation Flow Rate (s), veh/h/ln	1716	1870	1868	1499	1870	1745		1485		1781	1588	
Queue Service Time (g _s), s	17.5	12.7	12.7	0.9	22.2	22.2		3.1		8.9	19.3	
Cycle Queue Clearance Time (g _c), s	17.5	12.7	12.7	0.9	22.2	22.2		4.7		8.9	19.3	
Green Ratio (g/C)	0.14	0.67	0.67	0.01	0.54	0.54		0.05		0.14	0.17	
Capacity (c), veh/h	485	1251	1249	16	1006	938		108		203	268	
Volume-to-Capacity Ratio (X)	0.847	0.304	0.304	0.575	0.451	0.451		0.452		0.561	0.794	
Back of Queue (Q), ft/ln (95 th percentile)	316.9	223.9	220.5	24.7	379.2	353.8		87.4		186.6	322.3	
Back of Queue (Q), veh/ln (95 th percentile)	12.4	8.8	8.8	0.8	14.9	14.2		3.4		7.3	12.7	
Queue Storage Ratio (RQ) (95 th percentile)	0.53	0.00	0.00	0.15	0.00	0.00		0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	62.8	10.3	10.3	73.9	21.2	21.2		69.7		59.9	59.8	
Incremental Delay (d ₂), s/veh	4.2	0.6	0.6	29.1	1.5	1.6		2.9		2.4	5.3	
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	
Control Delay (d), s/veh	67.0	11.0	11.0	103.0	22.6	22.7		72.7		62.4	65.1	
Level of Service (LOS)	E	B	B	F	C	C		E		E	E	
Approach Delay, s/veh / LOS	30.6		C	23.5		C	72.7		E	64.2		E
Intersection Delay, s/veh / LOS	33.4						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.66		B	2.10		B	2.33		B	2.47		B
Bicycle LOS Score / LOS	1.45		A	1.22		A	0.57		A	1.03		A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018		Area Type	Other	
Jurisdiction	Brevard	Time Period	PM Peak Hour		PHF	1.00	
Urban Street	US 192	Analysis Year	2018		Analysis Period	1> 7:00	
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - PM Existing Impr...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	207	587	18	28	610	130	6	3	9	276	7	658

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	Yellow	Red	Green	Yellow	Red	Green	Yellow	Red	Green	Yellow	Red
EB	3.3	0.1	44.2	18.1	37.0	0.0						
WB	4.8	4.8	4.8	4.8	4.8	0.0						
NB	2.8	2.8	2.8	2.1	2.8	0.0						
SB												

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	18.6	59.5	10.9	51.8		44.6	25.0	69.6
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	10.2		4.2			33.6	17.2	58.2
Green Extension Time (g _e), s	0.8	0.0	0.1	0.0		3.4	0.9	3.4
Phase Call Probability	1.00		0.66			1.00	1.00	1.00
Max Out Probability	0.00		0.00			0.00	0.00	0.00

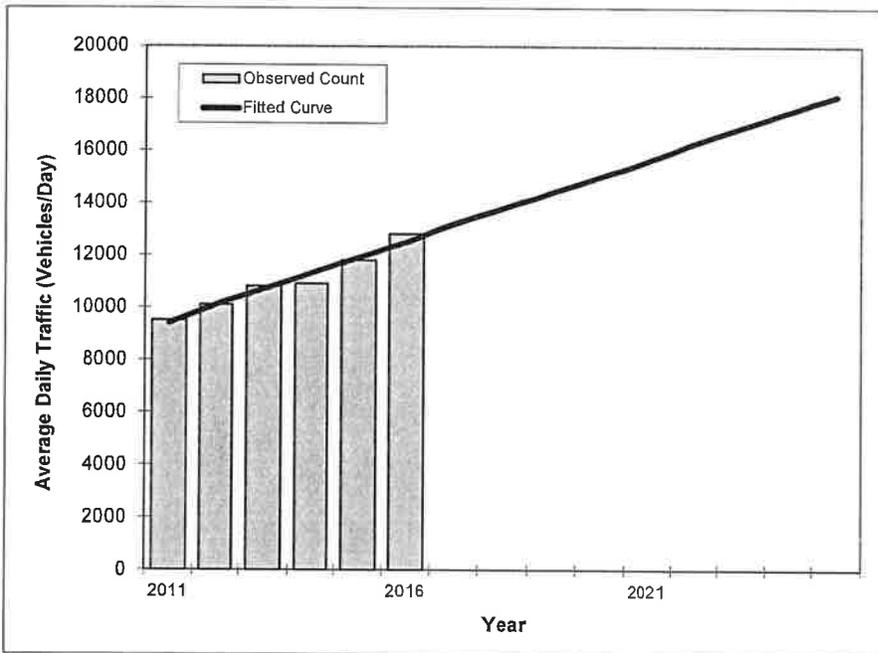
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	207	304	301	28	381	359	18			276	665	
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1856	1836	1781	1856	1742	374			1781	1588	
Queue Service Time (g _s), s	8.2	17.3	17.3	2.2	24.8	24.9	0.4			15.2	56.2	
Cycle Queue Clearance Time (g _c), s	8.2	17.3	17.3	2.2	24.8	24.9	31.6			15.2	56.2	
Green Ratio (g/C)	0.08	0.37	0.37	0.02	0.32	0.32	0.26			0.41	0.44	
Capacity (c), veh/h	272	687	680	42	585	549	133			336	704	
Volume-to-Capacity Ratio (X)	0.761	0.442	0.443	0.663	0.651	0.653	0.135			0.821	0.945	
Back of Queue (Q), ft/ln (95 th percentile)	169.8	323.5	313.7	53.5	451.4	421.5	21.6			281.6	784.4	
Back of Queue (Q), veh/ln (95 th percentile)	6.7	12.6	12.5	2.1	17.6	16.9	0.9			11.1	30.9	
Queue Storage Ratio (RQ) (95 th percentile)	0.29	0.00	0.00	0.32	0.00	0.00	0.00			0.00	0.00	
Uniform Delay (d ₁), s/veh	63.2	33.2	33.2	67.8	41.3	41.3	41.0			33.9	37.4	
Incremental Delay (d ₂), s/veh	4.4	2.1	2.1	16.4	5.5	5.9	0.5			5.0	11.8	
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	
Control Delay (d), s/veh	67.6	35.3	35.3	84.2	46.8	47.3	41.4			38.9	49.2	
Level of Service (LOS)	E	D	D	F	D	D	D			D	D	
Approach Delay, s/veh / LOS	43.5		D	48.4		D	41.4		D	46.2		D
Intersection Delay, s/veh / LOS	46.0						D					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.71		B	2.13		B	2.30		B	2.43		B
Bicycle LOS Score / LOS	1.16		A	1.12		A	0.52		A	2.04		B

APPENDIX G
GROWTH TRENDS ANALYSIS

TRAFFIC TRENDS
 Ellis Ave -- John Rodes to East Dr

County:	Brevard
Station #:	322
Highway:	Ellis Ave



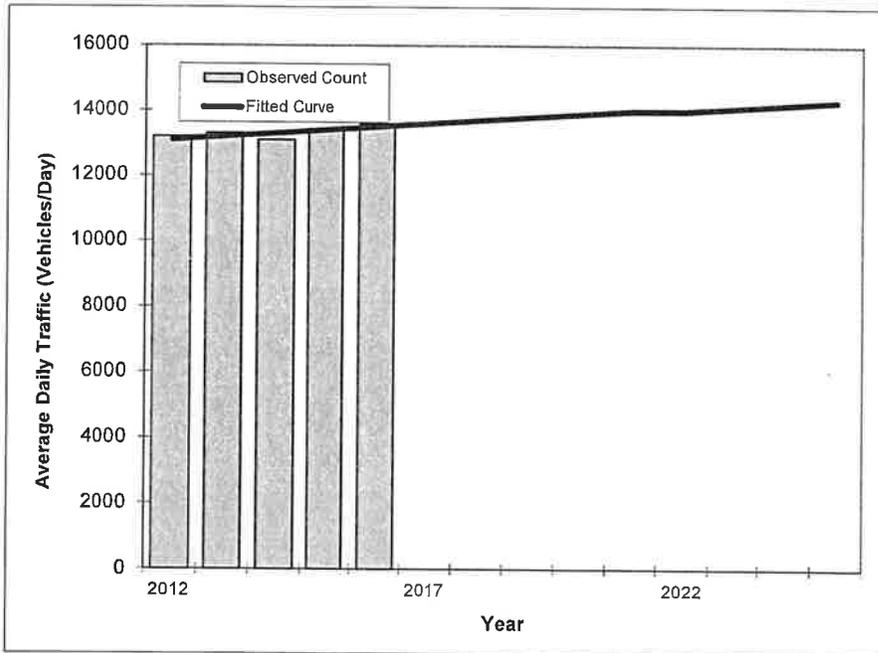
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2011	9500	9400
2012	10100	10100
2013	10800	10700
2014	10900	11300
2015	11800	11900
2016	12800	12500
2017 Opening Year Trend		
2017	N/A	13200
2019 Mid-Year Trend		
2019	N/A	14400
2022 Design Year Trend		
2022	N/A	16300
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	620
Trend R-squared:	96.3%
Trend Annual Historic Growth Rate:	6.60%
Trend Growth Rate (2016 to Design Year):	5.07%
Printed:	11-Oct-17
Straight Line Growth Option	

*Axle-Adjusted

TRAFFIC TRENDS
John Rodes Blvd -- Ellis Ave to Eau Gallie

County:	Brevard
Station #:	505
Highway:	John Rodes Blvd



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2012	13200	13100
2013	13300	13200
2014	13100	13300
2015	13400	13400
2016	13600	13500
2017 Opening Year Trend		
2017	N/A	13600
2019 Mid-Year Trend		
2019	N/A	13800
2022 Design Year Trend		
2022	N/A	14000
TRANPLAN Forecasts/Trends		

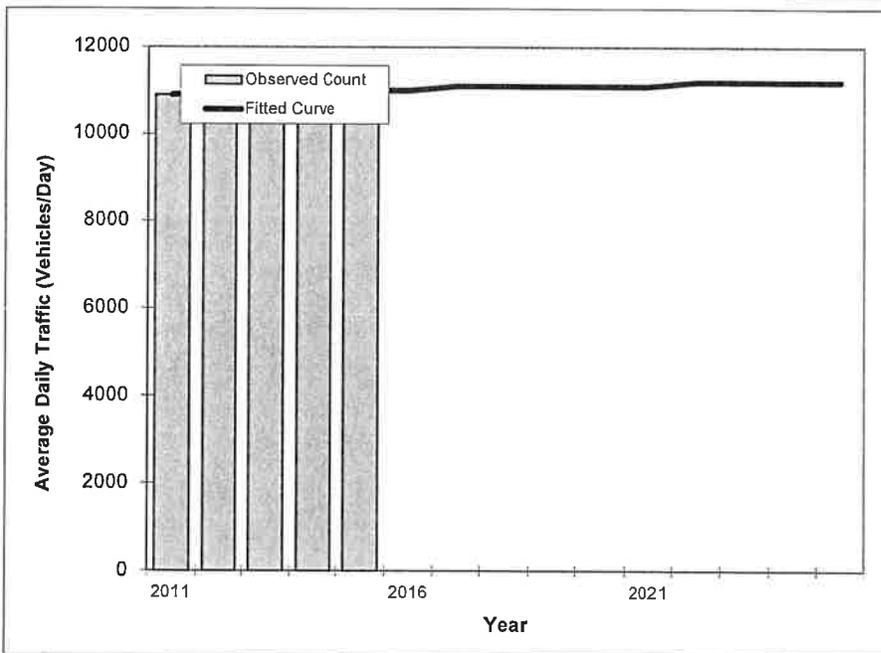
** Annual Trend Increase:	90
Trend R-squared:	54.7%
Trend Annual Historic Growth Rate:	0.76%
Trend Growth Rate (2016 to Design Year):	0.62%
Printed:	11-Oct-17
Straight Line Growth Option	

*Axle-Adjusted

TRAFFIC TRENDS

John Rodes Blvd -- Sheridan Ave to Ellis Ave

County:	Brevard
Station #:	504
Highway:	John Rodes Blvd



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2011	10900	10900
2012	11000	11000
2013	11000	11000
2014	11000	11000
2015	11000	11000
2017 Opening Year Trend		
2017	N/A	11100
2019 Mid-Year Trend		
2019	N/A	11100
2022 Design Year Trend		
2022	N/A	11200
TRANPLAN Forecasts/Trends		

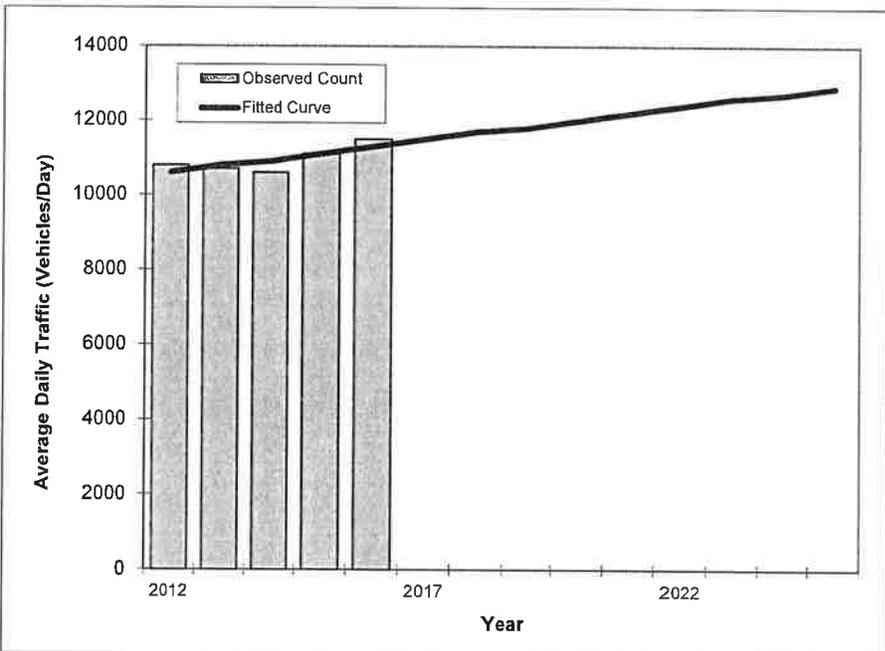
** Annual Trend Increase:	20
Trend R-squared:	50.0%
Trend Annual Historic Growth Rate:	0.23%
Trend Growth Rate (2015 to Design Year):	0.26%
Printed:	11-Oct-17
Straight Line Growth Option	

*Axle-Adjusted

TRAFFIC TRENDS

John Rodes Blvd – US 192 to Sheridan Ave

County:	Brevard
Station #:	511
Highway:	John Rodes Blvd



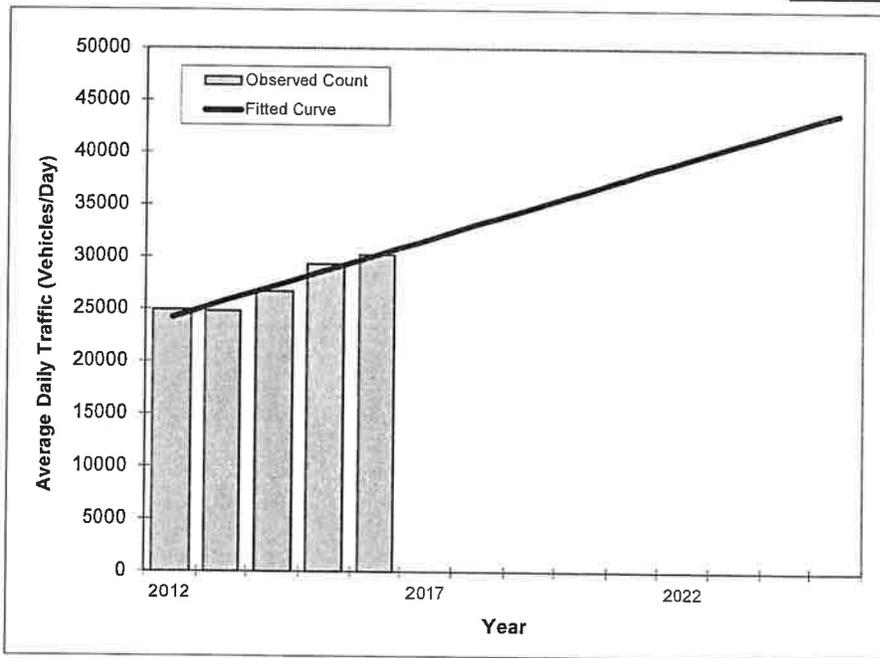
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2012	10800	10600
2013	10700	10800
2014	10600	10900
2015	11100	11100
2016	11500	11300
2017 Opening Year Trend		
2017	N/A	11500
2019 Mid-Year Trend		
2019	N/A	11800
2022 Design Year Trend		
2022	N/A	12400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:** 180
Trend R-squared: 60.9%
Trend Annual Historic Growth Rate: 1.65%
Trend Growth Rate (2016 to Design Year): 1.62%
Printed: 11-Oct-17
Straight Line Growth Option

*Axle-Adjusted

TRAFFIC TRENDS
US 192 -- I-95 to John Rodes Blvd

County:	Brevard
Station #:	421
Highway:	US 192



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2012	24900	24200
2013	24800	25700
2014	26700	27200
2015	29300	28700
2016	30200	30200
2017 Opening Year Trend		
2017	N/A	31700
2019 Mid-Year Trend		
2019	N/A	34700
2022 Design Year Trend		
2022	N/A	39300
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	1,510
Trend R-squared:	92.3%
Trend Annual Historic Growth Rate:	6.20%
Trend Growth Rate (2016 to Design Year):	5.02%
Printed:	11-Oct-17
Straight Line Growth Option	

*Axle-Adjusted

APPENDIX H
US 192 COASTAL COMMERCE TECH MEMO
FROM JUNE 11, 2009



Via Email: (cfischer@westmelbourne.org)

Ref: 3473.02

TECHNICAL MEMORANDUM

To: Christy Fischer

From: Dan D'Antonio, PE

Date: June 11, 2009

Re: Coastal Commerce – Racetrac Gasoline/Service Station

INTRODUCTION

Lassiter Transportation Group, Inc. (LTG) was retained by Sooner Investments to prepare a technical memorandum documenting the drawdown of entitlements from the approved Coast Commerce commercial development. The purpose of this document is to show that the cumulative number of trips generated by proposed uses within Coastal Commerce do not exceed the trips presented in the TIS.

LAND USE PLAN

The original Coastal Commerce Center development, as proposed in the April 2008 TIS, is comprised of 324,188 square feet (sq. ft.) of shopping center land usage. Businesses planned to locate within the site include only a 40,000 sq. ft. furniture store at this time. The proposed Racetrac gas station and convenience market will consist of 24 fueling positions and a 4,882-sq. ft. convenience market.

TRIP GENERATION

The procedures outlined by the Institute of Transportation Engineer's (ITE) in the manual Trip Generation, 8th Edition, were used to determine the project's trip-making characteristics. As is consistent with the TIS, ITE land use code 820 (shopping center) was used to quantify the total and net new trips generated by the Coastal Commerce Center development under daily and p.m. peak-hour conditions. These calculations are shown in Tables 1 and 2. Similarly, the ITE rates for code 890 (furniture store) and 945 (gasoline/service station with convenience market) were used to determine the trip generation for the planned uses shown in Table 3.

Table 1
Total Trip Generation – Coastal Commerce Center Approvals
Racetrac Gasoline/Service Station

Time Period	Land Use	ITE Code	Size (X)	Trip Generation Equation	Total Trips	Percent Enter	Percent Exit	Trips Enter	Trips Exit
Daily	Shopping Center	820	324.2 KSF	$\text{Ln}(T) = 0.65 \text{Ln}(X) + 5.83$	14,588	50%	50%	7,294	7,294
P.M. Peak-Hour		820	324.2 KSF	$\text{Ln}(T) = 0.66 \text{Ln}(X) + 3.40$	1,362	48%	52%	654	708

Source: ITE, Trip Generation, 8th Edition

TECHNICAL MEMORANDUM

Christy Fischer
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**Table 2
 Net New Trip Generation – Coastal Commerce Center Approvals
 Racetrac Gasoline/Service Station**

Time Period	Land Use	Total Trips			Pass-By Trips			New External Trips		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Daily	Shopping Center	7,294	7,294	14,588	2,480	2,480	4,960	4,814	4,814	9,628
P.M. Peak-Hour		654	708	1,362	222	241	463	432	467	899

Source: ITE, Trip Generation Handbook, 2nd Edition

**Table 3
 Total Trip Generation – Proposed Land Uses
 Racetrac Gasoline/Service Station**

Time Period	Land Use	ITE Code	Size (X)	Trip Generation Equation	Total Trips	Percent Enter	Percent Exit	Trips Enter	Trips Exit
Daily	Furniture Store	890	40.00 KSF	$T = 5.06(X)$	202	50%	50%	101	101
	Gas Station w/ Conv. Mkt.	945	24 VFP	$T = 162.78(X)*41\%$	1,602	50%	50%	801	801
P.M. Peak-Hour	Furniture Store	890	40.00 KSF	$T = 0.45(X)$	18	48%	52%	8	10
	Gas Station w/ Conv. Mkt.	945	24 VFP	$T = 13.38(X)*44\%$	142	50%	50%	71	71

*Gas station w/ convenience market daily and p.m. peak-hour trips were reduced by 59% and 56%, respectively, to account for pass-by trips

The next step was to subtract the proposed gas station trips from the "bank" of trips available within the Coastal Commerce Center approvals. This calculation is shown in Table 4 below. As indicated in Table 4, the proposed land use can be adequately accommodated within the approvals. Additionally, there will be a total of 9,178 daily trips and 846 p.m. peak-hour trips remaining in the trip bank.

**Table 4
 Coastal Commerce Approved Trips – Bank Withdrawals
 Racetrac Gasoline/Service Station**

Time Period	Land Uses	Total Trips		
		Enter	Exit	Total
Daily	Shopping Center	4,814	4,814	9,628
	Furniture Store	-101	-101	-202
	Gas Station w/ Conv. Mkt.	-801	-801	-1,602
	Remaining Trips in Bank	3,912	3,912	7,824
P.M. Peak-Hour	Shopping Center	432	467	899
	Furniture Store	-8	-10	-18
	Gas Station w/ Conv. Mkt.	-71	-71	-142
	Remaining Trips in Bank	353	386	739

TECHNICAL MEMORANDUM

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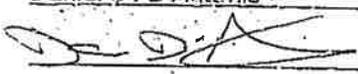
CONCLUSION

- The proposed development is a gas station with 24 vehicle fueling positions and 4,882 sq. ft. convenience market.
- The proposed development will generate 1,602 daily and 142 p.m. peak-hour new trips.
- There are adequate trips available within the Coastal Commerce Center approvals to accommodate the proposed development with 7,824 daily trips and 739 p.m. peak-hour trips remaining.

c: Donovan Smith, CSM Properties

I affirm, by affixing my signature and seal below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.

Name: Daniel M. D'Antonio

Signature: 

Florida PE License No.: 68399

Date: June 11, 2009

APPENDIX I
VESTED TRIPS – TRIPS REMAINING IN
BANK FOR COASTAL COMMERCE

Vested Trips Calculations

Total Coastal Commerce Approved Trips - 2007

Time Period	Land Use	Land Use Code	Trip Rate Equation*	Size	Units	Percent Entering	Percent Exiting	Total Trips			Pass-By Trips			New External Trips		
								Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Daily	Shopping Center	820	$\ln(T)=0.65\ln(X)+5.83$	324.188	KSF	50%	50%	7,294	7,294	14,587	2480	2480	4960	4,814	4,814	9,627
Totals:								7,294	7,294	14,587	2480	2480	4960	4,814	4,814	9,627
PM Peak Hour	Shopping Center	820	$\ln(T)=0.66\ln(X)+3.40$	324.188	KSF	48%	52%	653	708	1,361	222	241	463	431	467	898
Totals:								653	708	1,361	222	241	463	431	467	898

*Source= ITE *Trip Generation, 8th Edition*

Bank Withdrawals In 2009

Time Period	Land Use	Land Use Code	Trip Rate Equation*	Size	Units	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting	Total Trips
Daily	Convenience Store w/ Gas Pump (RaceTrac)	945	$T=162.78(X)*41\%$	24.000	VFP	50%	50%	801	801	1602
	Furniture Store (Rooms-To-Go)	890	$T=5.06(X)$	40.000	KSF	50%	50%	101	101	202
Totals:								902	902	1,804
PM Peak-Hour	Convenience Store w/ Gas Pump (RaceTrac)	945	$T=13.38(X)*44\%$	24.000	VFP	50%	50%	71	71	141
	Furniture Store (Rooms-To-Go)	890	$T=0.45(X)$	40.000	KSF	48%	52%	9	9	18
Totals:								80	80	159

*Gas station with Convenience Market daily and PM peak-hour were reduced by 59% and 56%, respectively, to account for pass-by trips

Bank Withdrawals After 2009

Time Period	Land Use	Land Use Code	Trip Rate Equation*	Size	Units	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting	Total Trips
Daily	Shopping Center (Chuck E Cheese, Goodwill)	820	$\ln(T)=0.65\ln(X)+5.83$	39.161	KSF	50%	50%	1,846	1,846	3,692
Totals:								1,846	1,846	3,692
PM Peak-Hour	Shopping Center (Chuck E Cheese, Goodwill)	820	$\ln(T)=0.66\ln(X)+3.40$	39.161	KSF	48%	52%	162	175	337
Totals:								162	175	337

*Source= ITE *Trip Generation, 8th Edition*

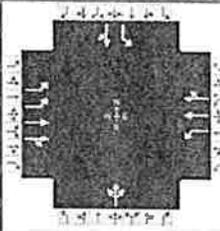
Coastal Commerce Approved Trips - Bank Withdrawals = Vested Trips

Time Period	Trip Bank	Trips Entering	Trips Exiting	Total Trips
Daily	Full Build-Out	4,814	4814	9627
	Trip Withdrawal in 2009	-902	-902	-1804
	Trip Withdrawal After 2009	-1,846	-1,846	-3,692
Total Trips Remaining in Trip Bank:		2,066	2066	4131
PM Peak-Hour	Full Build-Out	431	467	898
	Trip Withdrawal in 2009	-80	-80	-159
	Trip Withdrawal After 2009	-162	-175	-337
Total Trips Remaining in Trip Bank:		189	212	402

APPENDIX J
HCS SUMMARY SHEETS – BACKGROUND
CONDITIONS

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1> 7:00		
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - AM Background.x...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	432	795	3	10	743	177	19	8	24	116	3	214

Signal Information				Phase Diagram											
Cycle, s	150.0	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		1.7	12.9	79.3	11.0	7.8	0.0						
		Yellow		4.8	4.8	4.8	4.8	4.8	0.0						
		Red		2.8	2.8	2.8	2.1	2.8	0.0						

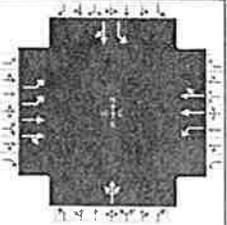
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	29.8	107.4	9.3	86.9		15.4	17.9	33.3
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	20.4		3.0			7.0	11.0	21.7
Green Extension Time (g _e), s	1.8	0.0	0.0	0.0		0.9	0.1	0.9
Phase Call Probability	1.00		0.34			1.00	0.99	1.00
Max Out Probability	0.00		0.00			0.00	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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	432	399	399	10	476	444		51		116	217	
Adjusted Saturation Flow Rate (s), veh/h/ln	1716	1870	1868	1499	1870	1745		1482		1781	1588	
Queue Service Time (g _s), s	18.4	13.6	13.6	1.0	24.1	24.1		3.2		9.0	19.7	
Cycle Queue Clearance Time (g _c), s	18.4	13.6	13.6	1.0	24.1	24.1		5.0		9.0	19.7	
Green Ratio (g/C)	0.15	0.67	0.67	0.01	0.53	0.53		0.05		0.14	0.17	
Capacity (c), veh/h	508	1244	1242	17	989	923		110		205	272	
Volume-to-Capacity Ratio (X)	0.851	0.321	0.321	0.586	0.481	0.481		0.462		0.566	0.797	
Back of Queue (Q), ft/ln (95 th percentile)	329.7	237.9	233.9	27.1	409	381.1		90.9		189.6	327	
Back of Queue (Q), veh/ln (95 th percentile)	12.9	9.4	9.4	0.9	16.1	15.2		3.6		7.5	12.9	
Queue Storage Ratio (RQ) (95 th percentile)	0.55	0.00	0.00	0.16	0.00	0.00		0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	62.3	10.7	10.7	73.8	22.4	22.4		69.6		59.7	59.6	
Incremental Delay (d ₂), s/veh	4.1	0.7	0.7	28.0	1.7	1.8		3.0		2.4	5.3	
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	
Control Delay (d), s/veh	66.4	11.4	11.4	101.8	24.0	24.1		72.6		62.1	64.9	
Level of Service (LOS)	E	B	B	F	C	C		E		E	E	
Approach Delay, s/veh / LOS	30.7		C	24.9		C		72.6		E	63.9	E
Intersection Delay, s/veh / LOS	33.8						C					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	1.66	B	2.10	B
Bicycle LOS Score / LOS	1.50	B	1.25	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - PM Background....				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	235	689	19	29	704	136	6	3	9	281	7	686

Signal Information				Signal Timing Diagram												
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		3.4	1.2	40.5	18.0	39.6	0.0							
		Yellow		4.8	4.8	4.8	4.8	4.8	0.0							
		Red		2.8	2.8	2.8	2.1	2.8	0.0							

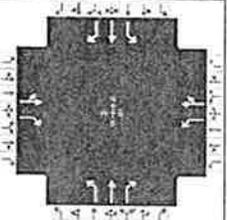
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	19.8	56.9	11.0	48.1		47.2	24.9	72.1
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	11.3		4.3			36.0	17.1	60.5
Green Extension Time (g _e), s	0.9	0.0	0.1	0.0		3.6	1.0	3.6
Phase Call Probability	1.00		0.68			1.00	1.00	1.00
Max Out Probability	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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	235	356	352	29	432	408	18			281	693	
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1856	1838	1781	1856	1751	354			1781	1587	
Queue Service Time (g _s), s	9.3	21.5	21.5	2.3	30.2	30.3	0.5			15.1	58.5	
Cycle Queue Clearance Time (g _c), s	9.3	21.5	21.5	2.3	30.2	30.3	34.0			15.1	58.5	
Green Ratio (g/C)	0.09	0.35	0.35	0.02	0.29	0.29	0.28			0.43	0.46	
Capacity (c), veh/h	302	653	647	43	536	506	135			336	732	
Volume-to-Capacity Ratio (X)	0.779	0.544	0.545	0.674	0.806	0.807	0.134			0.835	0.947	
Back of Queue (Q), ft/ln (95 th percentile)	192.2	392	380.8	55.5	558.8	522.7	21			279.8	812.5	
Back of Queue (Q), veh/ln (95 th percentile)	7.6	15.3	15.2	2.2	21.8	20.9	0.8			11.0	32.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.32	0.00	0.00	0.34	0.00	0.00	0.00			0.00	0.00	
Uniform Delay (d ₁), s/veh	62.6	36.4	36.4	67.8	46.1	46.1	39.5			33.0	36.1	
Incremental Delay (d ₂), s/veh	4.3	3.2	3.3	16.8	12.2	12.9	0.4			5.5	12.6	
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	66.9	39.6	39.6	84.5	58.4	59.1	40.0			38.5	48.7	
Level of Service (LOS)	E	D	D	F	E	E	D			D	D	
Approach Delay, s/veh / LOS	46.4		D	59.6		E	40.0		D	45.7		D
Intersection Delay, s/veh / LOS	50.2						D					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.71		B	2.13		B	2.30		B	2.43		B
Bicycle LOS Score / LOS	1.27		A	1.20		A	0.52		A	2.09		B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at She...	File Name	2. John Rodes Blvd at Sheridan Rd - AM Backgro...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	69	19	62	107	9	137	23	883	55	45	208	25

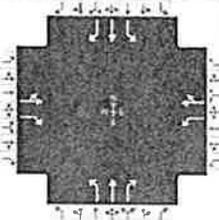
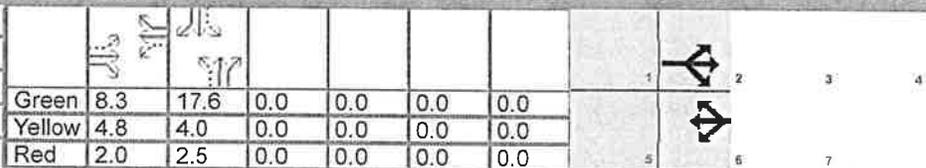
Signal Information				Signal Timing (s)													
Cycle, s	57.9	Reference Phase	2	Green	19.6	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	4.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	Yes	Simult. Gap E/W	On	Red	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On														

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		7.0		6.0		5.0		5.0
Phase Duration, s		26.4		26.4		31.5		31.5
Change Period, (Y+R _c), s		6.8		6.8		6.5		6.5
Max Allow Headway (MAH), s		7.3		7.3		4.0		4.0
Queue Clearance Time (g _s), s		9.8		14.7		27.0		27.0
Green Extension Time (g _e), s		5.0		4.9		0.0		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.01		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	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h		88	51	107	146		23	883	2	45	208	0
Adjusted Saturation Flow Rate (s), veh/h/ln		1012	1585	1393	1308		1174	1870	1585	624	1767	1585
Queue Service Time (g _s), s		2.3	1.3	3.9	4.8		0.7	25.0	0.0	0.1	4.4	0.0
Cycle Queue Clearance Time (g _c), s		7.8	1.3	12.7	4.8		4.9	25.0	0.0	25.0	4.4	0.0
Green Ratio (g/C)		0.34	0.34	0.34	0.34		0.43	0.43	0.43	0.43	0.43	0.43
Capacity (c), veh/h		453	535	382	441		547	809	686	125	764	686
Volume-to-Capacity Ratio (X)		0.194	0.095	0.280	0.331		0.042	1.091	0.003	0.359	0.272	0.000
Back of Queue (Q), ft/ln (95 th percentile)		43.4	20.6	60.9	79.4		7.4	778.5	0.5	28.6	64.9	0
Back of Queue (Q), veh/ln (95 th percentile)		1.7	0.8	2.4	2.6		0.3	30.7	0.0	1.1	2.4	0.0
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.18	0.32	0.00		0.03	0.00	0.00	0.11	0.00	0.00
Uniform Delay (d ₁), s/veh		16.2	13.1	20.8	14.3		12.1	16.4	9.3	28.9	10.5	0.0
Incremental Delay (d ₂), s/veh		0.8	0.3	1.4	1.6		0.0	59.4	0.0	1.7	0.2	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		16.9	13.4	22.2	15.9		12.1	75.8	9.3	30.6	10.7	0.0
Level of Service (LOS)		B	B	C	B		B	F	A	C	B	
Approach Delay, s/veh / LOS	15.6	B		18.6	B		74.1	E		14.3	B	
Intersection Delay, s/veh / LOS	50.1						D					

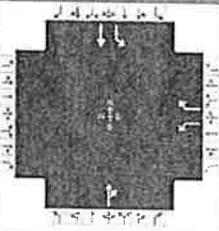
Multimodal Results	EB			WB			NB			SB		
	Pedestrian LOS Score / LOS	2.17	B		2.13	B		1.89	B		1.90	B
Bicycle LOS Score / LOS	0.72	A		0.91	A		1.99	B		0.91	A	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP			Analysis Date	May 7, 2018										
Jurisdiction	Brevard			Time Period	PM Peak Hour										
Urban Street	John Rodes Blvd			Analysis Year	2019										
Intersection	John Rodes Blvd at She...			File Name	2. John Rodes Blvd at Sheridan Rd - PM Backgro...										
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				28	11	62	77	21	62	52	364	136	89	583	52
Signal Information															
Cycle, s	39.2	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	8.3	17.6	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	4.8	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	0.0
Red	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				2		6		8		4					
Case Number				7.0		6.0		5.0		5.0					
Phase Duration, s				15.1		15.1		24.1		24.1					
Change Period, (Y+R c), s				6.8		6.8		6.5		6.5					
Max Allow Headway (MAH), s				7.3		7.3		4.1		4.1					
Queue Clearance Time (g s), s				3.7		5.5		13.8		11.7					
Green Extension Time (g e), s				2.9		2.9		3.9		4.2					
Phase Call Probability				1.00		1.00		1.00		1.00					
Max Out Probability				0.00		0.00		0.34		0.25					
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				39	36	77	83			52	364	98	89	583	38
Adjusted Saturation Flow Rate (s), veh/h/ln				1236	1585	1404	1649			832	1826	1585	1018	1870	1585
Queue Service Time (g s), s				0.0	0.7	1.9	1.6			2.1	5.3	1.4	2.6	9.7	0.5
Cycle Queue Clearance Time (g c), s				1.7	0.7	3.5	1.6			11.8	5.3	1.4	7.9	9.7	0.5
Green Ratio (g/C)				0.21	0.21	0.21	0.21			0.45	0.45	0.45	0.45	0.45	0.45
Capacity (c), veh/h				418	332	420	346			351	819	711	502	839	711
Volume-to-Capacity Ratio (X)				0.093	0.108	0.183	0.240			0.148	0.444	0.138	0.177	0.695	0.053
Back of Queue (Q), ft/ln (95 th percentile)				12.9	11.7	26.8	28.2			13.7	54.7	12.1	18.4	103.7	4.5
Back of Queue (Q), veh/ln (95 th percentile)				0.5	0.5	1.1	1.1			0.5	2.1	0.5	0.7	4.1	0.2
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.10	0.14	0.00			0.06	0.00	0.05	0.07	0.00	0.02
Uniform Delay (d 1), s/veh				12.5	12.4	14.3	12.8			13.3	7.4	6.3	10.1	8.6	6.1
Incremental Delay (d 2), s/veh				0.3	0.5	0.8	1.3			0.2	0.4	0.1	0.2	1.0	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				12.8	13.0	15.0	14.1			13.5	7.8	6.4	10.3	9.6	6.1
Level of Service (LOS)				B	B	B	B			B	A	A	B	A	A
Approach Delay, s/veh / LOS				12.9	B	14.5	B			8.1	A		9.5	A	
Intersection Delay, s/veh / LOS				9.7			A								
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				2.14	B	2.11	B			1.87	B		1.91	B	
Bicycle LOS Score / LOS				0.61	A	0.75	A			1.34	A		1.66	B	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP			Analysis Date	May 7, 2018		
Jurisdiction	Brevard			Area Type	Other		
Urban Street	John Rodes Blvd			Time Period	AM Peak Hour		
Intersection	John Rodes Blvd at Ellis...			PHF	1.00		
Project Description	4397.02			Analysis Year	2019		
				Analysis Period	1> 7:00		
				File Name	4. John Rodes Blvd at Ellis Rd - AM Background....		



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				77		184		740	211	232	229	

Signal Information													
Cycle, s	94.7	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	10.5	50.0	14.1	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0			
				Red	2.0	2.0	2.5	0.0	0.0	0.0			

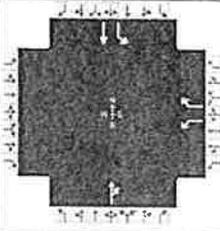
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				20.6		56.8	17.3	74.1
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				13.0		52.0	10.0	5.9
Green Extension Time (g _e), s				1.2		0.0	0.5	4.2
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				0.00		1.00	0.02	0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14		6	16	5	2	
Adjusted Flow Rate (v), veh/h				77		184		951		232	229	
Adjusted Saturation Flow Rate (s), veh/h/ln				1781		1535		1799		1781	1826	
Queue Service Time (g _s), s				3.6		11.0		50.0		8.0	3.9	
Cycle Queue Clearance Time (g _c), s				3.6		11.0		50.0		8.0	3.9	
Green Ratio (g/C)				0.15		0.15		0.53		0.66	0.71	
Capacity (c), veh/h				266		229		949		273	1297	
Volume-to-Capacity Ratio (X)				0.289		0.803		1.002		0.850	0.177	
Back of Queue (Q), ft/ln (95 th percentile)				73.3		209.5		863.2		240.4	50.5	
Back of Queue (Q), veh/ln (95 th percentile)				2.9		8.0		34.0		9.5	1.9	
Queue Storage Ratio (RQ) (95 th percentile)				0.18		0.00		0.00		0.62	0.00	
Uniform Delay (d ₁), s/veh				35.8		38.9		22.4		29.1	4.5	
Incremental Delay (d ₂), s/veh				0.7		7.7		29.6		7.9	0.0	
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0	0.0	
Control Delay (d), s/veh				36.5		46.6		52.0		37.1	4.6	
Level of Service (LOS)				D		D		F		D	A	
Approach Delay, s/veh / LOS	0.0			43.6		D		52.0		D	20.9	C
Intersection Delay, s/veh / LOS				42.1							D	

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	1.73 B	1.96 B	1.89 B	0.66 A
Bicycle LOS Score / LOS		F	2.06 B	1.25 A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - PM Background....				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				142		230		329	90	152	596	

Signal Information													
Cycle, s	51.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	4.5	15.6	10.8	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	2.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0

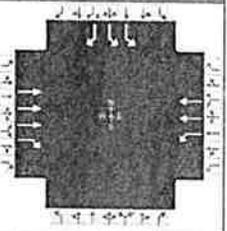
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				17.3		22.4	11.3	33.7
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				9.0		12.7	4.7	13.3
Green Extension Time (g _e), s				1.8		2.9	0.4	2.9
Phase Call Probability				0.99		1.00	0.88	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				7		14		6	16	5		2	
Adjusted Flow Rate (v), veh/h				142		230		419		152		596	
Adjusted Saturation Flow Rate (s), veh/h/ln				1739		1560		1801		1781		1870	
Queue Service Time (g _s), s				3.6		7.0		10.7		2.7		11.3	
Cycle Queue Clearance Time (g _c), s				3.6		7.0		10.7		2.7		11.3	
Green Ratio (g/C)				0.21		0.21		0.31		0.43		0.53	
Capacity (c), veh/h				367		329		553		392		988	
Volume-to-Capacity Ratio (X)				0.387		0.698		0.758		0.387		0.603	
Back of Queue (Q), ft/ln (95 th percentile)				62.2		114.9		167.6		36.7		130.3	
Back of Queue (Q), veh/ln (95 th percentile)				2.4		4.5		6.6		1.4		5.1	
Queue Storage Ratio (RQ) (95 th percentile)				0.15		0.00		0.00		0.09		0.00	
Uniform Delay (d ₁), s/veh				17.3		18.6		16.0		10.8		8.3	
Incremental Delay (d ₂), s/veh				0.8		3.2		1.6		0.6		0.4	
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0		0.0	
Control Delay (d), s/veh				18.1		21.9		17.6		11.4		8.8	
Level of Service (LOS)				B		C		B		B		A	
Approach Delay, s/veh / LOS	0.0			20.4		C		17.6		B		9.3	A
Intersection Delay, s/veh / LOS				14.3				B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.94	B	1.90	B	0.67	A
Bicycle LOS Score / LOS				F	1.18	A	1.72	B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP			Analysis Date	Aug 31, 2018		
Jurisdiction	Brevard			Time Period	AM Peak Hour		
Urban Street	US 192			Analysis Year	2019		
Intersection	US 192 at SB I-95			File Name	5. US 192 at SB I-95 - AM Background.xus		
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		222	166	166	225						456	94

Signal Information													
Cycle, s	150.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On										
Force Mode	Fixed	Simult. Gap N/S	On										
				Green	7.7	98.7	23.5	0.0	0.0	0.0	0.0	0.0	0.0
				Yellow	4.8	4.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0
				Red	2.1	2.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0

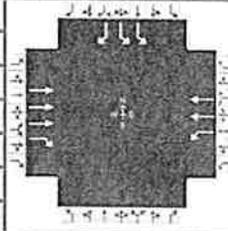
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6				
Case Number		7.3	1.0	4.0				4
Phase Duration, s		105.6	14.6	120.2				9.0
Change Period, (Y+R _c), s		6.9	6.9	6.9				29.8
Max Allow Headway (MAH), s		0.0	6.1	0.0				4.2
Queue Clearance Time (g _s), s			6.3					21.2
Green Extension Time (g _e), s		0.0	1.4	0.0				2.3
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
Assigned Movement		2	12	1	6					7		14
Adjusted Flow Rate (v), veh/h		222	166	166	225					456		94
Adjusted Saturation Flow Rate (s), veh/h/ln		1618	1585	1781	1710					1730		1497
Queue Service Time (g _s), s		2.5	6.0	4.3	2.6					19.2		8.5
Cycle Queue Clearance Time (g _c), s		2.5	6.0	4.3	2.6					19.2		8.5
Green Ratio (g/C)		0.66	0.66	0.72	0.76					0.16		0.16
Capacity (c), veh/h		3194	1043	883	2584					541		234
Volume-to-Capacity Ratio (X)		0.069	0.159	0.188	0.087					0.842		0.401
Back of Queue (Q), ft/ln (95 th percentile)		41.9	98.6	72.9	41.5					343.6		158.5
Back of Queue (Q), veh/ln (95 th percentile)		1.6	3.9	2.9	1.6					13.5		5.9
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		9.2	9.8	6.4	4.8					61.5		56.9
Incremental Delay (d ₂), s/veh		0.0	0.3	0.2	0.1					3.6		1.1
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0					0.0		0.0
Control Delay (d), s/veh		9.2	10.1	6.7	4.9					65.1		58.0
Level of Service (LOS)		A	B	A	A					E		E
Approach Delay, s/veh / LOS	9.6	A		5.6	A		0.0			63.9	E	
Intersection Delay, s/veh / LOS	30.9						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.37	A		1.86	B		2.49	B		2.49	B	
Bicycle LOS Score / LOS	0.70	A		0.81	A						F	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018		Area Type	Other	
Jurisdiction	Brevard	Time Period	PM Peak Hour		PHF	1.00	
Urban Street	US 192	Analysis Year	2019		Analysis Period	1> 7:00	
Intersection	US 192 at SB I-95		File Name	5. US 192 at SB I-95 - PM Background.xus			
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		251	138	468	406					607		186

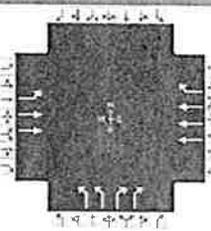
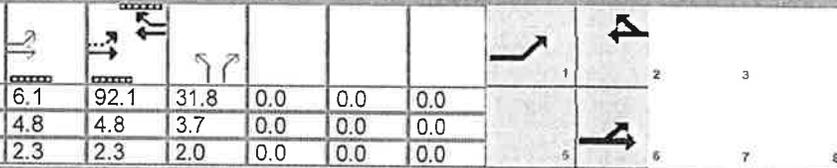
Signal Information				EB				WB				NB				SB			
Cycle, s	140.0	Reference Phase	2	[Diagram]				[Diagram]				[Diagram]							
Offset, s	0	Reference Point	End	Green	23.5	67.5	28.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.8	4.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.1	2.1	2.6	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				4
Case Number		7.3	1.0	4.0				9.0
Phase Duration, s		74.4	30.4	104.8				35.2
Change Period, (Y+R _c), s		6.9	6.9	6.9				6.3
Max Allow Headway (MAH), s		0.0	6.1	0.0				4.2
Queue Clearance Time (g _s), s			18.7					25.6
Green Extension Time (g _e), s		0.0	4.8	0.0				3.3
Phase Call Probability			1.00					1.00
Max Out Probability			0.00					0.03

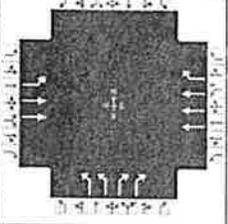
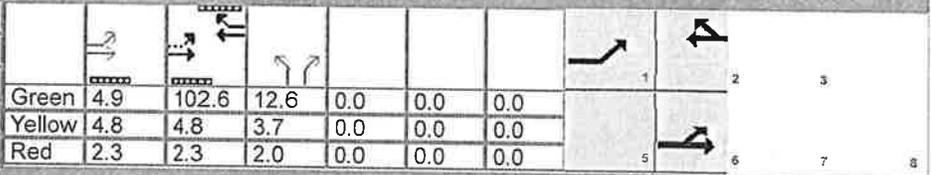
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		2	12	1	6					7		14
Adjusted Flow Rate (v), veh/h		251	138	468	406					607		186
Adjusted Saturation Flow Rate (s), veh/h/ln		1644	1585	1781	1752					1730		1547
Queue Service Time (g _s), s		3.9	6.9	16.7	5.5					23.6		15.2
Cycle Queue Clearance Time (g _c), s		3.9	6.9	16.7	5.5					23.6		15.2
Green Ratio (g/C)		0.48	0.48	0.66	0.70					0.21		0.21
Capacity (c), veh/h		2378	764	863	2451					714		319
Volume-to-Capacity Ratio (X)		0.106	0.181	0.542	0.166					0.850		0.582
Back of Queue (Q), ft/ln (95 th percentile)		71.7	122.8	273.5	93.7					406.8		261.1
Back of Queue (Q), veh/ln (95 th percentile)		2.7	4.8	10.8	3.6					16.0		10.0
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		19.8	20.6	10.9	7.2					53.5		50.1
Incremental Delay (d ₂), s/veh		0.1	0.5	1.1	0.1					4.5		1.7
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0					0.0		0.0
Control Delay (d), s/veh		19.9	21.1	12.0	7.3					57.9		51.8
Level of Service (LOS)		B	C	B	A					E		D
Approach Delay, s/veh / LOS	20.3	C		9.8	A		0.0			56.5	E	
Intersection Delay, s/veh / LOS	29.8						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.40	A		1.87	B		2.48	B		2.48	B	
Bicycle LOS Score / LOS	0.70	A		1.21	A						F	

HCS7 Signalized Intersection Results Summary

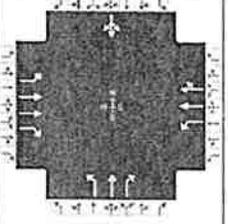
General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP		Analysis Date	Aug 31, 2018		Area Type	Other								
Jurisdiction	Brevard		Time Period	AM Peak Hour		PHF	1.00								
Urban Street	US 192		Analysis Year	2019		Analysis Period	1 > 7:00								
Intersection	US 192 at NB I-95		File Name	6. US 192 at NB I-95 - AM Background.xus											
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				117	585			324	537	98		526			
Signal Information															
Cycle, s	150.0	Reference Phase	2												
Offset, s	0	Reference Point	End	Green	6.1	92.1	31.8	0.0	0.0	0.0					
Uncoordinated	No	Simult. Gap EW	On	Yellow	4.8	4.8	3.7	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.3	2.3	2.0	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		7.3		9.0						
Phase Duration, s				13.2	112.5		99.2		37.5						
Change Period, (Y+R _c), s				7.1	7.1		7.1		5.7						
Max Allow Headway (MAH), s				5.0	0.0		0.0		6.2						
Queue Clearance Time (g _s), s				5.6					29.3						
Green Extension Time (g _e), s				0.6	0.0		0.0		2.6						
Phase Call Probability				0.99					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				1	6			2	12	7		14			
Adjusted Flow Rate (v), veh/h				117	585			324	537	98		526			
Adjusted Saturation Flow Rate (s), veh/h/ln				1725	1781			1644	1585	1689		1403			
Queue Service Time (g _s), s				3.6	8.8			4.1	29.7	3.5		27.3			
Cycle Queue Clearance Time (g _c), s				3.6	8.8			4.1	29.7	3.5		27.3			
Green Ratio (g/C)				0.67	0.70			0.61	0.61	0.21		0.21			
Capacity (c), veh/h				719	2501			3030	973	717		596			
Volume-to-Capacity Ratio (X)				0.163	0.234			0.107	0.552	0.137		0.883			
Back of Queue (Q), ft/ln (95 th percentile)				61.8	144.6			69.1	410.6	70		406.1			
Back of Queue (Q), veh/ln (95 th percentile)				2.4	5.7			2.6	16.2	2.7		16.0			
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				9.0	8.0			12.0	16.9	47.9		57.3			
Incremental Delay (d ₂), s/veh				0.1	0.2			0.1	2.3	0.2		14.1			
Initial Queue Delay (d ₃), s/veh				0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (d), s/veh				9.1	8.2			12.0	19.1	48.1		71.3			
Level of Service (LOS)				A	A			B	B	D		E			
Approach Delay, s/veh / LOS				8.3	A		16.5	B		67.7	E		0.0		
Intersection Delay, s/veh / LOS				28.5						C					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				2.06	B		1.38	A		2.49	B		2.49	B	
Bicycle LOS Score / LOS				1.07	A		0.96	A			F				

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information															
Agency	LTG			Duration, h	0.25														
Analyst	ACP			Analysis Date	Aug 31, 2018							Area Type				Other			
Jurisdiction	Brevard			Time Period	PM Peak Hour							PHF				1.00			
Urban Street	US 192			Analysis Year	2019							Analysis Period				1 > 7:00			
Intersection	US 192 at NB I-95			File Name	6. US 192 at NB I-95 - PM Background.xus														
Project Description	4397.02																		
Demand Information				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (v), veh/h				106	704			759	662	138		195							
Signal Information																			
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	4.9	102.6	12.6	0.0	0.0	0.0													
Yellow	4.8	4.8	3.7	0.0	0.0	0.0													
Red	2.3	2.3	2.0	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		7.3		9.0										
Phase Duration, s				12.0	121.7		109.7		18.3										
Change Period, ($Y+R_c$), s				7.1	7.1		7.1		5.7										
Max Allow Headway (MAH), s				5.0	0.0		0.0		6.2										
Queue Clearance Time (g_s), s				4.1					11.5										
Green Extension Time (g_e), s				0.5	0.0		0.0		1.1										
Phase Call Probability				0.98					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				1	6		2	12	7	14									
Adjusted Flow Rate (v), veh/h				106	704		759	662	138	195									
Adjusted Saturation Flow Rate (s), veh/h/ln				1668	1781		1685	1585	1702	1403									
Queue Service Time (g_s), s				2.1	6.3		6.6	26.8	5.4	9.5									
Cycle Queue Clearance Time (g_c), s				2.1	6.3		6.6	26.8	5.4	9.5									
Green Ratio (g/C)				0.78	0.82		0.73	0.73	0.09	0.09									
Capacity (c), veh/h				563	2915		3704	1162	306	252									
Volume-to-Capacity Ratio (X)				0.188	0.241		0.205	0.570	0.451	0.773									
Back of Queue (Q), ft/ln (95 th percentile)				28.5	73.8		95.6	335.8	110.6	172.2									
Back of Queue (Q), veh/ln (95 th percentile)				1.1	2.9		3.7	13.2	4.3	6.8									
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				3.9	2.9		5.9	8.6	60.4	62.3									
Incremental Delay (d_2), s/veh				0.2	0.2		0.1	2.0	2.2	12.3									
Initial Queue Delay (d_3), s/veh				0.0	0.0		0.0	0.0	0.0	0.0									
Control Delay (d), s/veh				4.1	3.1		6.0	10.6	62.6	74.6									
Level of Service (LOS)				A	A		A	B	E	E									
Approach Delay, s/veh / LOS				3.2	A		8.2	A	69.6	E	0.0								
Intersection Delay, s/veh / LOS				14.6						B									
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS				2.02	B		1.35	A	2.48	B	2.48	B							
Bicycle LOS Score / LOS				1.16	A		1.27	A		F									

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018		Area Type	Other	
Jurisdiction	Brevard	Time Period	AM Peak Hour		PHF	1.00	
Urban Street	US 192	Analysis Year	2019		Analysis Period	1> 7:00	
Intersection	US 192 at Coastal Ln	File Name	7. US 192 at Coastal Ln - AM Background.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	84	1231	44	41	778	56	33	6	29	11	5	23

Signal Information				Signal Timing Diagram											
Cycle, s	150.0	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	4.1	0.8		116.0	8.8	0.0	0.0								
Yellow	4.8	0.0		4.8	3.7	0.0	0.0								
Red	2.7	0.0		2.0	2.4	0.0	0.0								

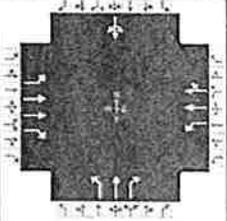
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	12.3	123.5	11.6	122.8		14.9		14.9
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3		4.3
Queue Clearance Time (g _s), s	3.4		2.7			8.8		5.3
Green Extension Time (g _e), s	0.2	0.0	0.1	0.0		0.1		0.2
Phase Call Probability	0.97		0.82			0.97		0.97
Max Out Probability	0.00		0.00			0.02		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	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	84	1231	28	41	422	412	33	6	9		39	
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1781	1572	1767	1870	1826	1382	1870	1585		1608	
Queue Service Time (g _s), s	1.4	17.6	0.6	0.7	9.9	9.9	3.5	0.5	0.8		0.2	
Cycle Queue Clearance Time (g _c), s	1.4	17.6	0.6	0.7	9.9	9.9	6.8	0.5	0.8		3.3	
Green Ratio (g/C)	0.81	0.78	0.78	0.80	0.77	0.77	0.06	0.06	0.06		0.06	
Capacity (c), veh/h	571	2771	1224	387	1446	1411	99	110	93		125	
Volume-to-Capacity Ratio (X)	0.147	0.444	0.023	0.106	0.292	0.292	0.335	0.055	0.097		0.312	
Back of Queue (Q), ft/ln (95 th percentile)	19.1	239.1	8	9.8	156.2	150.9	60.1	10.3	15.6		68.6	
Back of Queue (Q), veh/ln (95 th percentile)	0.8	9.4	0.3	0.4	6.2	6.0	2.4	0.4	0.6		2.7	
Queue Storage Ratio (RQ) (95 th percentile)	0.04	0.00	0.02	0.03	0.00	0.00	0.21	0.00	0.07		0.00	
Uniform Delay (d ₁), s/veh	3.4	5.6	3.8	4.4	5.0	5.0	71.3	66.7	66.8		68.0	
Incremental Delay (d ₂), s/veh	0.1	0.5	0.0	0.1	0.5	0.5	2.0	0.2	0.4		1.4	
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	
Control Delay (d), s/veh	3.5	6.2	3.8	4.5	5.5	5.5	73.3	66.9	67.3		69.4	
Level of Service (LOS)	A	A	A	A	A	A	E	E	E		E	
Approach Delay, s/veh / LOS	5.9	A		5.5	A		71.4	E		69.4	E	
Intersection Delay, s/veh / LOS	8.2						A					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.07	B		1.63	B		2.33	B		2.50	C	
Bicycle LOS Score / LOS	1.60	B		1.21	A		0.57	A		0.55	A	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018		Area Type	Other	
Jurisdiction	Brevard	Time Period	PM Peak Hour		PHF	1.00	
Urban Street	US 192	Analysis Year	2019		Analysis Period	1> 7:00	
Intersection	US 192 at Coastal Ln		File Name	7. US 192 at Coastal Ln - PM Background.xus			
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	52	819	179	173	1196	50	190	24	113	38	10	86

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	4.3	2.1	94.2	18.9	0.0	0.0						
				Yellow	4.8	0.0	4.8	3.7	0.0	0.0						
				Red	2.7	0.0	2.0	2.4	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	11.8	101.0	14.0	103.2		25.0		25.0
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.4		4.4
Queue Clearance Time (g _s), s	3.3		6.2			20.9		13.1
Green Extension Time (g _e), s	0.0	0.0	0.3	0.0		0.0		0.8
Phase Call Probability	0.87		1.00			1.00		1.00
Max Out Probability	0.22		0.17			1.00		0.53

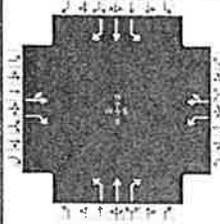
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	52	819	84	173	627	619	190	24	27			134
Adjusted Saturation Flow Rate (s), veh/h/ln	1739	1781	1572	1781	1870	1844	1269	1826	1572			1571
Queue Service Time (g _s), s	1.3	13.7	2.6	4.2	22.0	22.1	7.8	1.6	2.1			6.8
Cycle Queue Clearance Time (g _c), s	1.3	13.7	2.6	4.2	22.0	22.1	18.9	1.6	2.1			11.1
Green Ratio (g/C)	0.70	0.67	0.67	0.72	0.69	0.69	0.14	0.14	0.14			0.14
Capacity (c), veh/h	330	2397	1058	518	1287	1269	122	246	212			245
Volume-to-Capacity Ratio (X)	0.157	0.342	0.079	0.334	0.487	0.488	1.559	0.097	0.127			0.547
Back of Queue (Q), ft/ln (95 th percentile)	20.8	219.7	39.4	66.6	338.6	331	613.5	35.6	39.6			208.7
Back of Queue (Q), veh/ln (95 th percentile)	0.8	8.6	1.5	2.6	13.3	13.2	23.6	1.4	1.5			8.2
Queue Storage Ratio (RQ) (95 th percentile)	0.05	0.00	0.12	0.18	0.00	0.00	2.19	0.00	0.18			0.00
Uniform Delay (d ₁), s/veh	8.3	9.7	7.9	7.0	10.2	10.2	67.8	53.1	53.3			57.1
Incremental Delay (d ₂), s/veh	0.2	0.4	0.1	0.4	1.3	1.3	287.4	0.2	0.3			2.5
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
Control Delay (d), s/veh	8.5	10.1	8.1	7.4	11.6	11.6	355.1	53.2	53.6			59.6
Level of Service (LOS)	A	B	A	A	B	B	F	D	D			E
Approach Delay, s/veh / LOS	9.8		A	11.1		B	291.3		F	59.6		E
Intersection Delay, s/veh / LOS	37.6						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.19	B	1.65	B	2.32	B	2.60	C
Bicycle LOS Score / LOS	1.28	A	1.66	B	0.89	A	0.71	A

APPENDIX K
HCS SUMMARY SHEETS – BACKGROUND
CONDITIONS WITH IMPROVEMENTS

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018		Area Type	Other	
Jurisdiction	Brevard	Time Period	AM Peak Hour		PHF	1.00	
Urban Street	John Rodes Blvd	Analysis Year	2019		Analysis Period	1> 7:00	
Intersection	John Rodes Blvd at She...	File Name	2. John Rodes Blvd at Sheridan Rd - AM Backgro...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	69	19	62	107	9	137	23	883	55	45	208	25

Signal Information														
Cycle, s	46.5	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	Yes	Simult. Gap E/W	On	Green	8.0	25.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

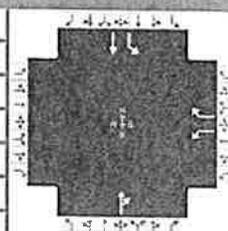
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		7.0		6.0		5.0		5.0
Phase Duration, s		14.8		14.8		31.7		31.7
Change Period, (Y+R _c), s		6.8		6.8		6.5		6.5
Max Allow Headway (MAH), s		7.3		7.3		4.0		4.0
Queue Clearance Time (g _s), s		9.1		10.0		21.0		24.2
Green Extension Time (g _e), s		0.0		0.0		4.2		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		1.00		1.00		0.09		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	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h		88	51	107	146		23	883	2	45	208	0
Adjusted Saturation Flow Rate (s), veh/h/ln		658	1585	1393	1308		1174	1870	1585	624	1767	1585
Queue Service Time (g _s), s		2.2	1.3	0.9	4.8		0.5	19.0	0.0	3.1	2.8	0.0
Cycle Queue Clearance Time (g _c), s		7.1	1.3	8.0	4.8		3.3	19.0	0.0	22.2	2.8	0.0
Green Ratio (g/C)		0.17	0.17	0.17	0.17		0.54	0.54	0.54	0.54	0.54	0.54
Capacity (c), veh/h		251	273	182	225		719	1014	859	237	958	859
Volume-to-Capacity Ratio (X)		0.350	0.187	0.587	0.649		0.032	0.871	0.002	0.190	0.217	0.000
Back of Queue (Q), ft/ln (95 th percentile)		48.2	23	74.3	108.9		3.5	213.9	0.2	18.2	28.2	0
Back of Queue (Q), veh/ln (95 th percentile)		1.9	0.9	2.9	3.6		0.1	8.4	0.0	0.7	1.1	0.0
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.21	0.39	0.00		0.02	0.00	0.00	0.07	0.00	0.00
Uniform Delay (d ₁), s/veh		19.8	16.5	23.1	17.9		6.4	9.2	4.9	18.9	5.5	0.0
Incremental Delay (d ₂), s/veh		3.0	1.2	10.9	11.7		0.0	3.1	0.0	0.4	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
Control Delay (d), s/veh		22.8	17.7	34.0	29.6		6.4	12.3	4.9	19.3	5.6	0.0
Level of Service (LOS)		C	B	C	C		A	B	A	B	A	
Approach Delay, s/veh / LOS	20.9	C		31.5	C		12.2	B		8.1	A	
Intersection Delay, s/veh / LOS				15.4						B		

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.17	B		2.13	B		1.86	B		1.88	B	
Bicycle LOS Score / LOS	0.72	A		0.91	A		1.99	B		0.91	A	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - AM Background...		
Project Description	4397.02				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				77		184		740	211	232	229	

Signal Information													
Cycle, s	97.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	8.5	54.3	14.1	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0			
				Red	2.0	2.0	2.5	0.0	0.0	0.0			

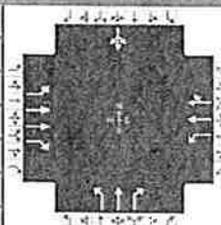
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				20.6		61.1	15.3	76.4
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				13.3		49.9	8.0	5.9
Green Extension Time (g _e), s				0.8		4.2	0.5	4.2
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				0.15		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				7		14		6	16	5	2	
Adjusted Flow Rate (v), veh/h				77		184		951		232	229	
Adjusted Saturation Flow Rate (s), veh/h/ln				1781		1535		1799		1781	1826	
Queue Service Time (g _s), s				3.8		11.3		47.9		6.0	3.9	
Cycle Queue Clearance Time (g _c), s				3.8		11.3		47.9		6.0	3.9	
Green Ratio (g/C)				0.15		0.15		0.56		0.67	0.72	
Capacity (c), veh/h				260		224		1008		270	1309	
Volume-to-Capacity Ratio (X)				0.296		0.820		0.943		0.860	0.175	
Back of Queue (Q), ft/ln (95 th percentile)				75.9		219.5		631.6		155.7	50.8	
Back of Queue (Q), veh/ln (95 th percentile)				3.0		8.4		24.9		6.1	2.0	
Queue Storage Ratio (RQ) (95 th percentile)				0.19		0.00		0.00		0.40	0.00	
Uniform Delay (d ₁), s/veh				37.0		40.3		19.9		25.1	4.5	
Incremental Delay (d ₂), s/veh				0.8		9.9		4.1		7.9	0.0	
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0	0.0	
Control Delay (d), s/veh				37.8		50.2		24.0		32.9	4.5	
Level of Service (LOS)				D		D		C		C	A	
Approach Delay, s/veh / LOS	0.0			46.5	D		24.0	C		18.8	B	
Intersection Delay, s/veh / LOS				26.1				C				

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.73	B	1.96	B	1.89	B	0.65	A
Bicycle LOS Score / LOS				F	2.06	B	1.25	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	US 192 at Coastal Ln		File Name	7. US 192 at Coastal Ln - PM Background Improv...			
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	52	819	179	173	1196	50	190	24	113	38	10	86

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		4.3	3.6	81.7	29.9	0.0	0.0				
		Yellow		4.8	0.0	4.8	3.7	0.0	0.0				
		Red		2.7	0.0	2.0	2.4	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	11.8	88.5	15.5	92.2		36.0		36.0
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.4		4.4
Queue Clearance Time (g _s), s	3.7		7.4			31.9		12.0
Green Extension Time (g _e), s	0.1	0.0	0.6	0.0		0.0		1.4
Phase Call Probability	0.87		1.00			1.00		1.00
Max Out Probability	0.00		0.00			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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	52	819	84	173	627	619	190	24	27		134	
Adjusted Saturation Flow Rate (s), veh/h/ln	1739	1781	1572	1781	1870	1844	1269	1826	1572		1563	
Queue Service Time (g _s), s	1.7	17.4	3.3	5.4	27.6	27.6	19.9	1.5	1.9		5.0	
Cycle Queue Clearance Time (g _c), s	1.7	17.4	3.3	5.4	27.6	27.6	29.9	1.5	1.9		10.0	
Green Ratio (g/C)	0.61	0.58	0.58	0.64	0.61	0.61	0.21	0.21	0.21		0.21	
Capacity (c), veh/h	279	2079	918	460	1140	1124	232	390	336		367	
Volume-to-Capacity Ratio (X)	0.187	0.394	0.092	0.376	0.550	0.551	0.820	0.062	0.080		0.365	
Back of Queue (Q), ft/ln (95 th percentile)	29.7	283.4	53.9	93.9	435.3	424.6	332.6	31.9	35.4		188	
Back of Queue (Q), veh/ln (95 th percentile)	1.1	11.2	2.1	3.7	17.1	17.0	12.8	1.2	1.4		7.4	
Queue Storage Ratio (RQ) (95 th percentile)	0.07	0.00	0.16	0.25	0.00	0.00	1.19	0.00	0.16		0.00	
Uniform Delay (d ₁), s/veh	13.5	15.8	12.8	11.5	16.0	16.1	60.6	43.9	44.0		47.1	
Incremental Delay (d ₂), s/veh	0.3	0.6	0.2	0.5	1.9	1.9	20.3	0.1	0.1		0.6	
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	
Control Delay (d), s/veh	13.8	16.3	13.0	12.0	18.0	18.0	80.9	43.9	44.2		47.7	
Level of Service (LOS)	B	B	B	B	B	B	F	D	D		D	
Approach Delay, s/veh / LOS	15.9		B	17.2		B	73.1		E	47.7		D
Intersection Delay, s/veh / LOS	23.2						C					

Multimodal Results	EB			WB			NB			SB		
	Pedestrian LOS Score / LOS	2.21		B	1.67		B	2.31		B	2.60	
Bicycle LOS Score / LOS	1.28		A	1.66		B	0.89		A	0.71		A

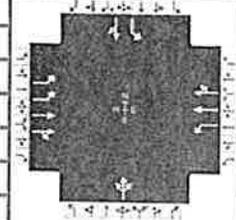
APPENDIX L
2019 MODEL DISTRIBUTION

APPENDIX M
HCS SUMMARY SHEETS – BUILD-OUT
CONDITIONS

HCS7 Signalized Intersection Results Summary

General Information

Agency	LTG	Intersection Information	
Analyst	ACP	Duration, h	0.25
Jurisdiction	Brevard	Analysis Date	Aug 31, 2018
Urban Street	US 192	Area Type	Other
Intersection	John Rodes Blvd at US...	Time Period	AM Peak Hour
Project Description	4397.02	PHF	1.00
		Analysis Year	2019
		Analysis Period	1 > 7:00
		File Name	1. John Rodes Blvd at US 192 - AM Build-Out.xus



Demand Information

Approach Movement	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	432	795	3	10	743	186	19	8	24	153	3	214

Signal Information

Cycle, s	150.0	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	1.7	12.9	76.5	13.9	7.7	0.0						
Yellow	4.8	4.8	4.8	4.8	4.8	0.0						
Red	2.8	2.8	2.8	2.1	2.8	0.0						

Timer Results

	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	29.8	104.6	9.3	84.1		15.3	20.8	36.1
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	20.4		3.0			6.9	13.9	21.2
Green Extension Time (g _e), s	1.8	0.0	0.0	0.0		0.8	0.0	0.9
Phase Call Probability	1.00		0.34			1.00	1.00	1.00
Max Out Probability	0.00		0.00			0.00	1.00	0.00

Movement Group Results

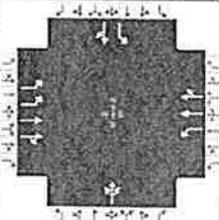
Approach Movement	EB			WB			NB			SB			
	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18	
Adjusted Flow Rate (v), veh/h	432	399	399	10	481	448		51		153	217		
Adjusted Saturation Flow Rate (s), veh/h/ln	1716	1870	1868	1499	1870	1740		1492		1781	1588		
Queue Service Time (g _s), s	18.4	14.4	14.4	1.0	25.4	25.4		3.2		11.9	19.2		
Cycle Queue Clearance Time (g _c), s	18.4	14.4	14.4	1.0	25.4	25.4		4.9		11.9	19.2		
Green Ratio (g/C)	0.15	0.65	0.65	0.01	0.51	0.51		0.05		0.16	0.19		
Capacity (c), veh/h	507	1210	1208	17	955	888		110		238	302		
Volume-to-Capacity Ratio (X)	0.852	0.330	0.330	0.586	0.504	0.504		0.465		0.642	0.719		
Back of Queue (Q), ft/ln (95 th percentile)	329.8	251.5	247.3	27.1	431	400.6		91		242.3	316.6		
Back of Queue (Q), veh/ln (95 th percentile)	12.9	9.9	9.9	0.9	17.0	16.0		3.6		9.5	12.5		
Queue Storage Ratio (RQ) (95 th percentile)	0.55	0.00	0.00	0.16	0.00	0.00		0.00		0.00	0.00		
Uniform Delay (d ₁), s/veh	62.3	11.9	11.9	73.8	24.2	24.2		69.7		58.5	57.0		
Incremental Delay (d ₂), s/veh	4.2	0.7	0.7	28.0	1.9	2.0		3.0		5.6	3.2		
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		
Control Delay (d), s/veh	66.5	12.6	12.6	101.8	26.1	26.3		72.7		64.0	60.2		
Level of Service (LOS)	E	B	B	F	C	C		E		E	E		
Approach Delay, s/veh / LOS	31.5		C	27.0		C		72.7		E	61.8		E
Intersection Delay, s/veh / LOS	35.0						D						

Multimodal Results

	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.66		B	2.10		B	2.33		B	2.47		B
Bicycle LOS Score / LOS	1.50		B	1.26		A	0.57		A	1.10		A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP			Analysis Date	Aug 31, 2018		
Jurisdiction	Brevard			Time Period	PM Peak Hour		
Urban Street	US 192			Analysis Year	2019		
Intersection	John Rodes Blvd at US...			File Name	1. John Rodes Blvd at US 192 - PM Build-Out.xus		
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	235	689	19	29	704	172	6	3	9	301	7	686

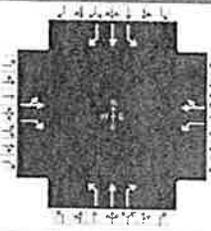
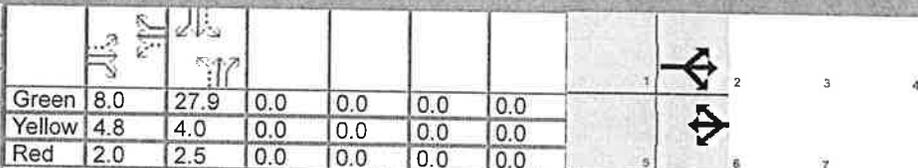
Signal Information											
Cycle, s	140.0	Reference Phase	2								
Offset, s	0	Reference Point	End								
Uncoordinated	No	Simult. Gap E/W	On								
Force Mode	Fixed	Simult. Gap N/S	On								
Green	3.4	1.2	40.5	19.4	38.2	0.0					
Yellow	4.8	4.8	4.8	4.8	4.8	0.0					
Red	2.8	2.8	2.8	2.1	2.8	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	19.8	56.9	11.0	48.1		45.8	26.3	72.1
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	11.3		4.3			34.6	18.3	60.5
Green Extension Time (g _e), s	0.9	0.0	0.1	0.0		3.6	1.0	3.6
Phase Call Probability	1.00		0.68			1.00	1.00	1.00
Max Out Probability	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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	235	356	352	29	453	423	18			301	693	
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1856	1838	1781	1856	1729	366			1781	1587	
Queue Service Time (g _s), s	9.3	21.5	21.5	2.3	32.2	32.2	0.4			16.3	58.5	
Cycle Queue Clearance Time (g _c), s	9.3	21.5	21.5	2.3	32.2	32.2	32.6			16.3	58.5	
Green Ratio (g/C)	0.09	0.35	0.35	0.02	0.29	0.29	0.27			0.43	0.46	
Capacity (c), veh/h	302	653	647	43	536	500	134			354	732	
Volume-to-Capacity Ratio (X)	0.779	0.544	0.545	0.674	0.845	0.846	0.134			0.851	0.947	
Back of Queue (Q), ft/ln (95 th percentile)	192.2	392	380.8	55.5	598.7	555.1	21.3			299.8	812.6	
Back of Queue (Q), veh/ln (95 th percentile)	7.6	15.3	15.2	2.2	23.4	22.2	0.8			11.8	32.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.32	0.00	0.00	0.34	0.00	0.00	0.00			0.00	0.00	
Uniform Delay (d ₁), s/veh	62.6	36.3	36.4	67.8	46.8	46.8	40.3			33.0	36.1	
Incremental Delay (d ₂), s/veh	4.3	3.2	3.3	16.8	15.1	16.0	0.4			5.8	12.6	
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	66.9	39.6	39.6	84.5	61.9	62.9	40.7			38.8	48.7	
Level of Service (LOS)	E	D	D	F	E	E	D			D	D	
Approach Delay, s/veh / LOS	46.4		D	63.1		E	40.7		D	45.7		D
Intersection Delay, s/veh / LOS	51.4						D					

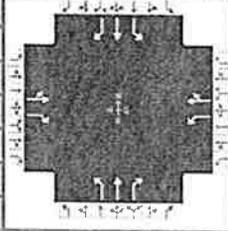
Multimodal Results	EB			WB			NB			SB		
	Pedestrian LOS Score / LOS	1.71		B	2.13		B	2.30		B	2.43	
Bicycle LOS Score / LOS	1.27		A	1.23		A	0.52		A	2.13		B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP			Analysis Date	May 7, 2018										
Jurisdiction	Brevard			Area Type	Other										
Urban Street	John Rodes Blvd			Time Period	AM Peak Hour										
Intersection	John Rodes Blvd at She...			PHF	1.00										
Project Description	4397.02			Analysis Year	2019								Analysis Period	1 > 7:00	
File Name	2. John Rodes Blvd at Sheridan Rd - AM Build-Ou...														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				69	19	62	107	9	137	23	939	56	45	222	25
Signal Information															
Cycle, s	49.2	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	8.0	27.9	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	4.8	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	
Red	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					2		6		8		4				
Case Number					7.0		6.0		5.0		5.0				
Phase Duration, s					14.8		14.8		34.4		34.4				
Change Period, (Y+R _c), s					6.8		6.8		6.5		6.5				
Max Allow Headway (MAH), s					7.3		7.3		4.0		4.0				
Queue Clearance Time (g _s), s					9.6		10.0		23.5		27.0				
Green Extension Time (g _e), s					0.0		0.0		4.4		0.0				
Phase Call Probability					1.00		1.00		1.00		1.00				
Max Out Probability					1.00		1.00		0.17		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				88	51	107	146			23	939	3	45	222	0
Adjusted Saturation Flow Rate (s), veh/h/ln				602	1585	1393	1308			1159	1870	1585	592	1767	1585
Queue Service Time (g _s), s				2.4	1.4	0.4	5.2			0.5	21.5	0.0	3.5	3.1	0.0
Cycle Queue Clearance Time (g _c), s				7.6	1.4	8.0	5.2			3.6	21.5	0.0	25.0	3.1	0.0
Green Ratio (g/C)				0.16	0.16	0.16	0.16			0.57	0.57	0.57	0.57	0.57	0.57
Capacity (c), veh/h				228	258	157	213			731	1060	899	223	1001	898
Volume-to-Capacity Ratio (X)				0.385	0.198	0.681	0.686			0.031	0.886	0.003	0.201	0.222	0.000
Back of Queue (Q), ft/ln (95 th percentile)				53.1	25	89.9	122.1			3.6	248.3	0.3	19.9	30.6	0
Back of Queue (Q), veh/ln (95 th percentile)				2.1	1.0	3.5	4.1			0.1	9.8	0.0	0.8	1.1	0.0
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.22	0.47	0.00			0.02	0.00	0.00	0.08	0.00	0.00
Uniform Delay (d ₁), s/veh				21.5	17.8	24.6	19.4			6.2	9.3	4.6	20.1	5.3	0.0
Incremental Delay (d ₂), s/veh				3.8	1.3	18.7	14.5			0.0	4.5	0.0	0.4	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
Control Delay (d), s/veh				25.4	19.2	43.2	33.9			6.2	13.8	4.6	20.6	5.4	0.0
Level of Service (LOS)				C	B	D	C			A	B	A	C	A	
Approach Delay, s/veh / LOS				23.1	C	37.8	D			13.6	B	7.9	A		
Intersection Delay, s/veh / LOS				17.3						B					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				2.18	B	2.14	B	1.86	B	1.87	B				
Bicycle LOS Score / LOS				0.72	A	0.91	A	2.08	B	0.93	A				

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP		Analysis Date	May 7, 2018		Area Type	Other
Jurisdiction	Brevard		Time Period	PM Peak Hour		PHF	1.00
Urban Street	John Rodes Blvd		Analysis Year	2019		Analysis Period	1 > 7:00
Intersection	John Rodes Blvd at She...		File Name	2. John Rodes Blvd at Sheridan Rd - PM Build-O...			
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	28	11	62	78	21	62	52	394	136	89	638	52

Signal Information			
Cycle, s	41.1	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	Yes	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		7.0		6.0		5.0		5.0
Phase Duration, s		15.4		15.4		25.7		25.7
Change Period, (Y+R _c), s		6.8		6.8		6.5		6.5
Max Allow Headway (MAH), s		7.3		7.3		4.1		4.1
Queue Clearance Time (g _s), s		3.9		5.9		15.4		13.2
Green Extension Time (g _e), s		2.9		2.9		3.9		4.3
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		0.48		0.36

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		39	36	78	83		52	394	98	89	638	38	
Adjusted Saturation Flow Rate (s), veh/h/ln		1214	1585	1404	1649		790	1826	1585	990	1870	1585	
Queue Service Time (g _s), s		0.0	0.8	2.0	1.7		2.3	6.0	1.4	2.7	11.2	0.5	
Cycle Queue Clearance Time (g _c), s		1.9	0.8	3.9	1.7		13.4	6.0	1.4	8.6	11.2	0.5	
Green Ratio (g/C)		0.21	0.21	0.21	0.21		0.47	0.47	0.47	0.47	0.47	0.47	
Capacity (c), veh/h		402	327	402	341		331	854	741	496	875	741	
Volume-to-Capacity Ratio (X)		0.097	0.110	0.194	0.244		0.157	0.461	0.132	0.179	0.729	0.051	
Back of Queue (Q), ft/ln (95 th percentile)		13.9	12.5	29.4	30.1		15.1	62.2	12.5	19.4	127.9	4.7	
Back of Queue (Q), veh/ln (95 th percentile)		0.5	0.5	1.2	1.2		0.6	2.4	0.5	0.8	5.0	0.2	
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.11	0.15	0.00		0.07	0.00	0.05	0.07	0.00	0.02	
Uniform Delay (d ₁), s/veh		13.2	13.1	15.2	13.5		14.1	7.4	6.2	10.3	8.8	5.9	
Incremental Delay (d ₂), s/veh		0.4	0.5	0.8	1.3		0.2	0.4	0.1	0.2	1.7	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		13.5	13.7	16.1	14.9		14.4	7.8	6.2	10.4	10.5	6.0	
Level of Service (LOS)		B	B	B	B		B	A	A	B	B	A	
Approach Delay, s/veh / LOS	13.6	B		15.4	B		8.1	A			10.2	B	
Intersection Delay, s/veh / LOS	10.2						B						

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.14	B	2.11	B	1.87	B	1.91	B
Bicycle LOS Score / LOS	0.61	A	0.75	A	1.39	A	1.75	B

HCS7 Two-Way Stop-Control Report

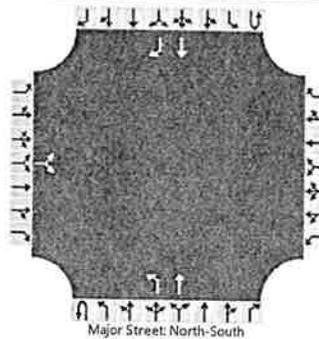
General Information

Analyst	ACP
Agency/Co.	LTG
Date Performed	5/7/2018
Analysis Year	2019
Time Analyzed	AM Peak-Hour Build-Out
Intersection Orientation	North-South
Project Description	4397.02

Site Information

Intersection	John Rodes Blvd at Proj
Jurisdiction	Brevard
East/West Street	Project Frontage Road
North/South Street	John Rodes Boulevard
Peak Hour Factor	1.00
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	0		0	0	0	0	1	1	0	0	0	1	1	
Configuration			LR							L	T				T	R	
Volume (veh/h)		57		37						9	640				356	14	
Percent Heavy Vehicles (%)		2		2						2							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized															No		
Median Type Storage					Left Only												1

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			94							9						
Capacity, c (veh/h)			466							1188						
v/c Ratio			0.20							0.01						
95% Queue Length, Q ₉₅ (veh)			0.7							0.0						
Control Delay (s/veh)			14.7							8.1						
Level of Service (LOS)			B							A						
Approach Delay (s/veh)		14.7								0.1						
Approach LOS		B														

HCS7 Two-Way Stop-Control Report

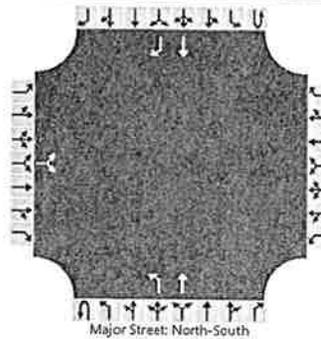
General Information

Analyst	ACP
Agency/Co.	LTG
Date Performed	5/7/2018
Analysis Year	2019
Time Analyzed	PM Peak-Hour Build-Out
Intersection Orientation	North-South
Project Description	4397.02

Site Information

Intersection	John Rodes Blvd at Proj
Jurisdiction	Brevard
East/West Street	Project Frontage Road
North/South Street	John Rodes Boulevard
Peak Hour Factor	1.00
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	0		0	0	0	0	1	1	0	0	0	1	1		
Configuration			LR							L	T				T	R		
Volume (veh/h)		30		19						36	404				1085	56		
Percent Heavy Vehicles (%)		2		2						2								
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized																	No	
Median Type Storage		Left Only											1					

Critical and Follow-up Headways

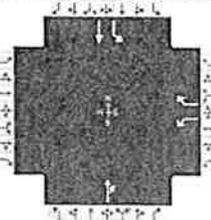
Base Critical Headway (sec)		7.1		6.2						4.1							
Critical Headway (sec)		6.42		6.22						4.12							
Base Follow-Up Headway (sec)		3.5		3.3						2.2							
Follow-Up Headway (sec)		3.52		3.32						2.22							

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			49							36							
Capacity, c (veh/h)			247							612							
v/c Ratio			0.20							0.06							
95% Queue Length, Q ₉₅ (veh)			0.7							0.2							
Control Delay (s/veh)			23.1							11.3							
Level of Service (LOS)			C							B							
Approach Delay (s/veh)		23.1								0.9							
Approach LOS		C															

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - AM Build-Out.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				79		184		785	219	232	240	

Signal Information				Signal Timing (s)											
Cycle, s	111.7	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	Yes	Simult. Gap E/W	On	Green	10.4	65.4	15.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	2.0	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

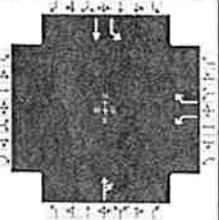
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				22.3		72.2	17.2	89.3
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				15.1		60.5	9.9	6.4
Green Extension Time (g _e), s				0.7		4.6	0.5	4.6
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				0.36		0.00	0.03	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				7		14		6	16	5		2
Adjusted Flow Rate (v), veh/h				79		184		1004		232		240
Adjusted Saturation Flow Rate (s), veh/h/ln				1781		1535		1800		1781		1826
Queue Service Time (g _s), s				4.5		13.1		58.5		7.9		4.4
Cycle Queue Clearance Time (g _c), s				4.5		13.1		58.5		7.9		4.4
Green Ratio (g/C)				0.14		0.14		0.59		0.70		0.74
Capacity (c), veh/h				253		218		1055		265		1349
Volume-to-Capacity Ratio (X)				0.312		0.843		0.952		0.874		0.178
Back of Queue (Q), ft/ln (95 th percentile)				91.8		257.5		800.8		289.7		59.5
Back of Queue (Q), veh/ln (95 th percentile)				3.6		9.8		31.5		11.4		2.3
Queue Storage Ratio (RQ) (95 th percentile)				0.23		0.00		0.00		0.74		0.00
Uniform Delay (d ₁), s/veh				43.1		46.8		21.7		32.6		4.4
Incremental Delay (d ₂), s/veh				0.8		15.4		8.3		12.8		0.0
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0		0.0
Control Delay (d), s/veh				44.0		62.2		30.0		45.4		4.4
Level of Service (LOS)				D		E		C		D		A
Approach Delay, s/veh / LOS	0.0			56.7		E	30.0		C	24.6		C
Intersection Delay, s/veh / LOS				32.6						C		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.74	B	1.96	B	1.89	B	0.65	A
Bicycle LOS Score / LOS				F	2.14	B	1.27	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - PM Build-Out.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				150		230		353	94	152	641	

Signal Information													
Cycle, s	52.7	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	4.6	17.0	11.1	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0			
				Red	2.0	2.0	2.5	0.0	0.0	0.0			

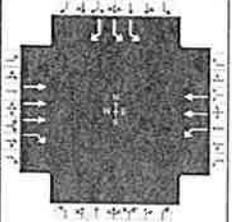
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				17.6		23.8	11.4	35.1
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				9.2		13.8	4.7	14.7
Green Extension Time (g _e), s				1.9		3.1	0.4	3.1
Phase Call Probability				1.00		1.00	0.89	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				7		14		6	16	5		2
Adjusted Flow Rate (v), veh/h				150		230		447		152		641
Adjusted Saturation Flow Rate (s), veh/h/ln				1739		1560		1802		1781		1870
Queue Service Time (g _s), s				3.9		7.2		11.8		2.7		12.7
Cycle Queue Clearance Time (g _c), s				3.9		7.2		11.8		2.7		12.7
Green Ratio (g/C)				0.21		0.21		0.32		0.45		0.54
Capacity (c), veh/h				365		328		581		385		1006
Volume-to-Capacity Ratio (X)				0.411		0.702		0.769		0.395		0.637
Back of Queue (Q), ft/ln (95 th percentile)				69.4		119.9		185.1		37.6		149.7
Back of Queue (Q), veh/ln (95 th percentile)				2.7		4.6		7.3		1.5		5.9
Queue Storage Ratio (RQ) (95 th percentile)				0.17		0.00		0.00		0.10		0.00
Uniform Delay (d ₁), s/veh				18.0		19.3		16.1		11.0		8.6
Incremental Delay (d ₂), s/veh				0.9		3.3		1.6		0.7		0.5
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0		0.0
Control Delay (d), s/veh				18.9		22.6		17.7		11.6		9.1
Level of Service (LOS)				B		C		B		B		A
Approach Delay, s/veh / LOS	0.0			21.2		C	17.7		B	9.6		A
Intersection Delay, s/veh / LOS	14.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.94	B	1.90	B	0.67	A
Bicycle LOS Score / LOS				F	1.23	A	1.80	B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018		Area Type	Other	
Jurisdiction	Brevard	Time Period	AM Peak Hour		PHF	1.00	
Urban Street	US 192	Analysis Year	2019		Analysis Period	1 > 7:00	
Intersection	US 192 at SB I-95		File Name	5. US 192 at SB I-95 - AM Build-Out.xus			
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		223	166	189	232					457		94

Signal Information													
Cycle, s	150.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap EW	On										
Force Mode	Fixed	Simult. Gap N/S	On										
		Green		8.6	97.8	23.5	0.0	0.0	0.0				
		Yellow		4.8	4.8	3.7	0.0	0.0	0.0				
		Red		2.1	2.1	2.6	0.0	0.0	0.0				

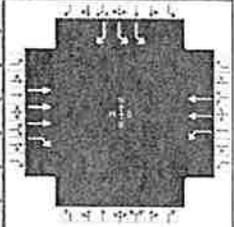
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6				4
Case Number		7.3	1.0	4.0				9.0
Phase Duration, s		104.7	15.5	120.2				29.8
Change Period, (Y+R _c), s		6.9	6.9	6.9				6.3
Max Allow Headway (MAH), s		0.0	6.1	0.0				4.2
Queue Clearance Time (g _s), s			6.9					21.3
Green Extension Time (g _e), s		0.0	1.6	0.0				2.3
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		2	12	1	6					7		14
Adjusted Flow Rate (v), veh/h		223	166	189	232					457		94
Adjusted Saturation Flow Rate (s), veh/h/ln		1618	1585	1781	1710					1730		1497
Queue Service Time (g _s), s		2.5	6.1	4.9	2.7					19.3		8.5
Cycle Queue Clearance Time (g _c), s		2.5	6.1	4.9	2.7					19.3		8.5
Green Ratio (g/C)		0.65	0.65	0.72	0.76					0.16		0.16
Capacity (c), veh/h		3164	1033	885	2583					542		235
Volume-to-Capacity Ratio (X)		0.070	0.161	0.213	0.090					0.842		0.400
Back of Queue (Q), ft/ln (95 th percentile)		43	100.7	84	43.1					344		158.4
Back of Queue (Q), veh/ln (95 th percentile)		1.6	4.0	3.3	1.6					13.5		5.9
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		9.5	10.1	6.5	4.8					61.4		56.9
Incremental Delay (d ₂), s/veh		0.0	0.3	0.3	0.1					3.6		1.1
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0					0.0		0.0
Control Delay (d), s/veh		9.6	10.5	6.8	4.9					65.1		58.0
Level of Service (LOS)		A	B	A	A					E		E
Approach Delay, s/veh / LOS	10.0	A		5.7	A		0.0			63.9	E	
Intersection Delay, s/veh / LOS	30.5						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.37	A		1.86	B		2.49	B		2.49	B	
Bicycle LOS Score / LOS	0.70	A		0.83	A						F	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	US 192 at SB I-95	File Name	5. US 192 at SB I-95 - PM Build-Out.xus				
Project Description	4397.02						



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	138	480	410						610	186

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	24.3	66.6	29.0	0.0	0.0	0.0	0.0	0.0	0.0
				Yellow	4.8	4.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0
				Red	2.1	2.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0

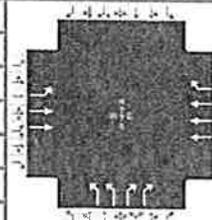
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6				4
Case Number		7.3	1.0	4.0				9.0
Phase Duration, s		73.5	31.2	104.7				35.3
Change Period, (Y+R _c), s		6.9	6.9	6.9				6.3
Max Allow Headway (MAH), s		0.0	6.1	0.0				4.2
Queue Clearance Time (g _s), s			19.4					25.8
Green Extension Time (g _e), s		0.0	4.9	0.0				3.3
Phase Call Probability			1.00					1.00
Max Out Probability			0.00					0.03

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					7		14
Adjusted Flow Rate (v), veh/h		258	138	480	410					610		186
Adjusted Saturation Flow Rate (s), veh/h/ln		1644	1585	1781	1752					1730		1547
Queue Service Time (g _s), s		4.1	7.0	17.4	5.6					23.8		15.2
Cycle Queue Clearance Time (g _c), s		4.1	7.0	17.4	5.6					23.8		15.2
Green Ratio (g/C)		0.48	0.48	0.66	0.70					0.21		0.21
Capacity (c), veh/h		2346	754	861	2448					717		321
Volume-to-Capacity Ratio (X)		0.110	0.183	0.557	0.168					0.851		0.580
Back of Queue (Q), ft/ln (95 th percentile)		75	124.6	282.1	95.4					408.4		260.7
Back of Queue (Q), veh/ln (95 th percentile)		2.9	4.9	11.1	3.7					16.1		10.0
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		20.3	21.1	11.1	7.2					53.4		50.0
Incremental Delay (d ₂), s/veh		0.1	0.5	1.2	0.1					4.5		1.7
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0					0.0		0.0
Control Delay (d), s/veh		20.4	21.6	12.3	7.4					57.9		51.7
Level of Service (LOS)		C	C	B	A					E		D
Approach Delay, s/veh / LOS	20.8	C		10.0	B		0.0			56.5	E	
Intersection Delay, s/veh / LOS	29.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.40	A	1.87	B	2.48	B	2.48	B
Bicycle LOS Score / LOS	0.71	A	1.22	A				F

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	US 192 at NB I-95	File Name	6. US 192 at NB I-95 - AM Build-Out.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	117	587			354	540	98		532			

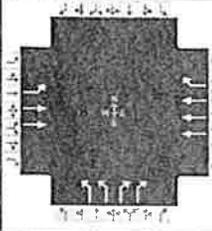
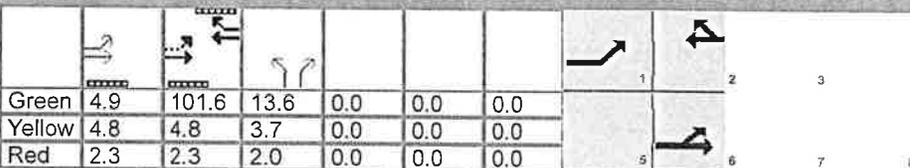
Signal Information												
Cycle, s	150.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
		Green		6.2	91.9	32.1	0.0	0.0	0.0	0.0	0.0	0.0
		Yellow		4.8	4.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0
		Red		2.3	2.3	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	1	6		2		4		
Case Number	1.0	4.0		7.3		9.0		
Phase Duration, s	13.3	112.2		99.0		37.8		
Change Period, (Y+R _c), s	7.1	7.1		7.1		5.7		
Max Allow Headway (MAH), s	5.0	0.0		0.0		6.2		
Queue Clearance Time (g _s), s	5.6					29.6		
Green Extension Time (g _e), s	0.6	0.0		0.0		2.5		
Phase Call Probability	0.99					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	1	6			2	12	7		14			
Adjusted Flow Rate (v), veh/h	117	587			354	540	98		532			
Adjusted Saturation Flow Rate (s), veh/h/ln	1725	1781			1644	1585	1689		1403			
Queue Service Time (g _s), s	3.6	8.9			4.5	30.0	3.5		27.6			
Cycle Queue Clearance Time (g _c), s	3.6	8.9			4.5	30.0	3.5		27.6			
Green Ratio (g/C)	0.67	0.70			0.61	0.61	0.21		0.21			
Capacity (c), veh/h	698	2496			3021	971	722		600			
Volume-to-Capacity Ratio (X)	0.168	0.235			0.117	0.556	0.136		0.886			
Back of Queue (Q), ft/ln (95 th percentile)	62.3	146.3			76.6	415.6	69.8		410.8			
Back of Queue (Q), veh/ln (95 th percentile)	2.4	5.8			2.9	16.4	2.7		16.2			
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	9.1	8.0			12.1	17.1	47.7		57.2			
Incremental Delay (d ₂), s/veh	0.2	0.2			0.1	2.3	0.2		14.4			
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (d), s/veh	9.3	8.3			12.2	19.4	47.9		71.6			
Level of Service (LOS)	A	A			B	B	D		E			
Approach Delay, s/veh / LOS	8.4	A		16.5	B		67.9	E	0.0			
Intersection Delay, s/veh / LOS	28.5						C					

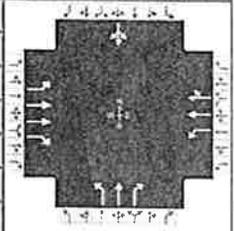
Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.06	B		1.38	A		2.49	B		2.49	B	
Bicycle LOS Score / LOS	1.07	A		0.98	A			F				

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information								
Agency	LTG			Duration, h	0.25							
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other							
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00							
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00							
Intersection	US 192 at NB I-95	File Name	6. US 192 at NB I-95 - PM Build-Out.xus									
Project Description	4397.02											
Demand Information				EB		WB		NB		SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	106	713			775	664	138		218			
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	4.9	101.6	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	4.8	4.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red	2.3	2.3	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	1		6		2		4					
Case Number	1.0		4.0		7.3		9.0					
Phase Duration, s	12.0		120.7		108.7		19.3					
Change Period, (Y+R _c), s	7.1		7.1		7.1		5.7					
Max Allow Headway (MAH), s	5.0		0.0		0.0		6.2					
Queue Clearance Time (g _s), s	4.1						12.7					
Green Extension Time (g _e), s	0.5		0.0		0.0		0.9					
Phase Call Probability	0.98						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	1	6			2	12	7		14			
Adjusted Flow Rate (v), veh/h	106	713			775	664	138		218			
Adjusted Saturation Flow Rate (s), veh/h/ln	1668	1781			1685	1585	1702		1403			
Queue Service Time (g _s), s	2.1	6.6			7.0	27.7	5.3		10.7			
Cycle Queue Clearance Time (g _c), s	2.1	6.6			7.0	27.7	5.3		10.7			
Green Ratio (g/C)	0.78	0.81			0.73	0.73	0.10		0.10			
Capacity (c), veh/h	551	2890			3668	1150	330		272			
Volume-to-Capacity Ratio (X)	0.193	0.247			0.211	0.577	0.418		0.801			
Back of Queue (Q), ft/ln (95 th percentile)	30	80.7			101.9	346.8	109.2		195			
Back of Queue (Q), veh/ln (95 th percentile)	1.1	3.2			4.0	13.7	4.2		7.7			
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	4.1	3.1			6.2	9.1	59.5		61.9			
Incremental Delay (d ₂), s/veh	0.2	0.2			0.1	2.1	1.8		14.7			
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (d), s/veh	4.4	3.3			6.3	11.2	61.3		76.6			
Level of Service (LOS)	A	A			A	B	E		E			
Approach Delay, s/veh / LOS	3.4	A			8.6	A	70.7		E		0.0	
Intersection Delay, s/veh / LOS	15.4						B					
Multimodal Results				EB		WB		NB		SB		
Pedestrian LOS Score / LOS	2.02	B			1.35	A	2.48	B	2.48	B		
Bicycle LOS Score / LOS	1.16	A			1.28	A		F				

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	US 192 at Coastal Ln	File Name	7. US 192 at Coastal Ln - AM Build-Out.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	92	1231	44	41	778	56	33	6	29	11	5	56

Signal Information				Signal Timing (s)										
Cycle, s	150.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	No	Simult. Gap E/W	On	Green	4.1	0.8	112.6	12.1	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	0.0	4.8	3.7	0.0	0.0				
				Red	2.7	0.0	2.0	2.4	0.0	0.0				

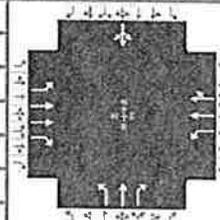
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	12.4	120.2	11.6	119.4		18.2		18.2
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3		4.3
Queue Clearance Time (g _s), s	3.8		2.8			12.0		8.4
Green Extension Time (g _e), s	0.2	0.0	0.0	0.0		0.1		0.2
Phase Call Probability	0.98		0.82			0.99		0.99
Max Out Probability	0.00		0.00			0.61		0.03

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	92	1231	28	41	422	412	33	6	9		72	
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1781	1572	1767	1870	1826	1341	1870	1585		1601	
Queue Service Time (g _s), s	1.8	19.3	0.7	0.8	10.9	10.9	3.6	0.4	0.8		1.2	
Cycle Queue Clearance Time (g _c), s	1.8	19.3	0.7	0.8	10.9	10.9	10.0	0.4	0.8		6.4	
Green Ratio (g/C)	0.78	0.76	0.76	0.78	0.75	0.75	0.08	0.08	0.08		0.08	
Capacity (c), veh/h	552	2693	1189	372	1404	1371	99	151	128		157	
Volume-to-Capacity Ratio (X)	0.167	0.457	0.024	0.110	0.300	0.301	0.332	0.040	0.070		0.460	
Back of Queue (Q), ft/ln (95 th percentile)	25.1	268.5	9.2	11.5	179.1	172.9	59.9	10	15		126.1	
Back of Queue (Q), veh/ln (95 th percentile)	1.0	10.6	0.4	0.5	7.1	6.9	2.4	0.4	0.6		5.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.06	0.00	0.03	0.03	0.00	0.00	0.21	0.00	0.07		0.00	
Uniform Delay (d ₁), s/veh	4.2	6.8	4.5	5.3	6.0	6.0	71.1	63.6	63.8		66.3	
Incremental Delay (d ₂), s/veh	0.1	0.6	0.0	0.1	0.5	0.6	1.9	0.1	0.2		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	
Control Delay (d), s/veh	4.3	7.4	4.6	5.5	6.6	6.6	73.1	63.7	64.0		68.4	
Level of Service (LOS)	A	A	A	A	A	A	E	E	E		E	
Approach Delay, s/veh / LOS	7.1		A	6.5		A	70.2		E	68.4		E
Intersection Delay, s/veh / LOS	10.1						B					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.08	B	2.32	B
Bicycle LOS Score / LOS	1.60	B	0.57	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018		Area Type	Other	
Jurisdiction	Brevard	Time Period	PM Peak Hour		PHF	1.00	
Urban Street	US 192	Analysis Year	2019		Analysis Period	1 > 7:00	
Intersection	US 192 at Coastal Ln		File Name	7. US 192 at Coastal Ln - PM Build-Out.xus			
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	84	819	179	173	1196	50	190	24	113	38	10	104

Signal Information													
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	4.8	3.2	81.7	29.9	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	0.0	4.8	3.7	0.0	0.0			
				Red	2.7	0.0	2.0	2.4	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	12.3	88.5	15.5	91.7		36.0		36.0
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.4		4.4
Queue Clearance Time (g _s), s	4.7		7.4			31.9		13.5
Green Extension Time (g _e), s	0.2	0.0	0.6	0.0		0.0		1.4
Phase Call Probability	0.96		1.00			1.00		1.00
Max Out Probability	0.00		0.00			1.00		0.01

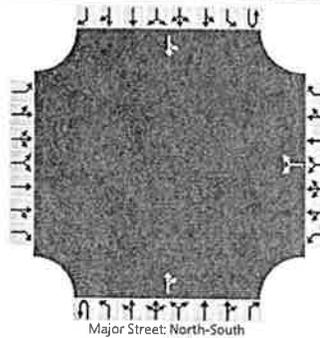
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	84	819	84	173	627	619	190	24	27			152
Adjusted Saturation Flow Rate (s), veh/h/ln	1739	1781	1572	1781	1870	1844	1248	1826	1572			1569
Queue Service Time (g _s), s	2.7	17.4	3.3	5.4	27.8	27.8	18.4	1.5	1.9			5.6
Cycle Queue Clearance Time (g _c), s	2.7	17.4	3.3	5.4	27.8	27.8	29.9	1.5	1.9			11.5
Green Ratio (g/C)	0.62	0.58	0.58	0.64	0.61	0.61	0.21	0.21	0.21			0.21
Capacity (c), veh/h	282	2079	918	460	1134	1118	215	390	336			367
Volume-to-Capacity Ratio (X)	0.297	0.394	0.092	0.376	0.553	0.554	0.882	0.062	0.080			0.414
Back of Queue (Q), ft/ln (95 th percentile)	48.5	283.4	53.9	93.9	439.4	429.1	353.4	31.9	35.4			210.6
Back of Queue (Q), veh/ln (95 th percentile)	1.9	11.2	2.1	3.7	17.3	17.2	13.6	1.2	1.4			8.3
Queue Storage Ratio (RQ) (95 th percentile)	0.11	0.00	0.16	0.25	0.00	0.00	1.26	0.00	0.16			0.00
Uniform Delay (d ₁), s/veh	13.9	15.8	12.8	11.5	16.3	16.3	62.1	43.9	44.0			47.7
Incremental Delay (d ₂), s/veh	0.6	0.6	0.2	0.5	1.9	2.0	31.8	0.1	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
Control Delay (d), s/veh	14.5	16.3	13.0	12.0	18.3	18.3	93.8	43.9	44.2			48.5
Level of Service (LOS)	B	B	B	B	B	B	F	D	D			D
Approach Delay, s/veh / LOS	15.9		B	17.5		B	83.3		F	48.5		D
Intersection Delay, s/veh / LOS	24.3						C					

Multimodal Results	EB			WB			NB			SB		
	Pedestrian LOS Score / LOS	2.21		B	1.67		B	2.31		B	2.60	
Bicycle LOS Score / LOS	1.30		A	1.66		B	0.89		A	0.74		A

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	ACP	Intersection	Coastal Ln at Proj Front
Agency/Co.	LTG	Jurisdiction	Brevard
Date Performed	5/7/2018	East/West Street	Project Frontage Road
Analysis Year	2019	North/South Street	Coastal Lane
Time Analyzed	AM Peak-Hour Build-Out	Peak Hour Factor	1.00
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	4397.02		

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		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						33		0			0	8		0	0	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type Storage							Left Only									1

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								4.1
Critical Headway (sec)						6.42		6.22								4.12
Base Follow-Up Headway (sec)						3.5		3.3								2.2
Follow-Up Headway (sec)						3.52		3.32								2.22

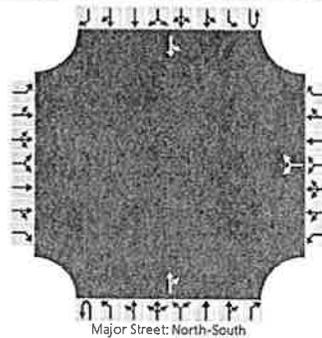
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						33										0
Capacity, c (veh/h)						930										1612
v/c Ratio						0.04										0.00
95% Queue Length, Q ₉₅ (veh)						0.1										0.0
Control Delay (s/veh)						9.0										7.2
Level of Service (LOS)						A										A
Approach Delay (s/veh)						9.0										
Approach LOS						A										

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	ACP	Intersection	Coastal Ln at Proj Front
Agency/Co.	LTG	Jurisdiction	Brevard
Date Performed	5/7/2018	East/West Street	Project Frontage Road
Analysis Year	2019	North/South Street	Coastal Lane
Time Analyzed	PM Peak-Hour Build-Out	Peak Hour Factor	1.00
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	4397.02		

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		0	1	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						18		0			0	32		0	0		
Percent Heavy Vehicles (%)						2		2						2			
Proportion Time Blocked																	
Percent Grade (%)						0											
Right Turn Channelized																	
Median Type Storage						Left Only											1

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2									4.1	
Critical Headway (sec)						6.42		6.22									4.12	
Base Follow-Up Headway (sec)						3.5		3.3									2.2	
Follow-Up Headway (sec)						3.52		3.32									2.22	

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						18											0	
Capacity, c (veh/h)						918											1580	
v/c Ratio						0.02											0.00	
95% Queue Length, Q ₉₅ (veh)						0.1											0.0	
Control Delay (s/veh)						9.0											7.3	
Level of Service (LOS)						A											A	
Approach Delay (s/veh)						9.0												
Approach LOS						A												

APPENDIX N
TURN LANE WARRANTS

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

4-lane roadway

INPUT

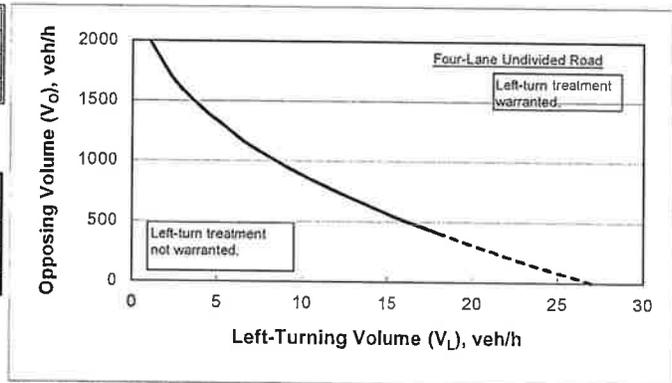
Variable	Value
Left-turning volume (V_L), veh/h:	36
Advancing volume (V_A), veh/h:	440
Opposing volume (V_O), veh/h:	1141

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0



Note: When $V_O < 400$ veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h ($V_A > 400$ veh/h).

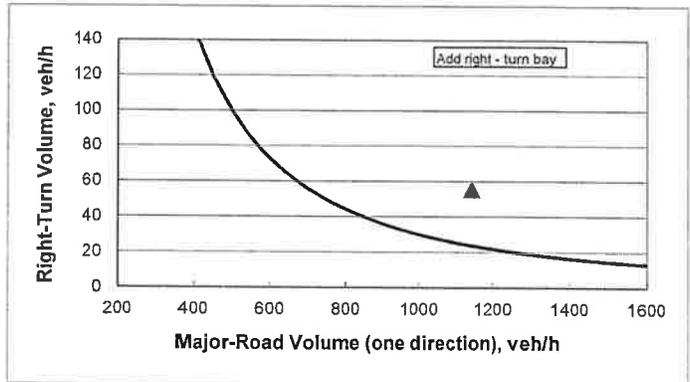
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	4-lane roadway	
	Variable	Value
Major-road speed, mph:		45
Major-road volume (one direction), veh/h:		1141
Right-turn volume, veh/h:		56

OUTPUT

	Variable	Value
Limiting right-turn volume, veh/h:		24
Guidance for determining the need for a major-road right-turn bay for a 4-lane roadway:		
Add right-turn bay.		



APPENDIX O
FUTURE LAND USE AND
ZONING MEMORANDUM



Ref: 4397.03

TECHNICAL MEMORANDUM

To: Christy Fischer
From: George Galan, P.E.
Date: May 7, 2018
Subject: Oasis of West Melbourne – Future Land Use and Zoning Comparisons

INTRODUCTION

The 0.90-acre parcel being examined is being annexed into the City of West Melbourne. As part of the annexation process, the future land use designation and the zoning are being changed from Brevard County designations to City designations. The following table compares the maximum potential daily trip generation of the County designations with the requested City designations.

FUTURE LAND USE DESIGNATIONS

The parcel is assigned a County future land use designation of RES-6, the detailed description of which is attached to the analysis. RES-6 permits a maximum residential density of 6 dwelling units per acre, but with bonuses, it allows up to 13.5 dwelling units per acre. This analysis assumes the property receives the maximum density of 13.5 du/ac which will be categorized as Multifamily Housing Mid-Rise (Land Use Code 221) according to the Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, for trip generation comparison. Therefore, under the County future land use designation the maximum yield for this site is 12 multifamily dwelling units.

The requested City future land use designation is Urban Density Residential (UD-RES), the detailed description of which is attached to the analysis. UD-RES permits a maximum residential density of 18 dwelling units per acre, but with bonuses, it allows up to 25 dwelling units per acre. This analysis assumes the property receives the maximum density of 25 du/ac which will be categorized as Multifamily Housing Mid-Rise (Land Use Code 221) according to the ITE, Trip Generation Manual, 10th Edition, for trip generation comparison. Therefore, under the City future land use designation the maximum yield for this site is 22 multifamily dwelling units.

ZONING DESIGNATIONS

The parcel is assigned a County zoning designation of AU, the detailed description of which is attached to the analysis. AU permits a maximum residential density of 0.4 dwelling units per acre. This zoning, however, is a holding category, and due to the size of the site, it is non-conforming and does not meet the County's minimum zoning requirements for AU. This analysis assumes the property is permitted one single family detached dwelling unit which will be categorized as Single Family Detached (Land Use Code 210) according to the ITE, Trip Generation Manual, 10th Edition, for trip generation comparison. Therefore, under the County zoning designation, the maximum yield for this site is one dwelling unit. It should be noted for comparison purposes that less weight should be given to the AU zoning, and more emphasis should be placed on the future land use designation's yield since this property is in an urban area, the lot is non-conforming, and future land use designation is more in keeping with surrounding development trends.

The requested City zoning designation is R-3, the detailed description of which is attached to the analysis. R-3 permits a maximum residential density of 25 dwelling units per acre in keeping with the underlying requested future land use designation of UD-RES. This analysis assumes the property receives the maximum density of 25 du/ac which will be categorized as Multifamily Housing Mid-Rise (Land Use Code 221) according to the ITE, Trip Generation Manual, 10th Edition, for trip generation comparison. Therefore, under the City R-3 designation the maximum yield for this site is 22 multifamily dwelling units.

COMPARISON RESULTS

Table 1 shows that based on the Future Land Use amendment, an increase of 55 daily trips is likely. This trip increase amounts to 0.3% of the adopted maximum average daily vehicle capacity of John Rodes Boulevard. This increase is de minimis, and further capacity analysis is not necessary.

**Table 1
 Potential Trip Generation Increase
 Oasis of West Melbourne**

Future Land Use								
	FLU	Density		Acres (x)	Number of Units	ITE Land Use Code	Equation	Daily Trips
City	UDR	25	DU/AC	0.9	22	221	$T=5.45(x)-1.75$	118
County	RES-6	13.5	DU/AC	0.9	12	221	$T=5.45(x)-1.75$	64
Potential Increase:								55
Zoning								
	Zoning	Density		Acres(x)	Number of Units	ITE Land Use Code	Equation	Daily Trips
City	R-3	25	DU/AC	0.9	22	221	$T=5.45(x)-1.75$	118
County	AU	0.4	DU/AC	0.9	1	210	$\ln(T)=0.92\ln(x)+2.71$	15
Potential Increase:								103

Sincerely,

LTG, Inc.



George Galan, PE
 Senior Project Manager

- Attachments: Brevard County Future Land Use Designation Description RES-6 excerpt
 City of West Melbourne Future Land Use Designation Description UD-RES excerpt
 Brevard County Zoning Designation Description AU excerpt
 City of West Melbourne Zoning Designation Description R-3 excerpt

**Brevard County Future Land Use
Designation Description RES-6 Excerpt**

provided that minimum infrastructure requirements set forth in Policy 1.2 are available. Such higher densities should be relegated to interior portions of the PUD tract, away from perimeters, to enhance blending with adjacent areas and to maximize the integration of open space within the development and promote inter-connectivity with surrounding uses. This density bonus shall not be utilized for properties within the Coastal High Hazard Area (CHHA).

Residential 6 (maximum of 6 dwelling units per acre)

Policy 1.6

The Residential 6 land use designation affords a transition in density between the higher urbanized areas and lower intensity land uses. This land use designation permits a maximum density of up to six (6) units per acre, except as otherwise may be provided for within this element. The Residential 6 land use designation may be considered for lands within the following generalized locations, unless otherwise limited by this Comprehensive Plan:

Criteria:

- A. Areas adjacent to existing Residential 6 land use designation; or
- B. Areas which serve as a transition between existing land uses or land use designations with density greater than six (6) units per acre and areas with density of less than six (6) units per acre; or
- C. Unincorporated areas which are adjacent to incorporated areas and may be considered a logical transition for Residential 6.
- D. Up to a 25% density bonus to permit up to 7.5 dwelling units per acre may be considered where the Planned Unit Development concept is utilized, where deemed compatible by the County with adjacent development, provided that minimum infrastructure requirements set forth in Policy 1.2 are available. Such higher densities should be relegated to interior portions of the PUD tract, away from perimeters, to enhance blending with adjacent areas and to maximize the integration of open space within the development and promote inter-connectivity with surrounding uses. This density bonus shall not be utilized for properties within the CHHA.

Residential 4 (maximum of 4 dwelling units per acre)

Policy 1.7

The Residential 4 land use designation affords an additional step down in density from more highly urbanized areas. This land use designation permits a maximum density of up to four (4) units per acre, except as otherwise may be provided for within

**City of West Melbourne Future Land Use
Designation Description RES-6 Excerpt**

Future Land Use

Land Use and Development



Policies

2.1 Residential Category Identification

The adopted Future Land Use Map shall identify appropriate locations for the following land use categories, as defined in the following descriptions of each land use designation. Density is expressed as dwelling units per gross acreage of each development (du/acre or du/ac).

Table 1 – Residential Future Land Use Categories

Land Use Category	Land Uses	Maximum Density
Low Density (LD-RES)	Single Family Residences	5 dwelling units (du)/acre
Medium Density (MD-RES)	Single and Multi-Family Residences	10 du/acre
Urban Density (UD-RES)	Single and Multi-Family Residences	18 du/acre Density bonus up to 25 du/acre
Manufactured Homes (MH-RES)	Manufactured and Mobile Homes Residences	6 du/acre

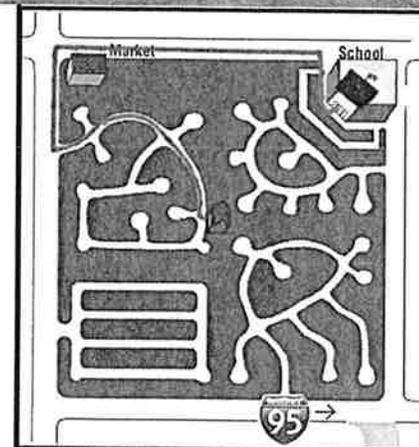
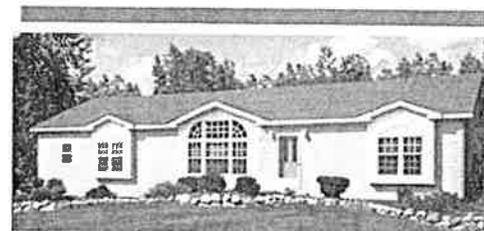


Residential land uses are intended for the development and support of existing and future neighborhood areas and low density residential areas. The city's neighborhoods are designed to provide the community safe, vibrant places to live and share life with family, friends, and neighbors. Types of residential uses include: Low Density, Medium Density, Urban Density and Manufactured or Mobile Home.

2.2 Residential Future Land Uses

Residential land uses are intended for the development and support of existing and future neighborhood areas and low density residential areas. The city's neighborhoods are designed to provide the community safe, vibrant places to live and share life with family, friends, and neighbors. A variety of transportation alternatives (walking, biking, auto, and transit) should interconnect adjacent neighborhoods and activity centers. In order to foster neighborhood connection to other neighborhoods, civic spaces are encouraged to be located along the transitional areas that link the city's residential areas together. Residential land use categories are:

- a. *Low Density Residential (LD-RES):*
The Low Density Residential land use designation consists of single family residential uses. Commercial uses are not allowed in low-density residential land areas. The maximum density allowed in the LD-RES land use designation is 5 du/acre.
- b. *Medium Density Residential (MD-RES):*
The Medium Density Residential land use designation consists of single and multi-family residential uses. Mixed-use neighborhood commercial centers which contribute to the overall livability of denser residential areas are allowed adjacent to MD-RES land uses. The maximum density



Driving-only transportation pattern

Future Land Use

Land Use and Development



allowed in the MD-RES land use designation is 10 du/acre.

c. *Urban Density Residential (UD-RES):*

The Urban Density Residential land use designation consists of a variety of single-family and multi-family residential uses. Mixed-use neighborhood commercial centers which contribute to the overall livability of denser residential areas are allowed adjacent to Urban Density Residential land uses. The maximum density for the UD-RES land use designation is 18 du/acre. A density bonus of an additional 7 du/acre, up to 25 du/acre, may be available via zoning permit approval if for each additional unit per acre, up to 7 dwelling units, at least one of the following criteria are met (for example, for 2 additional units, at least 2 of the criteria must be met, and so on):

- i. Connection to municipal water and sewer systems.
 - ii. Proximity of one (1) mile or less to any of the city's mixed-use designated areas.
 - iii. Proximity of less than one mile to developments with the same density.
 - iv. A transportation access management system that compliments the existing transportation system(s).
 - v. Fire station proximity of two (2) miles or less to the proposed development.
 - vi. A park is at least three-fourths (3/4) of a mile in proximity to the proposed development.
 - vii. Elementary schools are within two (2) miles or less to the proposed development.
 - viii. Wetlands occupy less than 50 percent of the total site.
 - ix. A perimeter buffer surrounds the development.
- d. *Manufactured Home or Mobile Home Residential (MH-RES):*
The Manufactured Home or Mobile Home Residential land use designation consists of manufactured home or mobile home parks land areas. Commercial properties and business uses are not allowed in areas designated for manufactured home or mobile home residential land uses, unless they are accessory uses solely for the use of the residents. The maximum density allowed in the MH-RES land use designation is 6 du/acre.

2.3 Economic and Business Development Category Identification

The adopted Future Land Use Map shall identify appropriate locations for the following land use categories, as defined in the following descriptions of each land use designation. Intensity is expressed as Floor Area Ratio (FAR), a common architectural ratio which is measured by taking the total square footage of the building divided by the total square footage of the lot.

West Melbourne's future land use framework will encourage all housing neighborhoods to be better integrated in order to provide better multi-modal accessibility between the city's residential resources and other community facilities, business centers, and park resources.



Walkable connected transportation network

Economic and business development

land uses are intended for the development and support of existing and future commercial, professional, and industrial activity centers. The city's commercial, professional, and industrial activity centers are designed to provide the community a healthy economic and business environment by supporting the city's quality of life. Types of economic and business development land uses include: commercial and industrial.

**Brevard County Zoning Designation
Description AU Excerpt**

Sec. 62-1334. - Agricultural residential, AU and AU(L).

The AU agricultural residential zoning classification encompasses lands devoted to agricultural pursuits and single-family residential development of spacious character.

The classification is divided into two types, AU and AU(L). The AU is the standard agricultural residential classification, while the AU(L) is a low intensity sub-classification more suited to smaller lots where the neighborhood has a more residential than agricultural character.

(1) *Permitted uses.*

a. (1) Permitted uses within the AU classification are as follows:

Single-family detached residential dwelling.

All agricultural pursuits, including the packing, processing, and sales of commodities raised on the premises as provided in chapter 86, article IV.

Raising and grazing of animals.

Dude ranches, with a minimum area of 40 acres. Barns or stables shall be 200 feet from any property line.

Fowl raising and beekeeping.

Parks and public recreational facilities.

Plant nurseries.

Private golf courses.

Private camps.

Foster homes.

(2) Permitted uses within the AU(L) sub-classification are as follows:

Single-family detached residential dwelling.

Agricultural pursuits of a personal non-commercial nature. Structures for the housing of livestock and animals shall not be permitted within 100 feet of any existing residence under different ownership, except where otherwise permitted in section 62-2108.

Parks and public recreational facilities.

Foster homes.

b. Permitted uses with conditions are as follows (see division 5, subdivision II, of this article):

Fish camps (section 62-1835.4.5).

Group homes, level I, subject to the requirements set forth in section 62-1835.9.

Landscaping business (section 62-1837).

Mobile home residential dwelling (section 62-1837.7.5).

Power substations, telephone exchanges and transmission facilities (section 62-1839).

Preexisting use (section 62-1839.7).

Private parks and playgrounds (section 62-1840).

Resort dwellings.

Temporary living quarters during construction of a residence.

Tenant dwellings: Mobile homes (section 62-1843).

Tenant dwellings: One unit is permitted for each five acres of land under the same ownership. Tenant dwellings must be 100 feet from property of different ownership (section 62-1842.5).

- (2) *Accessory buildings or uses.* Accessory buildings and uses customary to residential and agricultural uses are permitted. (Refer to definition cited in section 62-1102 and standards cited in section 62-2100.5).
- (3) *Conditional uses.* Conditional uses are as follows:
 - Airplane runways (section 62-1905).
 - Bed and breakfast inns (section 62-1912).
 - Boarding of horses and horses for hire (section 62-1913).
 - Captive wildlife (section 62-1958).
 - Change of nonconforming agricultural use.
 - Composting facility.
 - Farmers' market (section 62-1929).
 - Guesthouses or servants' quarters, without kitchen facilities (section 62-1932).
 - Hog farms (section 62-1934).
 - Land alteration (over five acres) (section 62-1936).
 - Private heliports (section 62-1943.5).
 - Roadside stand (section 62-1945.5).
 - Security mobile homes.
 - Single-family residential second kitchen facility.
 - Skateboard ramps (section 62-1948).
 - Substantial expansion of a preexisting use (section 62-1949.7).
 - Veterinary hospital, office or clinic, pet kennels (section 62-1956).
 - Wireless telecommunication facilities and broadcast towers.
 - Zoological parks (section 62-1960).
- (4) *Minimum lot size.* An area of not less than two and one-half acres is required, having a minimum width of 150 feet and a minimum depth of 150 feet.
- (5) *Setbacks.*

- a. Structures shall be set back not less than 25 feet from the front lot line, not less than ten feet from the side lot lines, and not less than 20 feet from the rear lot line. If a corner lot is contiguous to a key lot, then the side street setback shall be not less than 25 feet.
 - b. Accessory buildings shall be located to the rear of the front building line of the principal building and shall be set back not less than 15 feet from the side lot lines and not less than 15 feet from the rear lot lines.
 - c. Setbacks for barns and stalls are as follows:
 - 1. *Front*: 125 feet from the front lot line.
 - 2. *Side*: 50 feet from the side lot line.
 - 3. *Rear*: 50 feet from the rear lot line.
- (6) *Minimum floor area*. Minimum floor area is 750 square feet of living area.
- (7) *Maximum height of structures*. Maximum height of structures is as follows:
- a. Residential structures: 35 feet.
 - b. Structures accessory to an agricultural use: 45 feet.

(Code 1979, § 14-20.08(D); Ord. No. 95-47, §§ 8, 9, 10-19-95; Ord. No. 95-49, § 18, 10-19-95; Ord. No. 95-51, § 3, 10-19-95; Ord. No. 96-16, §§ 8, 9, 3-28-96; Ord. No. 96-46, § 10, 10-22-96; Ord. No. 97-29, § 2, 8-12-97; Ord. No. 97-46, § 1, 12-2-97; Ord. No. 98-03, § 6, 1-29-98; Ord. No. 98-08, § 2, 2-10-98; Ord. No. 98-11, § 3, 2-26-98; Ord. No. 98-62, § 5, 12-3-98; Ord. No. 2002-49, § 5, 9-17-02; Ord. No. 2003-03, § 6, 1-14-03; Ord. No. 03-40, § 1, 8-12-03; Ord. No. 04-29, § 6, 8-5-04; Ord. No. 2004-52, § 4, 12-14-04; Ord. No. 2005-25, § 5, 5-19-05; Ord. No. 05-27, § 2, 5-19-05; Ord. No. 2007-59, § 9, 12-6-07; Ord. No. 2009-06, § 2(Exh. A), 2-5-09; Ord. No. 2010-22, § 10, 11-23-10; Ord. No. 2011-17, § 4, 5-26-11; Ord. No. 2013-38, § 1, 11-19-13; Ord. No. 2013-38, § 1, 11-19-13; Ord. No. 2014-30, § 3, 10-2-14)

Editor's note— Ord. No. 2013-38, § 1, adopted November 19, 2013, amended § 62-1334 to read as set out herein. Previously § 62-1334 was titled agricultural residential, AU and AU(L).

**City of West Melbourne Zoning
Designation Description R-3 Excerpt**

DIVISION 7. - R-3 MULTIPLE-FAMILY DWELLING DISTRICT

Sec. 98-316. - Intent.

The R-3 multiple-family dwelling district is intended to apply to those areas classified so as to include, but not be limited to, higher density residential developments of large apartment houses, group development projects, planned unit developments, and other multifamily projects. Lot, height and other building restrictions are intended to accommodate an intense degree of development, maintaining an adequate amount of open space for residential uses, some nonresidential uses compatible with the character of the district or as accessory uses to serve high density residential uses.

(Ord. No. 45, art. VI, § 5, 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996)

Sec. 98-317. - Principal uses and structures.

The principal uses and structures in the R-3 multiple-family dwelling district are as follows:

- (1) Single-family dwellings, including townhouses.
- (2) Two-family dwellings.
- (3) Multiple-family dwellings.
- (4) Planned unit developments.

(Ord. No. 45, art. VI, § 5(a), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997; Ord. No. 2009-33, § 2, 5-19-2009; Ord. No. 2011-06, § 1, 2-15-2011)

Sec. 98-318. - Accessory uses and structures.

The accessory uses and structures in the R-3 multiple-family dwelling district are as follows:

- (1) Noncommercial nurseries and greenhouses.
- (2) Customary accessory uses of a residential nature, clearly incidental and subordinate to the principal use, including garages and carports in keeping with the residential character of the district.
- (3) Parking lots and facilities in conjunction with one or more principal uses, provided that an opaque screen or fence or a landscape area conforming to chapter 94 be provided wherever such facilities abut a residential use.
- (4) Limited retail and service establishments when operated within a single complex of 40 or more residential units, including the following:
 - a. Drugstores and sundry stores.
 - b. Confectionery shops and coffeeshops.
 - c. Newsstands.
 - d. Personal services, such as barbershops and beauty shops.
 - e. Delicatessens.

f. Eating and drinking establishments.

g. Laundry and similar uses.

No commercial display from such limited retail and service establishments shall be visible from outside a principal building. Such accessory use shall not exceed two percent of the gross floor area of a principal use.

- (5) Home occupations located within a detached single-family home and subject to division 4 of article V of this chapter.

(Ord. No. 45, art. VI, § 5(b), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997)

Sec. 98-319. - Conditional uses.

The conditional uses in the R-3 multiple-family dwelling district are as follows:

- (1) Public parks and recreational structures and facilities.
- (2) Golf courses.
- (3) Sewer lift stations.
- (4) Public and private clubs and lodges not involved in the conduct of commercial activities.
- (5) Professional and general office buildings.
- (6) Principal structures or structures otherwise permissible by conditional use that exceed 40 feet in height.

(Ord. No. 45, art. VI, § 5(c), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 2009-15, § 32, 1-20-2009)

Note— Ord. No. 2009-15, § 32, adopted Jan. 20, 2009, renamed former section 98-319, special exceptions, as set out herein.

Sec. 98-320. - Prohibited uses and structures.

The prohibited uses and structures in the R-3 multiple-family dwelling district are as follows:

- (1) Retail, personal service and other commercial establishments not in conformance with sections 98-317 through 98-319.
- (2) All uses not specifically or provisionally permitted in this division.
- (3) Any use not keeping with the residential character or professional character of the district.

(Ord. No. 45, art. VI, § 5(d), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996)

Sec. 98-321. - Density.

For any permitted use within the R-3 multiple-family dwelling district, the density shall not exceed 15 dwelling units per acre, or that allowed by the comprehensive plan future land use designation or policies further restricting density. For townhouse projects that are part of a larger development project, density shall be calculated utilizing the larger development project land area, provided the overall density does not exceed that allowed by this zoning district or the comprehensive plan future land use designation or its policies further restricting density.

(Ord. No. 45, art. VI, § 5(e), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 2009-33, § 2, 5-19-2009)

Sec. 98-322. - Lot and structure requirements.

The lot and structure requirements in the R-3 multiple-family dwelling district are as follows:

- (1) Minimum lot area: 12,000 square feet for single-family, two-family, multiple-family; 3,000 square feet for townhouses.
- (2) Minimum lot width: 100 feet for single-family, two-family, multiple-family; 24 feet for townhouses.
- (3) Minimum lot depth: 100 feet.
- (4) Maximum building coverage: 45 percent, except townhouses which can have 50 percent building coverage.
- (5) Minimum living or floor area:
 - a. Efficiency apartment: 450 square feet.
 - b. One-bedroom apartment: 550 square feet.
 - c. Two-bedroom apartment: 650 square feet.
 - d. Three-bedroom apartment: 800 square feet.
 - e. More than three-bedroom apartment: 800 square feet, plus 100 square feet for each additional bedroom.
 - f. Townhouses: 900 square feet.
- (6) Maximum height: 40 feet, unless the properties are located within a specific distance from the interchanges of I-95 as described in subsection (7) below.
- (7) If the property is located within the one-mile I-95 interchange radius of I-95 and Palm Bay Road or within the half-mile radius of I-95 and New Haven Avenue, and meets the following criteria, then the maximum building height may be 60 feet:
 - a. The minimum land area for the project site shall be five acres, or if included as part of a larger development project the overall site shall equal five acres.
 - b. Architecture. Architectural renderings shall be submitted along with the multifamily construction drawings to assist in identifying a unified architectural theme throughout the site. Exterior building facades, roof materials and signage shall use similar building materials and display a consistent use of these elements in the overall design. The architectural design shall incorporate the following design features that break up the expanses of wall and roof areas and distinguish an entrance area:
 1. Roofline accessories: Cornice molding, parapets, fake dormers and similar features shall be used to vary the building height by at least ten feet for at least 15 percent of the roofline.

2. Building massing relief features: Columns, facade engravings/etchings, recessing and protruding wall planes, overhangs, lighting or other similar features on any wall plane that exceeds 100 feet in length.
 3. Special pavement treatment at the entrance: Brick, stone, etched or painted surfaces or other contrasting natural looking materials.
 4. Site amenities. Benches, bicycle racks, tables, gazebos, and other exterior site amenities shall be indicated on the conceptual site plan.
- (8) Minimum yard requirements for structures not exceeding 40 feet in height:
- a. Front: 30 feet.
 - b. Side, interior: 15 feet.
 - c. Side, corner: 25 feet.
 - d. Rear: 25 feet; 20 feet when abutting an alley.
- (9) Minimum yard requirements for structures exceeding 40 feet in height:
- a. Front: 30 feet, plus three feet additional for every five feet or portion thereof of building height over 40 feet.
 - b. Side, interior: 15 feet, plus three feet additional for every five feet or portion thereof of building height over 40 feet.
 - c. Side, corner: 25 feet, plus three feet additional for every five feet or portion thereof of building height over 40 feet.
 - d. Rear: 25 feet; 20 feet when abutting an alley; plus three feet additional for every five feet or portion thereof of building height over 40 feet.
- (10) Minimum yard requirements for townhouses:
- a. Front: 25 feet.
 - b. Side, interior: 0 feet.
 - c. Side, corner: 25 feet; or if the property is adjacent to an undeveloped common area tract or dedicated easement that is at least 15 feet in width, the side corner setback is 0 feet.
 - d. Rear: 20 feet.

(Ord. No. 45, art. VI, § 5(f), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 2008-33, § 1, 7-1-2008; Ord. No. 2009-15, § 33, 1-20-2009; Ord. No. 2009-33, § 2, 5-19-2009; Ord. No. 2009-68, § 4, 12-15-2009; Ord. No. 2010-32, § 4, 12-7-2010; Ord. No. 2016-20, § 1, 11-22-2016)

Sec. 98-323. - Site plan review and approval.

Site plans for all construction in the R-3 multiple-family dwelling district shall be submitted to and approved by the city in accordance with article X of chapter 66, except for those developments for which plat approval is otherwise required by applicable ordinances and laws, such as single-family subdivisions and townhouses, which shall conform with the subdivision code.

(Ord. No. 45, art. VI, § 5(i), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-

1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997; Ord. No. 2009-33, § 2, 5-19-2009)

Sec. 98-324. - Setbacks.

In addition to the yard requirements set forth in section 98-322, the following setbacks shall be required for any structure on any size lot in the R-3 multiple-family dwelling district when subdivision of land in accordance with chapter 86 is not required:

- (1) Setbacks for individual buildings from any public or private right-of-way and from any public or private parking area shall be as follows:
 - a. From rights-of-way: 20 feet.
 - b. From parking areas: 15 feet.

(Ord. No. 45, art. VI, § 5(j), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997)

Sec. 98-325. - Recreation land and recreation fees.

In the R-3 multiple-family dwelling district, recreational areas and/or fees in lieu of recreational areas shall be required to be dedicated or paid in accordance with chapter 86.

(Ord. No. 45, art. VI, § 5(k), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997)

Sec. 98-326. - Interpretation of criteria as minimum requirements.

The criteria as set forth by this division for the R-3 multiple-family dwelling district shall be deemed the minimum necessary for compliance. The planning and zoning board shall reserve the right to determine, at the time of site plan approval, such additional requirements as may be necessary to ensure the safety, health and general welfare of the residents.

(Ord. No. 45, art. VI, § 5(l), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996)

Sec. 98-327. - Reserved.

Sec. 98-328. - Development bonus for townhouse project enhancements.

Townhouse structures will be allowed to be on lots that measure 18 feet in width instead of the minimum lot width of 24 feet if the following criteria are met:

- (1) *Environmental buildings and project layout.* The applicant commits to using green building standards, which means using Energy Star and Water Star fixtures and equipment, as well as exceeding the minimum insulation standards required by the State of Florida. A copy of the building materials and mechanisms used to achieve these environmental priorities will be submitted simultaneously with the multifamily conceptual site plan.

- (2) *Architecture.* Architectural renderings shall be submitted along with the multifamily construction drawings to assist in identifying a unified architectural theme throughout the site. Exterior building facades, roof materials and signage shall use similar building materials and display a consistent use of these elements in the overall design. The architectural design shall incorporate the following design features that break up the expanses of wall and roof areas and distinguish an entrance area:
- a. *Roofline accessories:* Cornice molding, parapets, fake dormers and similar features.
 - b. *Balconies:* For second story windows, at least one balcony shall be provided per unit facing the front yard.
 - c. *Building massing relief features:* Columns, facade engravings/etchings, recessing and protruding wall planes, overhangs, lighting or other similar features.
 - d. *Special pavement treatment at the entrance:* Brick, stone, etched or painted surfaces or other contrasting natural looking materials.

(Ord. No. 2009-68, § 5, 12-15-2009)

Secs. 98-329—98-360. - Reserved.

**OASIS OF WEST MELBOURNE OFF SITE IMPROVEMENTS
ENGINEER'S COST ESTIMATE - CONNECTOR ROAD**

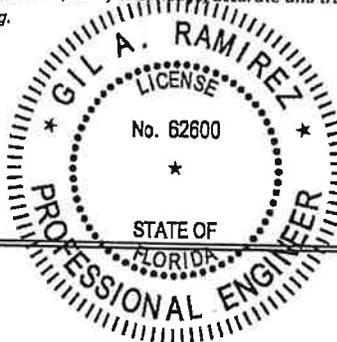
ITEM DESCRIPTION	UNIT	UNIT COST	QTY	SUBTOTAL
Mobilization	LS	\$15,000.00	1	\$15,000.00
Geotechnical Investigation	LS	\$5,000.00	1	\$5,000.00
Engineering	LS	\$27,000.00	1	\$27,000.00
Erosion and Sediment Control Incl. Monitoring	LS	\$20,000.00	1	\$20,000.00
Sawcut & Demo	LS	\$3,500.00	1	\$3,500.00
Relocate existing monument sign	LS	\$2,750.00	--	--
Rough Grade and Finish	LS	\$54,000.00	1	\$54,000.00
Maintenance of Traffic	LS	\$16,000.00	1	\$16,000.00
Construction Entrance	EA	\$4,500.00	2	\$9,000.00
2" Type S-111 Asphaltic Concrete	SY	\$16.00	4039	\$64,624.00
10" Limerock Base	SY	\$18.00	4039	\$72,702.00
12" Stabilized Base	SY	\$6.50	4039	\$26,253.50
Concrete Flume	EA	\$900.00	2	\$1,800.00
Type F Curb	LF	\$17.50	2989	\$52,307.50
Ribbon Curb	LF	\$14.50	41	\$594.50
Stem Wall and D Curb	LF	\$80.00	303	\$24,240.00
Handicap Ramp with Truncated Domes	EA	\$960.00	9	\$8,640.00
Raised Concrete Sidewalk	SF	\$5.50	8398	\$46,189.00
Import Fill	CY	\$16.50	6800	\$112,200.00
Clearing and Grubbing	AC	\$13,500.00	2	\$27,000.00
Type 4 Inlet	EA	\$5,700.00	9	\$51,300.00
Stormwater Manhole	EA	\$2,700.00	1	\$2,700.00
18" RCP	LF	\$49.00	71	\$3,479.00
24" RCP	LF	\$71.00	103	\$7,313.00
Sod & Final Grade Ditch Line	LS	\$14,500.00	1	\$14,500.00
Signage and Striping	LS	\$10,000.00	1	\$10,000.00
Staking	LS	\$7,500.00	1	\$7,500.00
Clean, Sweep, and Trash Removal	LS	\$6,500.00	1	\$6,500.00
Testing & Certified As-Built Survey	LS	\$20,000.00	1	\$20,000.00
Overhead	LS	\$64,500.00	1	\$64,500.00
TOTAL				\$ 773,842.50
CONTINGENCY - 3%				\$ 23,215.28
LAND VALUE				\$ 40,000.00
GRAND TOTAL				\$ 837,057.78

NOTES:

1. This estimate only includes improvements which are impact fee creditable: 1280 LF of new roadway (235 lf of extending Costal Lane, 1045 LF of connecting Costal Lane and John Rodes Blvd,) and associated drainage, striping, and new sidewalk along connector road only.
2. This estimate of conceptual cost was developed to determine a reasonable cost to construct the improvements as indicated on the Conceptual Intersection Improvement Plan.
3. Estimate shall not be used as a basis for bids or the preparation of bid documents.
4. Estimate does not include costs for replacement or repair of any miscellaneous items not indicated on the submitted plan.
5. Estimate assumes existing soils are adequate.

I affirm, by affixing my signature below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.

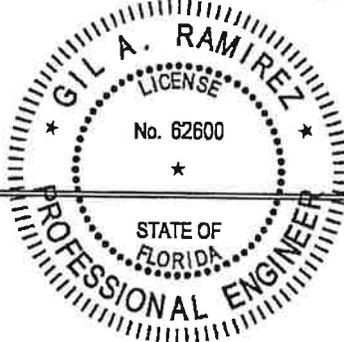
Name: Gil Ramirez, P.E.
 Signature: Gilberto A Ramirez
2018.11.05 12:23:54 -05'00'
 Date: November 5, 2018



This item has been electronically signed and sealed by: Gil A. Ramirez, PE on 11/5/18 using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

EXH C p 1 of 2

OASIS OF WEST MELBOURNE OFF SITE IMPROVEMENTS ENGINEER'S COST ESTIMATE - JOHN RODES TURN LANES				
ITEM DESCRIPTION	UNIT	UNIT COST	QTY	SUBTOTAL
Survey/Engineering	LS	\$3,000.00	1	\$3,000.00
Relocate existing monument sign	LS	\$2,750.00	1	\$2,750.00
Milling and Resurfacing	LS	\$15,000.00	1	\$15,000.00
Rough Grade and Finish	LS	\$4,000.00	1	\$4,000.00
Maintenance of Traffic	LS	\$14,500.00	1	\$14,500.00
2" Type 5-111 Asphaltic Concrete	SY	\$16.00	461	\$7,376.00
10" Limerock Base	SY	\$18.00	461	\$8,298.00
12" Stabilized Base	SY	\$6.50	461	\$2,996.50
Signage and Striping	LS	\$6,500.00	1	\$6,500.00
TOTAL				\$ 64,420.50
CONTINGENCY - 3%				\$ 1,932.62
GRAND TOTAL				\$ 66,353.12
NOTES:				
1. This estimate only includes improvements which are impact fee creditable: additional pavement for widening for the installation of a left turn bay and the installation of a 260 LF right turn lane, including the associated milling & resurfacing and striping.				
2. This estimate of conceptual cost was developed to determine a reasonable cost to construct the improvements as indicated on the Conceptual Roadway Plan.				
3. Estimate shall not be used as a basis for bids or the preparation of bid documents.				
4. Estimate does not include costs for replacement or repair of any miscellaneous items not indicated on the submitted plan.				
5. Estimate assumes existing soils are adequate.				
I affirm, by affixing my signature below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.				
Name:	<u>Gil Ramirez, P.E.</u>			
Signature:	<u>Gilberto A Ramirez</u>			
Date:	<u>2018.11.05 12:24:37 -05'00'</u>			
Date:	<u>November 5, 2018</u>			

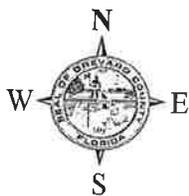
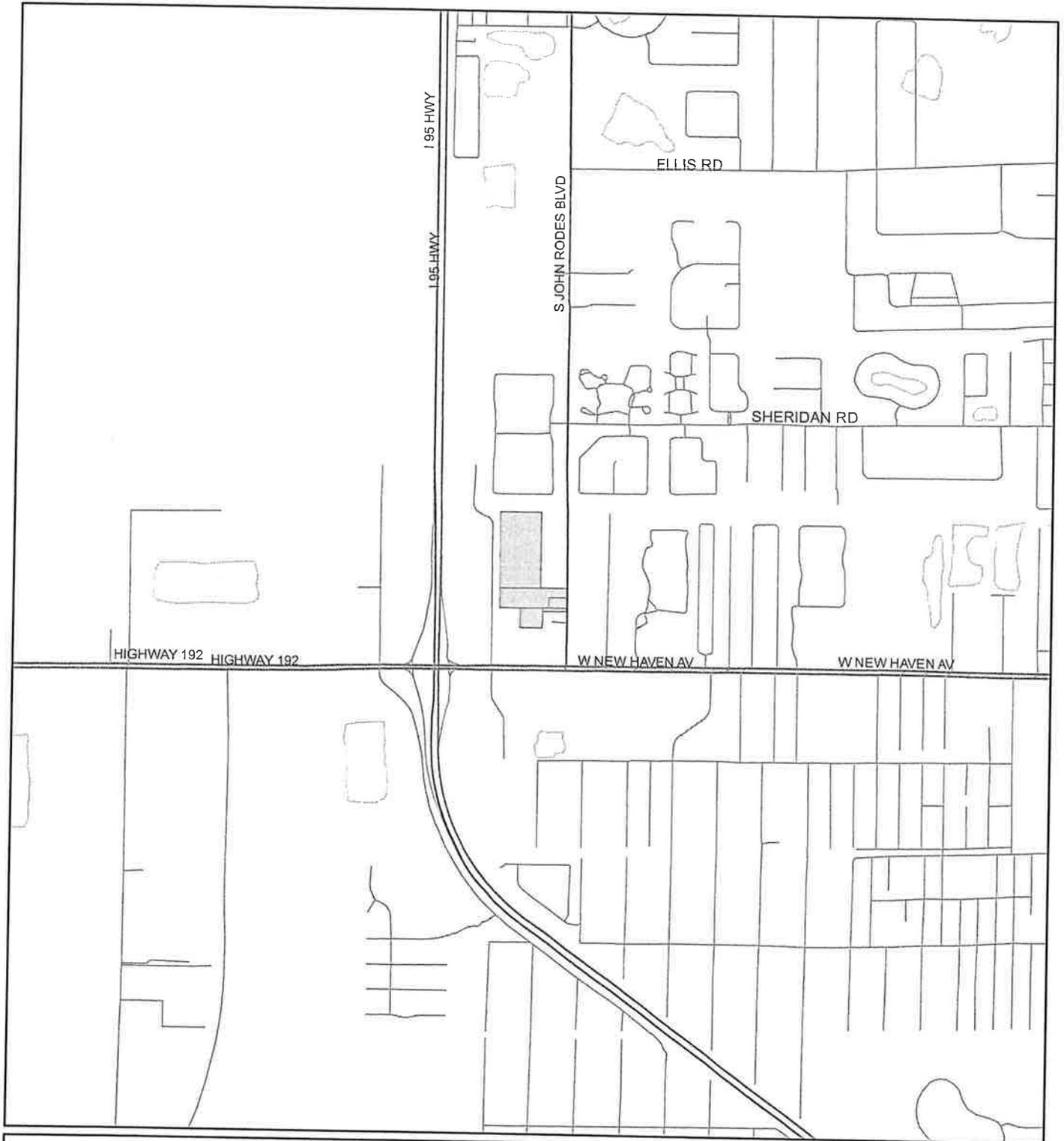


This item has been electronically signed and sealed by: Gil A. Ramirez, PE on 11/5/18 using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

EXH C p. 262

LOCATION MAP

OASIS at WEST MELBOURNE



1:24,000 or 1 inch = 2,000 feet

 Subject Property

This map was compiled from recorded documents and does not reflect an actual survey. The Brevard County Board of County Commissioners does not assume responsibility for errors or omissions hereon.

Produced by BoCC - GIS Date: 7/6/2018

TRAFFIC IMPACT FEE CREDIT AGREEMENT – OASIS AT WEST MELBOURNE

PROVIDING FOR TRANSPORTATION IMPACT FEE CREDIT FOR OASIS AT WEST MELBOURNE MULTIFAMILY DEVELOPMENT COMMUNITY.

THIS TRANSPORTATION IMPACT FEE CREDIT AGREEMENT for the Oasis at West Melbourne project ("the **Agreement**") is entered into this 13 day of November, 2018, by and between the **BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA**, a political subdivision of the State of Florida, whose address is 2725 Judge Fran Jamieson Way, Viera, Florida 32940, (hereinafter referred to as "**County**"), the **CITY OF WEST MELBOURNE, FLORIDA**, a municipal corporation, whose address is 2240 Minton Road, West Melbourne, Florida 32904 (hereinafter referred to as "**City**"), and **PICERNE DEVELOPMENT CORPORATION OF FLORIDA**, a Florida corporation registered to do business in the State of Florida, whose address is 247 N. Westmonte Drive, Altamonte Springs, Florida 32714 (hereinafter referred to as "**Developer**"), is based on the following premises:

RECITALS:

WHEREAS, Larry R. McGuire and Royal Poinciana Estates, LLC, are the current owners and Developer is the contract purchaser of that certain property located north of West New Haven Avenue, between South John Rodes Boulevard and Coastal Lane (f.k.a. Dike Road), which is located in the City of West Melbourne and more particularly described in the attached **Exhibit "A"**, and which is approximately 21.78 acres (hereinafter referred to collectively as the "**Property**"); and

WHEREAS, the City has adopted a Comprehensive Plan and Zoning Regulations that are applicable within its corporate limits; and

WHEREAS, the City has established a Future Land Use Map designation of Urban Density Residential and has established the R-3: Multifamily Dwelling Residential Zoning District on the Property; and

WHEREAS, the Future Land Use designation of Urban Density Residential and the Zoning of R-3 Multifamily Dwelling Residential Zoning District permits single family dwellings, multiple-family dwellings, planned unit developments, accessory uses and limited retail and service establishments and as otherwise described in section 98-317, West Melbourne Land Development Regulations, and limits residential density to 15 dwelling units per acre and a maximum height of 60 feet; and

WHEREAS, public facilities servicing the Development include the improvements described herein, potable water and sewer service available to the Property from the City, and other public facilities currently in place; and

WHEREAS, Developer has prepared a development program to construct a 316-unit residential apartment complex on the Property (hereinafter referred to as the "Project"); and

WHEREAS, the City has determined the Project to be consistent with the City's Comprehensive Plan; and

WHEREAS, Developer retained Lassiter Transportation Group, Inc. to perform a traffic study to determine the impact of the Project on the surrounding road network; and

WHEREAS, Lassiter Transportation Group, Inc. performed such traffic study and reported its results in that certain "Oasis at West Melbourne Traffic Impact Study" dated May 9, 2018 (the "Traffic Impact Study"), a copy of which is attached hereto as **Exhibit "B"** and incorporated by reference herein; and

WHEREAS, the Traffic Impact Study, which has been approved by the County and the City, states that the Project will generate a total of 191 new p.m. peak-hour trips, with 124 entering and 67 exiting, and 2,039 average daily trips; and,

WHEREAS, pursuant to its home rule powers and the Brevard County Charter, Brevard County has imposed transportation impact fees pursuant to Article V, Division 4 of Chapter 62, Brevard County Land Development Regulations, and is commonly known as the "Brevard County Transportation Impact Fee Ordinance;" (hereinafter referred to as the "**Ordinance**"); and

WHEREAS, the Ordinance includes a schedule of Impact Fees assessable against the users of property for the public purpose of requiring new developments to pay their fair share of the impacts attributable to said development on the transportation network of Brevard County; and

WHEREAS, the Ordinance provides a mechanism for credits against Transportation Impact Fees for qualifying contributions towards off-site roadway improvements, and further provides that no credit shall exceed the assessed transportation impact fee for the land development activity awarded the credit; and

WHEREAS, the provisions of the Ordinance are applicable within the incorporated limits of the City including the Property; and

WHEREAS, the County and the City entered into an interlocal agreement, executed on April 11, 1989 by the City and May 16, 1989 by the County, providing for the participation by the City in the program created by the Ordinance; and

WHEREAS, the City and County have also entered into an Interlocal Agreement regarding collection and distribution of Transportation Impact Fees; and

WHEREAS, provisions of the interlocal agreement stipulate that the City shall require the presentation of an impact fee voucher that affirmatively states that the applicant has paid the applicable impact fee for the particular structure or development; and

WHEREAS, with the understanding that it shall be awarded Transportation Impact Fee Credits, Developer agrees to make certain Public Access roadway improvements in connection with development of the Project as described herein; and

WHEREAS, the Roadway Improvements to be constructed and dedicated by Developer are expected to further increase the capacity of and improve traffic safety on South John Rodes Boulevard and the additional capacity will accommodate traffic that is not generated by the Project; and

WHEREAS, the City will be responsible for issuance of building permits on the Property; and

WHEREAS, a traffic concurrency evaluation of the proposed development for the Property was conducted by the City and a City concurrency evaluation and approval occurred as part of the development process; and

WHEREAS, the City and County have broad home rule powers to give assurances that developers will be able to implement their development programs subject to certain conditions, and thereby to encourage a stronger commitment to capital facilities planning, ensure the provisions of adequate public facilities for development, encourage the efficient use of resources, encourage private participation in comprehensive planning, and reduce the economic cost of development; and

WHEREAS, the design, construction and conveyance of the Roadway Improvements is consistent with and serves to implement the goals, objectives, and policies of the City's Comprehensive Plan; and

WHEREAS, the City and County endorse the Developer's request for a credit against transportation impact fees; and

NOW THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged by all parties, the parties hereto agree as follows:

1. **Recitals.** The above recitals are hereby incorporated and made a part of this Agreement.
2. **Roadway Improvements.**

a. Developer shall be responsible for, construct and dedicate to the City a public road between and connecting South John Rodes Boulevard (a County road) and Coastal Lane (a City street) at the southern end of the Property, construction of turn lanes on South John Rodes Boulevard to provide access to the new public road and certain roadway improvements to Coastal Lane, all as set forth in **Exhibit "C"**, prepared by Construction Engineering Group and attached hereto and incorporated herein by this reference ("**Roadway Improvements**") Such Roadway Improvements are further described in the conceptual plans prepared by Construction Engineering Group, dated June 6, 2018 ("Conceptual Plans"). The Developer, subject to the consent of the City and the County Public Works Director, may make revisions to the design and construction of the Conceptual Plans in order to address the City's and County's roadway design standards.

b. Prior to commencement of construction of the Roadway Improvements, Developer shall submit final design and construction plans ("Final Plans") consistent with the Conceptual Plans as approved and amended by the Developer, City and County pursuant to this Agreement, which Final Plans shall be subject to administrative review and approval by the City and County.

c. The Developer shall commence construction of the Roadway Improvements within twenty-four (24) months of the approval of Final Plans by the City and County subject only to the Developer obtaining all of the necessary government permits for the Roadway Improvements, and finish within eighteen (18) months thereafter. In the event that any party shall be delayed or prevented from performing any act required by this Agreement by reasons of acts of God, strikes, lockouts, labor troubles, inability to procure materials, failure of power, riots, insurrection, wars or other reason of a like nature not the fault of the hindered party, then performance of such acts shall be excused for the period of delay and the period for the performance of such acts shall be extended for a period equivalent to the period of delay provided, however, that any such extension shall not extend the ten (10) year duration of this Agreement as set forth in Paragraph 12 therein. Prior to the commencement of any work on the Project, Developer shall notify the County and City that it is ready to proceed.

d. The parties agree that the Roadway Improvements are not site-related for purposes of obtaining credit against impact fees, mobility fees or other mitigation for transportation or mobility impacts. However, in accordance with Brevard County's Land Development Regulations, partial credit is being recognized for the Roadway Improvements, as specified in section 7 below. The Roadway Improvements specifically exclude the driveways into and out of the Developer's Project.

3. **Engineer's Opinion of Costs.** The Engineer's Opinion of Costs (hereinafter the "Estimated Costs") for completing the non-site related Roadway Improvements in accordance with the requirements of this Agreement and the Plans are itemized in **Exhibit "C"** attached hereto and by this reference made a part hereof. For the purpose of calculating the amount of transportation impact fee credit due Developer, the Engineer's Opinion of Costs shall have the same meaning as estimated costs in the Ordinance. The estimated costs of \$903,410.90 as

itemized in **Exhibit "C"** are those costs associated with the completion of the non-site related improvements and which are eligible for a traffic impact fee credit.

4. **Delivery by Developer's Certificate of Completion.** Upon the delivery by Developer and/or its agents of its Certificate of Completion and request for final inspection of the Roadway Improvements, and the issuance of final "As Built" plans, the City and County within five (5) working days thereafter shall conduct its remaining inspections, if any, and shall each issue its Certificate of Completion or in the event of any deficiencies state in writing the specifics of the deficiencies, and Developer shall within forty five (45) days thereafter commence to satisfy any deficiencies, and diligently pursue correction of said deficiencies. After correction of the deficiencies the City and County shall each issue its Certificate of Completion within five (5) working days of the additional submittal. Construction of the turn lanes on South John Rodes Boulevard shall be inspected by the County's Development Inspection Group, and Developer shall pay all fees associated with such review.

5. **Dedication.** Upon issuance of the Certificates of Completion by the City and County, the Developer shall dedicate the area of the Roadway Improvements to the City as a public right of way.

6. **Statement of Actual Costs.** Within sixty (60) days from the date that the County and City issue their respective Certificates of Completion for the Roadway Improvements, Developer shall provide to the City and County a statement of the actual total cost of the Roadway Improvements including the non-site related portion thereof, which statement shall be certified by the Engineer of Record (the "Engineer"). The County and City shall have thirty (30) days to review the costs for eligibility and reasonableness and approve the Engineer's certification. In the event the City or County does not approve the Engineer's certification of cost, the parties shall, within fifteen (15) days of rejection of Engineer's certification, choose a mutually acceptable engineer familiar with road design and construction to review all relevant information and provide a final determination of the actual total cost of eligible improvements. The parties shall share equally the cost for such engineer's services and shall be bound by said engineer's final determination.

7. **Impact Fee Credit.** In consideration of the financial expenses associated with the construction of the Roadway Improvements required to be constructed by Developer under

this Agreement, City and County agree that Developer and its assignees and successors in interest shall enjoy the benefit of a credit against any Transportation Impact Fees, mobility fees, or other charges imposed by the City and/or County for mitigation of transportation or mobility impacts that may be assessed (hereinafter referred to as the "Impact Fee Credit") on new construction on the Property. The amount of the Impact Fee Credit shall equal a percentage of the actual cost of construction of the non-site related eligible Roadway Improvements, (including, but not limited to, engineering, design, permitting, soil preparation, paving (including repaving of the turn lane area of John Rodes Boulevard), right of way and geotechnical engineering). In accordance with section 62-815(b)(2) of the Brevard County Land Development Regulations, the percentage Impact Fee Credit shall be equal to the ratio of excess capacity to total capacity of the Roadway Improvements as follows: for the turn lane on John Rodes Boulevard, credit shall be equal to 74.5% of the actual cost of construction; for the remainder of the Roadway Improvements, credit shall be equal to 84.04% of the actual cost of construction. However, in no event shall the amount of Impact Fee Credit exceed the actual cumulative amount of Transportation Impact Fees assessed (or successor traffic mitigation fee equivalent) for new construction on the Property or \$752,396.00, whichever is less. The estimated cost of constructing the non-site related eligible Roadway Improvements (including right of way) is \$903,410.90.

8. Non-Transferability of Impact Fee Credit. Pursuant to current County Code provisions, the Impact Fee Credit shall be applicable only against Transportation Impact Fees that are assessed for development of the Property or any portion thereof within ten (10) years from the Effective Date of this Agreement, as hereafter defined. In the event that the County Code is amended in the future to allow transfer of Transportation Impact Fees credits to other properties, any portion of the Impact Fee Credit remaining at such time shall be transferable in accordance with such amended County Code provisions. In no event shall Developer or its assigns enjoy the benefit of the Impact Fee Credit more than ten (10) years from the Effective Date of this Agreement and any unused portion of the Impact Fee Credit shall thereafter be forfeited and of no value.

9. Use of Impact Fee Credit. The parties agree that it is their intent that Impact Fee Credit under this Agreement be redeemed by the Developer in the form of a voucher executed by

420 South Orange Ave., Ste. 1200
Orlando, FL 32801-4904
Telephone: 407-423-4000
Facsimile: 407-254-4251
Email: jim.mcneil@akerman.com

If to City: City of West Melbourne
Attn: Scott Morgan, City Manager
2240 Minton Road
West Melbourne, FL 32904-4928
Telephone: 321-727-7700
Facsimile: 321-768-2390
Email: smorgan@westmelbourne.org

With a copy to: Morris Richardson, City Attorney
City of West Melbourne
2240 Minton Road
West Melbourne, FL 32904-4928
Telephone: 321-727-7700
Facsimile: 321-768-2390
Email: mrichardson@westmelbourne.org

If to County: Brevard County
Attn: Frank Abbate, County Manager
2725 Judge Fran Jamieson Way
Viera, FL 32940
Telephone: 321-633-2000
Facsimile: 321-633-2115
Email: frank.abbate@brevardfl.gov

With a copy to: Brevard County Public Works Department
Attn: Andrew Holmes
2725 Judge Fran Jamieson Way
Viera, FL 32940
Telephone: 321-617-7202
Facsimile: 321-617-7208
Email: John.Denninghoff@brevardcounty.us

14. **Miscellaneous.** The execution of this Agreement has been duly authorized by the appropriate body of each of the parties hereto. Each party has complied with all the applicable requirements of law and has full power and authority, to comply with the terms and conditions of this Agreement. The venue of any litigation arising out of this Agreement shall be Brevard

County, Florida. The exhibits attached hereto and incorporated by reference herein are by such attachment and incorporation made a part of this Agreement for all purposes. The fact that one of the parties to this Agreement may be deemed to have drafted or structured the provisions of this Agreement, whether in whole or in part, shall not be considered in construing or interpreting any particular provision hereof, whether in favor of or against such party. The terms and conditions of this Agreement shall bind and inure to the benefit of the parties hereto and their respective successors and assigns. This Agreement is solely for the benefit the parties hereto and their respective successors and assigns, and no right or cause of action shall accrue upon or result by reason hereof or for the benefit of any third party not a formal party hereto. Nothing in this Agreement whether express or implied, is intended or shall be construed to confer upon any person other than the parties hereto any right, remedy, or claim under or by reason of this Agreement or any of the provisions hereof. This Agreement may not be changed, amended, or modified in any respect whatsoever except through in writing signed by all of the parties, nor may any covenant, condition, agreement, requirement, provision, or obligation contained herein be waived except in a signed writing.

15. **Attorneys' Fees/Hold Harmless/Indemnification** Should any litigation arise between the parties, each party shall bear its own attorneys' fees and costs. In the event of litigation or claims against the County and/or City from third parties arising from this Agreement or the construction described herein, Developer shall indemnify and hold harmless the County and/or City, as the case may be, from any such litigation or claims; provided, however, nothing contained herein shall be deemed to be a waiver by the County or the City of their respective sovereign immunity. Nothing in this Agreement shall inure to the benefit of any third party for the purpose of allowing any claim which would otherwise be barred by sovereign immunity or operation of law. Developer acknowledges that specific consideration has been paid and other good and sufficient consideration has been received for this indemnification provision.

16. **Captions.** Headings of a particular paragraph of this Agreement are inserted only for convenience and are in no way to be construed as part of the Agreement or as a limitation of the scope of the paragraphs to which they refer.

17. **Severability.** If any part of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall nevertheless

continue in full force without being impaired or invalidated in any way. If any party's joinder in or execution of this Agreement is deemed invalid for any particular purpose, the sections for which the joinder or execution is valid shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have caused this Agreement to be duly executed and their corporate seals affixed as of the day and year first above written.

[SIGNATURES ON THE FOLLOWING PAGES]

Signed, sealed and delivered
in the presence of:

[Signature]
Witness 1
Stephanie Ennis
Print Name of Witness 1

[Signature]
Witness 2
THERESE LAURENCE
Print Name of Witness 2

DEVELOPER:

**PICERNE DEVELOPMENT
CORPORATION OF FLORIDA, a
Florida corporation**

By: [Signature]
Richard R. Haley
Vice President

STATE OF FLORIDA
COUNTY OF Seminole

The foregoing instrument was acknowledged before me this 5 day of November,
2018, by Richard R. Haley as Vice President of Picerne Development Corporation of Florida,
Inc., a Florida corporation. He is [] personally known to me or [] produced
_____ as identification.

My commission expires: 11/17/21

SEAL
Commission No.: GG063086

[Signature]
Notary Public
[Signature]
(Name typed, printed or stamped)



ATTEST:

CITY OF WEST MELBOURNE, a
chartered municipal corporation

City Clerk

Hal J. Rose, Mayor

(SEAL)

**STATE OF FLORIDA
COUNTY OF BREVARD**

The foregoing instrument was acknowledged before me this ____ day of _____, 2018, by **Hal J. Rose, Mayor** of The City of West Melbourne, Florida, a chartered municipal Corporation, on behalf of the City. He is [] personally known to me or [] produced _____ as identification.

My commission expires:

Notary Public

SEAL

Commission No.:

(Name typed, printed or stamped)

ATTEST:

Scott Ellis, Clerk

**BOARD OF COUNTY COMMISSIONERS
OF BREVARD COUNTY, FLORIDA, a
political subdivision of the State of Florida**

Rita Pritchett, Chair

(SEAL)

As approved by the Board on 11/13/18

**STATE OF FLORIDA
COUNTY OF BREVARD**

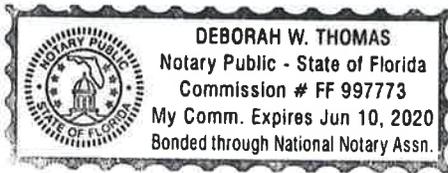
The foregoing instrument was acknowledged before me this 13 day of November, 2018, by Rita Pritchett, Chair of the Board of County Commissioners of Brevard County, Florida, a political subdivision of the State of Florida, who is [] personally known to me or [] produced _____ as identification.

My commission expires:
SEAL

Notary Public

Commission No.:

DEBORAH W. THOMAS
(Name typed, printed or stamped)



LIST OF EXHIBITS

- A. Legal Description for Property
- B. Traffic Impact Study by Lassiter Transportation Group, Inc.
- C. Engineer's Opinion of Total Costs and Percentage of Non-Site Related Costs

EXHIBIT "A"

LEGAL DESCRIPTION FOR "PROPERTY"

The land referred to herein below is situated in the County of Brevard, State of Florida, and is described as follows:

PARCEL NO. 1:

Begin at a spike in the centerline of New Haven Avenue and on the West Section line of Section 2, Township 28 South, Range 36 East, run N. 0 degrees, 00'03" W. along the West section line of aforementioned Section 2, for a distance of 2,282.75 feet to a chipped concrete monument, being the place and point of beginning.

Begin at the point-of-beginning and run S. 0 degrees 00'03" E, along the West boundary of Section 2, Township 28 South, Range 36 East, for a distance of 1,122.79 feet to a point on the West right-of-way of L-13 canal; thence run N 89 degrees, 59'57" E. for a distance of 50.0 feet, to an iron pin; thence run still N. 89 degrees, 59'57" E. for a distance of 611.64 ft. to a 4" x 4" concrete monument; thence run N. 0 degrees, 00'03" W. for a distance of 1,122.79 feet to an iron pin on the South right-of-way of the M-1 canal; thence S. 89 degrees 59'57" W. along the South right-of-way of said M-1 canal, for a distance of 611.64 feet to an iron pin; thence run still S. 89 degrees, 59'57" W. for a distance of 50.0 ft to a concrete monument being the place and point-of-beginning.

EXCEPTING:

The L-13 canal right-of-way described as follows: Begin at the place and point-of-beginning and run S. 0 degrees, 00' 03" E. along the West boundary of Section 2, Township 28 S., Range. 36 E., for a distance of 1,122.79 ft. to a point; thence run N. 89 degrees, 59'57" E. for a distance of 50.0 ft. to an iron pin; thence run N. 0 degrees, 00' 03" W., parallel with the West boundary of Section 2, Township 28 South, Range. 36 East, for a distance of 1,122.79 ft. to an iron pin; thence run S. 89 degrees, 59' 57" W. for a distance of 50.0 ft. to a concrete monument being the place and point-of-beginning.

PARCEL NO. 2:

The North 289.35 feet of Lots 23 & 24 lying West of Lake Washington Road, Florida Indian River Land Co., subdivision of Section 2, Township 28 South, Range 36 East, as recorded in Plat Book 2, Page 80 of the Public Records of Brevard County, Florida, SUBJECT to right of way for existing roads and canals, and EXCEPTING therefrom land as described in Official Records Books 185, Page 47, of the Public Records of Brevard County, Florida. More particularly described as follows: Commence at the West 1/4 corner of Section 2, Township 28 South, Range

Traffic Impact Fee Credit Agmt.

Oasis at West Melbourne

Page 16

44306973;9

46776231;3

36 East; Thence N 00°02'09" W along the West line of said Section 2, a distance of 1128.73 feet; Thence N 89°53'09" E a distance of 53.00 feet to a point on the East Right of Way of the L-13 Drainage Canal being the Point of Beginning, thence N 89°53'09" E a distance of 973.95 feet to the West Right of Way line of John Rhodes Boulevard; Thence South along said West Right of Way a distance of 139.50 feet; Thence S 89°53'30" W a distance of 260.00 feet, Thence S 00°03'33" W a distance of 150.00 feet, Thence S 89°53'01" W a distance of 713.61 feet to the East right of way of the L-13 Drainage Canal, Thence N 00°02'09" W along said East right of way a distance of 289.50 feet to the point of beginning.

PARCEL NO. 3

HISTORIC LEGAL DESCRIPTION:

BEGIN 864.34 FEET NORTH OF THE SOUTH LINE OF LOT 23, SECTION 2, TOWNSHIP 28 SOUTH, RANGE 36 EAST, OF THE FLORIDA INDIAN RIVER LAND COMPANY PLAT AND THE WEST RIGHT OF WAY OF LAKE WASHINGTON ROAD (RHODES BLVD.) RUN THENCE NORTH ALONG THE WEST RIGHT OF WAY OF LAKE WASHINGTON ROAD 150 FEET, THENCE SOUTH 89 33'30" WEST 260.00 FEET, THENCE SOUTH 150.00 FEET, THENCE NORTH 89 33'30" EAST 260.00 FEET TO THE POINT OF BEGINNING.

PARCEL NO. 3 BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A TRACT OF LAND LYING IN SECTION 2, TOWNSHIP 28 SOUTH, RANGE 36 EAST, BEING A PORTION OF THE LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 3031, PAGE 1482 OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF ROGERS PLACE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 29, PAGE 11 OF SAID PUBLIC RECORDS; THENCE RUN NORTH 00°08'26" WEST, ALONG THE WEST RIGHT-OF-WAY LINE OF SOUTH JOHN RODES BOULEVARD, 50.86 FEET TO THE SOUTHEAST CORNER OF SAID LANDS AND THE POINT OF BEGINNING; THENCE DEPARTING SAID WEST RIGHT-OF-WAY LINE RUN SOUTH 89°34'01" WEST, ALONG THE SOUTH LINE OF SAID LANDS, 259.32 FEET TO THE SOUTHWEST CORNER THEREOF; THENCE RUN NORTH 00°10'01" WEST, ALONG THE WEST LINE OF SAID LANDS, 150.00 FEET TO THE NORTHWEST CORNER THEREOF; THENCE RUN NORTH 89°34'01" EAST, ALONG THE NORTH LINE OF SAID LANDS, 259.39 FEET TO THE NORTHEAST CORNER THEREOF, SAID POINT LIES ON THE AFORESAID WEST RIGHT-OF-WAY LINE; THENCE RUN SOUTH 00°08'26" EAST, ALONG SAID WEST RIGHT-OF-WAY LINE, 150.00 FEET TO THE POINT OF BEGINNING.

EXHIBIT "B"

TRAFFIC IMPACT STUDY BY LASSITER GROUP, INC.

EXHIBIT "C"

**ENGINEER'S OPINION OF COSTS FOR
NON-SITE RELATED IMPROVEMENTS**

**OASIS OF WEST MELBOURNE OFF SITE IMPROVEMENTS
ENGINEER'S COST ESTIMATE - CONNECTOR ROAD**

ITEM DESCRIPTION	UNIT	UNIT COST	QTY	SUBTOTAL
Mobilization	LS	\$15,000.00	1	\$15,000.00
Geotechnical Investigation	LS	\$5,000.00	1	\$5,000.00
Engineering	LS	\$27,000.00	1	\$27,000.00
Erosion and Sediment Control Incl. Monitoring	LS	\$20,000.00	1	\$20,000.00
Sawcut & Demo	LS	\$3,500.00	1	\$3,500.00
Relocate existing monument sign	LS	\$2,750.00	--	--
Rough Grade and Finish	LS	\$54,000.00	1	\$54,000.00
Maintenance of Traffic	LS	\$16,000.00	1	\$16,000.00
Construction Entrance	EA	\$4,500.00	2	\$9,000.00
2" Type S-111 Asphaltic Concrete	SY	\$16.00	4039	\$64,624.00
10" Limerock Base	SY	\$18.00	4039	\$72,702.00
12" Stabilized Base	SY	\$6.50	4039	\$26,253.50
Concrete Flume	EA	\$900.00	2	\$1,800.00
Type F Curb	LF	\$17.50	2989	\$52,307.50
Ribbon Curb	LF	\$14.50	41	\$594.50
Stem Wall and D Curb	LF	\$80.00	303	\$24,240.00
Handicap Ramp with Truncated Domes	EA	\$960.00	9	\$8,640.00
Raised Concrete Sidewalk	SF	\$5.50	8398	\$46,189.00
Import Fill	CY	\$16.50	6800	\$112,200.00
Clearing and Grubbing	AC	\$13,500.00	2	\$27,000.00
Type 4 Inlet	EA	\$5,700.00	9	\$51,300.00
Stormwater Manhole	EA	\$2,700.00	1	\$2,700.00
18" RCP	LF	\$49.00	71	\$3,479.00
24" RCP	LF	\$71.00	103	\$7,313.00
Sod & Final Grade Ditch Line	LS	\$14,500.00	1	\$14,500.00
Signage and Striping	LS	\$10,000.00	1	\$10,000.00
Staking	LS	\$7,500.00	1	\$7,500.00
Clean, Sweep, and Trash Removal	LS	\$6,500.00	1	\$6,500.00
Testing & Certified As-Built Survey	LS	\$20,000.00	1	\$20,000.00
Overhead	LS	\$64,500.00	1	\$64,500.00
TOTAL				\$ 773,842.50
CONTINGENCY - 3%				\$ 23,215.28
LAND VALUE				\$ 40,000.00
GRAND TOTAL				\$ 837,057.78

NOTES:

1. This estimate only includes improvements which are impact fee creditable: 1280 LF of new roadway (235 lf of extending Costal Lane, 1045 LF of connecting Costal Lane and John Rodes Blvd,) and associated drainage, striping, and new sidewalk along connector road only.
2. This estimate of conceptual cost was developed to determine a reasonable cost to construct the improvements as indicated on the Conceptual Intersection Improvement Plan.
3. Estimate shall not be used as a basis for bids or the preparation of bid documents.
4. Estimate does not include costs for replacement or repair of any miscellaneous items not indicated on the submitted plan.
5. Estimate assumes existing soils are adequate.

I affirm, by affixing my signature below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.

Name: Gil Ramirez, P.E.
 Signature: Gilberto A Ramirez
2018.11.05 12:23:54 -05'00'
 Date: November 5, 2018

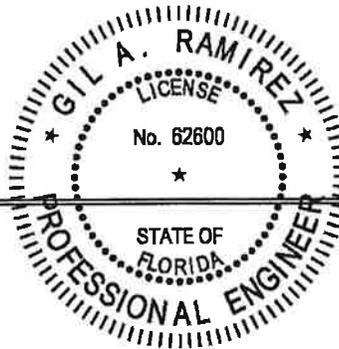


This item has been electronically signed and sealed by: Gil A. Ramirez, PE on 11/5/18 using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

EXH C p. 1 of 2

OASIS OF WEST MELBOURNE OFF SITE IMPROVEMENTS ENGINEER'S COST ESTIMATE - JOHN RODES TURN LANES				
ITEM DESCRIPTION	UNIT	UNIT COST	QTY	SUBTOTAL
Survey/Engineering	LS	\$3,000.00	1	\$3,000.00
Relocate existing monument sign	LS	\$2,750.00	1	\$2,750.00
Milling and Resurfacing	LS	\$15,000.00	1	\$15,000.00
Rough Grade and Finish	LS	\$4,000.00	1	\$4,000.00
Maintenance of Traffic	LS	\$14,500.00	1	\$14,500.00
2" Type 5-111 Asphaltic Concrete	SY	\$16.00	461	\$7,376.00
10" Limerock Base	SY	\$18.00	461	\$8,298.00
12" Stabilized Base	SY	\$6.50	461	\$2,996.50
Signage and Striping	LS	\$6,500.00	1	\$6,500.00
TOTAL				\$ 64,420.50
CONTINGENCY - 3%				\$ 1,932.62
GRAND TOTAL				\$ 66,353.12
NOTES:				
1. This estimate only includes improvements which are impact fee creditable: additional pavement for widening for the installation of a left turn bay and the installation of a 260 LF right turn lane, including the associated milling & resurfacing and striping.				
2. This estimate of conceptual cost was developed to determine a reasonable cost to construct the improvements as indicated on the Conceptual Roadway Plan.				
3. Estimate shall not be used as a basis for bids or the preparation of bid documents.				
4. Estimate does not include costs for replacement or repair of any miscellaneous items not indicated on the submitted plan.				
5. Estimate assumes existing soils are adequate.				
I affirm, by affixing my signature below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.				
Name:	<u>Gil Ramirez, P.E.</u>			
Signature:	Gilberto A Ramirez			
	2018.11.05 12:24:37 -05'00'			
Date:	<u>November 5, 2018</u>			

This item has been electronically signed and sealed by: Gil A. Ramirez, PE on 11/5/18 using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



FXH C/2018

**Oasis of West Melbourne
West Melbourne, Florida**

Traffic Impact Study

**Prepared for: Picerne Real Estate Group
By: LTG, Inc.
REVISED – September 2018**



LTG

*Engineering
& Planning*

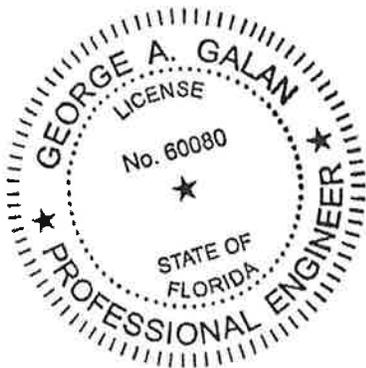
PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with LTG, Inc., a corporation authorized to operate as an engineering business, EB 0009227, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: Oasis of West Melbourne – Traffic Impact Analysis
LOCATION: West Melbourne, Florida
CLIENT: Picerne Real Estate Group
JOB #: 4397.03

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.

Prepared by:
LTG, Inc.
1450 W. Granada Blvd, Suite 2
Ormond Beach, FL 32174
Certificate of Authorization 9227
386/257-2571



*THIS ITEM HAS BEEN DIGITALLY
SIGNED AND SEALED BY:*

George Digitally signed by
A Galan George A Galan
Date: 2018.09.04
13:59:58 -04'00'

ON THE DATE ADJACENT TO THE SEAL

*PRINTED COPIES OF THIS DOCUMENT ARE
NOT CONSIDERED SIGNED AND SEALED AND
THE SIGNATURE MUST BE VERIFIED ON ANY
ELECTRONIC COPIES.*

*1450 W. GRANADA BLVD, SUITE 2
ORMOND BEACH, FL 32174
CERTIFICATE OF AUTHORIZATION 9227
GEORGE A. GALAN, P.E. NO. 60080*

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Appendix O-	Future Land Use and Zoning Memorandum

1

INTRODUCTION

LTG, Inc. (LTG) has been retained by Picerne Real Estate Group to prepare a Traffic Impact Study (TIS) for the proposed Oasis of West Melbourne in the City of West Melbourne, Florida. The development consists of a 316-unit apartment complex on 21.75 acres of land. The proposed development is located on John Rodes Boulevard just north of US 192. Figure 1 shows the location of the project relative to the surrounding roadway network. The anticipated build-out year is 2019. A preliminary site plan showing the layout of the site is attached as Appendix A. The approved methodology identifying the study parameters is attached in Appendix B.

Study Area

The study area includes the intersections and roadway segments listed below:

Intersections

1. John Rodes Boulevard at US 192
2. John Rodes Boulevard at Sheridan Road
3. John Rodes Boulevard at Project Frontage Road (build-out only)
4. John Rodes Boulevard at Ellis Road
5. US 192 at SB I-95 Ramp
6. US 192 at NB I-95 Ramp
7. US 192 at Coastal Lane
8. Coastal Lane at Project Frontage Road (build-out only)

Roadway Segments

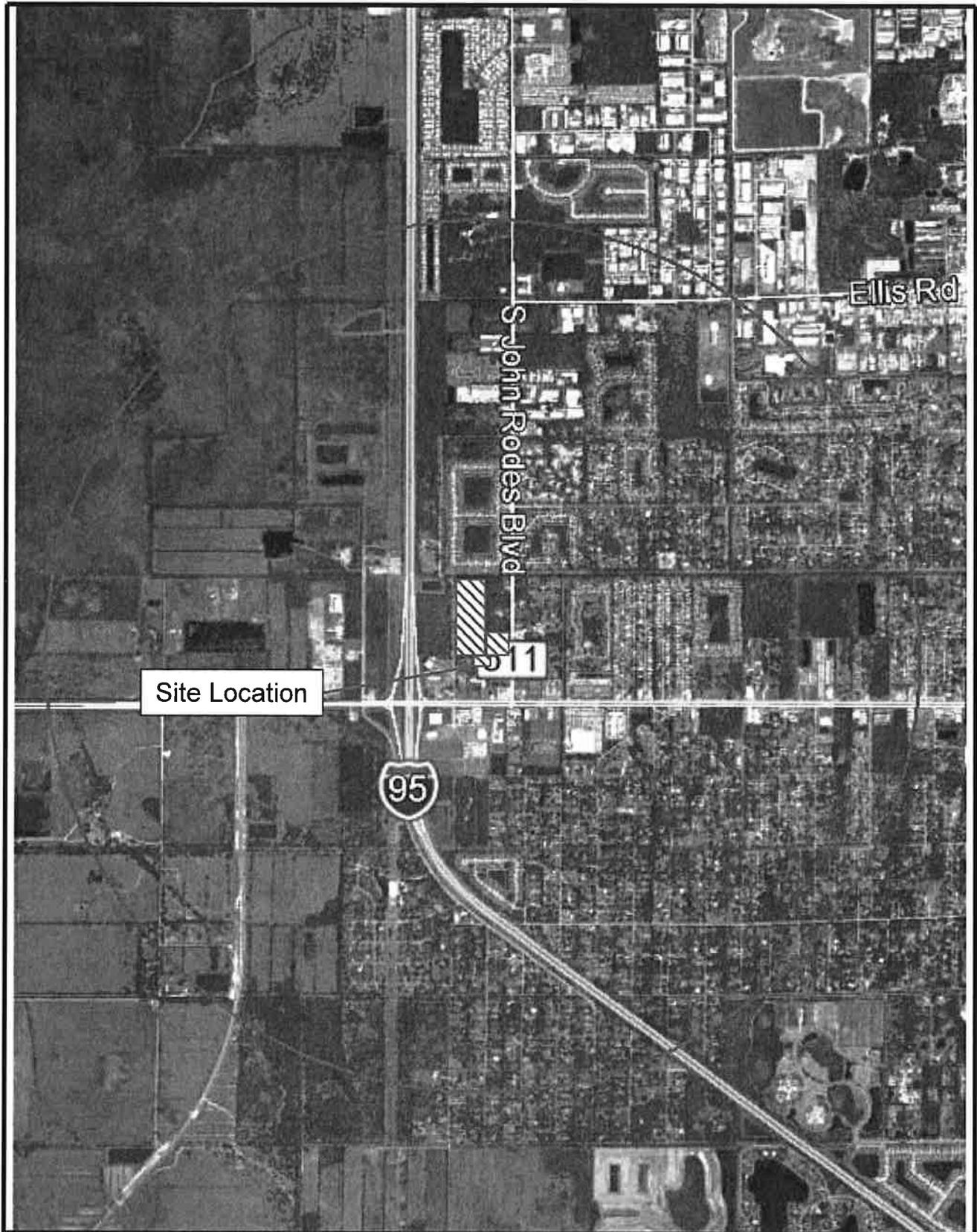
- US 192 from I-95 to John Rodes Boulevard
- John Rodes Boulevard from US 192 to Sheridan Road
- John Rodes Boulevard from Sheridan Road to Ellis Road

Study Procedures

Standard engineering and planning procedures were used to determine the impacts of the proposed project. Reference data were obtained from the Space Coast Transportation Planning Organization (Space Coast TPO), Brevard County, the City of Palm Bay, the Institute of Transportation Engineers (ITE), and the Florida Department of Transportation (FDOT).

Planned Roadway Improvements

FDOT's Five Year Work Program, Space Coast TPO, Brevard County, and the City of West Melbourne were consulted to ascertain if there were any programmed or planned roadway improvements within the study area. Based on information available, there are no programmed or planned roadway improvements within the study area.



Oasis of West
Melbourne



NTS

Site Location Map

Project No.: 4397.03

Figure: 1



LTG *Engineering
& Planning*

1970 Dairy Road, W. Melbourne, FL 32904
Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

2

EXISTING ROADWAY ANALYSIS

Weekday AM and PM peak-hour turning movement counts (TMCs) were conducted at each of the study area intersections on October 18 and October 19, 2017, and April 26, 2018. FDOT's peak season factors for Brevard County and the intersection's associated **peak-hour factors** were applied to the raw traffic counts. Figures 2a and 2b graphically depict the factored existing AM and PM peak-hour turning movements at the study area intersections. The factored turning movement counts and the raw TMC summaries are provided in Appendix C.

Signalized Intersection Analysis

The LOS at a signalized intersection is based on the average control delay per vehicle for the various movements within the intersection. The operating conditions at the signalized intersection was evaluated using the Brevard County Agencies' signal timings and *Highway Capacity Software 7, Version 7.5 (HCS)*. This software utilizes the procedures outlined in Chapter 19 of the *Highway Capacity Manual, 6th Edition*, titled "Signalized Intersections".

Table 1 shows the existing AM and PM peak-hour LOS at the signalized intersections. The HCS summary sheets are located in Appendix D and the signal timing sheets are located in Appendix E. As indicated in Table 1, the signalized intersections currently operate within the adopted LOS and with a v/c ratio less than 1.0 with the exception of John Rodes Boulevard at US 192.

Table 1
Existing AM and PM Peak-Hour LOS – Signalized Intersections
Oasis of West Melbourne

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
1. John Rodes Blvd at US 192	D	54.0	D	Yes	82.9	F	Yes
2. John Rodes Blvd at Sheridan Rd	D	39.2	D	No	9.6	A	No
4. John Rodes Blvd at Ellis Rd	D	30.5	C	No	13.5	B	No
5. US 192 at SB I-95 Ramp	D	30.9	C	No	30.2	C	No
6. US 192 at NB I-95 Ramp	D	28.3	C	No	14.1	B	No
7. US 192 at Coastal Ln	D	8.0	A	No	14.9	B	No

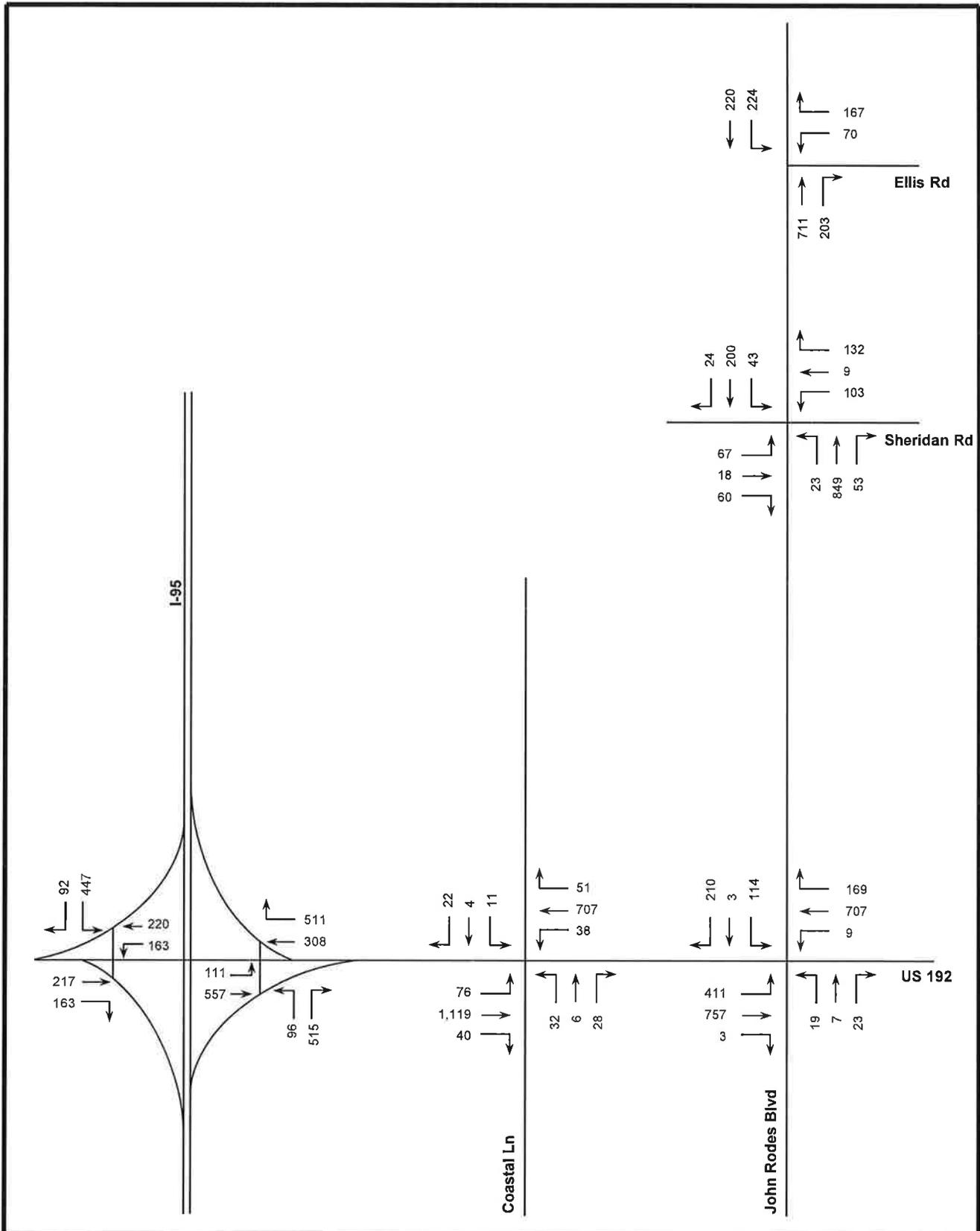
Recommended Intersection Improvements for Existing Conditions

Under existing conditions, the following improvement is recommended in order to achieve acceptable LOS and v/c ratios less than 1.0:

1. John Rodes Boulevard at US 192:
 - Optimize the signal timing splits

The LOS and/or v/c ratios will be exceeded due to background conditions without the addition of project trips; therefore, in accordance with Florida Statute 163.3180, the project is not responsible for mitigating the deficiencies.

Table 2 depicts the PM peak-hour LOS under the background conditions with the proposed intersection improvement. With the proposed improvement, the signalized intersection of John Rodes Boulevard at US 192 is expected to operate with an acceptable LOS and with v/c ratios less than 1.0. The HCS summary sheet is located in Appendix F.



Oasis of West Melbourne



NTS

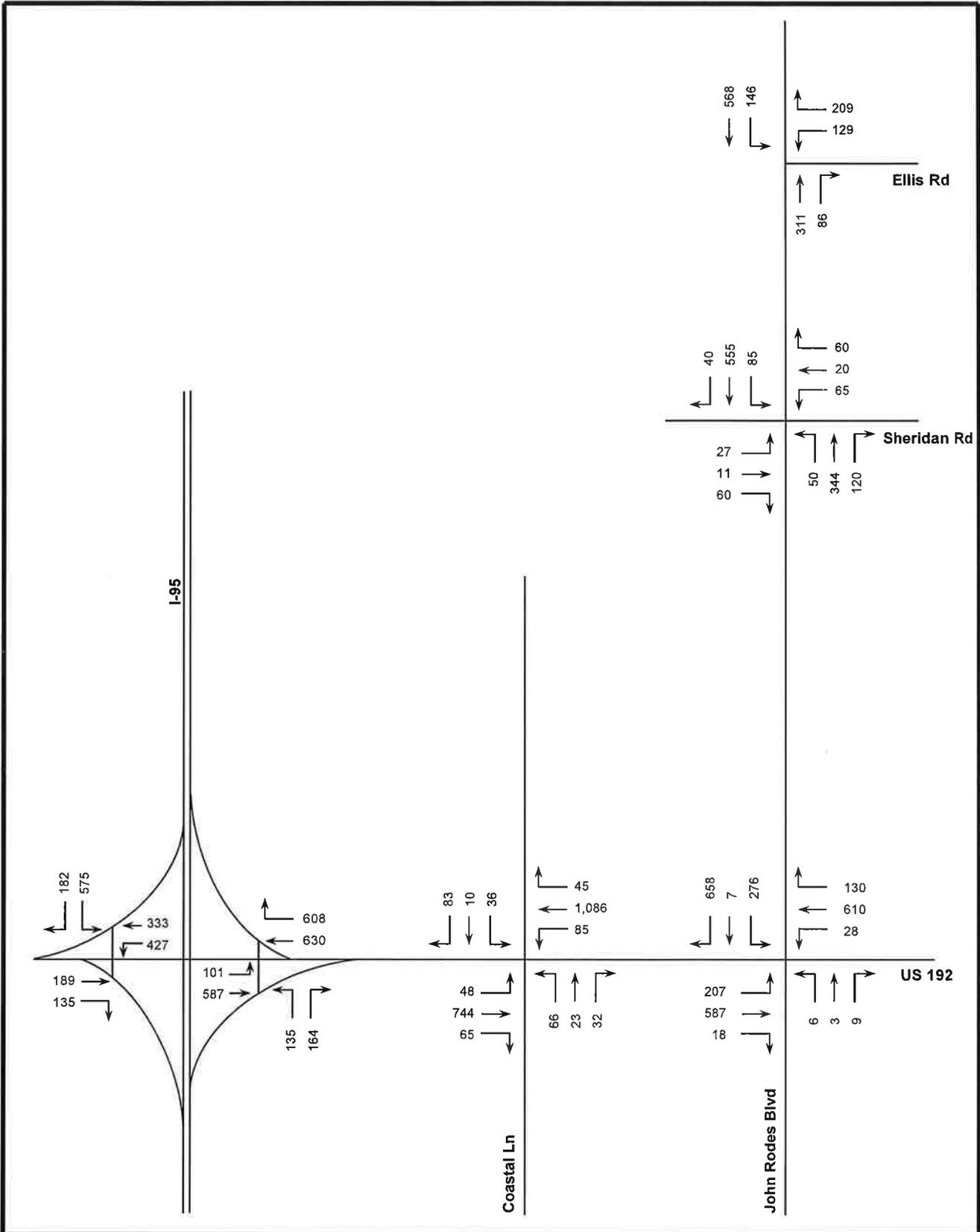
Existing AM Peak-Hour Factored Volumes

Project No.: 4397.03

Figure: 2a



1970 Dairy Road, W. Melbourne, FL 32904
 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227



Oasis of West Melbourne



NTS

Existing PM Peak-Hour Factored Volumes

Project No.: 4397.03

Figure: 2b



1970 Dairy Road, W. Melbourne, FL 32904
 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

Table 2
Existing PM Peak-Hour LOS - Signalized Intersection Improved
Oasis of West Melbourne

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
1. John Rodes Blvd at US 192	D	33.4	C	No	46.0	D	No

Roadway Segment Analysis

Roadway level of service describes the operating condition determined from the number of vehicles passing over a given section of roadway during a specified time period. It is a qualitative measure of several factors which include: speed, travel time, traffic interruptions, freedom to maneuver, driver comfort, convenience, safety and vehicle operating costs. Six levels of service have been established as standards by which to gauge roadway performance, designated by the letters A through F. The level of service categories are defined as follows:

- Level of Service A:* Free flow, individual users virtually unaffected by the presence of others
- Level of Service B:* Stable flow with a high degree of freedom to select operating conditions
- Level of Service C:* Flow remains stable, but with significant interactions with others
- Level of Service D:* High-density stable flow in which the freedom to maneuver is severely restricted
- Level of Service E:* This condition represents the capacity level of the road
- Level of Service F:* Forced flow in which the traffic exceeds the amount that can be served

The 2016 AADT for the study roadway segments were obtained from Space Coast TPO Transportation Data Management System. The existing PM peak-hour two-way LOS for the study area roadway segments are shown in Table 3. As indicated in Table 3, all study roadway segments currently operate within the adopted level of service. Figure 3 graphically depicts the roadway lane configuration of the roadway network.

Table 3
Existing PM Peak-Hour Two-Way LOS - Roadway Segments
Oasis of West Melbourne

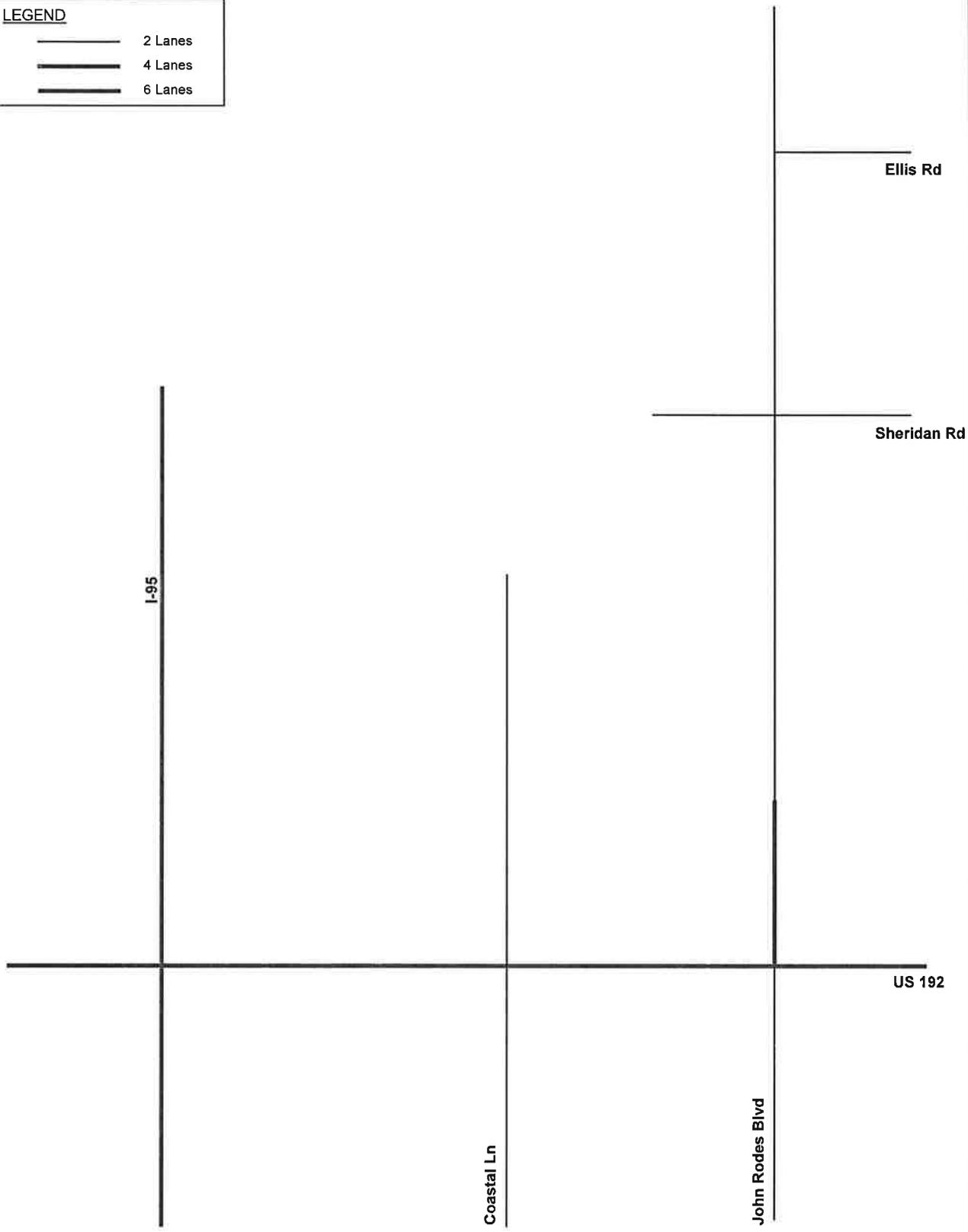
Roadway	Segment		No. of Lanes	Adopted LOS	Current MAV	Current MAV Peak-Hour Two-Way ¹	2016 AADT	Existing PM Peak-Hour Two-Way Volume ¹	Existing LOS
US 192	I-95	John Rodes Blvd	4	D	39,800	3,580	30,180	2,716	C
John Rodes Blvd	US 192	Sheridan Rd	2	D	17,700	1,600	11,520	1,037	C
John Rodes Blvd*	Sheridan Rd	Ellis Rd	2	D	17,700	1,600	10,990	989	C

*Most recent AADT data available is for the year 2015

¹Determined using a K-factor of 0.09

LEGEND

-  2 Lanes
-  4 Lanes
-  6 Lanes



**Oasis of West
Melbourne**



NTS

**Roadway Lane
Configuration**

Project No.: 4397.03

Figure: 3



1970 Dairy Road, W. Melbourne, FL 32904
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3

BACKGROUND ROADWAY ANALYSIS

The critical intersections and roadway segments were analyzed to determine potential impacts based on the mitigation of existing conditions. The following documents the procedures used to determine the background traffic in 2019.

Background Traffic Growth Rates

Historical growth rates were used to determine the background traffic. FDOT *Traffic Trends* software was used to calculate historical growth rates using the past five years of data obtained from the Space Coast Transportation Planning Organization (see Appendix G). The historical and applied growth rates are identified in Table 4.

Table 4
Historical Growth Rates
Oasis of West Melbourne

Roadway	Segment		Average Annual Growth Rate	Applied Growth Rate
US 192	I-95	John Rodes Blvd	5.02%	5.02%
John Rodes Blvd	US 192	Sheridan Rd	1.62%	2.00%
John Rodes Blvd	Sheridan Rd	Ellis Rd	0.26%	2.00%

Vested Traffic Trips from Adjacent Land Developments

The adjacent land developments were reviewed to ascertain if there were any programmed or planned land developments within the study area. Based on information available, the Coastal Commerce development is still under development and will be either constructed or under construction in 2019. The number of project trips associated with the remainder of the Coastal Commerce development was developed by comparing the existing, built portion of the development with the total planned development. This remaining portion of the development project trips will be included as vested trips for background conditions. The US 192 Coastal Commerce Technical Memorandum from June 11, 2009 was used as the basis for the vested trip development and is contained in Appendix H and the remaining trip bank calculations are contained in Appendix I.

Background Signalized Intersection Analysis

The signalized intersection was analyzed to determine the operational LOS under background conditions during the AM and PM peak-hours in 2019. As indicated in Table 5, all signalized intersections are expected to operate at an acceptable LOS with the exception of John Rodes Boulevard at Sheridan Road, John Rodes Boulevard at Ellis Road, and US 192 at Coastal Lane. The expected v/c ratio will be greater than 1 for the PM peak-hour. The HCS summary sheets are located in Appendix J.

**Table 5
Background AM and PM Peak-Hour LOS – Signalized Intersections
Oasis of West Melbourne**

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
1. John Rodes Blvd at US 192	D	33.8	C	No	50.2	D	No
2. John Rodes Blvd at Sheridan Rd	D	50.1	D	Yes	9.7	A	No
4. John Rodes Blvd at Ellis Rd	D	42.1	D	Yes	14.3	B	No
5. US 192 at SB I-95 Ramp	D	30.9	C	No	29.8	C	No
6. US 192 at NB I-95 Ramp	D	28.5	C	No	14.6	B	No
7. US 192 at Coastal Ln	D	8.2	A	No	37.6	D	Yes

Recommended Intersection Improvements for Background Conditions

Under background conditions, the following improvement is recommended in order for all study area intersections to achieve acceptable levels of service and v/c ratios less than 1.0:

2. John Rodes Boulevard at Sheridan Road:
 - Optimize the signal timing splits in the AM peak-hour
4. John Rodes Boulevard at Ellis Road:
 - Optimize the signal timing splits in the AM peak-hour
7. US 192 at Coastal Lane:
 - Optimize the signal timing splits in the PM peak-hour

The LOS and/or v/c ratios will be exceeded due to background conditions without the addition of project trips; therefore, in accordance with Florida Statute 163.3180, the project is not responsible for mitigating the deficiencies.

Table 6 depicts the PM peak-hour LOS under the background conditions with the proposed intersection improvements. With the proposed improvements, all signalized intersections are expected to operate with an acceptable LOS and with v/c ratios less than 1.0. The HCS summary sheet is located in Appendix K.

Table 6
Background PM Peak-Hour LOS - Signalized Intersection Improved
Oasis of West Melbourne

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
2. John Rodes Blvd at Sheridan Rd	D	15.4	B	No	-	-	-
4. John Rodes Blvd at Ellis Rd	D	26.1	C	No	-	-	-
7. US 192 at Coastal Ln	D	-	-	-	23.2	C	No

Roadway Segment Analysis

The background PM peak-hour two-way LOS for the study area road segments are shown in Table 7. As indicated in Table 7, the study roadway segments are expected to operate with an acceptable level of service under 2019 background conditions.

Table 7
Background PM Peak-Hour Two-Way LOS - Roadway Segments
Oasis of West Melbourne

Roadway	Segment		No. of Lanes	Adopted LOS	Current MAV	Current MAV Peak-Hour Two-Way ¹	Existing PM Peak-Hour Two-Way Volume ¹	2019 Growth Factor	Vested Trips	2019 Background Traffic	2019 Background Projected LOS
US 192	I-95	John Rodes Blvd	4	D	39,800	3,580	2,716	1.15	233	3,358	C
John Rodes Blvd	US 192	Sheridan Rd	2	D	17,700	1,600	1,037	1.06	32	1,131	C
John Rodes Blvd*	Sheridan Rd	Ellis Rd	2	D	17,700	1,600	989	1.08	32	1,100	C

*Most recent AADT data available is for the year 2015

¹Determined using a K-factor of 0.09

4

BUILD-OUT ROADWAY ANALYSIS

The study intersections and road segments were analyzed based on the build-out roadway conditions in 2019 to determine potential impacts and to investigate mitigation requirements.

Trip Generation

The trip generation for this development was determined using the trip generation rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 9th Edition*. The total daily, AM and PM peak-hour trip generation is presented Table 8.

Table 8
2019 Trip Generation
Oasis of West Melbourne

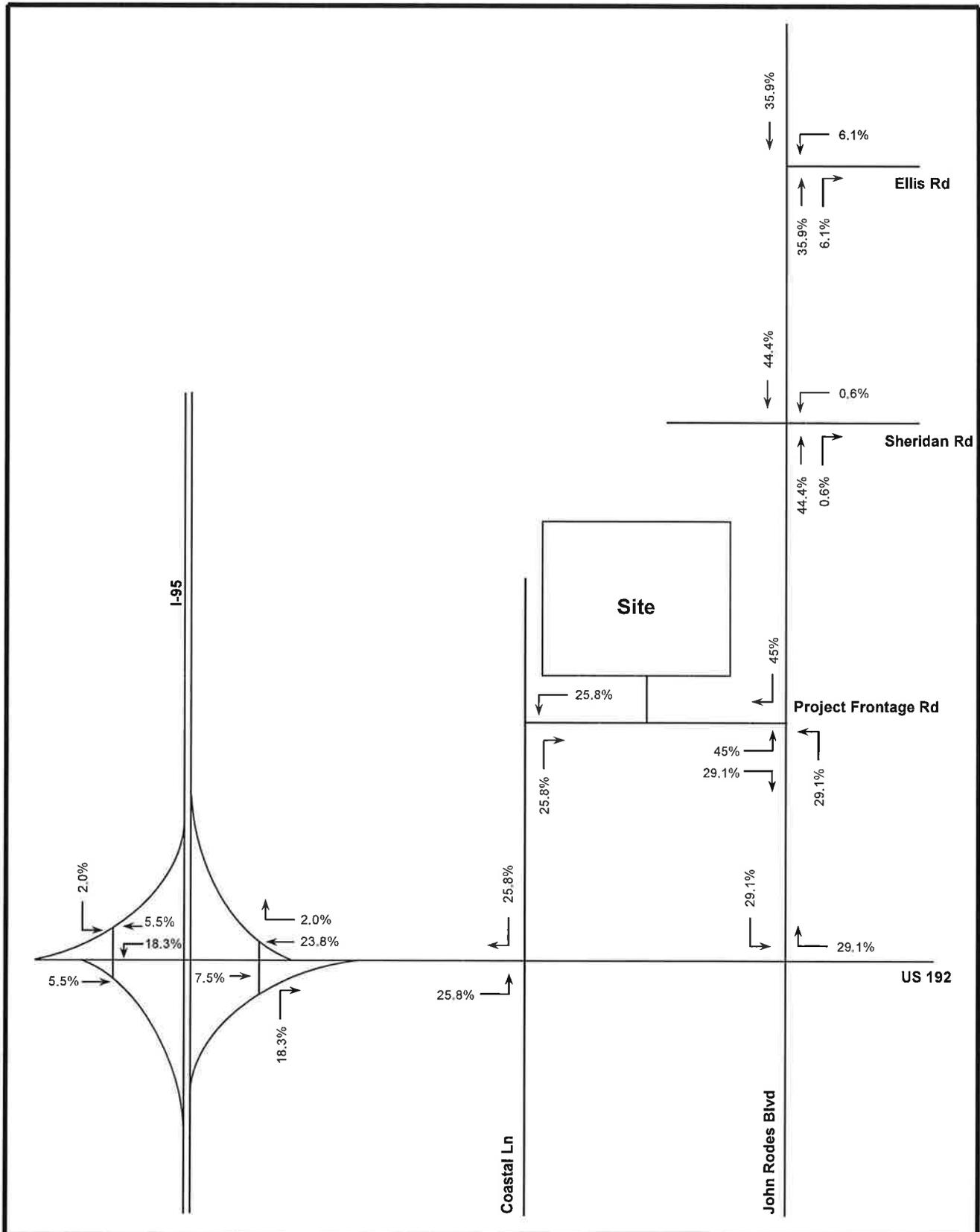
Time Period	Land Use	Land Use Code	Trip Rate Equation	Size	Units	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting	Total Trips
Daily	Apartment	220	$T=6.06(X)+123.56$	316	DU	50%	50%	1,019	1,019	2,039
AM Peak-Hour	Apartment	220	$T=0.49(X)+3.73$	316	DU	20%	80%	32	127	159
PM Peak-Hour	Apartment	220	$T=0.55(X)+17.65$	316	DU	65%	35%	124	67	191

Trip Distribution

The process of determining the directional flow of traffic associated with a new development is called trip distribution. The Central Florida Regional Planning Model (CFRPM) Version 6.1, was used to determine the trip distribution for this project. The trip distribution is graphically illustrated in Figure 4. The 2019 model year distribution is contained in Appendix L.

Trip Assignment

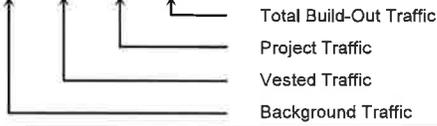
The final step in the analysis was to assign the project traffic to the roadway network. Figures 5a and 5b graphically depict build-out AM and PM peak-hour project trip assignment for the proposed development.



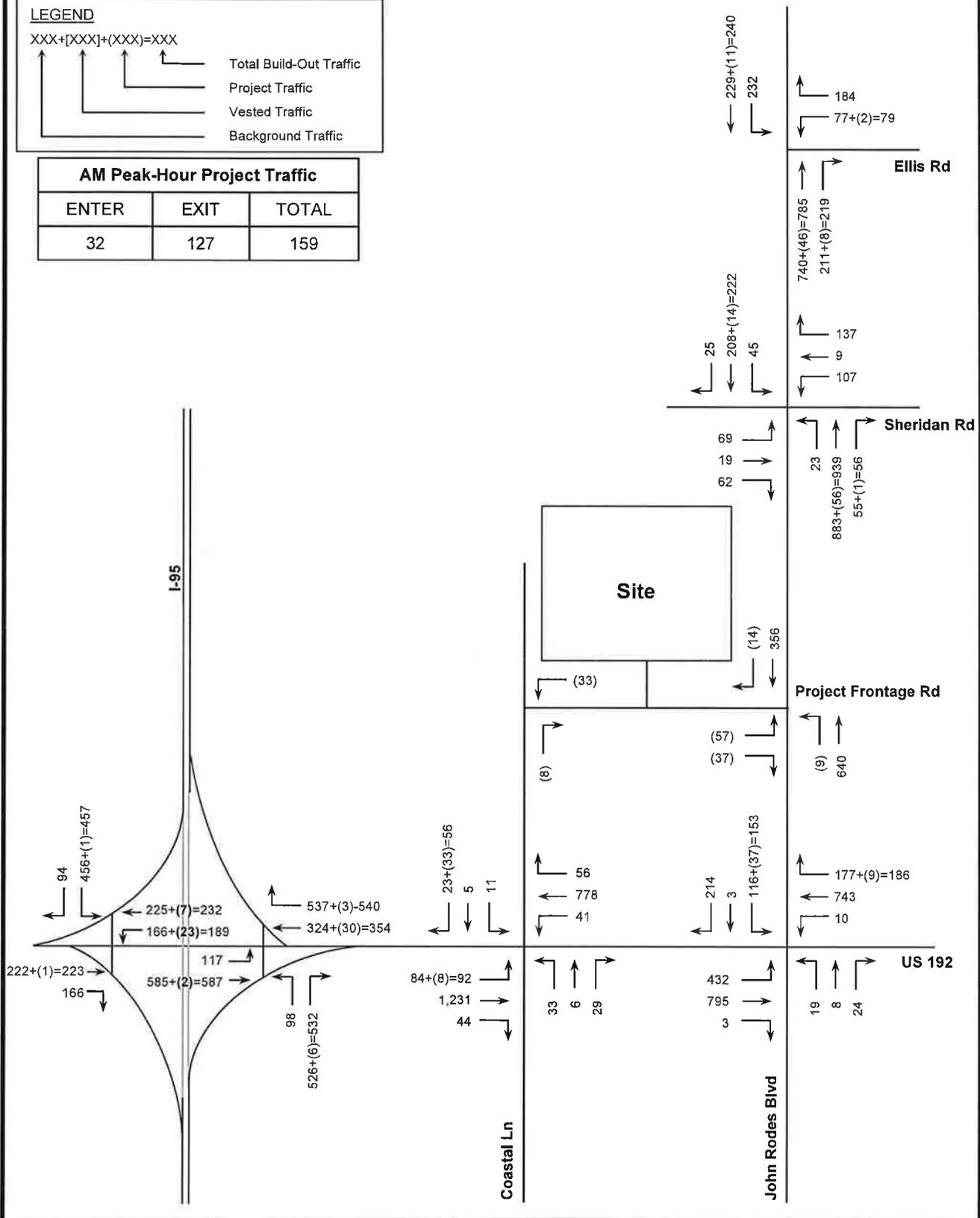
Oasis of West Melbourne	 NTS	Trip Distribution		
		Project No.: 4397.03	Figure: 4	

LEGEND

XXX+[XXX]+(XXX)=XXX



AM Peak-Hour Project Traffic		
ENTER	EXIT	TOTAL
32	127	159



Oasis of West Melbourne



NTS

Build-Out Traffic – AM Peak Hour

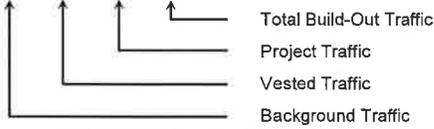
Project No.: 4397.03 Figure: 5a



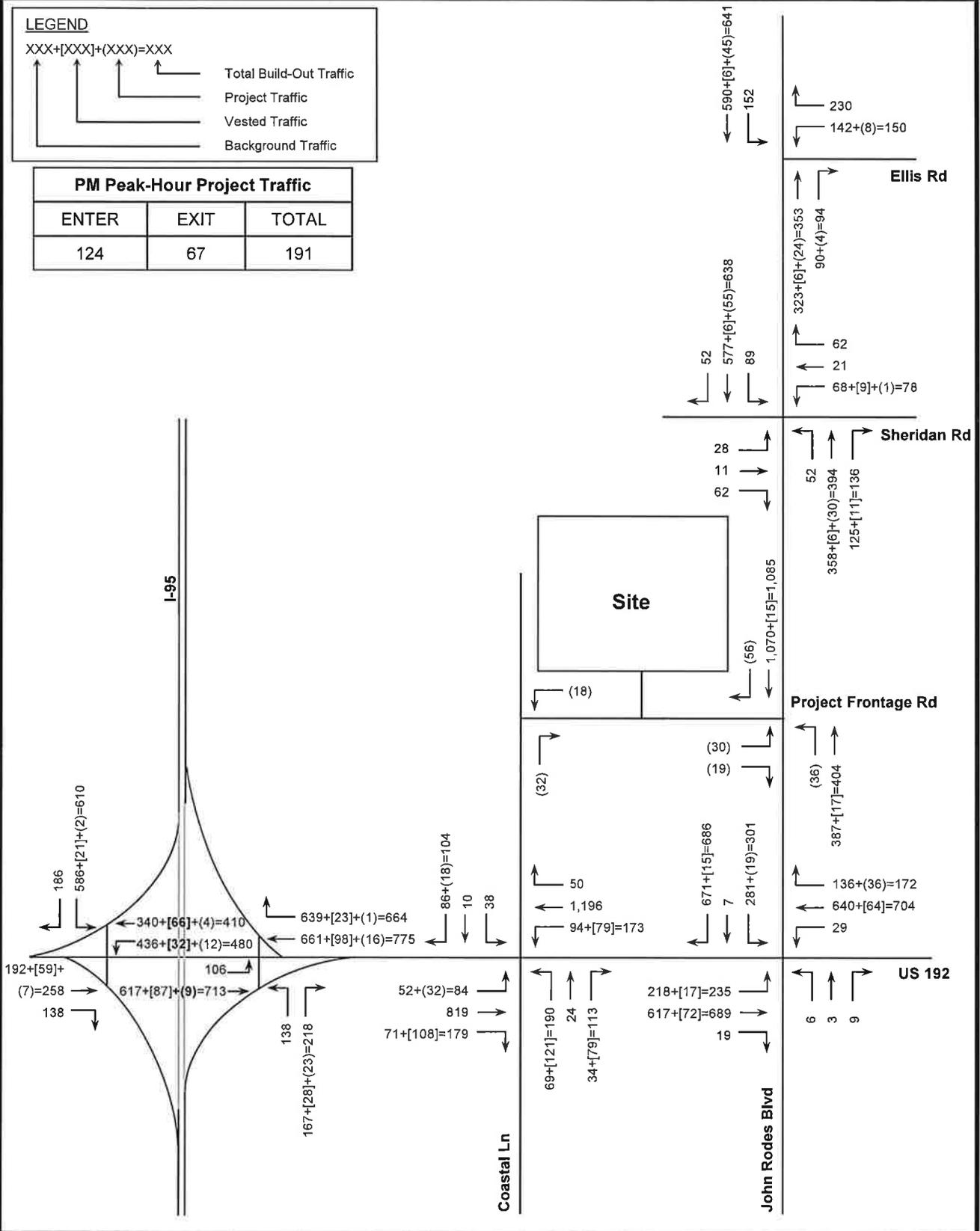
1970 Dairy Road, W. Melbourne, FL 32904
Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

LEGEND

XXX+[XXX]+(XXX)=XXX



PM Peak-Hour Project Traffic		
ENTER	EXIT	TOTAL
124	67	191



Oasis of West Melbourne



NTS

Build-Out Traffic – PM Peak Hour

Project No.: 4397.03 Figure: 5b



1970 Dairy Road, W. Melbourne, FL 32904
 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

2019 Build-Out Unsignalized Intersection Analysis

The operating conditions at the unsignalized study area intersection was analyzed to determine the operational LOS under build-out conditions using the *Highway Capacity Software 7, Version 7.5 (HCS)*. This software utilizes the procedures outlined in Chapter 20 of the *Highway Capacity Manual, Sixth Edition*, titled "Two-Way Stop-Controlled Intersections". Table 9 shows the projected LOS for the unsignalized intersection at build-out during the AM and PM peak-hours. The HCS summary sheet is contained in Appendix M. As indicated in the table, the unsignalized intersection is anticipated to operate with an acceptable LOS in 2019.

**Table 9
Build-Out AM and PM Peak-Hour LOS – Unsignalized Intersection
Oasis of West Melbourne**

Intersection	Adopted LOS	Build-Out Conditions					
		AM Peak-Hour			PM Peak-Hour		
		Critical Approach	Delay	LOS	Critical Approach	Delay	LOS
3. John Rodes Blvd at Project Frontage Rd	D	EB	14.7	B	EB	23.1	C
8. Coastal Ln at Project Frontage Rd	D	WB	9.0	A	WB	9.0	A

2019 Build-Out Signalized Intersection Analysis

The signalized intersection was analyzed to determine the operational LOS at the time of build-out in 2019, including all improvements recommended in existing and background conditions and the results are presented in Table 10. The HCS summary sheets are contained in Appendix M. As indicated in the table, all signalized intersections are anticipated to operate with an acceptable LOS and with v/c ratio less than 1.0 under 2019 build-out conditions.

**Table 10
Build-Out AM and PM Peak-Hour LOS – Signalized Intersection
Oasis of West Melbourne**

Intersection	Adopted LOS	AM Peak-Hour			PM Peak-Hour		
		Delay (sec.)	LOS	V/C greater than 1.0?	Delay (sec.)	LOS	V/C greater than 1.0?
1. John Rodes Blvd at US 192	D	35.0	D	No	51.4	D	No
2. John Rodes Blvd at Sheridan Rd	D	17.3	B	No	10.2	B	No
4. John Rodes Blvd at Ellis Rd	D	32.6	C	No	14.5	B	No
5. US 192 at SB I-95 Ramp	D	30.5	C	No	29.8	C	No
6. US 192 at NB I-95 Ramp	D	28.5	C	No	15.4	B	No
7. US 192 at Coastal Ln	D	10.1	B	No	24.3	C	No

Roadway Segment Analysis

As indicated in Table 11, the study roadway segments are expected to operate with an acceptable LOS under build-out conditions during the PM peak-hour.

**Table 11
Build-Out PM Peak-Hour Two-Way LOS - Roadway Segments
Oasis of West Melbourne**

Roadway	Segment		No. of Lanes	Adopted LOS	Current MAV	Current MAV Peak-Hour Two-Way¹	Existing PM Peak-Hour Two-Way Volume¹	2019 Background Traffic	Project Distribution	Project Trips	2019 Build-Out Traffic	2019 Build-Out Projected LOS
US 192	I-95	John Rodes Blvd	4	D	39,800	3,580	2,716	3,358	25.8%	49	3,407	C
John Rodes Blvd	US 192	Project Frontage Rd	2	D	17,700	1,600	1,037	1,131	29.1%	56	1,187	C
John Rodes Blvd	Project Frontage Rd	Sheridan Rd	2	D	17,700	1,600	1,037	1,131	45.0%	86	1,217	C
John Rodes Blvd*	Sheridan Rd	Ellis Rd	2	D	17,700	1,600	989	1,100	44.4%	85	1,185	C

^{*}Most recent AADT data available is for the year 2015

¹Determined using a K-factor of 0.09

Access Review

Site access is proposed via one full access frontage roadway (Project Frontage Drive) that connects to John Rodes Boulevard to the east and Coastal Lane to the west. Along this access frontage roadway will be the main entrance full access driveway connecting to the project site where all project traffic will enter and exit. The requirement for a northbound left-turn lane and a southbound right-turn lane at the intersection of the project frontage roadway with John Rodes Boulevard was evaluated using NCHRP Report 457, and FDOT Designed Standard Index 301. NCHRP summary sheets are included as Appendix N. The results of the turn lane evaluation are provided below:

John Rodes Boulevard at Project Frontage Drive:

The recommended geometry of the ingress and egress at the intersections will consist of:

- Northbound: Add an exclusive northbound left-turn lane of 265 feet minimum at the intersection
- Southbound: Add an exclusive southbound right-turn lane of 240 feet minimum at the intersection

As mentioned, an exclusive northbound left-turn lane is warranted under build-out condition due to NCHRP Report 457. FDOT Design Standard Index No. 301 recommends a minimum length of 240 feet for a 50-mph design speed (posted speed limit of 45 mph). A minimum queue length of 25 feet is recommended for the northbound left-turn lane, resulting in a recommended total length of 265 feet.

5

CONCLUSIONS

This study was conducted to evaluate the impact of the proposed Oasis of West Melbourne. The development will consist of a 316-unit apartment complex that will generate 159 project trips in the AM peak-hour and 191 project trips in the PM peak-hour. The results of the study are summarized below:

Existing Conditions

- All signalized intersections operate within the adopted level of service with the exception of John Rodes Boulevard at US. The following improvement is recommended:
 1. John Rodes Boulevard at US 192:
 - Optimize the signal timing splits

Note: The LOS and/or v/c ratios will be exceeded due to background conditions without the addition of project trips; therefore, in accordance with Florida Statute 163.3180, the project is not responsible for mitigating this deficiency.

- All study area roadway segments operate within the adopted level of service.

Background Conditions

- All signalized intersections are expected to operate with an acceptable LOS with the exception of John Rodes Boulevard at Sheridan Road, John Rodes Boulevard at Elliz Road, and US 192 at Coastal Lane. The following improvements are recommended:
 2. John Rodes Boulevard at Sheridan Road:
 - Optimize the signal timing splits in the AM peak-hour
 4. John Rodes Boulevard at Elliz Road:
 - Optimize the signal timing splits in the AM peak-hour
 7. US 192 at Coastal Lane:
 - Optimize the signal timing splits in the PM peak-hour

Note: The LOS and/or v/c ratios will be exceeded due to background conditions without the addition of project trips; therefore, in accordance with Florida Statute 163.3180, the project is not responsible for mitigating this deficiency.

- All study area roadway segments are expected to operate with an acceptable LOS.

Build-Out Conditions

- The unsignalized intersection is anticipated to operate with an acceptable LOS.
- All signalized intersections are anticipated to operate with an acceptable LOS with the improvements proposed in existing and background conditions.
- All study roadway segments are expected to operate with an acceptable LOS.

Access

The recommended geometry of the ingress and egress at the project driveway intersections will consist of:

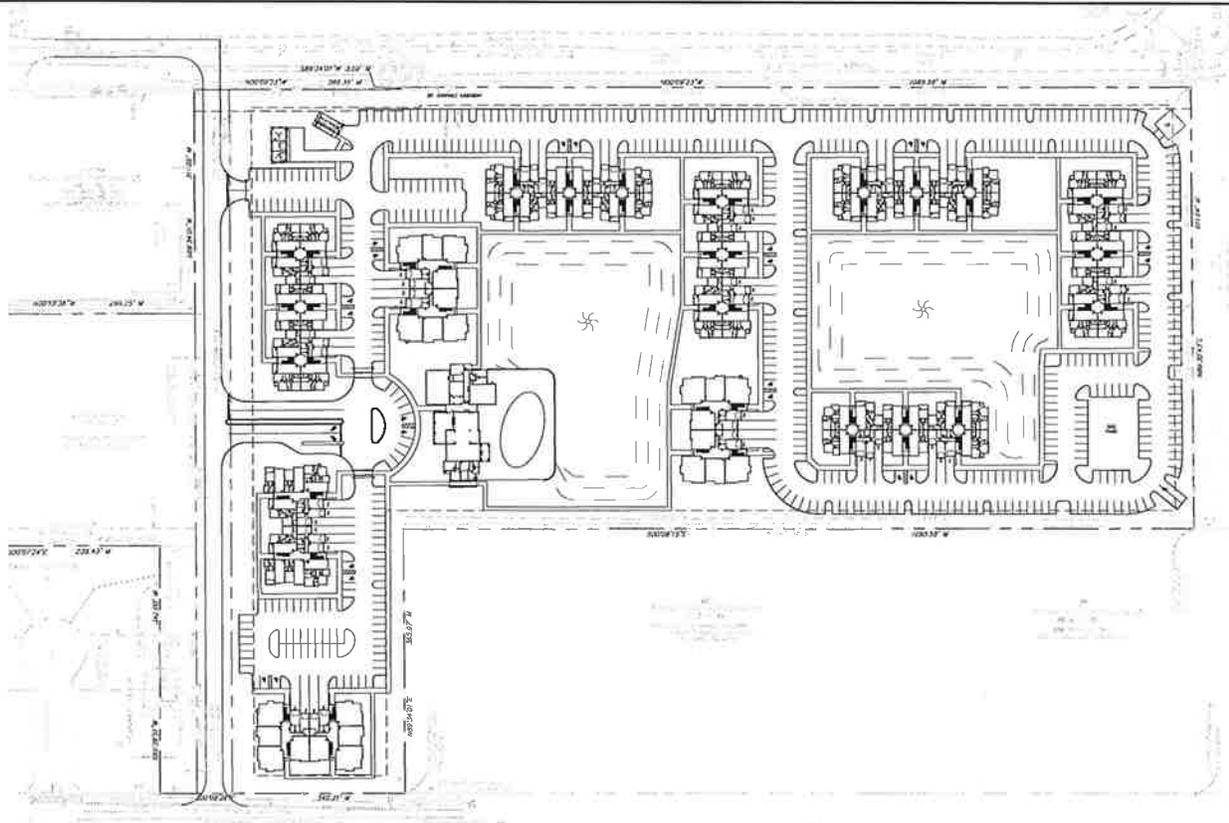
- Northbound: Add an exclusive northbound left-turn lane of 265 feet minimum at the intersection
- Southbound: Add an exclusive southbound right-turn lane of 240 feet minimum at the intersection

Based on the results of this study and the recommendations provided above, the Oasis of West Melbourne project is recommended for approval.

APPENDICES

APPENDIX A

SITE PLAN



OASIS OF WEST MELBOURNE

PARKING CALCULATIONS:

150,000 sq. ft.	1.2 SPACES PER UNIT = 532 PARKING SPACES
1.2 SPACES PER UNIT = 532 PARKING SPACES	INCLUDING 78 HANDICAP PARKING SPACES
250,000 sq. ft.	1.2 SPACES PER UNIT = 832 PARKING SPACES
832 PARKING SPACES INCLUDING 78 HANDICAP PARKING SPACES	



APPENDIX B

METHODOLOGY



Via Email: (cfischer@westmelbourne.org)

Ref: 4397.01

October 2, 2017

Christy Fischer
 Planning and Economic Development Director
 City of West Melbourne
 2240 Minton Road
 West Melbourne, FL 32904

RE: Picerne Real Estate Group – Oasis of West Melbourne - Traffic Impact Study (TIS) Methodology
 W. Melbourne, Florida

Dear Ms. Fischer:

LTG, Inc. (LTG) has been retained by Picerne Real Estate Group to prepare a Traffic Impact Study for the proposed Oasis of West Melbourne residential development. The proposed Oasis of West Melbourne development consists of a 316-unit apartment complex. The proposed development is located on John Rodes Boulevard just north of US 192 in the City of West Melbourne, Florida. The proposed build-out year is 2019. Figure 1 shows the location and influence area of the project relative to the surrounding road network. A concept plan showing the layout of the site is attached as Appendix A.

Trip Generation

The daily, a.m. and p.m. peak-hour trip generation for the build-out of the development was determined using the Institute of Transportation Engineers (ITE) 9th edition of the *Trip Generation Manual*. The trip generation for the development is summarized in Table 1.

**Table 1
 Trip Generation
 Oasis of West Melbourne**

Time Period	Land Use	ITE Land Use Code	Trip Rate Equation	Units (X) DUs	Total Trips	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting
Daily	Apartment	220	$T = 6.06(X) + 123.56$	316	2,039	50%	50%	1,020	1,019
A.M. Peak-hour	Apartment	220	$T = 0.49 (X) + 3.73$	316	159	20%	80%	32	127
P.M. Peak-hour	Apartment	220	$T = 0.55 (X) + 17.65$	316	191	65%	35%	124	67

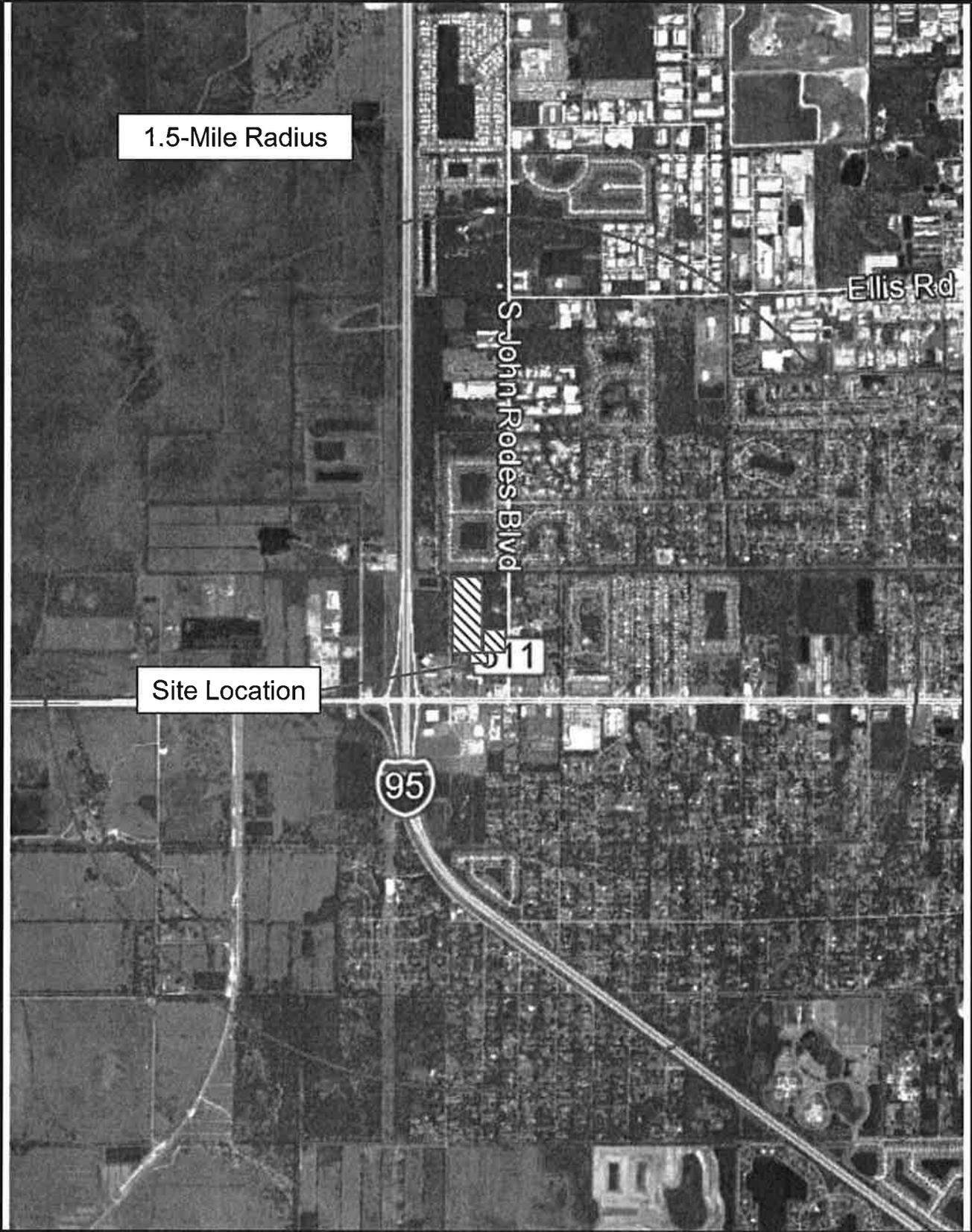
Source: ITE, *Trip Generation 9th Edition*

Trip Distribution

The Central Florida Regional Planning Model version 6.1 will be used to obtain trip distribution and will be manually modified where appropriate. Figure 2 shows the proposed distribution of traffic along the surrounding road network.

Trip Assignment

Traffic will be assigned to the study area roadways using the peak-hour trip generation and the project trip distribution identified by the model.



1.5-Mile Radius

Ellis Rd

S John Rodes Blvd

Site Location

95

11

<p>Oasis of West Melbourne</p>	 <p>NTS</p>	<p>Site Location Map</p>	 <p>1970 Dairy Road, W. Melbourne, FL 32904 Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227</p>
		<p>Project No.: 4397.01</p>	<p>Figure: 1</p>

Study Area

The City of West Melbourne Traffic Study Guidelines were used to determine the project study area. Based on the trip generation criteria the study area for the project was determined to be a 1.5-mile radius from the project.

The following intersections and road segments will be included in the analysis:

Intersections:

- John Rodes Boulevard at US 192 / W New Haven Avenue
- John Rodes Boulevard at Sheridan Road
- John Rodes Boulevard at Project Frontage Road
- John Rodes Boulevard at Ellis Road
- US 192 at SB I-95 Ramp
- US 192 at NB I-95 Ramp
- Dike Road at US 192 / W New Haven Avenue
- Dike Road at Project Frontage Road

Roadway Segments:

- US 192 / W New Haven Avenue from I-95 Northbound Ramp to John Rodes Boulevard
- John Rodes Boulevard from US 192 / W New Haven Avenue to Sheridan Road
- John Rodes Boulevard from Sheridan Road to Ellis Road

Analysis Period

Roadway segments will be analyzed based on p.m. peak-hour traffic and intersections will be analyzed for the a.m. and p.m. peak-hours. The analysis will be conducted under 2017 existing conditions and 2019 build-out conditions.

Traffic Concurrency Spreadsheet

The analysis will be based on the latest concurrency information as obtained from the Florida Department of Transportation (FDOT), the Space Coast Transportation Planning Organization (SCTPO), the City of West Melbourne, and Brevard County Planning Department.

Traffic Count Procedures

Manual turning movement counts will be conducted on a Tuesday, Wednesday or Thursday during a.m. and p.m. peak hours at each study intersection. Turning movement counts will not be older than one year.

Build-Out Traffic

The build-out traffic will be developed by the sum of the background traffic derived from growth rates plus vested traffic and the estimated project traffic. Growth rates for each study area roadway segment will be determined by historic growth trends calculated based upon five years of historic count data. A minimum annual growth rate of two percent shall be used unless otherwise documented. In no case shall a negative growth rate be used. Vested traffic will be coordinated with the City of West Melbourne. All improvements funded for construction within the first three years of the five-year work program will be considered in the analysis.

Christy Fisher
October 2, 2017
Page 5

Segment Analysis – Existing and Build-Out Conditions

If the future projected volume is expected to exceed the maximum service volume of a roadway segment, an additional transportation analysis may be conducted (requires client authorization) to determine the service volume specific to that segment. The procedures documented in the latest version of the FDOT *Quality/Level of Service Handbook* will be used to determine specific capacity, if default capacities are exceeded and if detailed, site-specific capacity analysis has the potential to yield a higher capacity calculation.

Improvements

If warranted, appropriate roadway and intersection improvements will be identified. Conditions will be analyzed for improvements that are required for mitigation. Site access needs will be addressed. The need for auxiliary lanes will be assessed using the methodology provided by NCHRP Report 457, HCS, and the latest version of the FDOT Design Standards.

Please review and advise if the City of West Melbourne is in agreement with this proposed methodology or provide comments relating to preferred revisions. If you have any questions, please contact me at 786.236.2857.

Sincerely,

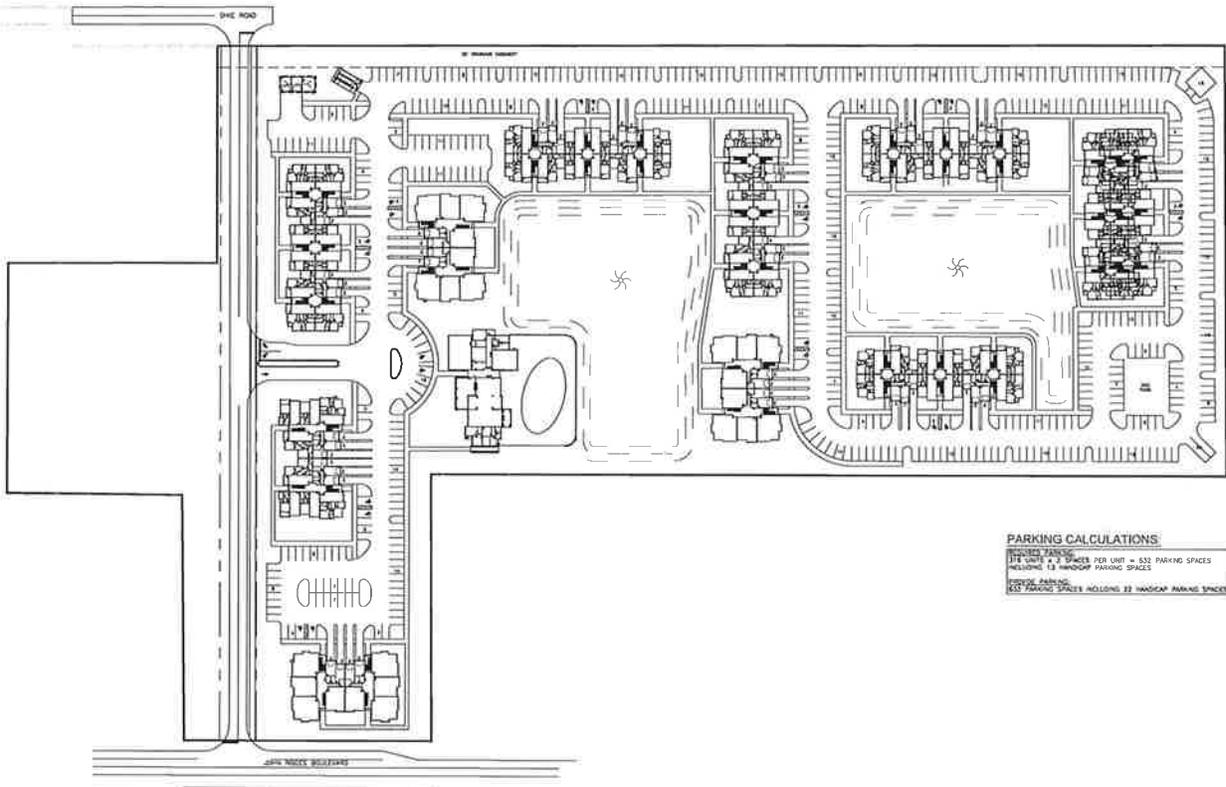
LTG, INC.



George Galan, P.E.
Senior Project Manager

c: Gil A. Ramirez, PE

Appendix A



PARKING CALCULATIONS:
 RESIDENT PARKING:
 174 UNITS x 1.5 SPACES PER UNIT = 261 PARKING SPACES
 INCLUDING 13 HANDICAP PARKING SPACES
 VISITOR PARKING:
 100 PARKING SPACES INCLUDING 22 HANDICAP PARKING SPACES

OASIS OF WEST MELBOURNE

PICERNE
 REAL ESTATE GROUP



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CONSTRUCTION
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APPENDIX C
FACTORED TURNING MOVEMENT COUNTS
AND RAW TURNING MOVEMENT COUNTS

AM Peak-Hour Factored TMC's

Ext Intersection	Approach	Mvmt	Existing Traffic					Background Traffic			Build-Out		
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
1. John Rhodes Blvd at US 152	Eastbound	U-Turn			0.97	0.92	0	0%	0			0	0
		Left	390	13	0.97	0.92	411	3%	432			0	432
		Through	716	14	0.97	0.92	757	2%	795			0	795
	Westbound	Right	3	0	0.97	0.92	3	0%	3			0	3
		U-Turn			0.97	0.92	0	0%	0			0	0
		Left	9	2	0.97	0.92	9	22%	10			0	10
	Northbound	Through	671	16	0.97	0.92	707	2%	743			0	743
		Right	160	6	0.97	0.92	169	4%	177	29.1%	in	9	188
		U-Turn			0.97	0.92	0	0%	0			0	0
	Southbound	Left	18	0	0.97	0.92	19	0%	19			0	19
		Through	7	0	0.97	0.92	7	0%	8			0	8
		Right	22	2	0.97	0.92	23	9%	24			0	24
	U-Turn			0.97	0.92	0	0%	0			0	0	
	Left	108	2	0.97	0.92	114	2%	116	29.1%	out	37	153	
	Through	3	0	0.97	0.92	3	0%	3			0	3	
	Right	199	6	0.97	0.92	210	3%	214			0	214	

Ext Intersection	Approach	Mvmt	Existing Traffic					Background Traffic			Build-Out		
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
2. John Rhodes Blvd at Sheridan Rd	Eastbound	U-Turn			1.05	0.93	0	0%	0			0	0
		Left	59	1	1.05	0.93	67	2%	69			0	69
		Through	16	0	1.05	0.93	16	0%	19			0	19
	Westbound	Right	53	1	1.05	0.93	60	2%	62			0	62
		U-Turn			1.05	0.93	0	0%	0			0	0
		Left	91	1	1.05	0.93	103	1%	107	0.6%	In	0	107
	Northbound	Through	8	2	1.05	0.93	9	25%	9			0	9
		Right	117	1	1.05	0.93	132	1%	137			0	137
		U-Turn			1.05	0.93	0	0%	0			0	0
	Southbound	Left	20	0	1.05	0.93	23	0%	23			0	23
		Through	752	14	1.05	0.93	849	2%	883	44.4%	Out	56	939
		Right	47	1	1.05	0.93	53	2%	55	0.6%	Out	1	56
	U-Turn			1.05	0.93	0	0%	0			0	0	
	Left	38	1	1.05	0.93	43	3%	45			0	45	
	Through	177	16	1.05	0.93	200	9%	209	44.4%	In	14	222	
	Right	21	0	1.05	0.93	24	0%	25			0	25	

Ext Intersection	Approach	Mvmt	Existing Traffic					Background Traffic			Build-Out		
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
3. John Rhodes Blvd at Project Fontage Rd	Eastbound	U-Turn			1.05	0.95	0	0%	0			0	0
		Left			1.05	0.95	0	0%	0	45.0%	Out	57	57
		Through			1.05	0.95	0	0%	0			0	0
	Westbound	Right			1.05	0.95	0	0%	0	29.1%	Out	37	37
		U-Turn			1.05	0.95	0	0%	0			0	0
		Left			1.05	0.95	0	0%	0			0	0
	Northbound	Through			1.05	0.95	0	0%	0			0	0
		Right			1.05	0.95	0	0%	0			0	0
		U-Turn			1.05	0.95	0	0%	0			0	0
	Southbound	Left			1.05	0.95	0	0%	0	29.1%	In	9	9
		Through	557	19	1.05	0.95	616	3%	640			0	640
		Right			1.05	0.95	0	0%	0			0	0
	U-Turn			1.05	0.95	0	0%	0			0	0	
	Left			1.05	0.95	0	0%	0			0	0	
	Through	310	8	1.05	0.95	343	3%	356			0	356	
	Right			1.05	0.95	0	0%	0	45.0%	In	14	14	

Ext Intersection	Approach	Mvmt'L	Existing Traffic					Background Traffic				Build-Out	
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
4. John Roads Blvd at Ellis Rd	Eastbound	U-Turn	0	0	1.05	0.93	0	0%	0			0	0
		Left	0	0	1.05	0.93	0	0%	0			0	0
		Through	0	0	1.05	0.93	0	0%	0			0	0
	Westbound	U-Turn	0	0	1.05	0.93	0	0%	0			0	0
		Left	62	1	1.05	0.93	70	2%	77	8.1%	In	2	79
		Through	0	0	1.05	0.93	0	0%	0			0	0
	Northbound	Right	148	9	1.05	0.93	167	6%	184			0	154
		U-Turn	0	0	1.05	0.93	0	0%	0			0	0
		Left	0	0	1.05	0.93	0	0%	0			0	0
	Southbound	Through	630	9	1.05	0.93	711	1%	740	35.9%	Out	46	785
		Right	180	4	1.05	0.93	203	2%	211	6.1%	Out	6	219
		U-Turn	0	0	1.05	0.93	0	0%	0			0	0
	Left	168	0	1.05	0.93	224	0%	232			0	232	
	Through	195	10	1.05	0.93	220	5%	229	35.9%	In	11	240	
	Right	0	0	1.05	0.93	0	0%	0			0	0	

Ext Intersection	Approach	Mvmt'L	Existing Traffic					Background Traffic				Build-Out	
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
5. US 192 at SB I-95 Ramp	Eastbound	U-Turn	0	0	0.96	0.95	0	0%	0			0	0
		Left	0	0	0.96	0.95	0	0%	0			0	0
		Through	215	18	0.96	0.95	217	8%	222	5.5%	In	2	223
	Westbound	Right	161	1	0.96	0.95	183	1%	168			0	168
		U-Turn	0	0	0.96	0.95	0	0%	0			0	0
		Left	161	2	0.96	0.95	163	1%	168	18.3%	Out	23	189
	Northbound	Through	219	16	0.96	0.95	220	7%	225	5.5%	Out	7	232
		Right	0	0	0.96	0.95	0	0%	0			0	0
		U-Turn	0	0	0.96	0.95	0	0%	0			0	0
	Southbound	Left	0	0	0.96	0.95	0	0%	0			0	0
		Through	0	0	0.96	0.95	0	0%	0			0	0
		Right	0	0	0.96	0.95	0	0%	0			0	0
	U-Turn	0	0	0.96	0.95	0	0%	0			0	0	
	Left	442	1	0.96	0.95	447	0%	456	2.0%	In	1	457	
	Through	0	0	0.96	0.95	0	0%	0			0	0	
Right	91	8	0.96	0.95	92	0%	94			0	94		

Ext Intersection	Approach	Mvmt'L	Existing Traffic					Background Traffic				Build-Out	
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
6. US 192 at NE I-95 Ramp	Eastbound	U-Turn	0	0	0.96	0.95	0	0%	0			0	0
		Left	110	7	0.96	0.95	111	6%	117			0	117
		Through	551	7	0.96	0.95	557	1%	585	7.5%	In	2	597
	Westbound	Right	0	0	0.96	0.95	0	0%	0			0	0
		U-Turn	0	0	0.96	0.95	0	0%	0			0	0
		Left	0	0	0.96	0.95	0	0%	0			0	0
	Northbound	Through	305	17	0.96	0.95	308	6%	324	23.8%	Out	30	354
		Right	506	4	0.96	0.95	511	1%	537	2.0%	Out	3	540
		U-Turn	0	0	0.96	0.95	0	0%	0			0	0
	Southbound	Left	95	5	0.96	0.95	96	2%	98			0	98
		Through	0	0	0.96	0.95	0	0%	0			0	0
		Right	510	5	0.96	0.95	515	1%	526	18.3%	In	6	532
	U-Turn	0	0	0.96	0.95	0	0%	0			0	0	
	Left	0	0	0.96	0.95	0	0%	0			0	0	
	Through	0	0	0.96	0.95	0	0%	0			0	0	
Right	0	0	0.96	0.95	0	0%	0			0	0		

Ext		Existing Traffic							Background Traffic			Build-Out	
Intersection	Approach	Mvmt	Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
7. US 192 at Coastal Ln	Eastbound	U-Turn			1.05	0.95	0	0%	0			0	0
		Left	69	1	1.05	0.95	76	1%	84	25.8%	in	8	92
		Through	1012	12	1.05	0.95	1119	1%	1,231			0	1,231
		Right	36	1	1.05	0.95	40	3%	44			0	44
	Westbound	U-Turn			1.05	0.95	0	0%	0			0	0
		Left	34	1	1.05	0.95	38	3%	41			0	41
		Through	640	12	1.05	0.95	707	2%	778			0	778
		Right	46	0	1.05	0.95	51	0%	56			0	56
	Northbound	U-Turn			1.05	0.95	0	0%	0			0	0
		Left	29	0	1.05	0.95	32	0%	33			0	33
		Through	5	0	1.05	0.95	6	0%	6			0	6
		Right	25	0	1.05	0.95	28	0%	29			0	29
	Southbound	U-Turn			1.05	0.95	0	0%	0			0	0
		Left	10	0	1.05	0.95	11	0%	11			0	11
		Through	4	0	1.05	0.95	4	0%	5			0	5
		Right	20	0	1.05	0.95	22	0%	23	25.8%	out	33	56

PM Peak-Hour Factored TMC's

Ext	Intersection	Approach	Mvmt	Existing Traffic				Background Traffic				Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
1. John Rodes Blvd at US 192	Eastbound	U-Turn			0.97	0.95	0	0%	0	0	0%	0	0	0
		Left	203	5	0.97	0.95	207	2%	17	235	5%	0	0	235
		Through	575	18	0.97	0.95	587	3%	72	689	0%	0	0	689
	Westbound	Right	18	0	0.97	0.95	18	0%	0	19	0%	0	0	19
		U-Turn			0.97	0.95	0	0%	0	0	0%	0	0	0
		Left	27	0	0.97	0.95	28	0%	0	29	0%	0	0	29
	Northbound	Through	597	20	0.97	0.95	610	3%	64	704	0%	0	0	704
		Right	127	2	0.97	0.95	130	2%	0	136	29%	In	36	172
		U-Turn			0.97	0.95	0	0%	0	0	0%	0	0	0
	Southbound	Left	6	1	0.97	0.95	6	17%	0	6	0%	0	0	6
		Through	3	0	0.97	0.95	3	0%	0	3	0%	0	0	3
		Right	9	0	0.97	0.95	9	0%	0	9	0%	0	0	9
	U-Turn			0.97	0.95	0	0%	0	0	0%	0	0	0	
	Left	270	3	0.97	0.95	276	1%	0	281	29%	Out	19	301	
	Through	7	0	0.97	0.95	7	0%	0	7	0%	0	0	7	
	Right	644	5	0.97	0.95	658	1%	15	686	0%	0	0	686	

Ext	Intersection	Approach	Mvmt	Existing Traffic				Background Traffic				Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
2. John Rodes Blvd at Sheridan Rd	Eastbound	U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	24	0	1.05	0.95	27	0%	0	28	0%	0	0	28
		Through	10	1	1.05	0.95	11	10%	0	11	0%	0	0	11
	Westbound	Right	54	1	1.05	0.95	60	2%	0	62	0%	0	0	62
		U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	59	1	1.05	0.95	65	2%	0	77	1%	In	1	78
	Northbound	Through	18	0	1.05	0.95	20	0%	0	21	0%	0	0	21
		Right	54	1	1.05	0.95	60	2%	0	62	0%	0	0	62
		U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
	Southbound	Left	45	0	1.05	0.95	50	0%	0	52	0%	0	0	52
		Through	311	14	1.05	0.95	344	5%	6	364	44%	Out	30	394
		Right	109	1	1.05	0.95	120	1%	11	136	1%	Out	0	136
	U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0	
	Left	77	0	1.05	0.95	85	0%	0	89	0%	0	0	89	
	Through	502	11	1.05	0.95	555	2%	6	583	44%	In	55	638	
	Right	45	1	1.05	0.95	50	2%	0	52	0%	0	0	52	

Ext	Intersection	Approach	Mvmt	Existing Traffic				Background Traffic				Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
3. John Rodes Blvd at Project Frontage Rd	Eastbound	U-Turn			1.05	0.94	0	0%	0	0	0%	0	0	0
		Left			1.05	0.94	0	0%	0	0	45%	Out	30	30
		Through			1.05	0.94	0	0%	0	0	0%	0	0	0
	Westbound	Right			1.05	0.94	0	0%	0	0	29%	Out	19	19
		U-Turn			1.05	0.94	0	0%	0	0	0%	0	0	0
		Left			1.05	0.94	0	0%	0	0	0%	0	0	0
	Northbound	Through			1.05	0.94	0	0%	0	0	0%	0	0	0
		Right	333	7	1.05	0.94	372	2%	17	404	0%	0	0	404
		U-Turn			1.05	0.94	0	0%	0	0	0%	0	0	0
	Southbound	Left			1.05	0.94	0	0%	0	0	0%	0	0	0
		Through	921	8	1.05	0.94	1029	1%	15	1085	0%	0	0	1085
		Right			1.05	0.94	0	0%	0	0	45%	In	56	56

Ext	Intersection	Approach	Mvmt	Existing Traffic				Background Traffic				Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
4. John Rouse Blvd at Ellie Rd	Eastbound	U-Turn	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Through	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
	Westbound	Right	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		U-Turn	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	117	6	1.05	0.95	129	5%	0	142	6%	In	6	150
	Northbound	Through	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Right	189	8	1.05	0.95	209	4%	0	230	0%	0	0	230
		U-Turn	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
	Southbound	Left	0	0	1.05	0.95	0	0%	0	0	0%	0	0	0
		Through	281	4	1.05	0.95	311	1%	6	329	36%	Out	24	353
		Right	78	2	1.05	0.95	86	3%	0	90	6%	Out	4	94

Ext	Intersection	Approach	Mvmt	Existing Traffic				Background Traffic				Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
5. US 192 at SB I-96 Ramp	Eastbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Through	187	11	0.96	0.95	189	6%	59	251	6%	In	7	258
	Westbound	Right	134	2	0.96	0.95	135	1%	0	138	0%	0	0	138
		U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	423	5	0.96	0.95	427	1%	32	468	18%	Out	12	480
	Northbound	Through	330	14	0.96	0.95	333	4%	56	406	6%	Out	4	410
		Right	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
	Southbound	Left	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Through	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Right	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0

Ext	Intersection	Approach	Mvmt	Existing Traffic				Background Traffic				Build-Out		
				Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips
6. US 192 at NB I-95 Ramp	Eastbound	U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	100	10	0.96	0.95	101	10%	0	106	0%	0	0	106
		Through	581	11	0.96	0.95	587	2%	87	704	8%	In	9	713
	Westbound	Right	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Left	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
	Northbound	Through	623	17	0.96	0.95	630	3%	98	759	24%	Out	16	775
		Right	602	5	0.96	0.95	608	1%	23	662	2%	Out	1	664
		U-Turn	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
	Southbound	Left	134	6	0.96	0.95	135	4%	0	138	0%	0	0	138
		Through	0	0	0.96	0.95	0	0%	0	0	0%	0	0	0
		Right	162	1	0.96	0.95	164	1%	28	195	18%	In	23	218

Ext Intersection	Approach	Mvmt	Existing Traffic					Background Traffic					Build-Out	
			Raw Count	Raw Truck Count	Seasonal Factor	Intersection Peak Hour Factor	TMC Volume	% Heavy Vehicles	Vested Traffic	Total Background Volume	% Model Distribution	Trip Direction	Project Trips	Total Build-Out Volume
7, US 122 at Coastal Ln	Eastbound	U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	43	2	1.05	0.95	48	5%	0	52	26%	in	32	84
		Through	673	10	1.05	0.95	744	1%	0	819	0%	0	0	819
	Westbound	Right	50	2	1.05	0.95	65	3%	108	179	0%	0	0	179
		U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	77	1	1.05	0.95	85	1%	79	173	0%	0	0	173
	Northbound	Through	983	13	1.05	0.95	1086	1%	0	1,196	0%	0	0	1,196
		Right	41	0	1.05	0.95	45	0%	0	50	0%	0	0	50
		U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
	Southbound	Left	60	3	1.05	0.95	66	5%	121	190	0%	0	0	190
		Through	21	1	1.05	0.95	23	5%	0	24	0%	0	0	24
		Right	29	1	1.05	0.95	32	3%	79	113	0%	0	0	113
	Southbound	U-Turn			1.05	0.95	0	0%	0	0	0%	0	0	0
		Left	33	0	1.05	0.95	36	0%	0	38	0%	0	0	38
		Through	9	0	1.05	0.95	10	0%	0	10	0%	0	0	10
	Right	75	2	1.05	0.95	83	3%	0	86	26%	out	18	104	

DE TRAFFIC

http:de-traffic.com
John Rodes Blvd at US 192
Brevard County, FL

File Name : John at US 192_Rep
Site Code : 00000001
Start Date : 5/1/2018
Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	John Rodes Blvd Southbound				US 192 Westbound				John Rodes Blvd Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	19	1	33	53	1	146	37	184	3	3	4	10	86	129	1	216	463
07:15 AM	25	2	54	81	3	158	41	202	5	2	5	12	80	188	0	268	563
07:30 AM	29	0	47	76	2	144	38	184	4	2	6	12	105	168	0	273	545
07:45 AM	28	1	54	83	2	201	44	247	5	1	6	12	102	184	1	287	629
Total	101	4	188	293	8	649	160	817	17	8	21	46	373	669	2	1044	2200
08:00 AM	26	0	44	70	2	168	37	207	4	2	5	11	103	178	2	283	571
08:15 AM	28	1	54	83	4	128	46	178	1	1	5	7	104	169	1	274	542
08:30 AM	34	1	56	91	5	147	36	188	5	1	5	11	88	180	2	270	560
08:45 AM	30	0	40	70	6	165	37	208	2	1	3	6	81	147	3	231	515
Total	118	2	194	314	17	608	156	781	12	5	18	35	376	674	8	1058	2188
04:00 PM	44	1	99	144	4	194	27	225	1	1	2	4	39	135	1	175	548
04:15 PM	53	0	102	155	5	221	34	260	3	2	2	7	44	159	0	203	625
04:30 PM	47	2	124	173	2	200	41	243	2	1	1	4	54	137	2	193	613
04:45 PM	64	2	142	208	5	160	35	200	1	0	2	3	51	144	4	199	610
Total	208	5	467	680	16	775	137	928	7	4	7	18	188	575	7	770	2396
05:00 PM	69	2	166	237	6	147	30	183	2	2	3	7	64	130	5	199	626
05:15 PM	63	2	174	239	9	133	32	174	1	0	2	3	44	158	4	206	622
05:30 PM	74	1	162	237	7	157	30	194	2	1	2	5	44	143	5	192	628
05:45 PM	57	2	128	187	5	139	32	176	2	1	2	5	37	145	2	184	552
Total	263	7	630	900	27	576	124	727	7	4	9	20	189	576	16	781	2428
Grand Total	690	18	1479	2187	68	2608	577	3253	43	21	55	119	1126	2494	33	3653	9212
Apprch %	31.6	0.8	67.6		2.1	80.2	17.7		36.1	17.6	46.2		30.8	68.3	0.9		
Total %	7.5	0.2	16.1	23.7	0.7	28.3	6.3	35.3	0.5	0.2	0.6	1.3	12.2	27.1	0.4	39.7	

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at US 192
 Brevard County, FL

File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 2

Groups Printed- Automobiles - Commercial

	John Rodes Blvd Southbound				US 192 Westbound				John Rodes Blvd Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	678	18	1455	2151	66	2539	567	3172	41	21	52	114	1093	2434	33	3560	8997
% Automobiles	98.3	100	98.4	98.4	97.1	97.4	98.3	97.5	95.3	100	94.5	95.8	97.1	97.6	100	97.5	97.7
Commercial	12	0	24	36	2	69	10	81	2	0	3	5	33	60	0	93	215
% Commercial	1.7	0	1.6	1.6	2.9	2.6	1.7	2.5	4.7	0	5.5	4.2	2.9	2.4	0	2.5	2.3

DE TRAFFIC

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 John Rodes Blvd at US 192
 Brevard County, FL

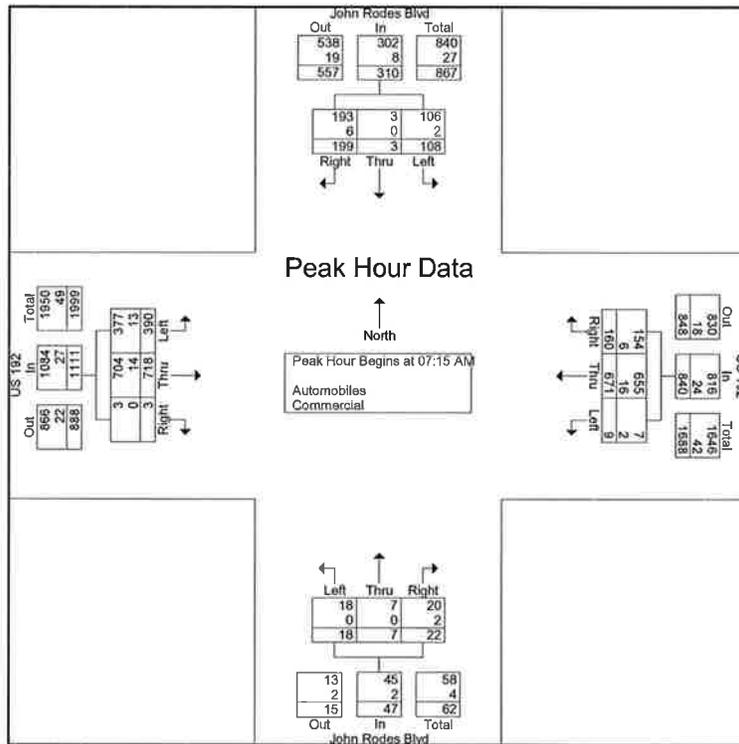
File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 3

Start Time	John Rodes Blvd Southbound				US 192 Westbound				John Rodes Blvd Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	25	2	54	81	3	158	41	202	5	2	5	12	80	188	0	268	563
07:30 AM	29	0	47	76	2	144	38	184	4	2	6	12	105	168	0	273	545
07:45 AM	28	1	54	83	2	201	44	247	5	1	6	12	102	184	1	287	629
08:00 AM	26	0	44	70	2	168	37	207	4	2	5	11	103	178	2	283	571
Total Volume	108	3	199	310	9	671	160	840	18	7	22	47	390	718	3	1111	2308
% App. Total	34.8	1	64.2		1.1	79.9	19		38.3	14.9	46.8		35.1	64.6	0.3		
PHF	.931	.375	.921	.934	.750	.835	.909	.850	.900	.875	.917	.979	.929	.955	.375	.968	.917
Automobiles	106	3	193	302	7	655	154	816	18	7	20	45	377	704	3	1084	2247
% Automobiles	98.1	100	97.0	97.4	77.8	97.6	96.3	97.1	100	100	90.9	95.7	96.7	98.1	100	97.6	97.4
Commercial	2	0	6	8	2	16	6	24	0	0	2	2	13	14	0	27	61
% Commercial	1.9	0	3.0	2.6	22.2	2.4	3.8	2.9	0	0	9.1	4.3	3.3	1.9	0	2.4	2.6

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at US 192
 Brevard County, FL

File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
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DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at US 192
 Brevard County, FL

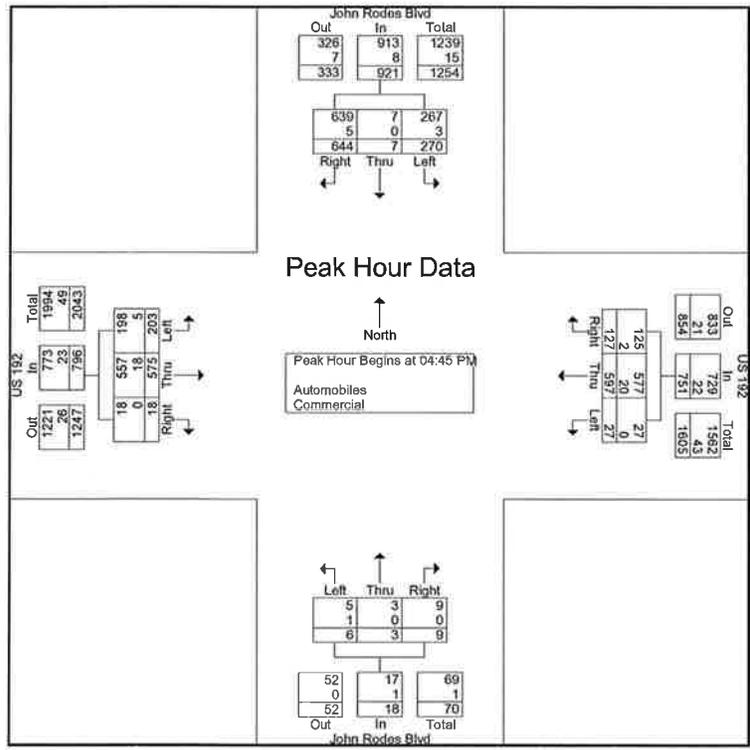
File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 5

Start Time	John Rodes Blvd Southbound				US 192 Westbound				John Rodes Blvd Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	64	2	142	208	5	160	35	200	1	0	2	3	51	144	4	199	610
05:00 PM	69	2	166	237	6	147	30	183	2	2	3	7	64	130	5	199	626
05:15 PM	63	2	174	239	9	133	32	174	1	0	2	3	44	158	4	206	622
05:30 PM	74	1	162	237	7	157	30	194	2	1	2	5	44	143	5	192	628
Total Volume	270	7	644	921	27	597	127	751	6	3	9	18	203	575	18	796	2486
% App. Total	29.3	0.8	69.9		3.6	79.5	16.9		33.3	16.7	50		25.5	72.2	2.3		
PHF	.912	.875	.925	.963	.750	.933	.907	.939	.750	.375	.750	.643	.793	.910	.900	.966	.990
Automobiles	267	7	639	913	27	577	125	729	5	3	9	17	198	557	18	773	2432
% Automobiles	98.9	100	99.2	99.1	100	96.6	98.4	97.1	83.3	100	100	94.4	97.5	96.9	100	97.1	97.8
Commercial	3	0	5	8	0	20	2	22	1	0	0	1	5	18	0	23	54
% Commercial	1.1	0	0.8	0.9	0	3.4	1.6	2.9	16.7	0	0	5.6	2.5	3.1	0	2.9	2.2

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at US 192
 Brevard County, FL

File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 6



DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at US 192
 Brevard County, FL

File Name : John at US 192_Rep
 Site Code : 00000001
 Start Date : 5/1/2018
 Page No : 7

Groups Printed- Peds

Start Time	John Rodes Blvd Southbound					US 192 Westbound					John Rodes Blvd Northbound					US 192 Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:30 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	5
08:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	3
04:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
05:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
05:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	2
05:30 PM	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	1	1	4
05:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	3	3	11
Grand Total	0	0	0	2	2	0	0	0	9	9	0	0	0	0	0	0	0	0	10	10	21
Apprch %	0	0	0	100		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	9.5	9.5	0	0	0	42.9	42.9	0	0	0	0	0	0	0	0	47.6	47.6	

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	John Rodes Blvd Southbound				Sheridan Rd Westbound				John Rodes Blvd Northbound				Sorento Circle Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	4	31	4	39	19	0	20	39	3	146	9	158	9	2	9	20	256
07:15 AM	6	36	7	49	19	3	24	46	4	155	7	166	14	2	11	27	288
07:30 AM	9	45	5	59	21	1	31	53	4	166	11	181	15	2	14	31	324
07:45 AM	9	44	6	59	29	3	29	61	5	200	13	218	20	4	15	39	377
Total	28	156	22	206	88	7	104	199	16	667	40	723	58	10	49	117	1245
08:00 AM	11	45	5	61	21	2	32	55	6	205	10	221	11	5	14	30	367
08:15 AM	9	43	5	57	20	2	25	47	5	181	13	199	13	5	10	28	331
08:30 AM	11	43	5	59	21	2	30	53	5	136	16	157	11	6	10	27	296
08:45 AM	14	42	5	61	17	4	34	55	6	105	16	127	9	3	8	20	263
Total	45	173	20	238	79	10	121	210	22	627	55	704	44	19	42	105	1257
04:00 PM	20	129	11	160	10	6	12	28	9	74	25	108	4	1	11	16	312
04:15 PM	24	117	10	151	11	4	15	30	11	85	19	115	6	0	10	16	312
04:30 PM	16	137	9	162	14	2	16	32	12	79	24	115	2	2	14	18	327
04:45 PM	21	138	12	171	14	4	10	28	10	86	26	122	5	1	15	21	342
Total	81	521	42	644	49	16	53	118	42	324	94	460	17	4	50	71	1293
05:00 PM	19	123	13	155	15	8	14	37	9	68	34	111	8	2	13	23	326
05:15 PM	21	104	11	136	16	4	14	34	14	78	25	117	9	5	12	26	313
05:30 PM	19	116	15	150	16	5	19	40	15	53	24	92	9	5	14	28	310
05:45 PM	24	107	13	144	13	6	19	38	13	50	19	82	7	4	10	21	285
Total	83	450	52	585	60	23	66	149	51	249	102	402	33	16	49	98	1234
Grand Total	237	1300	136	1673	276	56	344	676	131	1867	291	2289	152	49	190	391	5029
Apprch %	14.2	77.7	8.1		40.8	8.3	50.9		5.7	81.6	12.7		38.9	12.5	48.6		
Total %	4.7	25.9	2.7	33.3	5.5	1.1	6.8	13.4	2.6	37.1	5.8	45.5	3	1	3.8	7.8	

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 2

Groups Printed- Automobiles - Commercial

	John Rodes Blvd Southbound				Sheridan Rd Westbound				John Rodes Blvd Northbound				Sorento Circle Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	230	1249	132	1611	271	52	338	661	128	1817	287	2232	148	48	185	381	4885
% Automobiles	97	96.1	97.1	96.3	98.2	92.9	98.3	97.8	97.7	97.3	98.6	97.5	97.4	98	97.4	97.4	97.1
Commercial	7	51	4	62	5	4	6	15	3	50	4	57	4	1	5	10	144
% Commercial	3	3.9	2.9	3.7	1.8	7.1	1.7	2.2	2.3	2.7	1.4	2.5	2.6	2	2.6	2.6	2.9

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

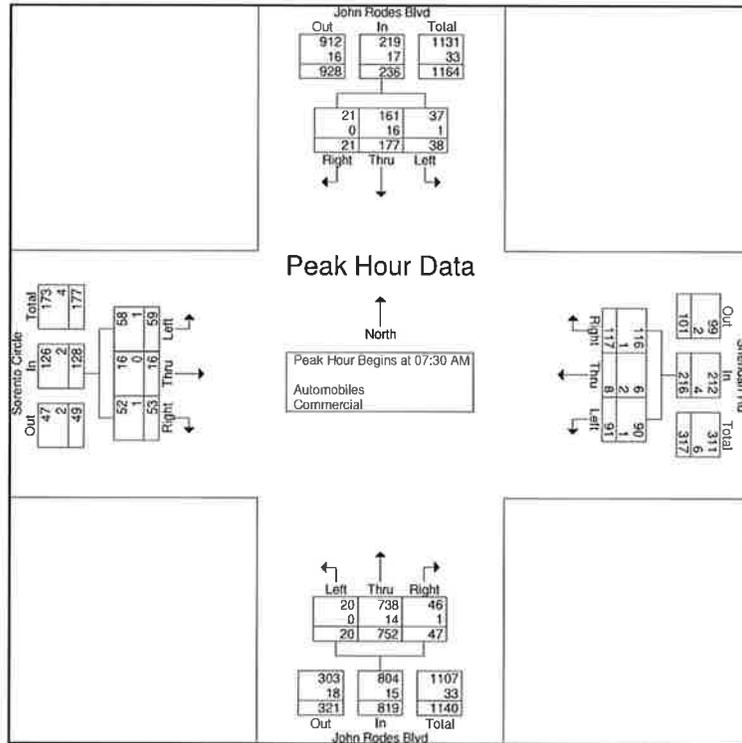
File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 3

Start Time	John Rodes Blvd Southbound				Sheridan Rd Westbound				John Rodes Blvd Northbound				Sorento Circle Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	45	5	59	21	1	31	53	4	166	11	181	15	2	14	31	324
07:45 AM	9	44	6	59	29	3	29	61	5	200	13	218	20	4	15	39	377
08:00 AM	11	45	5	61	21	2	32	55	6	205	10	221	11	5	14	30	367
08:15 AM	9	43	5	57	20	2	25	47	5	181	13	199	13	5	10	28	331
Total Volume	38	177	21	236	91	8	117	216	20	752	47	819	59	16	53	128	1399
% App. Total	16.1	75	8.9		42.1	3.7	54.2		2.4	91.8	5.7		46.1	12.5	41.4		
PHF	.864	.983	.875	.967	.784	.667	.914	.885	.833	.917	.904	.926	.738	.800	.883	.821	.928
Automobiles	37	161	21	219	90	6	116	212	20	738	46	804	58	16	52	126	1361
% Automobiles	97.4	91.0	100	92.8	98.9	75.0	99.1	98.1	100	98.1	97.9	98.2	98.3	100	98.1	98.4	97.3
Commercial	1	16	0	17	1	2	1	4	0	14	1	15	1	0	1	2	38
% Commercial	2.6	9.0	0	7.2	1.1	25.0	0.9	1.9	0	1.9	2.1	1.8	1.7	0	1.9	1.6	2.7

DE TRAFFIC

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 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 4



DE TRAFFIC

http:de-traffic.com
 John Rodas Blvd at Sheridan Rd
 Brevard County, FL

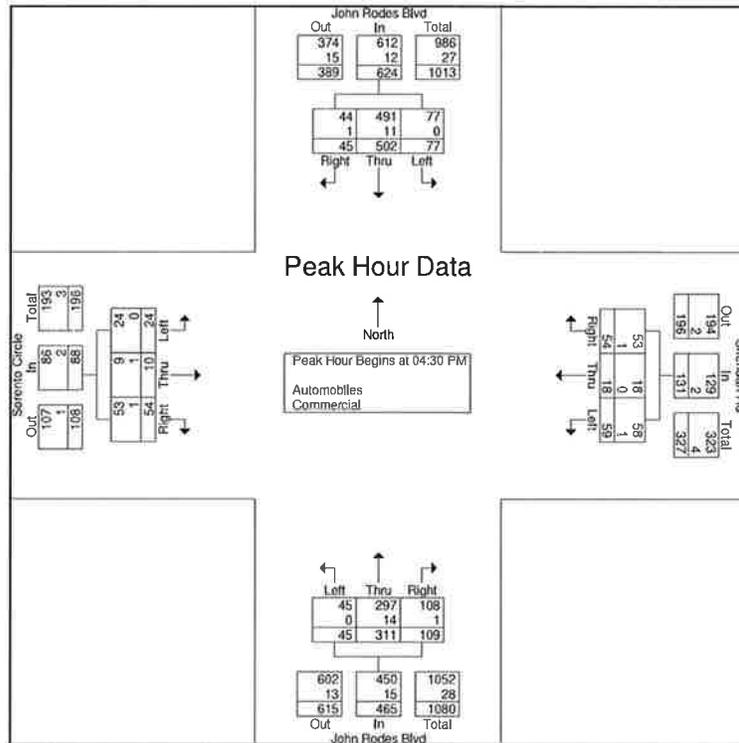
File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 5

Start Time	John Rodas Blvd Southbound				Sheridan Rd Westbound				John Rodas Blvd Northbound				Sorento Circle Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	16	137	9	162	14	2	16	32	12	79	24	115	2	2	14	18	327
04:45 PM	21	138	12	171	14	4	10	28	10	86	26	122	5	1	15	21	342
05:00 PM	19	123	13	155	15	8	14	37	9	68	34	111	8	2	13	23	326
05:15 PM	21	104	11	136	16	4	14	34	14	78	25	117	9	5	12	26	313
Total Volume	77	502	45	624	59	18	54	131	45	311	109	465	24	10	54	88	1308
% App. Total	12.3	80.4	7.2		4.5	13.7	41.2		9.7	66.9	23.4		27.3	11.4	61.4		
PHF	.917	.909	.865	.912	.922	.563	.844	.885	.804	.904	.801	.953	.667	.500	.900	.846	.956
Automobiles	77	491	44	612	58	18	53	129	45	297	108	450	24	9	53	86	1277
% Automobiles	100	97.8	97.8	98.1	98.3	100	98.1	98.5	100	95.5	99.1	96.8	100	90.0	98.1	97.7	97.6
Commercial	0	11	1	12	1	0	1	2	0	14	1	15	0	1	1	2	31
% Commercial	0	2.2	2.2	1.9	1.7	0	1.9	1.5	0	4.5	0.9	3.2	0	10.0	1.9	2.3	2.4

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 6



DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Sheridan Rd
 Brevard County, FL

File Name : John at Sheridan
 Site Code : 00000003
 Start Date : 10/18/2017
 Page No : 7

Groups Printed- Peds

Start Time	John Rodes Blvd Southbound					Sheridan Rd Westbound					John Rodes Blvd Northbound					Sorento Circle Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
04:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1	3
05:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	2	2	5
Grand Total	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0	0	0	3	3	7
Apprch %	0	0	0	0		0	0	0	100		0	0	0	0		0	0	0	100		
Total %	0	0	0	0	0	0	0	0	57.1	57.1	0	0	0	0	0	0	0	0	42.9	42.9	

DE TRAFFIC

http:de-traffic.com
John Rodes Blvd at Ellis Rd
Brevard County, FL

File Name : John at Ellis
Site Code : 00000004
Start Date : 10/18/2017
Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	John Rodes Blvd Southbound				Ellis Rd Westbound				John Rodes Blvd Northbound				N/A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	46	42	0	88	20	0	21	41	0	125	39	164	0	0	0	0	293
07:15 AM	56	55	0	111	21	0	25	46	0	143	41	184	0	0	0	0	341
07:30 AM	63	61	0	124	18	0	31	49	0	153	54	207	0	0	0	0	380
07:45 AM	42	48	0	90	19	0	37	56	0	135	44	179	0	0	0	0	325
Total	207	206	0	413	78	0	114	192	0	556	178	734	0	0	0	0	1339
08:00 AM	51	43	0	94	11	0	43	54	0	165	43	208	0	0	0	0	356
08:15 AM	42	43	0	85	14	0	37	51	0	177	39	216	0	0	0	0	352
08:30 AM	54	56	0	110	15	0	36	51	0	143	42	185	0	0	0	0	346
08:45 AM	44	64	0	108	12	0	41	53	0	123	35	158	0	0	0	0	319
Total	191	206	0	397	52	0	157	209	0	608	159	767	0	0	0	0	1373
04:00 PM	29	93	0	122	31	0	42	73	0	62	11	73	0	0	0	0	268
04:15 PM	34	102	0	136	35	0	63	98	0	72	19	91	0	0	0	0	325
04:30 PM	19	90	0	109	42	0	55	97	0	83	15	98	0	0	0	0	304
04:45 PM	24	116	0	140	34	0	35	69	0	78	13	91	0	0	0	0	300
Total	106	401	0	507	142	0	195	337	0	295	58	353	0	0	0	0	1197
05:00 PM	27	126	0	153	26	0	44	70	0	87	18	105	0	0	0	0	328
05:15 PM	35	108	0	143	34	0	55	89	0	68	22	90	0	0	0	0	322
05:30 PM	41	144	0	185	27	0	43	70	0	72	19	91	0	0	0	0	346
05:45 PM	29	136	0	165	30	0	47	77	0	54	19	73	0	0	0	0	315
Total	132	514	0	646	117	0	189	306	0	281	78	359	0	0	0	0	1311
Grand Total	636	1327	0	1963	389	0	655	1044	0	1740	473	2213	0	0	0	0	5220
Apprch %	32.4	67.6	0		37.3	0	62.7		0	78.6	21.4		0	0	0		
Total %	12.2	25.4	0	37.6	7.5	0	12.5	20	0	33.3	9.1	42.4	0	0	0	0	

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 2

Groups Printed- Automobiles - Commercial

	John Rodes Blvd Southbound				Ellis Rd Westbound				John Rodes Blvd Northbound				N/A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	630	1294	0	1924	375	0	628	1003	0	1714	465	2179	0	0	0	0	5106
% Automobiles	99.1	97.5	0	98	96.4	0	95.9	96.1	0	98.5	98.3	98.5	0	0	0	0	97.8
Commercial	6	33	0	39	14	0	27	41	0	26	8	34	0	0	0	0	114
% Commercial	0.9	2.5	0	2	3.6	0	4.1	3.9	0	1.5	1.7	1.5	0	0	0	0	2.2

DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

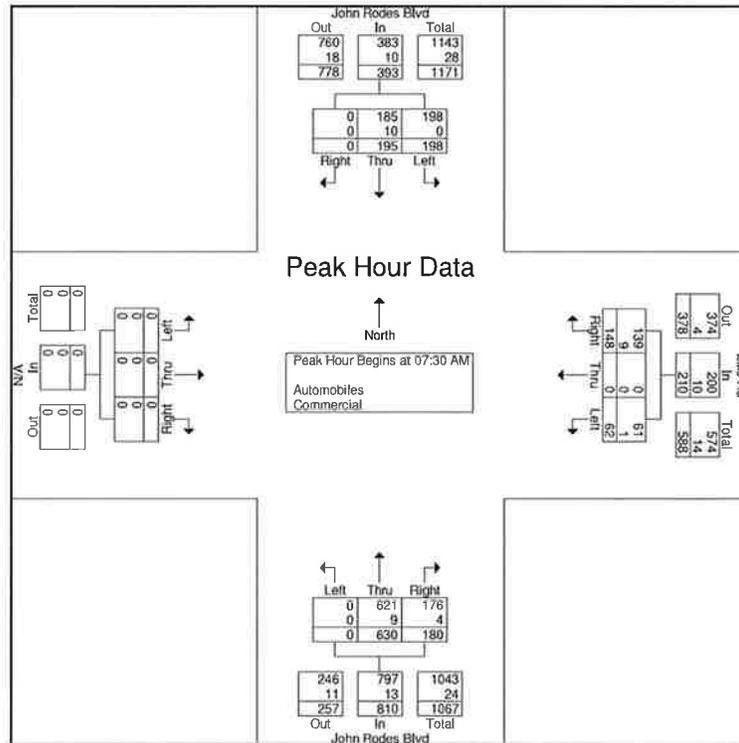
File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 3

Start Time	John Rodes Blvd Southbound				Ellis Rd Westbound				John Rodes Blvd Northbound				N/A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	63	61	0	124	18	0	31	49	0	153	54	207	0	0	0	0	380
07:45 AM	42	48	0	90	19	0	37	56	0	135	44	179	0	0	0	0	325
08:00 AM	51	43	0	94	11	0	43	54	0	165	43	208	0	0	0	0	356
08:15 AM	42	43	0	85	14	0	37	51	0	177	39	216	0	0	0	0	352
Total Volume	198	195	0	393	62	0	148	210	0	630	180	810	0	0	0	0	1413
% App. Total	50.4	49.6	0		29.5	0	70.5		0	77.8	22.2		0	0	0		
PHF	.786	.799	.000	.792	.816	.000	.860	.938	.000	.890	.833	.938	.000	.000	.000	.000	.930
Automobiles	198	185	0	383	61	0	139	200	0	621	176	797	0	0	0	0	1380
% Automobiles	100	94.9	0	97.5	98.4	0	93.9	95.2	0	98.6	97.8	98.4	0	0	0	0	97.7
Commercial	0	10	0	10	1	0	9	10	0	9	4	13	0	0	0	0	33
% Commercial	0	5.1	0	2.5	1.6	0	6.1	4.8	0	1.4	2.2	1.6	0	0	0	0	2.3

DE TRAFFIC

http:de-traffic.com
 John Rodas Blvd at Ellis Rd
 Brevard County, FL

File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 4



DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

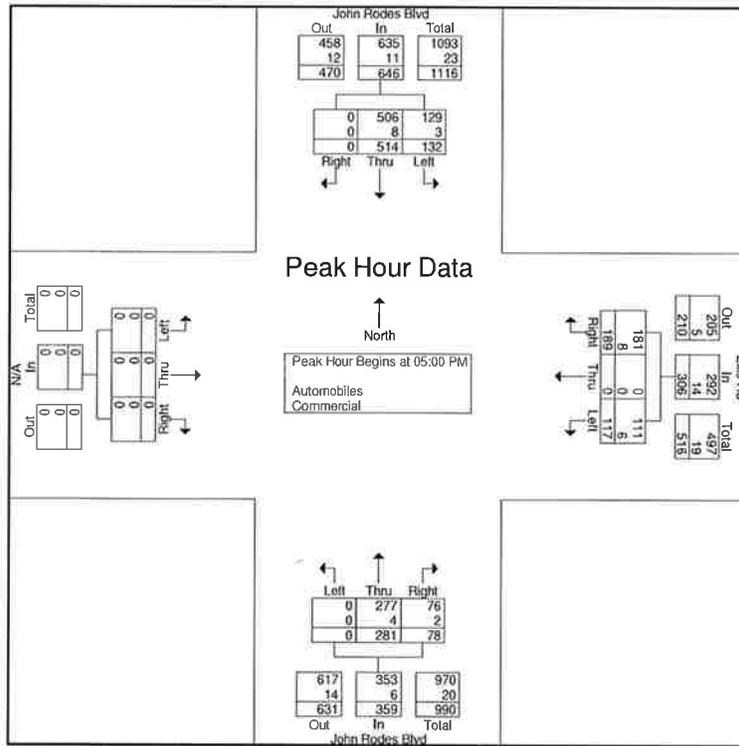
File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 5

Start Time	John Rodes Blvd Southbound				Ellis Rd Westbound				John Rodes Blvd Northbound				N/A Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	27	126	0	153	26	0	44	70	0	87	18	105	0	0	0	0	328
05:15 PM	35	108	0	143	34	0	55	89	0	68	22	90	0	0	0	0	322
05:30 PM	41	144	0	185	27	0	43	70	0	72	19	91	0	0	0	0	346
05:45 PM	29	136	0	165	30	0	47	77	0	54	19	73	0	0	0	0	315
Total Volume	132	514	0	646	117	0	189	306	0	281	78	359	0	0	0	0	1311
% App. Total	20.4	79.6	0		38.2	0	61.8		0	78.3	21.7		0	0	0		
PHF	.805	.892	.000	.873	.860	.000	.859	.860	.000	.807	.886	.855	.000	.000	.000	.000	.947
Automobiles	129	506	0	635	111	0	181	292	0	277	76	353	0	0	0	0	1280
% Automobiles	97.7	98.4	0	98.3	94.9	0	95.8	95.4	0	98.6	97.4	98.3	0	0	0	0	97.6
Commercial	3	8	0	11	6	0	8	14	0	4	2	6	0	0	0	0	31
% Commercial	2.3	1.6	0	1.7	5.1	0	4.2	4.6	0	1.4	2.6	1.7	0	0	0	0	2.4

DE TRAFFIC

http:de-traffic.com
 John Rodas Blvd at Ellis Rd
 Brevard County, FL

File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 6



DE TRAFFIC

http:de-traffic.com
 John Rodes Blvd at Ellis Rd
 Brevard County, FL

File Name : John at Ellis
 Site Code : 00000004
 Start Date : 10/18/2017
 Page No : 7

Groups Printed- Peds

Start Time	John Rodes Blvd Southbound					Ellis Rd Westbound					John Rodes Blvd Northbound					N/A Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
08:00 AM	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Total	0	0	0	3	3	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
05:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Total	0	0	0	1	1	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0
Grand Total	0	0	0	5	5	0	0	0	0	0	0	0	0	4	4	0	0	0	0	0	0
Apprch %	0	0	0	100		0	0	0	0		0	0	0	100		0	0	0	0		
Total %	0	0	0	55.6	55.6	0	0	0	0	0	0	0	0	44.4	44.4	0	0	0	0	0	0

DE TRAFFIC

http://de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	I-95 SB Ramp Southbound				US 192 Westbound				N/A Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	82	0	15	97	28	39	0	67	0	0	0	0	0	50	36	86	250
07:15 AM	96	0	16	112	31	44	0	75	0	0	0	0	0	53	48	101	288
07:30 AM	115	0	21	136	44	48	0	92	0	0	0	0	0	49	37	86	314
07:45 AM	106	0	26	132	37	55	0	92	0	0	0	0	0	54	42	96	320
Total	399	0	78	477	140	186	0	326	0	0	0	0	0	206	163	369	1172
08:00 AM	124	0	20	144	44	50	0	94	0	0	0	0	0	48	38	86	324
08:15 AM	113	0	23	136	39	62	0	101	0	0	0	0	0	49	42	91	328
08:30 AM	99	0	22	121	41	51	0	92	0	0	0	0	0	64	39	103	316
08:45 AM	92	0	13	105	37	47	0	84	0	0	0	0	0	69	32	101	290
Total	428	0	78	506	161	210	0	371	0	0	0	0	0	230	151	381	1258
04:00 PM	116	0	43	159	92	93	0	185	0	0	0	0	0	55	31	86	430
04:15 PM	136	0	37	173	102	78	0	180	0	0	0	0	0	44	31	75	428
04:30 PM	143	0	44	187	108	86	0	194	0	0	0	0	0	55	34	89	470
04:45 PM	153	0	54	207	96	81	0	177	0	0	0	0	0	45	41	86	470
Total	548	0	178	726	398	338	0	736	0	0	0	0	0	199	137	336	1798
05:00 PM	137	0	45	182	117	85	0	202	0	0	0	0	0	43	28	71	455
05:15 PM	107	0	44	151	108	76	0	184	0	0	0	0	0	47	33	80	415
05:30 PM	102	0	36	138	100	71	0	171	0	0	0	0	0	41	30	71	380
05:45 PM	99	0	33	132	78	61	0	139	0	0	0	0	0	60	28	88	359
Total	445	0	158	603	403	293	0	696	0	0	0	0	0	191	119	310	1609
Grand Total	1820	0	492	2312	1102	1027	0	2129	0	0	0	0	0	826	570	1396	5837
Apprch %	78.7	0	21.3		51.8	48.2	0		0	0	0	0	0	59.2	40.8		
Total %	31.2	0	8.4	39.6	18.9	17.6	0	36.5	0	0	0	0	0	14.2	9.8	23.9	

DE TRAFFIC

http:de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
 Page No : 2

Groups Printed- Automobiles - Commercial

Factor	I-95 SB Ramp Southbound				US 192 Westbound				N/A Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	1806	0	457	2263	1083	975	0	2058	0	0	0	0	0	778	559	1337	5658
% Automobiles	99.2	0	92.9	97.9	98.3	94.9	0	96.7	0	0	0	0	0	94.2	98.1	95.8	96.9
Commercial	14	0	35	49	19	52	0	71	0	0	0	0	0	48	11	59	179
% Commercial	0.8	0	7.1	2.1	1.7	5.1	0	3.3	0	0	0	0	0	5.8	1.9	4.2	3.1

DE TRAFFIC

http:de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
 Page No : 3

Start Time	I-95 SB Ramp Southbound				US 192 Westbound				N/A Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	106	0	26	132	37	55	0	92	0	0	0	0	0	54	42	96	320
08:00 AM	124	0	20	144	44	50	0	94	0	0	0	0	0	48	38	86	324
08:15 AM	113	0	23	136	39	62	0	101	0	0	0	0	0	49	42	91	328
08:30 AM	99	0	22	121	41	51	0	92	0	0	0	0	0	64	39	103	316
Total Volume	442	0	91	533	161	218	0	379	0	0	0	0	0	215	161	376	1288
% App. Total	82.9	0	17.1		42.5	57.5	0		0	0	0	0	0	57.2	42.8		
PHF	.891	.000	.875	.925	.915	.879	.000	.938	.000	.000	.000	.000	.000	.840	.958	.913	.982
Automobiles	441	0	83	524	159	202	0	361	0	0	0	0	0	197	160	357	1242
% Automobiles	99.8	0	91.2	98.3	98.8	92.7	0	95.3	0	0	0	0	0	91.6	99.4	94.9	96.4
Commercial	1	0	8	9	2	16	0	18	0	0	0	0	0	18	1	19	46
% Commercial	0.2	0	8.8	1.7	1.2	7.3	0	4.7	0	0	0	0	0	8.4	0.6	5.1	3.6

DE TRAFFIC

http:de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

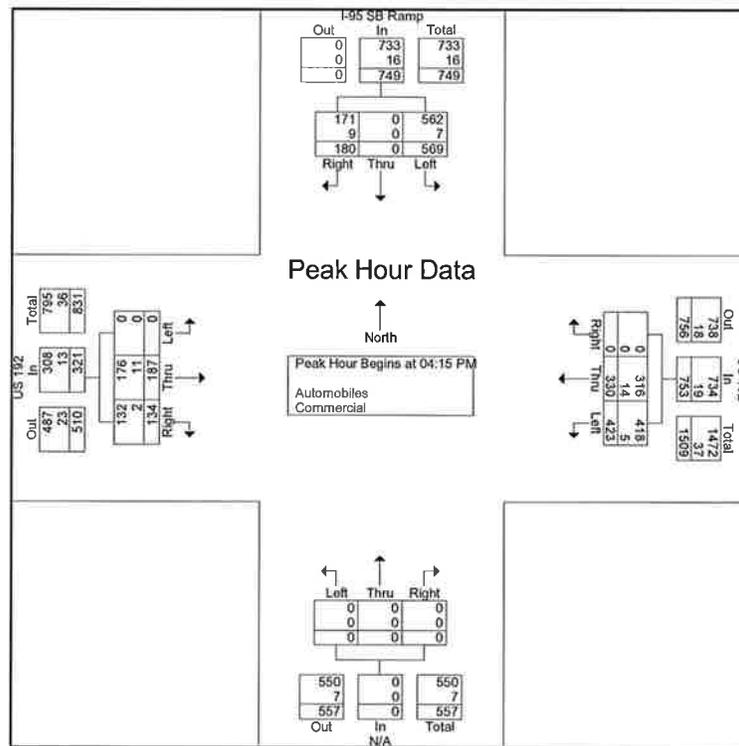
File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
 Page No : 5

Start Time	I-95 SB Ramp Southbound				US 192 Westbound				N/A Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	136	0	37	173	102	78	0	180	0	0	0	0	0	44	31	75	428
04:30 PM	143	0	44	187	108	86	0	194	0	0	0	0	0	55	34	89	470
04:45 PM	153	0	54	207	96	81	0	177	0	0	0	0	0	45	41	86	470
05:00 PM	137	0	45	182	117	85	0	202	0	0	0	0	0	43	28	71	455
Total Volume	569	0	180	749	423	330	0	753	0	0	0	0	0	187	134	321	1823
% App. Total	76	0	24		56.2	43.8	0		0	0	0	0	0	58.3	41.7		
PHF	.930	.000	.833	.905	.904	.959	.000	.932	.000	.000	.000	.000	.000	.850	.817	.902	.970
Automobiles	562	0	171	733	418	316	0	734	0	0	0	0	0	176	132	308	1775
% Automobiles	98.8	0	95.0	97.9	98.8	95.8	0	97.5	0	0	0	0	0	94.1	98.5	96.0	97.4
Commercial	7	0	9	16	5	14	0	19	0	0	0	0	0	11	2	13	48
% Commercial	1.2	0	5.0	2.1	1.2	4.2	0	2.5	0	0	0	0	0	5.9	1.5	4.0	2.6

DE TRAFFIC

http:de-traffic.com
 I-95 SB Ramp at US 192
 Brevard County, FL

File Name : I 95 SBR at US 192
 Site Code : 00000001
 Start Date : 4/26/2018
 Page No : 6



DE TRAFFIC

http:de-traffic.com
 I-95 NB Ramp at US 192
 Brevard County, FL

File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	N/A Southbound				US 192 Westbound				I 95 Ramp Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	0	0	0	0	0	67	102	169	20	0	115	135	13	102	0	115	419
07:15 AM	0	0	0	0	0	83	122	205	26	0	141	167	19	117	0	136	508
07:30 AM	0	0	0	0	0	78	107	185	19	0	137	156	21	127	0	148	489
07:45 AM	0	0	0	0	0	87	153	240	24	0	124	148	23	134	0	157	545
Total	0	0	0	0	0	315	484	799	89	0	517	606	76	480	0	556	1961
08:00 AM	0	0	0	0	0	80	121	201	28	0	143	171	25	137	0	162	534
08:15 AM	0	0	0	0	0	70	107	177	22	0	125	147	28	149	0	177	501
08:30 AM	0	0	0	0	0	68	125	193	21	0	118	139	34	131	0	165	497
08:45 AM	0	0	0	0	0	50	147	197	22	0	107	129	27	131	0	158	484
Total	0	0	0	0	0	268	500	768	93	0	493	586	114	548	0	662	2016
04:00 PM	0	0	0	0	0	139	154	293	32	0	38	70	25	126	0	151	514
04:15 PM	0	0	0	0	0	155	154	309	26	0	41	67	21	153	0	174	550
04:30 PM	0	0	0	0	0	146	174	320	31	0	36	67	26	147	0	173	560
04:45 PM	0	0	0	0	0	140	155	295	35	0	46	81	29	136	0	165	541
Total	0	0	0	0	0	580	637	1217	124	0	161	285	101	562	0	663	2165
05:00 PM	0	0	0	0	0	182	119	301	42	0	39	81	24	145	0	169	551
05:15 PM	0	0	0	0	0	168	141	309	25	0	41	66	21	144	0	165	540
05:30 PM	0	0	0	0	0	156	135	291	28	0	39	67	22	155	0	177	535
05:45 PM	0	0	0	0	0	147	125	272	32	0	38	70	20	128	0	148	490
Total	0	0	0	0	0	653	520	1173	127	0	157	284	87	572	0	659	2116
Grand Total	0	0	0	0	0	1816	2141	3957	433	0	1328	1761	378	2162	0	2540	8258
Apprch %	0	0	0		0	45.9	54.1		24.6	0	75.4		14.9	85.1	0		
Total %	0	0	0		0	22	25.9	47.9	5.2	0	16.1	21.3	4.6	26.2	0	30.8	

DE TRAFFIC

http:de-traffic.com
 I-95 NB Ramp at US 192
 Brevard County, FL

File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 2

Groups Printed- Automobiles - Commercial

	N/A				US 192				I 95 Ramp				US 192				Int. Total
	Southbound				Westbound				Northbound				Eastbound				
Factor	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Automobiles	0	0	0	0	0	1755	2125	3880	411	0	1316	1727	350	2127	0	2477	8084
% Automobiles	0	0	0	0	0	96.6	99.3	98.1	94.9	0	99.1	98.1	92.6	98.4	0	97.5	97.9
Commercial	0	0	0	0	0	61	16	77	22	0	12	34	28	35	0	63	174
% Commercial	0	0	0	0	0	3.4	0.7	1.9	5.1	0	0.9	1.9	7.4	1.6	0	2.5	2.1

DE TRAFFIC

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 I-95 NB Ramp at US 192
 Brevard County, FL

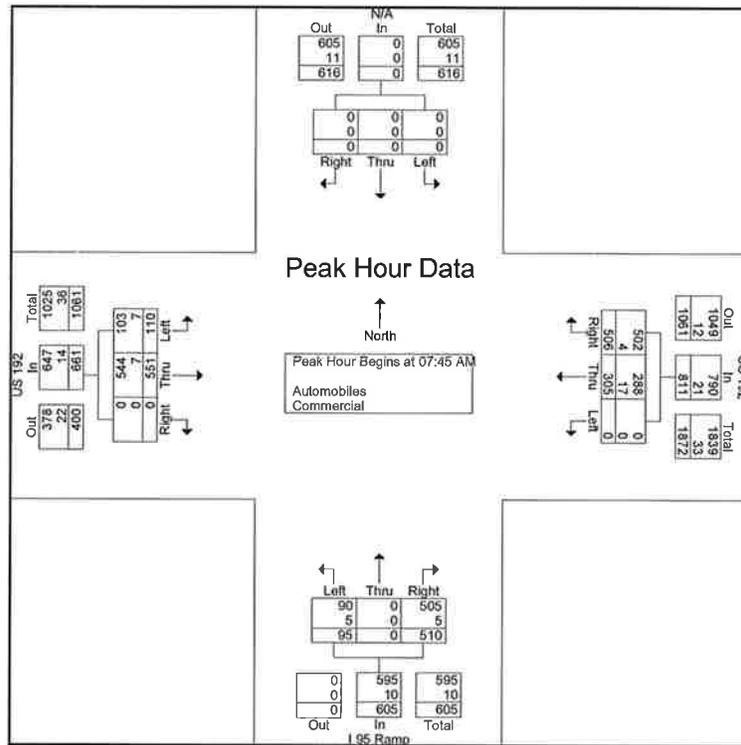
File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 3

Start Time	N/A Southbound				US 192 Westbound				I 95 Ramp Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	87	153	240	24	0	124	148	23	134	0	157	545
08:00 AM	0	0	0	0	0	80	121	201	28	0	143	171	25	137	0	162	534
08:15 AM	0	0	0	0	0	70	107	177	22	0	125	147	28	149	0	177	501
08:30 AM	0	0	0	0	0	68	125	193	21	0	118	139	34	131	0	165	497
Total Volume	0	0	0	0	0	305	506	811	95	0	510	605	110	551	0	661	2077
% App. Total	0	0	0	0	0	37.6	62.4		15.7	0	84.3		16.6	83.4	0		
PHF	.000	.000	.000	.000	.000	.876	.827	.845	.848	.000	.892	.885	.809	.924	.000	.934	.953
Automobiles	0	0	0	0	0	288	502	790	90	0	505	595	103	544	0	647	2032
% Automobiles	0	0	0	0	0	94.4	99.2	97.4	94.7	0	99.0	98.3	93.6	98.7	0	97.9	97.8
Commercial	0	0	0	0	0	17	4	21	5	0	5	10	7	7	0	14	45
% Commercial	0	0	0	0	0	5.6	0.8	2.6	5.3	0	1.0	1.7	6.4	1.3	0	2.1	2.2

DE TRAFFIC

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 I-95 NB Ramp at US 192
 Brevard County, FL

File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 4



DE TRAFFIC

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 I-95 NB Ramp at US 192
 Brevard County, FL

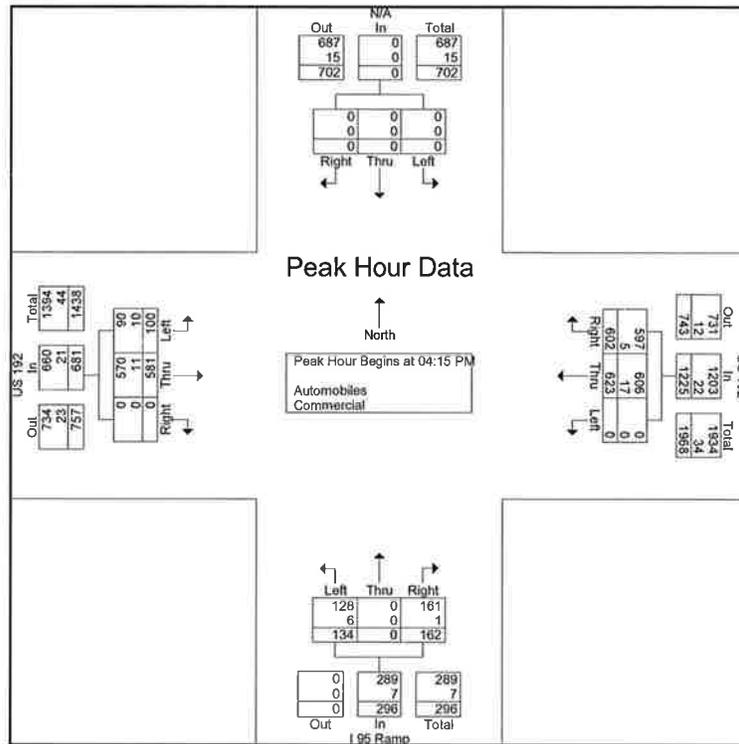
File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 5

Start Time	N/A				US 192				I 95 Ramp				US 192				Int. Total
	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	155	154	309	26	0	41	67	21	153	0	174	550
04:30 PM	0	0	0	0	0	146	174	320	31	0	36	67	26	147	0	173	560
04:45 PM	0	0	0	0	0	140	155	295	35	0	46	81	29	136	0	165	541
05:00 PM	0	0	0	0	0	182	119	301	42	0	39	81	24	145	0	169	551
Total Volume	0	0	0	0	0	623	602	1225	134	0	162	296	100	581	0	681	2202
% App. Total	0	0	0	0	0	50.9	49.1		45.3	0	54.7		14.7	85.3	0		
PHF	.000	.000	.000	.000	.000	.856	.865	.957	.798	.000	.880	.914	.862	.949	.000	.978	.983
Automobiles	0	0	0	0	0	606	597	1203	128	0	161	289	90	570	0	660	2152
% Automobiles	0	0	0	0	0	97.3	99.2	98.2	95.5	0	99.4	97.6	90.0	98.1	0	96.9	97.7
Commercial	0	0	0	0	0	17	5	22	6	0	1	7	10	11	0	21	50
% Commercial	0	0	0	0	0	2.7	0.8	1.8	4.5	0	0.6	2.4	10.0	1.9	0	3.1	2.3

DE TRAFFIC

http:de-traffic.com
 I-95 NB Ramp at US 192
 Brevard County, FL

File Name : I 95 NBR at US 192
 Site Code : 00000002
 Start Date : 4/26/2018
 Page No : 6



DE TRAFFIC

http:de-traffic.com
 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 1

Groups Printed- Automobiles - Commercial

Start Time	Dike Rd Southbound				US 192 Westbound				Coastal Ln Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
07:00 AM	4	0	4	8	4	117	4	125	2	0	1	3	11	203	4	218	354
07:15 AM	3	0	2	5	5	145	8	158	2	2	4	8	17	226	2	245	416
07:30 AM	3	0	5	8	9	158	9	176	6	1	9	16	18	248	7	273	473
07:45 AM	2	1	4	7	9	143	11	163	9	2	6	17	20	248	9	277	464
Total	12	1	15	28	27	563	32	622	19	5	20	44	66	925	22	1013	1707
08:00 AM	3	1	5	9	8	165	10	183	7	0	5	12	16	265	9	290	494
08:15 AM	2	2	6	10	8	174	16	198	7	2	5	14	15	251	11	277	499
08:30 AM	2	0	5	7	13	126	16	155	4	0	4	8	11	240	15	266	436
08:45 AM	4	1	4	9	11	120	11	142	6	1	10	17	13	205	15	233	401
Total	11	4	20	35	40	585	53	678	24	3	24	51	55	961	50	1066	1830
04:00 PM	4	1	11	16	19	228	9	256	9	2	9	20	9	182	0	191	483
04:15 PM	6	4	15	25	16	247	11	274	10	4	4	18	13	169	12	194	511
04:30 PM	2	2	20	24	18	245	10	273	16	4	5	25	10	183	20	213	535
04:45 PM	4	2	21	27	19	243	9	271	16	5	7	28	9	166	16	191	517
Total	16	9	67	92	72	963	39	1074	51	15	25	91	41	700	48	789	2046
05:00 PM	11	2	20	33	19	239	8	266	11	6	9	26	9	179	8	196	521
05:15 PM	16	3	14	33	21	256	14	291	17	6	8	31	15	145	15	175	530
05:30 PM	13	2	17	32	19	236	15	270	13	5	10	28	15	157	18	190	520
05:45 PM	13	2	19	34	23	200	14	237	10	5	7	22	14	139	19	172	465
Total	53	9	70	132	82	931	51	1064	51	22	34	107	53	620	60	733	2036
Grand Total	92	23	172	287	221	3042	175	3438	145	45	103	293	215	3206	180	3601	7619
Apprch %	32.1	8	59.9		6.4	88.5	5.1		49.5	15.4	35.2		6	89	5		
Total %	1.2	0.3	2.3	3.8	2.9	39.9	2.3	45.1	1.9	0.6	1.4	3.8	2.8	42.1	2.4	47.3	

DE TRAFFIC

http:de-traffic.com
 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 2

Groups Printed- Automobiles - Commercial

	Dike Rd Southbound				US 192 Westbound				Coastal Ln Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
Automobiles	91	23	169	283	219	2992	174	3385	141	43	101	285	208	3159	175	3542	7495
% Automobiles	98.9	100	98.3	98.6	99.1	98.4	99.4	98.5	97.2	95.6	98.1	97.3	96.7	98.5	97.2	98.4	98.4
Commercial	1	0	3	4	2	50	1	53	4	2	2	8	7	47	5	59	124
% Commercial	1.1	0	1.7	1.4	0.9	1.6	0.6	1.5	2.8	4.4	1.9	2.7	3.3	1.5	2.8	1.6	1.6

DE TRAFFIC

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 Dike Rd at US 192
 Brevard County, FL

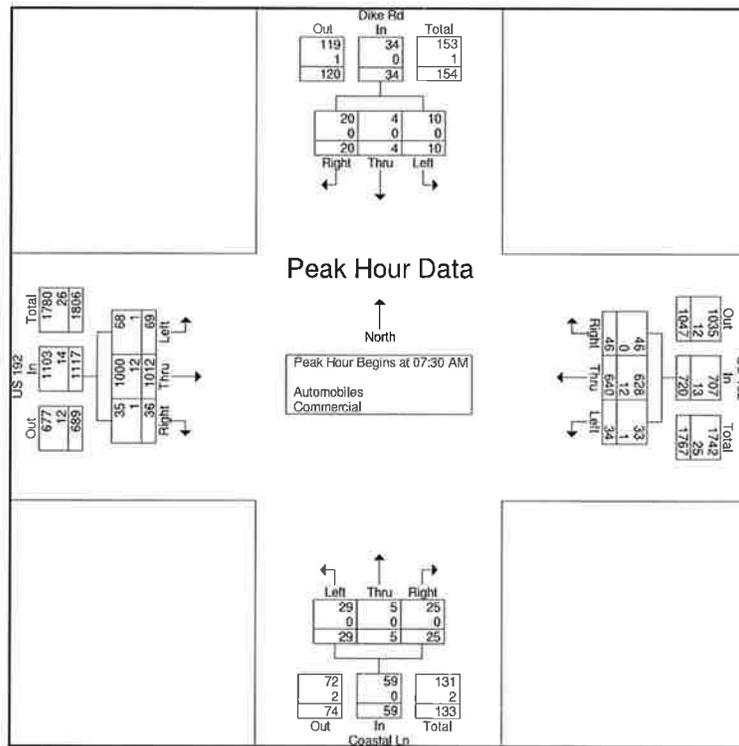
File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 3

Start Time	Dike Rd Southbound				US 192 Westbound				Coastal Ln Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	3	0	5	8	9	158	9	176	6	1	9	16	18	248	7	273	473
07:45 AM	2	1	4	7	9	143	11	163	9	2	6	17	20	248	9	277	464
08:00 AM	3	1	5	9	8	165	10	183	7	0	5	12	16	265	9	290	494
08:15 AM	2	2	6	10	8	174	16	198	7	2	5	14	15	251	11	277	499
Total Volume	10	4	20	34	34	640	46	720	29	5	25	59	69	1012	36	1117	1930
% App. Total	29.4	11.8	58.8		4.7	88.9	6.4		49.2	8.5	42.4		6.2	90.6	3.2		
PHF	.833	.500	.833	.850	.944	.920	.719	.909	.806	.625	.694	.868	.863	.955	.818	.963	.967
Automobiles	10	4	20	34	33	628	46	707	29	5	25	59	68	1000	35	1103	1903
% Automobiles	100	100	100	100	97.1	98.1	100	98.2	100	100	100	100	98.6	98.8	97.2	98.7	98.6
Commercial	0	0	0	0	1	12	0	13	0	0	0	0	1	12	1	14	27
% Commercial	0	0	0	0	2.9	1.9	0	1.8	0	0	0	0	1.4	1.2	2.8	1.3	1.4

DE TRAFFIC

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 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 4



DE TRAFFIC

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 Dike Rd at US 192
 Brevard County, FL

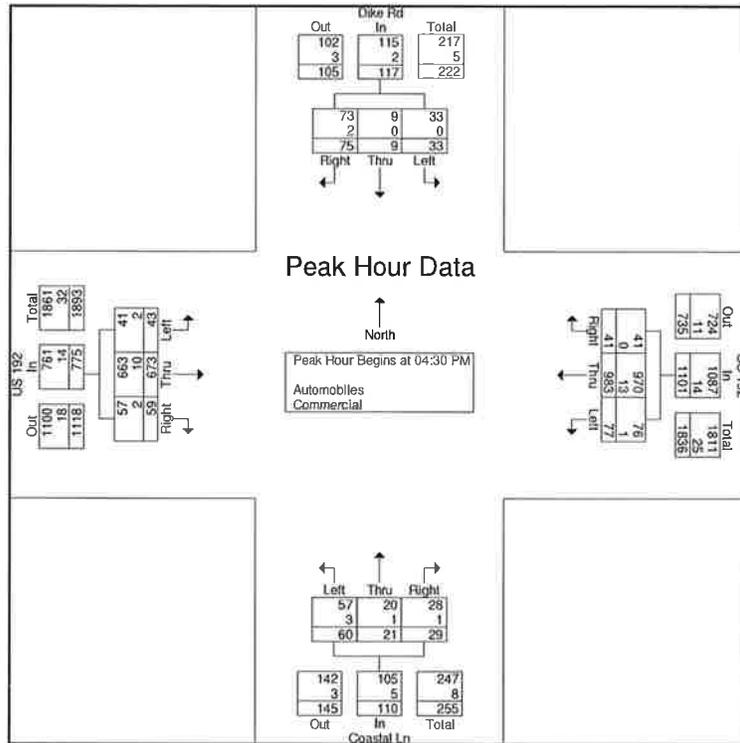
File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 5

Start Time	Dike Rd Southbound				US 192 Westbound				Coastal Ln Northbound				US 192 Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	2	20	24	18	245	10	273	16	4	5	25	10	183	20	213	535
04:45 PM	4	2	21	27	19	243	9	271	16	5	7	28	9	166	16	191	517
05:00 PM	11	2	20	33	19	239	8	266	11	6	9	26	9	179	8	196	521
05:15 PM	16	3	14	33	21	256	14	291	17	6	8	31	15	145	15	175	530
Total Volume	33	9	75	117	77	983	41	1101	60	21	29	110	43	673	59	775	2103
% App. Total	28.2	7.7	64.1		7	89.3	3.7		54.5	19.1	26.4		5.5	86.8	7.6		
PHF	.516	.750	.893	.886	.917	.960	.732	.946	.882	.875	.806	.887	.717	.919	.738	.910	.983
Automobiles	33	9	73	115	76	970	41	1087	57	20	28	105	41	663	57	761	2068
% Automobiles	100	100	97.3	98.3	98.7	98.7	100	98.7	95.0	95.2	96.6	95.5	95.3	98.5	96.6	98.2	98.3
Commercial	0	0	2	2	1	13	0	14	3	1	1	5	2	10	2	14	35
% Commercial	0	0	2.7	1.7	1.3	1.3	0	1.3	5.0	4.8	3.4	4.5	4.7	1.5	3.4	1.8	1.7

DE TRAFFIC

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 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192all
 Site Code : 0000002
 Start Date : 10/19/2017
 Page No : 6



DE TRAFFIC

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 Dike Rd at US 192
 Brevard County, FL

File Name : Dike at 192all
 Site Code : 00000002
 Start Date : 10/19/2017
 Page No : 7

Groups Printed- Peds

Start Time	Dike Rd Southbound					US 192 Westbound					Coastal Ln Northbound					US 192 Eastbound					Int. Total	
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total		
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0			
04:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1
Grand Total	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	3
Apprch %	0	0	0	0		0	0	0	100	100	0	0	0	0		0	0	0	0			
Total %	0	0	0	0		0	0	0	100	100	0	0	0	0		0	0	0	0			



NB Approach



SB Approach



EB Approach



WB Approach



John Rodes Blvd
at US 192

Brevard County

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299 McGregor Rd. DeLand Fl. 32720

Project
Number: L17-058

Sheet
Number: 4



NB Approach



SB Approach



EB Approach



WB Approach



John Rodes Blvd
at Sheridan Rd

Brevard County

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299 McGregor Rd. DeLand Fl. 32720

Project
Number: L17-058

Sheet
Number: 5



NB Approach



SB Approach



WB Approach



John Rodes Blvd
at Ellis Rd

Brevard County

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299 McGregor Rd. DeLand Fl. 32720

Project
Number: L17-058

Sheet
Number: 6



SB Approach



EB Approach



WB Approach



I-95 SB Ramp
at US 192

Brevard County

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299 McGregor Rd. DeLand Fl. 32720

Project
Number: L17-058

Sheet
Number: 1



NB Approach



EB Approach



WB Approach



I-95 NB Ramp
at US 192

Brevard County

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299 McGregor Rd. DeLand Fl. 32720

Project
Number: L17-058

Sheet
Number: 2



NB Approach



SB Approach



EB Approach



WB Approach



Dike Rd
at US 192

Brevard County

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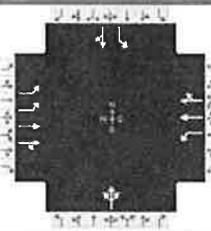
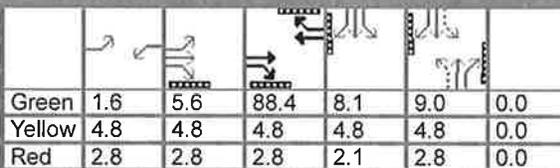
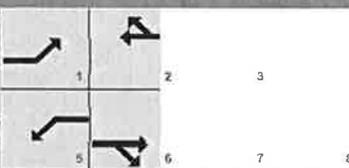
299 McGregor Rd. DeLand Fl. 32720

Project
Number: L17-058

Sheet
Number: 3

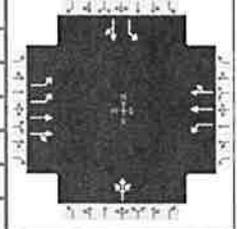
APPENDIX D
HCS SUMMARY SHEETS – EXISTING
CONDITIONS

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other										
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00										
Urban Street	US 192	Analysis Year	2018	Analysis Period	1 > 7:00										
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - AM Existing.xus												
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				411	757	3	9	707	169	19	7	23	114	3	210
Signal Information															
Cycle, s	150.0	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	1.6	5.6	88.4	8.1	9.0	0.0									
Yellow	4.8	4.8	4.8	4.8	4.8	0.0									
Red	2.8	2.8	2.8	2.1	2.8	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				1	6	5	2		4	3	8				
Case Number				2.0	4.0	2.0	4.0		8.3	1.0	4.0				
Phase Duration, s				22.4	109.2	9.2	96.0		16.6	15.0	31.6				
Change Period, ($Y+R_c$), s				7.6	7.6	7.6	7.6		7.6	6.9	7.6				
Max Allow Headway (MAH), s				4.0	0.0	4.0	0.0		4.3	4.0	4.3				
Queue Clearance Time (g_s), s				16.7		2.9			8.8	10.1	21.5				
Green Extension Time (g_e), s				0.0	0.0	0.0	0.0		0.2	0.0	0.4				
Phase Call Probability				1.00		0.31			1.00	0.99	1.00				
Max Out Probability				1.00		0.00			1.00	1.00	0.70				
Movement Group Results				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h				411	380	380	9	453	423		49		114	213	
Adjusted Saturation Flow Rate (s), veh/h/ln				1716	1870	1868	1499	1870	1745		1153		1781	1588	
Queue Service Time (g_s), s				14.7	12.4	12.4	0.9	19.7	19.7		2.3		8.1	19.5	
Cycle Queue Clearance Time (g_c), s				14.7	12.4	12.4	0.9	19.7	19.7		6.8		8.1	19.5	
Green Ratio (g/C)				0.10	0.68	0.68	0.01	0.59	0.59		0.06		0.13	0.16	
Capacity (c), veh/h				337	1267	1265	16	1102	1028		103		165	255	
Volume-to-Capacity Ratio (X)				1.218	0.300	0.300	0.576	0.411	0.411		0.477		0.691	0.837	
Back of Queue (Q), ft/ln (95 th percentile)				489.7	217.9	214.6	24.8	335.4	313.2		88.1		203.4	354.2	
Back of Queue (Q), veh/ln (95 th percentile)				19.1	8.6	8.6	0.8	13.2	12.5		3.5		8.0	13.9	
Queue Storage Ratio (RQ) (95 th percentile)				0.82	0.00	0.00	0.15	0.00	0.00		0.00		0.00	0.00	
Uniform Delay (d_1), s/veh				67.6	9.8	9.8	73.9	16.7	16.7		69.2		62.1	61.1	
Incremental Delay (d_2), s/veh				122.1	0.6	0.6	29.3	1.1	1.2		3.4		11.6	18.2	
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	
Control Delay (d), s/veh				189.7	10.4	10.4	103.2	17.8	17.9		72.6		73.7	79.2	
Level of Service (LOS)				F	B	B	F	B	B		E		E	E	
Approach Delay, s/veh / LOS				73.3		E	18.7		B	72.6		E	77.3		E
Intersection Delay, s/veh / LOS				54.0						D					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				1.65		B	2.09		B	2.33		B	2.47		B
Bicycle LOS Score / LOS				1.45		A	1.22		A	0.57		A	1.03		A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2018	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - PM Existing.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	207	587	18	28	610	130	6	3	9	276	7	658

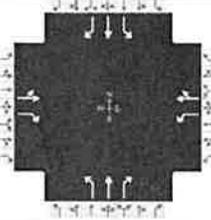
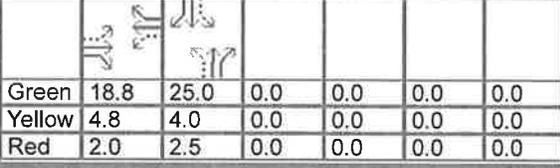
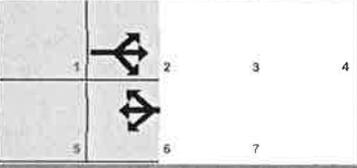
Signal Information													
Cycle, s	140.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	3.3	7.1	62.4	20.1	17.4	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	0.0	4.8	4.8	4.8	0.0			
				Red	2.8	0.0	2.8	2.1	2.8	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	18.0	77.1	10.9	70.0		25.0	27.0	52.0
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	10.2		4.2			19.4	20.4	46.4
Green Extension Time (g _e), s	0.2	0.0	0.0	0.0		0.0	0.0	0.0
Phase Call Probability	1.00		0.66			1.00	1.00	1.00
Max Out Probability	1.00		0.74			1.00	1.00	1.00

Movement Group Results	EB			WB			NB			SB			
	L	T	R	L	T	R	L	T	R	L	T	R	
Approach Movement													
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18	
Adjusted Flow Rate (v), veh/h	207	304	301	28	381	359		18		276	665		
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1856	1836	1781	1856	1742		383		1781	1588		
Queue Service Time (g _s), s	8.2	13.8	13.8	2.2	20.1	20.1		0.0		18.4	44.4		
Cycle Queue Clearance Time (g _c), s	8.2	13.8	13.8	2.2	20.1	20.1		17.4		18.4	44.4		
Green Ratio (g/C)	0.07	0.50	0.50	0.02	0.45	0.45		0.12		0.28	0.32		
Capacity (c), veh/h	257	921	911	42	827	776		82		307	504		
Volume-to-Capacity Ratio (X)	0.806	0.330	0.330	0.663	0.461	0.462		0.220		0.898	1.321		
Back of Queue (Q), ft/ln (95 th percentile)	183.6	259.1	251.3	53.5	358	334.1		26.8		394.2	1469.4		
Back of Queue (Q), veh/ln (95 th percentile)	7.2	10.1	10.1	2.1	14.0	13.4		1.1		15.5	57.8		
Queue Storage Ratio (RQ) (95 th percentile)	0.31	0.00	0.00	0.32	0.00	0.00		0.00		0.00	0.00		
Uniform Delay (d ₁), s/veh	63.8	21.2	21.2	67.8	27.1	27.1		54.9		44.0	47.8		
Incremental Delay (d ₂), s/veh	12.5	1.0	1.0	16.4	1.8	2.0		1.3		27.3	157.8		
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		
Control Delay (d), s/veh	76.3	22.2	22.2	84.2	28.9	29.1		56.2		71.3	205.6		
Level of Service (LOS)	E	C	C	F	C	C		E		E	F		
Approach Delay, s/veh / LOS	36.0		D	31.0		C		56.2		E	166.2		F
Intersection Delay, s/veh / LOS	82.9						F						

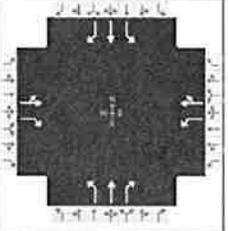
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.69	B	2.11	B	2.32	B	2.45	B
Bicycle LOS Score / LOS	1.16	A	1.12	A	0.52	A	2.04	B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other										
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00										
Urban Street	John Rodes Blvd	Analysis Year	2017	Analysis Period	1 > 7:00										
Intersection	John Rodes Blvd at She...	File Name	2. John Rodes Blvd at Sheridan Rd - AM Existing...												
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				67	18	60	103	9	132	23	849	53	43	200	24
Signal Information															
Cycle, s	57.1	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	18.8	25.0	0.0	0.0	0.0	0.0									
Yellow	4.8	4.0	0.0	0.0	0.0	0.0									
Red	2.0	2.5	0.0	0.0	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					2		6		8		4				
Case Number					7.0		6.0		5.0		5.0				
Phase Duration, s					25.6		25.6		31.5		31.5				
Change Period, ($Y+R_c$), s					6.8		6.8		6.5		6.5				
Max Allow Headway (MAH), s					7.3		7.3		4.0		4.0				
Queue Clearance Time (g_s), s					9.5		14.2		27.0		27.0				
Green Extension Time (g_e), s					4.8		4.7		0.0		0.0				
Phase Call Probability					1.00		1.00		1.00		1.00				
Max Out Probability					0.00		0.01		1.00		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				85	49	103	141			23	849	2	43	200	0
Adjusted Saturation Flow Rate (s), veh/h/ln				1013	1585	1395	1309			1182	1870	1585	644	1767	1585
Queue Service Time (g_s), s				2.2	1.2	3.7	4.6			0.7	25.0	0.0	0.3	4.1	0.0
Cycle Queue Clearance Time (g_c), s				7.5	1.2	12.2	4.6			4.6	25.0	0.0	25.0	4.1	0.0
Green Ratio (g/C)				0.33	0.33	0.33	0.33			0.44	0.44	0.44	0.44	0.44	0.44
Capacity (c), veh/h				446	520	377	430			564	820	695	130	775	695
Volume-to-Capacity Ratio (X)				0.191	0.094	0.273	0.328			0.041	1.035	0.003	0.330	0.258	0.000
Back of Queue (Q), ft/ln (95 th percentile)				41.7	19.8	58.1	76.5			7.1	622.2	0.5	26.7	59.7	0
Back of Queue (Q), veh/ln (95 th percentile)				1.6	0.8	2.3	2.6			0.3	24.5	0.0	1.0	2.2	0.0
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.18	0.31	0.00			0.03	0.00	0.00	0.10	0.00	0.00
Uniform Delay (d_1), s/veh				16.2	13.3	20.7	14.4			11.5	16.0	9.0	28.5	10.1	0.0
Incremental Delay (d_2), s/veh				0.7	0.3	1.4	1.6			0.0	40.9	0.0	1.5	0.2	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				17.0	13.6	22.1	16.0			11.6	56.9	9.0	30.0	10.3	0.0
Level of Service (LOS)				B	B	C	B			B	F	A	C	B	
Approach Delay, s/veh / LOS				15.7	B	18.6	B			55.6	E	13.8	B		
Intersection Delay, s/veh / LOS				39.2						D					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				2.16	B	2.12	B	1.89	B	1.90	B				
Bicycle LOS Score / LOS				0.71	A	0.89	A	1.93	B	0.89	A				

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2017	Analysis Period	1> 7:00		
Intersection	John Rodes Blvd at She...	File Name	2. John Rodes Blvd at Sheridan Rd - PM Existing....				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	27	11	60	65	20	60	50	344	120	85	555	50

Signal Information													
Cycle, s	37.9	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	8.0	16.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

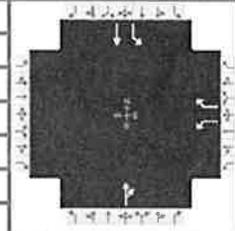
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		7.0		6.0		5.0		5.0
Phase Duration, s		14.8		14.8		23.1		23.1
Change Period, (Y+R _c), s		6.8		6.8		6.5		6.5
Max Allow Headway (MAH), s		7.3		7.3		4.1		4.1
Queue Clearance Time (g _s), s		3.5		5.0		12.9		11.0
Green Extension Time (g _e), s		2.7		2.6		3.8		4.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		0.27		0.20

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		38	35	65	80		50	344	88	85	555	37
Adjusted Saturation Flow Rate (s), veh/h/ln		1275	1585	1404	1648		854	1826	1585	1037	1870	1585
Queue Service Time (g _s), s		0.0	0.7	1.5	1.5		1.9	4.9	1.3	2.3	9.0	0.5
Cycle Queue Clearance Time (g _c), s		1.5	0.7	3.0	1.5		10.9	4.9	1.3	7.4	9.0	0.5
Green Ratio (g/C)		0.21	0.21	0.21	0.21		0.44	0.44	0.44	0.44	0.44	0.44
Capacity (c), veh/h		432	335	434	349		359	798	693	506	817	693
Volume-to-Capacity Ratio (X)		0.088	0.104	0.150	0.230		0.139	0.431	0.127	0.168	0.679	0.053
Back of Queue (Q), ft/ln (95 th percentile)		12	10.9	21.2	26.1		12.5	50.3	10.8	16.9	95.7	4.4
Back of Queue (Q), veh/ln (95 th percentile)		0.4	0.4	0.8	1.0		0.5	1.9	0.4	0.7	3.8	0.2
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.10	0.11	0.00		0.05	0.00	0.04	0.06	0.00	0.02
Uniform Delay (d ₁), s/veh		12.0	12.0	13.6	12.4		12.9	7.4	6.3	10.0	8.5	6.1
Incremental Delay (d ₂), s/veh		0.3	0.5	0.6	1.2		0.2	0.4	0.1	0.2	1.0	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		12.3	12.5	14.1	13.6		13.1	7.8	6.4	10.1	9.5	6.2
Level of Service (LOS)		B	B	B	B		B	A	A	B	A	A
Approach Delay, s/veh / LOS	12.4		B	13.8		B	8.1		A	9.4		A
Intersection Delay, s/veh / LOS				9.6						A		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.13	B	2.11	B	1.87	B	1.90	B
Bicycle LOS Score / LOS	0.61	A	0.73	A	1.28	A	1.60	B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - AM Existing.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				70		167		711	203	224	220	

Signal Information													
Cycle, s	85.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap EW	On	Green	7.5	45.3	12.0	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0			
				Red	2.0	2.0	2.5	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				18.5		52.1	14.3	66.5
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				10.9		43.2	6.9	5.5
Green Extension Time (g _e), s				1.1		2.0	0.6	3.9
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				0.00		0.50	0.00	0.00

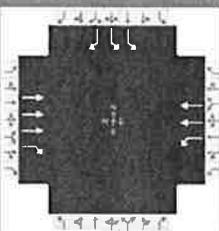
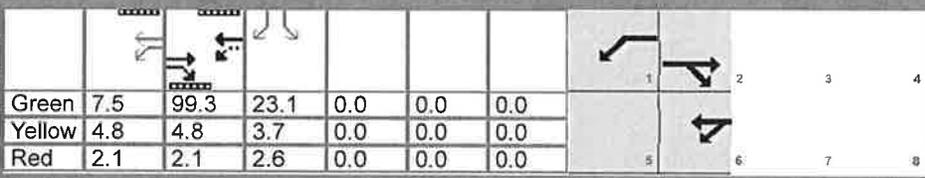
Movement Group Results	EB			WB			NB			SB			
	L	T	R	L	T	R	L	T	R	L	T	R	
Assigned Movement				7		14		6	16	5		2	
Adjusted Flow Rate (v), veh/h				70		167		914		224		220	
Adjusted Saturation Flow Rate (s), veh/h/ln				1781		1535		1798		1781		1826	
Queue Service Time (g _s), s				3.0		8.9		41.2		4.9		3.5	
Cycle Queue Clearance Time (g _c), s				3.0		8.9		41.2		4.9		3.5	
Green Ratio (g/C)				0.14		0.14		0.53		0.65		0.70	
Capacity (c), veh/h				253		218		959		273		1283	
Volume-to-Capacity Ratio (X)				0.277		0.767		0.953		0.820		0.172	
Back of Queue (Q), ft/ln (95 th percentile)				59.7		171.3		645.9		119.9		41.9	
Back of Queue (Q), veh/ln (95 th percentile)				2.4		6.5		25.4		4.7		1.6	
Queue Storage Ratio (RQ) (95 th percentile)				0.15		0.00		0.00		0.31		0.00	
Uniform Delay (d ₁), s/veh				32.7		35.3		18.9		20.7		4.3	
Incremental Delay (d ₂), s/veh				0.7		6.7		16.5		6.0		0.0	
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0		0.0	
Control Delay (d), s/veh				33.4		42.0		35.4		26.7		4.3	
Level of Service (LOS)				C		D		D		C		A	
Approach Delay, s/veh / LOS	0.0			39.5		D		35.4		D		15.6	B
Intersection Delay, s/veh / LOS				30.5				C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.73	B	1.95	B	1.89	B	0.65	A
Bicycle LOS Score / LOS				F	2.00	B	1.22	A

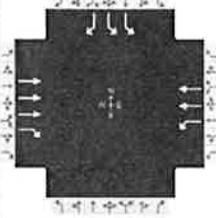
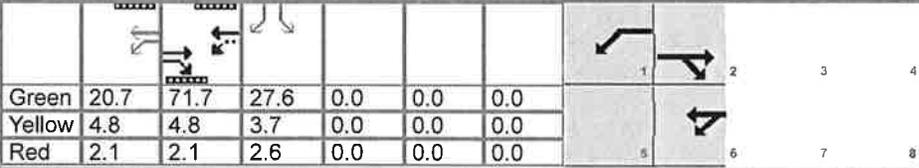
HCS7 Signalized Intersection Results Summary

General Information						Intersection Information									
Agency	LGT					Duration, h	0.25								
Analyst	ACP		Analysis Date	May 7, 2018		Area Type	Other								
Jurisdiction	Brevard		Time Period	PM Peak Hour		PHF	1.00								
Urban Street	John Rodes Blvd		Analysis Year	2017		Analysis Period	1 > 7:00								
Intersection	John Rodes Blvd at Ellis...		File Name	4. John Rodes Blvd at Ellis Rd - PM Existing.xus											
Project Description	4397.02														
Demand Information						EB		WB		NB		SB			
Approach Movement	L		T		R	L	T	R	L	T	R	L	T	R	
Demand (v), veh/h						129		209		311	86	146	568		
Signal Information															
Cycle, s	49.1	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	Yes	Simult. Gap E/W	On			Green	4.3	15.0	9.7	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On			Yellow	4.8	4.8	4.0	0.0	0.0	0.0			
						Red	2.0	2.0	2.5	0.0	0.0	0.0			
Timer Results						EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT		
Assigned Phase									4		6	5	2		
Case Number									9.0		8.3	1.0	4.0		
Phase Duration, s									16.2		21.8	11.1	32.9		
Change Period, (Y+R _c), s									6.5		6.8	6.8	6.8		
Max Allow Headway (MAH), s									4.8		3.5	4.0	3.5		
Queue Clearance Time (g _s), s									8.1		11.6	4.5	12.0		
Green Extension Time (g _e), s									1.6		2.7	0.4	2.7		
Phase Call Probability									0.99		1.00	0.86	1.00		
Max Out Probability									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						7		14		6	16	5	2		
Adjusted Flow Rate (v), veh/h						129		209		397		146	568		
Adjusted Saturation Flow Rate (s), veh/h/ln						1739		1560		1800		1781	1870		
Queue Service Time (g _s), s						3.2		6.1		9.6		2.5	10.0		
Cycle Queue Clearance Time (g _c), s						3.2		6.1		9.6		2.5	10.0		
Green Ratio (g/C)						0.20		0.20		0.31		0.43	0.53		
Capacity (c), veh/h						342		307		550		411	995		
Volume-to-Capacity Ratio (X)						0.377		0.680		0.721		0.355	0.571		
Back of Queue (Q), ft/ln (95 th percentile)						54.8		100.2		146.5		32.6	109.5		
Back of Queue (Q), veh/ln (95 th percentile)						2.1		3.9		5.8		1.3	4.3		
Queue Storage Ratio (RQ) (95 th percentile)						0.14		0.00		0.00		0.08	0.00		
Uniform Delay (d ₁), s/veh						17.1		18.3		15.2		10.2	7.7		
Incremental Delay (d ₂), s/veh						0.8		3.2		1.3		0.5	0.4		
Initial Queue Delay (d ₃), s/veh						0.0		0.0		0.0		0.0	0.0		
Control Delay (d), s/veh						17.9		21.5		16.5		10.7	8.1		
Level of Service (LOS)						B		C		B		B	A		
Approach Delay, s/veh / LOS	0.0					20.1		C		16.5		B	8.6	A	
Intersection Delay, s/veh / LOS						13.5				B					
Multimodal Results						EB		WB		NB		SB			
Pedestrian LOS Score / LOS	1.71		B			1.94		B		1.90		B	0.67	A	
Bicycle LOS Score / LOS								F		1.14		A	1.67	B	

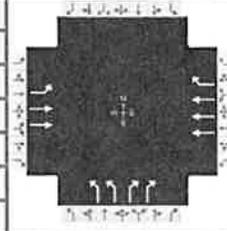
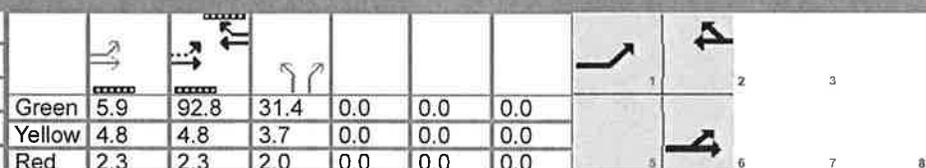
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other										
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00										
Urban Street	US 192	Analysis Year	2018	Analysis Period	1 > 7:00										
Intersection	US 192 at SB I-95	File Name	5. US 192 at SB I-95 - AM Existing.xus												
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h					217	163	163	220					447		92
Signal Information															
Cycle, s	150.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	No	Simult. Gap E/W	On												
Force Mode	Fixed	Simult. Gap N/S	On												
Green	7.5	99.3	23.1	0.0	0.0	0.0									
Yellow	4.8	4.8	3.7	0.0	0.0	0.0									
Red	2.1	2.1	2.6	0.0	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					2	1	6				4				
Case Number					7.3	1.0	4.0				9.0				
Phase Duration, s					106.2	14.4	120.6				29.4				
Change Period, (Y+R c), s					6.9	6.9	6.9				6.3				
Max Allow Headway (MAH), s					0.0	6.1	0.0				4.2				
Queue Clearance Time (g s), s						6.1					20.8				
Green Extension Time (g e), s					0.0	1.4	0.0				2.2				
Phase Call Probability						1.00					1.00				
Max Out Probability						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					2	12	1	6					7		14
Adjusted Flow Rate (v), veh/h					217	163	163	220					447		92
Adjusted Saturation Flow Rate (s), veh/h/ln					1618	1585	1781	1710					1730		1497
Queue Service Time (g s), s					2.4	5.8	4.1	2.5					18.8		8.3
Cycle Queue Clearance Time (g c), s					2.4	5.8	4.1	2.5					18.8		8.3
Green Ratio (g/C)					0.66	0.66	0.73	0.76					0.15		0.15
Capacity (c), veh/h					3213	1049	890	2593					532		230
Volume-to-Capacity Ratio (X)					0.068	0.155	0.183	0.085					0.840		0.400
Back of Queue (Q), ft/ln (95 th percentile)					40.3	95.3	70.3	40					338.1		155.5
Back of Queue (Q), veh/ln (95 th percentile)					1.5	3.8	2.8	1.5					13.3		5.8
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					9.0	9.5	6.3	4.7					61.7		57.2
Incremental Delay (d 2), s/veh					0.0	0.3	0.2	0.1					3.7		1.1
Initial Queue Delay (d 3), s/veh					0.0	0.0	0.0	0.0					0.0		0.0
Control Delay (d), s/veh					9.0	9.9	6.5	4.7					65.3		58.3
Level of Service (LOS)					A	A	A	A					E		E
Approach Delay, s/veh / LOS				9.4	A	5.5	A	0.0				64.2		E	
Intersection Delay, s/veh / LOS				30.9						C					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				1.37	A	1.86	B	2.49	B	2.49	B				
Bicycle LOS Score / LOS				0.70	A	0.80	A					F			

HCS7 Signalized Intersection Results Summary

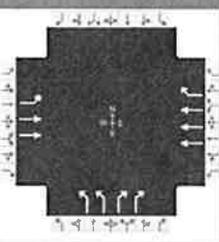
General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other										
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00										
Urban Street	US 192	Analysis Year	2018	Analysis Period	1 > 7:00										
Intersection	US 192 at SB I-95	File Name	5. US 192 at SB I-95 - PM Existing.xus												
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand (v), veh/h		189	135	427	333					575		182			
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	20.7	71.7	27.6	0.0	0.0	0.0									
Yellow	4.8	4.8	3.7	0.0	0.0	0.0									
Red	2.1	2.1	2.6	0.0	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				2	1	6				4					
Case Number				7.3	1.0	4.0				9.0					
Phase Duration, s				78.6	27.6	106.1				33.9					
Change Period, (Y+R _c), s				6.9	6.9	6.9				6.3					
Max Allow Headway (MAH), s				0.0	6.1	0.0				4.2					
Queue Clearance Time (g _s), s					16.4					24.4					
Green Extension Time (g _e), s				0.0	4.3	0.0				3.1					
Phase Call Probability					1.00					1.00					
Max Out Probability					0.00					0.02					
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					7		14			
Adjusted Flow Rate (v), veh/h		189	135	427	333					575		182			
Adjusted Saturation Flow Rate (s), veh/h/ln		1644	1585	1781	1752					1730		1547			
Queue Service Time (g _s), s		2.7	6.4	14.4	4.3					22.4		15.0			
Cycle Queue Clearance Time (g _c), s		2.7	6.4	14.4	4.3					22.4		15.0			
Green Ratio (g/C)		0.51	0.51	0.67	0.71					0.20		0.20			
Capacity (c), veh/h		2525	811	902	2484					681		305			
Volume-to-Capacity Ratio (X)		0.075	0.166	0.473	0.134					0.844		0.597			
Back of Queue (Q), ft/ln (95 th percentile)		49.7	111.7	239.7	72					387.7		259.1			
Back of Queue (Q), veh/ln (95 th percentile)		1.9	4.4	9.4	2.8					15.3		10.0			
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		17.3	18.2	9.9	6.6					54.2		51.2			
Incremental Delay (d ₂), s/veh		0.1	0.4	0.8	0.1					3.9		1.9			
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0					0.0		0.0			
Control Delay (d), s/veh		17.4	18.7	10.7	6.7					58.0		53.0			
Level of Service (LOS)		B	B	B	A					E		D			
Approach Delay, s/veh / LOS	17.9	B		9.0	A		0.0			56.8	E				
Intersection Delay, s/veh / LOS	30.2						C								
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.39	A		1.87	B		2.48	B		2.48	B				
Bicycle LOS Score / LOS	0.67	A		1.11	A						F				

HCS7 Signalized Intersection Results Summary

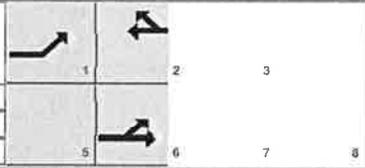
General Information				Intersection Information													
Agency	LTG			Duration, h	0.25												
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other												
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00												
Urban Street	US 192	Analysis Year	2018	Analysis Period	1 > 7:00												
Intersection	US 192 at NB I-95	File Name	6. US 192 at NB I-95 - AM Existing.xus														
Project Description	4397.02																
Demand Information				EB			WB			NB			SB				
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R		
Demand (v), veh/h				111	557			308	511	96		515					
Signal Information																	
Cycle, s	150.0	Reference Phase	2														
Offset, s	0	Reference Point	End	Green	5.9	92.8	31.4	0.0	0.0	0.0							
Uncoordinated	No	Simult. Gap E/W	On	Yellow	4.8	4.8	3.7	0.0	0.0	0.0							
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.3	2.3	2.0	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		7.3		9.0								
Phase Duration, s				13.0	112.9		99.9		37.1								
Change Period, (Y+R _c), s				7.1	7.1		7.1		5.7								
Max Allow Headway (MAH), s				5.0	0.0		0.0		6.2								
Queue Clearance Time (g _s), s				5.4					28.7								
Green Extension Time (g _e), s				0.5	0.0		0.0		2.7								
Phase Call Probability				0.99					1.00								
Max Out Probability				0.00					0.94								
Movement Group Results				EB			WB			NB			SB				
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R		
Assigned Movement				1	6			2	12	7		14					
Adjusted Flow Rate (v), veh/h				111	557			308	511	96		515					
Adjusted Saturation Flow Rate (s), veh/h/ln				1725	1781			1644	1585	1689		1403					
Queue Service Time (g _s), s				3.4	8.2			3.8	27.2	3.5		26.7					
Cycle Queue Clearance Time (g _c), s				3.4	8.2			3.8	27.2	3.5		26.7					
Green Ratio (g/C)				0.67	0.71			0.62	0.62	0.21		0.21					
Capacity (c), veh/h				731	2512			3053	981	707		587					
Volume-to-Capacity Ratio (X)				0.152	0.222			0.101	0.521	0.136		0.877					
Back of Queue (Q), ft/ln (95 th percentile)				57.9	134.5			64.5	380.5	68.8		397.6					
Back of Queue (Q), veh/ln (95 th percentile)				2.2	5.3			2.5	15.0	2.6		15.7					
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				8.8	7.7			11.6	16.1	48.3		57.4					
Incremental Delay (d ₂), s/veh				0.1	0.2			0.1	2.0	0.2		13.4					
Initial Queue Delay (d ₃), s/veh				0.0	0.0			0.0	0.0	0.0		0.0					
Control Delay (d), s/veh				8.9	7.9			11.7	18.0	48.4		70.9					
Level of Service (LOS)				A	A			B	B	D		E					
Approach Delay, s/veh / LOS				8.1	A		15.7	B		67.3	E		0.0				
Intersection Delay, s/veh / LOS				28.3						C							
Multimodal Results				EB			WB			NB			SB				
Pedestrian LOS Score / LOS				2.06	B		1.38	A		2.49	B		2.49	B			
Bicycle LOS Score / LOS				1.04	A		0.94	A		F							

HCS7 Signalized Intersection Results Summary

General Information						Intersection Information					
Agency	LTG					Duration, h	0.25				
Analyst	ACP		Analysis Date	Aug 31, 2018		Area Type	Other				
Jurisdiction	Brevard		Time Period	PM Peak Hour		PHF	1.00				
Urban Street	US 192		Analysis Year	2018		Analysis Period	1 > 7:00				
Intersection	US 192 at NB I-95		File Name	6. US 192 at NB I-95 - PM Existing.xus							
Project Description	4397.02										



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	101	587			630	608	135		164			

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	4.9	104.0	11.2	0.0	0.0	0.0					
	Yellow	4.8	4.8	3.7	0.0	0.0	0.0					
	Red	2.3	2.3	2.0	0.0	0.0	0.0					

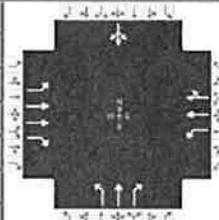
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		7.3		9.0		
Phase Duration, s	12.0	123.1		111.1		16.9		
Change Period, (Y+R _c), s	7.1	7.1		7.1		5.7		
Max Allow Headway (MAH), s	5.0	0.0		0.0		6.2		
Queue Clearance Time (g _s), s	3.9					10.0		
Green Extension Time (g _e), s	0.5	0.0		0.0		1.2		
Phase Call Probability	0.98					1.00		
Max Out Probability	0.00					0.95		

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6			2	12	7		14			
Adjusted Flow Rate (v), veh/h	101	587			630	608	135		164			
Adjusted Saturation Flow Rate (s), veh/h/ln	1668	1781			1685	1585	1702		1403			
Queue Service Time (g _s), s	1.9	4.7			5.1	22.4	5.3		8.0			
Cycle Queue Clearance Time (g _c), s	1.9	4.7			5.1	22.4	5.3		8.0			
Green Ratio (g/C)	0.79	0.83			0.74	0.74	0.08		0.08			
Capacity (c), veh/h	637	2951			3756	1178	272		224			
Volume-to-Capacity Ratio (X)	0.159	0.199			0.168	0.516	0.497		0.733			
Back of Queue (Q), ft/ln (95 th percentile)	24.7	52.4			72.8	284	110.4		141.8			
Back of Queue (Q), veh/ln (95 th percentile)	0.9	2.1			2.8	11.2	4.3		5.6			
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	3.4	2.5			5.3	7.5	61.7		63.0			
Incremental Delay (d ₂), s/veh	0.2	0.2			0.1	1.6	3.0		9.5			
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (d), s/veh	3.6	2.6			5.4	9.1	64.7		72.4			
Level of Service (LOS)	A	A			A	A	E		E			
Approach Delay, s/veh / LOS	2.8	A		7.2	A	69.0	E		0.0			
Intersection Delay, s/veh / LOS	14.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.02	B	1.34	A	2.48	B	2.48	B
Bicycle LOS Score / LOS	1.06	A	1.17	A	F			

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	US 192 at Coastal Ln	File Name	7. US 192 at Coastal Ln - AM Existing.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	76	1119	40	38	707	51	32	6	28	11	4	22

Signal Information				Signal Timing (s)						Signal Phases			
Cycle, s	150.0	Reference Phase	2	Green	4.0	0.8	116.3	8.5	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	4.8	0.0	4.8	3.7	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap EW	On	Red	2.7	0.0	2.0	2.4	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On										

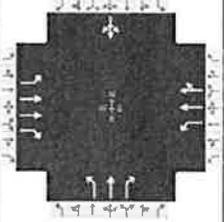
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	12.3	124.0	11.5	123.1		14.6		14.6
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3		4.3
Queue Clearance Time (g _s), s	3.3		2.7			8.6		5.2
Green Extension Time (g _e), s	0.2	0.0	0.0	0.0		0.1		0.2
Phase Call Probability	0.96		0.79			0.97		0.97
Max Out Probability	0.00		0.00			0.02		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	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	76	1119	24	38	383	375	32	6	9		37	
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1781	1572	1767	1870	1826	1385	1870	1585		1602	
Queue Service Time (g _s), s	1.3	15.1	0.5	0.7	8.7	8.7	3.4	0.5	0.8		0.2	
Cycle Queue Clearance Time (g _c), s	1.3	15.1	0.5	0.7	8.7	8.7	6.6	0.5	0.8		3.2	
Green Ratio (g/C)	0.81	0.78	0.78	0.80	0.78	0.78	0.06	0.06	0.06		0.06	
Capacity (c), veh/h	612	2781	1228	428	1450	1416	97	106	90		122	
Volume-to-Capacity Ratio (X)	0.124	0.402	0.020	0.089	0.264	0.265	0.329	0.057	0.100		0.304	
Back of Queue (Q), ft/ln (95 th percentile)	16.8	210.5	6.7	8.8	135.3	130.8	58.2	10.3	15.6		65.2	
Back of Queue (Q), veh/ln (95 th percentile)	0.7	8.3	0.3	0.3	5.3	5.2	2.3	0.4	0.6		2.6	
Queue Storage Ratio (RQ) (95 th percentile)	0.04	0.00	0.02	0.02	0.00	0.00	0.21	0.00	0.07		0.00	
Uniform Delay (d ₁), s/veh	3.2	5.3	3.7	4.0	4.8	4.8	71.4	67.0	67.1		68.2	
Incremental Delay (d ₂), s/veh	0.1	0.4	0.0	0.1	0.4	0.5	1.9	0.2	0.5		1.4	
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	
Control Delay (d), s/veh	3.3	5.7	3.7	4.1	5.2	5.2	73.3	67.2	67.6		69.6	
Level of Service (LOS)	A	A	A	A	A	A	E	E	E		E	
Approach Delay, s/veh / LOS	5.5		A	5.2		A	71.5		E	69.6		E
Intersection Delay, s/veh / LOS	8.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.07	B	1.63	B	2.33	B	2.50	C
Bicycle LOS Score / LOS	1.49	A	1.14	A	0.57	A	0.55	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2017	Analysis Period	1 > 7:00		
Intersection	US 192 at Coastal Ln	File Name	7. US 192 at Coastal Ln - PM Existing.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	48	744	65	85	1086	45	66	23	32	36	10	83

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														
Force Mode	Fixed	Simult. Gap N/S	On														
		Green		4.2	0.6	95.9	18.9	0.0	0.0								
		Yellow		4.8	0.0	4.8	3.7	0.0	0.0								
		Red		2.7	0.0	2.0	2.4	0.0	0.0								

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	11.7	102.7	12.3	103.3		25.0		25.0
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3		4.3
Queue Clearance Time (g _s), s	3.1		4.0			19.8		12.6
Green Extension Time (g _e), s	0.0	0.0	0.1	0.0		0.0		0.4
Phase Call Probability	0.85		0.96			1.00		1.00
Max Out Probability	0.18		0.01			1.00		0.29

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	48	744	32	85	569	562	66	23	0		129	
Adjusted Saturation Flow Rate (s), veh/h/ln	1739	1781	1572	1781	1870	1844	1272	1826	1572		1574	
Queue Service Time (g _s), s	1.1	11.7	0.9	2.0	19.1	19.1	7.2	1.5	0.0		6.1	
Cycle Queue Clearance Time (g _c), s	1.1	11.7	0.9	2.0	19.1	19.1	17.8	1.5	0.0		10.6	
Green Ratio (g/C)	0.72	0.68	0.68	0.72	0.69	0.69	0.13	0.13	0.13		0.13	
Capacity (c), veh/h	366	2439	1077	544	1289	1271	127	246	212		245	
Volume-to-Capacity Ratio (X)	0.131	0.305	0.030	0.156	0.442	0.442	0.521	0.093	0.000		0.526	
Back of Queue (Q), ft/ln (95 th percentile)	18	192.1	13.8	30.8	300.3	292.9	116.1	34.1	0		201.1	
Back of Queue (Q), veh/ln (95 th percentile)	0.7	7.6	0.5	1.2	11.8	11.7	4.5	1.3	0.0		7.9	
Queue Storage Ratio (RQ) (95 th percentile)	0.04	0.00	0.04	0.08	0.00	0.00	0.41	0.00	0.00		0.00	
Uniform Delay (d ₁), s/veh	7.5	8.8	7.1	6.3	9.7	9.7	65.4	53.0	0.0		56.9	
Incremental Delay (d ₂), s/veh	0.2	0.3	0.1	0.1	1.1	1.1	3.8	0.2	0.0		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	
Control Delay (d), s/veh	7.7	9.1	7.1	6.5	10.8	10.8	69.2	53.2	0.0		58.9	
Level of Service (LOS)	A	A	A	A	B	B	E	D			E	
Approach Delay, s/veh / LOS	9.0		A	10.5		B	65.0		E	58.9		E
Intersection Delay, s/veh / LOS	14.9						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.11	B	1.65	B	2.32	B	2.52	C
Bicycle LOS Score / LOS	1.17	A	1.49	A	0.63	A	0.70	A

APPENDIX E

SIGNAL TIMINGS

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green		8		5		8		5
Gap, Ext		6		3		6		3
Max 1		50		25		50		25
Max 2		50		50		50		50
Yel Clearance		4.8		4		4.8		4
Red Clearance		2		2.5		2		2.5
Walk		7						7
Ped Clearance		20						15
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Auto Flash Parm [1.4.1]

Flash Parameter	Clearance Time
Mode	CHANNEL Yellow 35
	Red 15

Auto Flash, Phases/Overlaps [1.4.2]

Yel (phases)								
Yel (overlaps)								

**John Rodes Blvd & Sheridan (ID 349) (Standard File)
10/16/17**

Phase Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable		1		1		1		1
Min Recall		1				1		
Max Recall		1				1		
Ped Recall								
Soft Recall								
Lock Calls		1				1		
Auto Flash Entry				1				1
Auto Flash Exit		1				1		
Dual Entry		1		1		1		1
Enable Simul Gap		1		1		1		1
Gaurant Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Phase Options+ [1.1.3]

Reservice								
Walk Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Conflicting Phase								
Conflicting Phase	#N/A							
Omit Yellow								
Ped Out/Olap								
Start Yel, Next Ph								

Inhibit Phases [1.1.5]

Phase	Inhibit Phases							
	1	2	3	4	5	6	7	8
1								
2								
3								
4								
5								
6								
7								
8								

Call Phases, Call Redirection [1.1.5]

Phase	Call Phases				Redirection			
					From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Overlap Program Parameters [1.5.2.1]

	Extend Green	Yellow	Red	Type
Overlap A(1)	4	3.5	1	#NAME?
Overlap B(2)		3.5	1.5	NORMAL

Overlap Program Parameters [1.5.2.1]

	Extend Green	Yellow	Red	Type
Overlap C(3)		3.5	1.5	NORMAL
Overlap D(4)		3.5	1.5	NORMAL

Overlap A (1) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap C (3) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap B (2) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap D (4) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap Program Parameters [1.5.2.1]

Overlap	Green	Yellow	Red	Type
E(5)		3.5	1.5	NORMAL
F(6)		3.5	1.5	NORMAL
G(7)		3.5	1.5	NORMAL
H(8)		3.5	1.5	NORMAL

Overlap	Green	Yellow	Red	Type
I(9)		3.5	1.5	NORMAL
J(10)		3.5	1.5	NORMAL
K(11)		3.5	1.5	NORMAL
L(12)		3.5	1.5	NORMAL

Overlap	Green	Yellow	Red	Type
M(13)		3.5	1.5	NORMAL
N(14)		3.5	1.5	NORMAL
O(15)		3.5	1.5	NORMAL
P(16)		3.5	1.5	NORMAL

Overlap E (5) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap K (11) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap F (6) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap L (12) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap G (7) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap M (13) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap H (8) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap N (14) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap I (9) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap O (15) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap J (10) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap P (16) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Phase Times [1.1.1]

	1	2	3	4	5	6	7	8
Min Green		15		6	5	15		
Gap, Ext		2.5		3.5	3	2.5		
Max 1		50		35	20	50		
Max 2		50		50	35	50		
Yel Clearance		4.8		4	4.8	4.8		
Red Clearance		2		2.5	2	2		
Walk								
Ped Clearance								
Red Revert								
Add Initial								
Max Initial								
Time B4 Reduct								
Cars B4 Reduct								
Time To Reduce								
Reduce By								
Min Gap								
DyMaxLim								
Max Step								

Phase Options [1.1.2]

	1	2	3	4	5	6	7	8
Enable		1		1	1	1		
Min Recall		1				1		
Max Recall								
Ped Recall								
Soft Recall								
Lock Calls								
Auto Flash Entry				1				
Auto Flash Exit		1				1		
Dual Entry		1				1		
Enable Simul Gap		1				1		
Gaurant Passage								
Rest In Walk								
Conditon Service								
Non-Actuated 1								
Non-Actuated 2								
Add Init Calc								

Phase Options+ [1.1.3]

Reservice								
Walk Thru Yel								
Skip Red No Call								
Red Rest								
Max II								
Conflicting Phase								
Conflicting Phase	#N/A							
Omit Yellow								
Ped Out/Olap								
Start Yel. Next Ph								

Auto Flash Parm [1.4.1]

Flash Parameter	Clearance Time
Mode <input type="text" value="VOT_MON"/> Yellow	45
Red	30

Auto Flash, Phases/Overlaps [1.4.2]

Yel (phases)	2	6						
Yel (overlaps)								

Ellis Rd & John Rode (ID 361) (Standard File)

10/16/17

Inhibit Phases [1.1.5]

Phase	Inhibit Phases							
	1	2	3	4	5	6	7	8
1								
2								
3								
4								
5								
6								
7								
8								

Call Phases, Call Redirection [1.1.5]

Phase	Call Phases				Redirection			
					From	To	From	To
1								
2								
3								
4								
5								
6								
7								
8								

Overlap Program Parameters [1.5.2.1]

	Extend Green	Yellow	Red	Type
Overlap A(1)		3.5	1.5	NORMAL
Overlap B(2)		3.5	1.5	NORMAL

Overlap Program Parameters [1.5.2.1]

	Extend Green	Yellow	Red	Type
Overlap C(3)		3.5	1.5	NORMAL
Overlap D(4)		3.5	1.5	NORMAL

Overlap A (1) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap C (3) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap B (2) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap D (4) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases								
Modifier Phases								
Conflict Phases								
Conflict Overlaps								
Conflicting Peds								

Overlap Program Parameters [1.5.2.1]

Overlap	Green	Yellow	Red	Type
E(5)		3.5	1.5	NORMAL
F(6)		3.5	1.5	NORMAL
G(7)		3.5	1.5	NORMAL
H(8)		3.5	1.5	NORMAL

Overlap	Green	Yellow	Red	Type
I(9)		3.5	1.5	NORMAL
J(10)		3.5	1.5	NORMAL
K(11)		3.5	1.5	NORMAL
L(12)		3.5	1.5	NORMAL

Overlap	Green	Yellow	Red	Type
M(13)		3.5	1.5	NORMAL
N(14)		3.5	1.5	NORMAL
O(15)		3.5	1.5	NORMAL
P(16)		3.5	1.5	NORMAL

Overlap E (5) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap K (11) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap F (6) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap L (12) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap G (7) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap M (13) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap H (8) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap N (14) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap I (9) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap O (15) Program Parameters [1.5.2.1] & [1.5.2.2]

Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap J (10) Program Parameters [1.5.2.1] & [1.5.2.2]

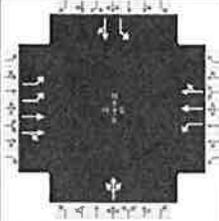
Included Phases																				
Modifier Phases																				
Conflicting Peds																				

Overlap P (16) Program Parameters [1.5.2.1] & [1.5.2.2]

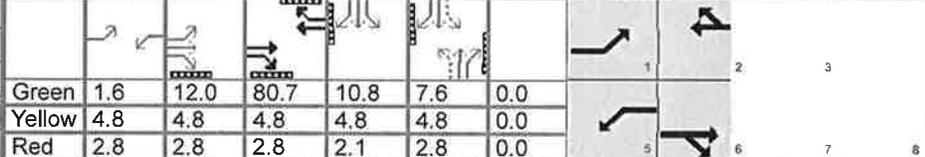
Included Phases																				
Modifier Phases																				
Conflicting Peds																				

APPENDIX F
HCS SUMMARY SHEETS – EXISTING
CONDITIONS WITH IMPROVEMENTS

HCS7 Signalized Intersection Results Summary

General Information					Intersection Information			
Agency	LTG				Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018		Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour		PHF	1.00		
Urban Street	US 192	Analysis Year	2018		Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - AM Existing Impr...					
Project Description	4397.02							

Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	411	757	3	9	707	169	19	7	23	114	3	210

Signal Information													
Cycle, s	150.0	Reference Phase	2	Green	1.6	12.0	80.7	10.8	7.6	0.0	1	2	3
Offset, s	0	Reference Point	End	Yellow	4.8	4.8	4.8	4.8	4.8	0.0	5	6	7
Uncoordinated	No	Simult. Gap E/W	On	Red	2.8	2.8	2.8	2.1	2.8	0.0	8		
Force Mode	Fixed	Simult. Gap N/S	On										

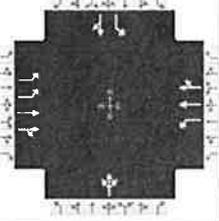
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	28.8	107.9	9.2	88.3		15.2	17.7	32.9
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	19.5		2.9			6.7	10.9	21.3
Green Extension Time (g _e), s	1.7	0.0	0.0	0.0		0.9	0.1	0.9
Phase Call Probability	1.00		0.31			1.00	0.99	1.00
Max Out Probability	0.00		0.00			0.00	1.00	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	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	411	380	380	9	453	423		49		114	213	
Adjusted Saturation Flow Rate (s), veh/h/ln	1716	1870	1868	1499	1870	1745		1485		1781	1588	
Queue Service Time (g _s), s	17.5	12.7	12.7	0.9	22.2	22.2		3.1		8.9	19.3	
Cycle Queue Clearance Time (g _c), s	17.5	12.7	12.7	0.9	22.2	22.2		4.7		8.9	19.3	
Green Ratio (g/C)	0.14	0.67	0.67	0.01	0.54	0.54		0.05		0.14	0.17	
Capacity (c), veh/h	485	1251	1249	16	1006	938		108		203	268	
Volume-to-Capacity Ratio (X)	0.847	0.304	0.304	0.575	0.451	0.451		0.452		0.561	0.794	
Back of Queue (Q), ft/ln (95 th percentile)	316.9	223.9	220.5	24.7	379.2	353.8		87.4		186.6	322.3	
Back of Queue (Q), veh/ln (95 th percentile)	12.4	8.8	8.8	0.8	14.9	14.2		3.4		7.3	12.7	
Queue Storage Ratio (RQ) (95 th percentile)	0.53	0.00	0.00	0.15	0.00	0.00		0.00		0.00	0.00	
Uniform Delay (d ₁), s/veh	62.8	10.3	10.3	73.9	21.2	21.2		69.7		59.9	59.8	
Incremental Delay (d ₂), s/veh	4.2	0.6	0.6	29.1	1.5	1.6		2.9		2.4	5.3	
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	
Control Delay (d), s/veh	67.0	11.0	11.0	103.0	22.6	22.7		72.7		62.4	65.1	
Level of Service (LOS)	E	B	B	F	C	C		E		E	E	
Approach Delay, s/veh / LOS	30.6		C	23.5		C	72.7		E	64.2		E
Intersection Delay, s/veh / LOS	33.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.66	B	2.10	B	2.33	B	2.47	B
Bicycle LOS Score / LOS	1.45	A	1.22	A	0.57	A	1.03	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2018	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - PM Existing Impr...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	207	587	18	28	610	130	6	3	9	276	7	658

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	3.3	0.1	44.2	18.1	37.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.8	4.8	4.8	0.0			
				Red	2.8	2.8	2.8	2.1	2.8	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4	3	8
Case Number	2.0	4.0	2.0	4.0		8.3	1.0	4.0
Phase Duration, s	18.6	59.5	10.9	51.8		44.6	25.0	69.6
Change Period, (Y+R _c), s	7.6	7.6	7.6	7.6		7.6	6.9	7.6
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3	4.0	4.3
Queue Clearance Time (g _s), s	10.2		4.2			33.6	17.2	58.2
Green Extension Time (g _e), s	0.8	0.0	0.1	0.0		3.4	0.9	3.4
Phase Call Probability	1.00		0.66			1.00	1.00	1.00
Max Out Probability	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	1	6	16	5	2	12	7	4	14	3	8	18	
Adjusted Flow Rate (v), veh/h	207	304	301	28	381	359		18		276	665		
Adjusted Saturation Flow Rate (s), veh/h/ln	1730	1856	1836	1781	1856	1742		374		1781	1588		
Queue Service Time (g _s), s	8.2	17.3	17.3	2.2	24.8	24.9		0.4		15.2	56.2		
Cycle Queue Clearance Time (g _c), s	8.2	17.3	17.3	2.2	24.8	24.9		31.6		15.2	56.2		
Green Ratio (g/C)	0.08	0.37	0.37	0.02	0.32	0.32		0.26		0.41	0.44		
Capacity (c), veh/h	272	687	680	42	585	549		133		336	704		
Volume-to-Capacity Ratio (X)	0.761	0.442	0.443	0.663	0.651	0.653		0.135		0.821	0.945		
Back of Queue (Q), ft/ln (95 th percentile)	169.8	323.5	313.7	53.5	451.4	421.5		21.6		281.6	784.4		
Back of Queue (Q), veh/ln (95 th percentile)	6.7	12.6	12.5	2.1	17.6	16.9		0.9		11.1	30.9		
Queue Storage Ratio (RQ) (95 th percentile)	0.29	0.00	0.00	0.32	0.00	0.00		0.00		0.00	0.00		
Uniform Delay (d ₁), s/veh	63.2	33.2	33.2	67.8	41.3	41.3		41.0		33.9	37.4		
Incremental Delay (d ₂), s/veh	4.4	2.1	2.1	16.4	5.5	5.9		0.5		5.0	11.8		
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		
Control Delay (d), s/veh	67.6	35.3	35.3	84.2	46.8	47.3		41.4		38.9	49.2		
Level of Service (LOS)	E	D	D	F	D	D		D		D	D		
Approach Delay, s/veh / LOS	43.5		D	48.4		D		41.4		D	46.2		D
Intersection Delay, s/veh / LOS	46.0						D						

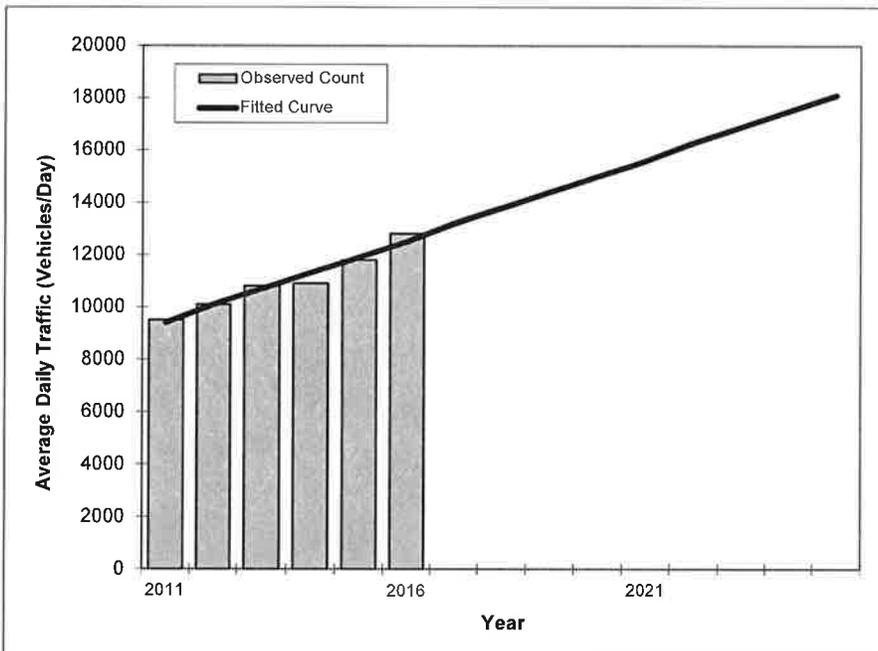
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	2.13	B	2.30	B	2.43	B
Bicycle LOS Score / LOS	1.16	A	1.12	A	0.52	A	2.04	B

APPENDIX G

GROWTH TRENDS ANALYSIS

TRAFFIC TRENDS
Ellis Ave -- John Rodes to East Dr

County:	Brevard
Station #:	322
Highway:	Ellis Ave



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2011	9500	9400
2012	10100	10100
2013	10800	10700
2014	10900	11300
2015	11800	11900
2016	12800	12500
2017 Opening Year Trend		
2017	N/A	13200
2019 Mid-Year Trend		
2019	N/A	14400
2022 Design Year Trend		
2022	N/A	16300
TRANPLAN Forecasts/Trends		

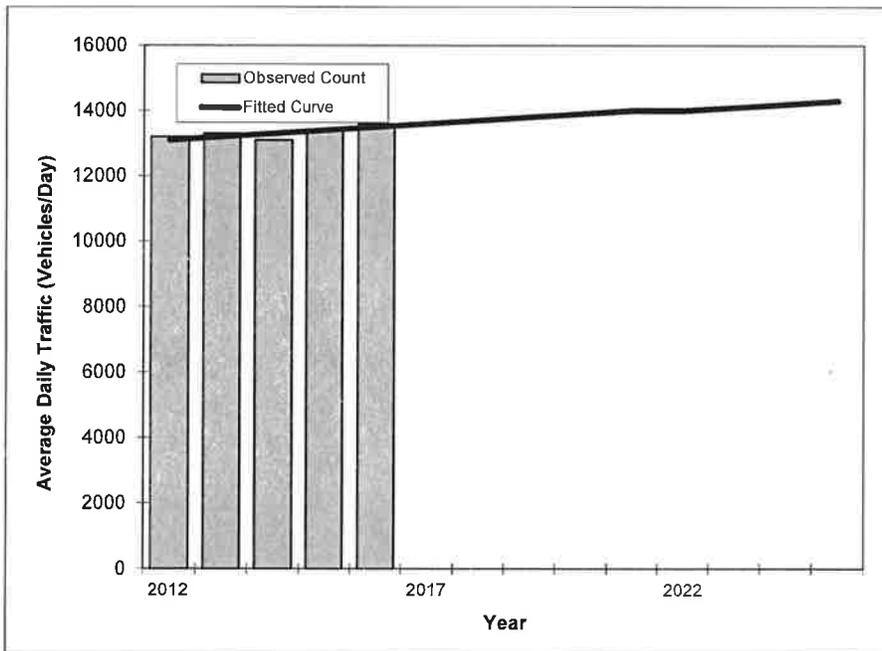
** Annual Trend Increase:	620
Trend R-squared:	96.3%
Trend Annual Historic Growth Rate:	6.60%
Trend Growth Rate (2016 to Design Year):	5.07%
Printed:	11-Oct-17
Straight Line Growth Option	

*Axle-Adjusted

TRAFFIC TRENDS

John Rodes Blvd -- Ellis Ave to Eau Gallie

County:	Brevard
Station #:	505
Highway:	John Rodes Blvd



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2012	13200	13100
2013	13300	13200
2014	13100	13300
2015	13400	13400
2016	13600	13500
2017 Opening Year Trend		
2017	N/A	13600
2019 Mid-Year Trend		
2019	N/A	13800
2022 Design Year Trend		
2022	N/A	14000
TRANPLAN Forecasts/Trends		

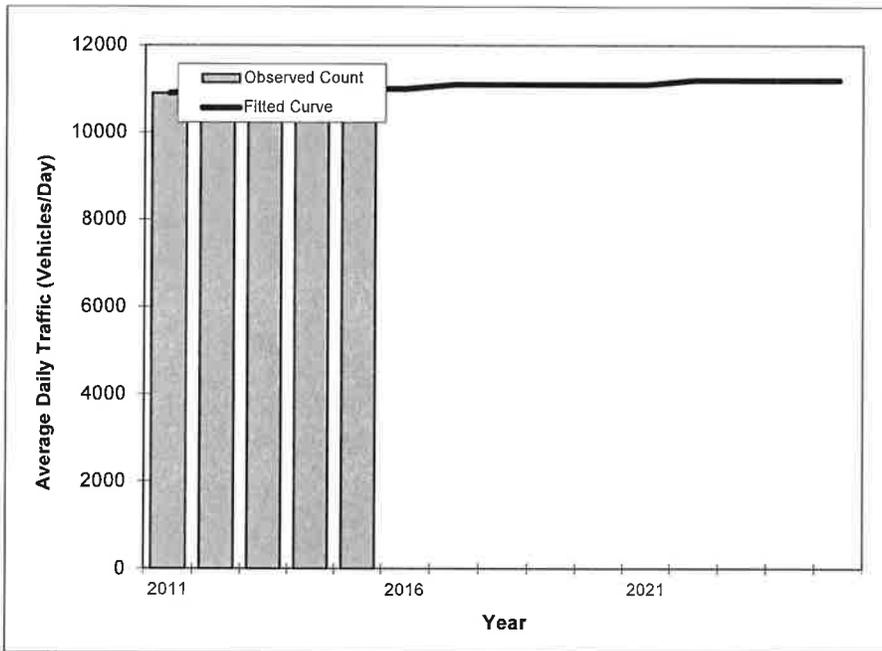
** Annual Trend Increase:	90
Trend R-squared:	54.7%
Trend Annual Historic Growth Rate:	0.76%
Trend Growth Rate (2016 to Design Year):	0.62%
Printed:	11-Oct-17
Straight Line Growth Option	

*Axle-Adjusted

TRAFFIC TRENDS

John Rodes Blvd -- Sheridan Ave to Ellis Ave

County:	Brevard
Station #:	504
Highway:	John Rodes Blvd



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2011	10900	10900
2012	11000	11000
2013	11000	11000
2014	11000	11000
2015	11000	11000
2017 Opening Year Trend		
2017	N/A	11100
2019 Mid-Year Trend		
2019	N/A	11100
2022 Design Year Trend		
2022	N/A	11200
TRANPLAN Forecasts/Trends		

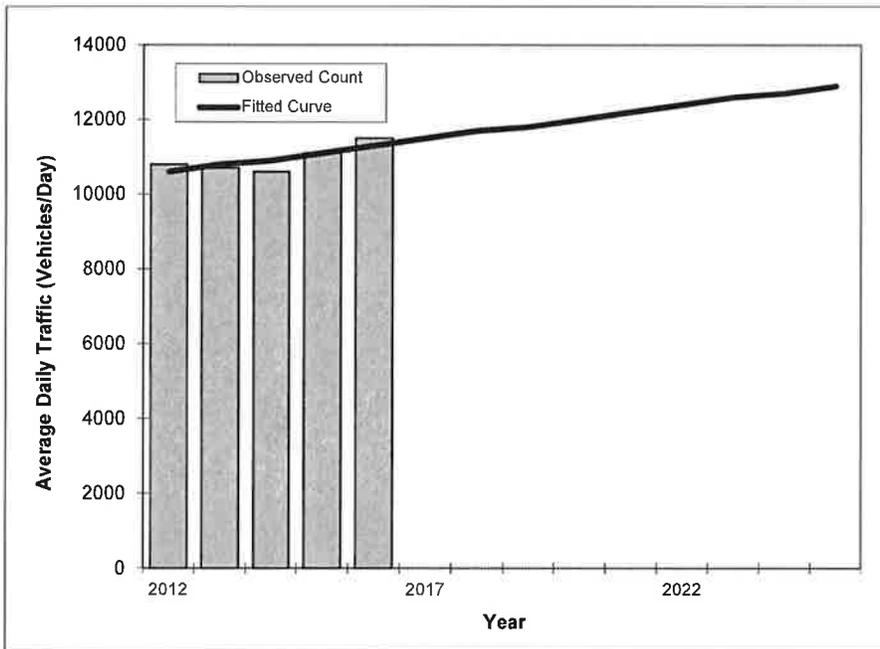
** Annual Trend Increase:	20
Trend R-squared:	50.0%
Trend Annual Historic Growth Rate:	0.23%
Trend Growth Rate (2015 to Design Year):	0.26%
Printed:	11-Oct-17
Straight Line Growth Option	

*Axle-Adjusted

TRAFFIC TRENDS

John Rodes Blvd – US 192 to Sheridan Ave

County:	Brevard
Station #:	511
Highway:	John Rodes Blvd



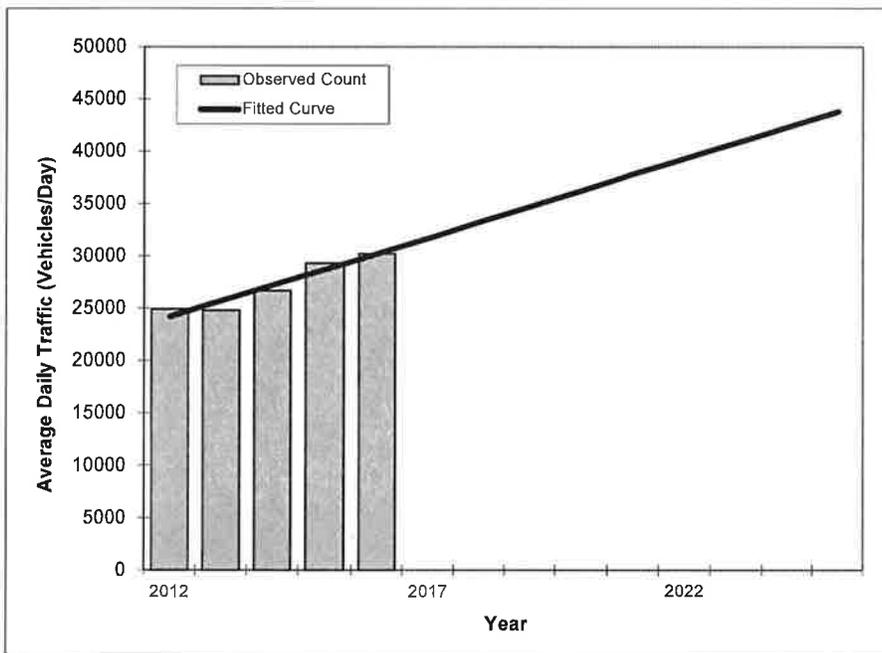
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2012	10800	10600
2013	10700	10800
2014	10600	10900
2015	11100	11100
2016	11500	11300
2017 Opening Year Trend		
2017	N/A	11500
2019 Mid-Year Trend		
2019	N/A	11800
2022 Design Year Trend		
2022	N/A	12400
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	180
Trend R-squared:	60.9%
Trend Annual Historic Growth Rate:	1.65%
Trend Growth Rate (2016 to Design Year):	1.62%
Printed:	11-Oct-17
Straight Line Growth Option	

*Axle-Adjusted

TRAFFIC TRENDS
US 192 -- I-95 to John Rodes Blvd

County:	Brevard
Station #:	421
Highway:	US 192



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2012	24900	24200
2013	24800	25700
2014	26700	27200
2015	29300	28700
2016	30200	30200
2017 Opening Year Trend		
2017	N/A	31700
2019 Mid-Year Trend		
2019	N/A	34700
2022 Design Year Trend		
2022	N/A	39300
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	1,510
Trend R-squared:	92.3%
Trend Annual Historic Growth Rate:	6.20%
Trend Growth Rate (2016 to Design Year):	5.02%
Printed:	11-Oct-17
Straight Line Growth Option	

*Axle-Adjusted

APPENDIX H
US 192 COASTAL COMMERCE TECH MEMO
FROM JUNE 11, 2009

Via Email: (cfischer@westmelbourne.org)

Ref: 3473.02

TECHNICAL MEMORANDUM

To: Christy Fischer

From: Dan D'Antonio, PE

Date: June 11, 2009

Re: Coastal Commerce – Racetrac Gasoline/Service Station

INTRODUCTION

Lassiter Transportation Group, Inc. (LTG) was retained by Sooner Investments to prepare a technical memorandum documenting the drawdown of entitlements from the approved Coast Commerce commercial development. The purpose of this document is to show that the cumulative number of trips generated by proposed uses within Coastal Commerce do not exceed the trips presented in the TIS.

LAND USE PLAN

The original Coastal Commerce Center development, as proposed in the April 2008 TIS, is comprised of 324,188 square feet (sq. ft.) of shopping center land usage. Businesses planned to locate within the site include only a 40,000 sq. ft. furniture store at this time. The proposed Racetrac gas station and convenience market will consist of 24 fueling positions and a 4,882-sq. ft. convenience market.

TRIP GENERATION

The procedures outlined by the Institute of Transportation Engineer's (ITE) in the manual *Trip Generation*, 8th Edition, were used to determine the project's trip-making characteristics. As is consistent with the TIS, ITE land use code 820 (shopping center) was used to quantify the total and net new trips generated by the Coastal Commerce Center development under daily and p.m. peak-hour conditions. These calculations are shown in Tables 1 and 2. Similarly, the ITE rates for code 890 (furniture store) and 945 (gasoline/service station with convenience market) were used to determine the trip generation for the planned uses shown in Table 3.

Table 1
Total Trip Generation – Coastal Commerce Center Approvals
Racetrac Gasoline/Service Station

Time Period	Land Use	ITE Code	Size (X)	Trip Generation Equation	Total Trips	Percent Enter	Percent Exit	Trips Enter	Trips Exit
Daily	Shopping Center	820	324.2 KSF	$\text{Ln}(T) = 0.65 \text{Ln}(X) + 5.83$	14,588	50%	50%	7,294	7,294
P.M. Peak-Hour		820	324.2 KSF	$\text{Ln}(T) = 0.66 \text{Ln}(X) + 3.40$	1,362	48%	52%	654	708

Source: ITE, *Trip Generation*, 8th Edition

TECHNICAL MEMORANDUM

Christy Fischer
 June 11, 2009
 Page 2

**Table 2
 Net New Trip Generation – Coastal Commerce Center Approvals
 Racetrac Gasoline/Service Station**

Time Period	Land Use	Total Trips			Pass-By Trips			New External Trips		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Daily	Shopping Center	7,294	7,294	14,588	2,480	2,480	4,960	4,814	4,814	9,628
P.M. Peak-Hour		654	708	1,362	222	241	463	432	467	899

Source: ITE, Trip Generation Handbook, 2nd Edition

**Table 3
 Total Trip Generation – Proposed Land Uses
 Racetrac Gasoline/Service Station**

Time Period	Land Use	ITE Code	Size (X)	Trip Generation Equation	Total Trips	Percent Enter	Percent Exit	Trips Enter	Trips Exit
Daily	Furniture Store	890	40.00 KSF	$T = 5.06(X)$	202	50%	50%	101	101
	Gas Station w/ Conv. Mkt.	945	24 VFP	$T = 162.78(X)*41\%$	1,602	50%	50%	801	801
P.M. Peak-Hour	Furniture Store	890	40.00 KSF	$T = 0.45(X)$	18	48%	52%	8	10
	Gas Station w/ Conv. Mkt.	945	24 VFP	$T = 13.38(X)*44\%$	142	50%	50%	71	71

*Gas station w/ convenience market daily and p.m. peak-hour trips were reduced by 59% and 56%, respectively, to account for pass-by trips

The next step was to subtract the proposed gas station trips from the "bank" of trips available within the Coastal Commerce Center approvals. This calculation is shown in Table 4 below. As indicated in Table 4, the proposed land use can be adequately accommodated within the approvals. Additionally, there will be a total of 9,178 daily trips and 846 p.m. peak-hour trips remaining in the trip bank.

**Table 4
 Coastal Commerce Approved Trips – Bank Withdrawals
 Racetrac Gasoline/Service Station**

Time Period	Land Uses	Total Trips		
		Enter	Exit	Total
Daily	Shopping Center	4,814	4,814	9,628
	Furniture Store	-101	-101	-202
	Gas Station w/ Conv. Mkt.	-801	-801	-1,602
	Remaining Trips in Bank	3,912	3,912	7,824
P.M. Peak-Hour	Shopping Center	432	467	899
	Furniture Store	-8	-10	-18
	Gas Station w/ Conv. Mkt.	-71	-71	-142
	Remaining Trips in Bank	353	386	739

TECHNICAL MEMORANDUM

Christy Fischer
June 11, 2009
Page 3

CONCLUSION

- The proposed development is a gas station with 24 vehicle fueling positions and 4,882 sq. ft. convenience market.
- The proposed development will generate 1,602 daily and 142 p.m. peak-hour new trips.
- There are adequate trips available within the Coastal Commerce Center approvals to accommodate the proposed development with 7,824 daily trips and 739 p.m. peak-hour trips remaining.

c: Donovan Smith, CSM Properties

I affirm, by affixing my signature and seal below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.

Name: Daniel M. D'Antonio

Signature: 

Florida PE License No.: 68399

Date: June 11, 2009

APPENDIX I
VESTED TRIPS – TRIPS REMAINING IN
BANK FOR COASTAL COMMERCE

Vested Trips Calculations

Total Coastal Commerce Approved Trips - 2007

Time Period	Land Use	Land Use Code	Trip Rate Equation*	Size	Units	Percent Entering	Percent Exiting	Total Trips			Pass-By Trips			New External Trips		
								Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Daily	Shopping Center	820	$\ln(T)=0.65\ln(X)+5.83$	324.188	KSF	50%	50%	7,294	7,294	14,587	2480	2480	4960	4,814	4,814	9,627
Totals:								7,294	7,294	14,587	2480	2480	4960	4,814	4,814	9,627
PM Peak Hour	Shopping Center	820	$\ln(T)=0.66\ln(X)+3.40$	324.188	KSF	48%	52%	653	708	1,361	222	241	463	431	467	898
Totals:								653	708	1,361	222	241	463	431	467	898

*Source= ITE Trip Generation, 8th Edition

Bank Withdrawals In 2009

Time Period	Land Use	Land Use Code	Trip Rate Equation*	Size	Units	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting	Total Trips
Daily	Convenience Store w/ Gas Pump (RaceTrac)	945	$T=162.78(X)*41\%$	24.000	VFP	50%	50%	801	801	1602
	Furniture Store (Rooms-To-Go)	890	$T=5.06(X)$	40.000	KSF	50%	50%	101	101	202
Totals:								902	902	1,804
PM Peak-Hour	Convenience Store w/ Gas Pump (RaceTrac)	945	$T=13.38(X)*44\%$	24.000	VFP	50%	50%	71	71	141
	Furniture Store (Rooms-To-Go)	890	$T=0.45(X)$	40.000	KSF	48%	52%	9	9	18
Totals:								80	80	159

*Gas station with Convenience Market daily and PM peak-hour were reduced by 59% and 56%, respectively, to account for pass-by trips

Bank Withdrawals After 2009

Time Period	Land Use	Land Use Code	Trip Rate Equation*	Size	Units	Percent Entering	Percent Exiting	Trips Entering	Trips Exiting	Total Trips
Daily	Shopping Center (Chuck E Cheese, Goodwill)	820	$\ln(T)=0.65\ln(X)+5.83$	39.161	KSF	50%	50%	1,846	1,846	3692
Totals:								1,846	1,846	3,692
PM Peak-Hour	Shopping Center (Chuck E Cheese, Goodwill)	820	$\ln(T)=0.66\ln(X)+3.40$	39.161	KSF	48%	52%	162	175	337
Totals:								162	175	337

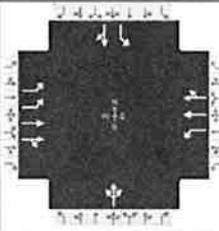
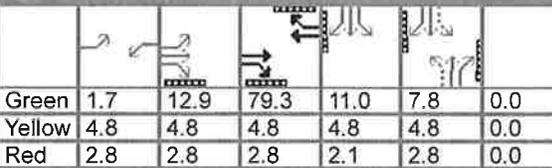
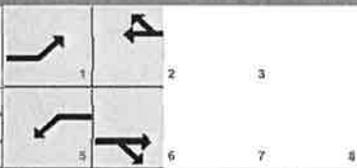
*Source= ITE Trip Generation, 8th Edition

Coastal Commerce Approved Trips - Bank Withdrawals = Vested Trips

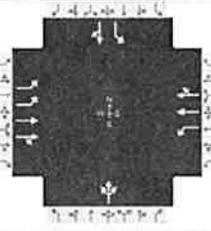
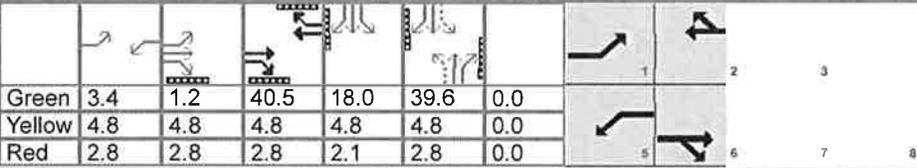
Time Period	Trip Bank	Trips Entering	Trips Exiting	Total Trips
Daily	Full Build-Out	4,814	4814	9627
	Trip Withdrawal in 2009	-902	-902	-1804
	Trip Withdrawal After 2009	-1,846	-1,846	-3,692
Total Trips Remaining in Trip Bank:		2,066	2066	4131
PM Peak-Hour	Full Build-Out	431	467	898
	Trip Withdrawal in 2009	-80	-80	-159
	Trip Withdrawal After 2009	-162	-175	-337
Total Trips Remaining in Trip Bank:		189	212	402

APPENDIX J
HCS SUMMARY SHEETS – BACKGROUND
CONDITIONS

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information															
Agency	LTG			Duration, h	0.25														
Analyst	ACP		Analysis Date	Aug 31, 2018		Area Type	Other												
Jurisdiction	Brevard		Time Period	AM Peak Hour		PHF	1.00												
Urban Street	US 192		Analysis Year	2019		Analysis Period	1 > 7:00												
Intersection	John Rodes Blvd at US...		File Name	1. John Rodes Blvd at US 192 - AM Background.x...															
Project Description	4397.02																		
Demand Information				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (v), veh/h				432	795	3	10	743	177	19	8	24	116	3	214				
Signal Information																			
Cycle, s	150.0	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	1.7	12.9	79.3	11.0	7.8	0.0									
				Yellow	4.8	4.8	4.8	4.8	4.8	0.0									
				Red	2.8	2.8	2.8	2.1	2.8	0.0									
Timer Results				EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase				1		6		5		2				4		3		8	
Case Number				2.0		4.0		2.0		4.0				8.3		1.0		4.0	
Phase Duration, s				29.8		107.4		9.3		86.9				15.4		17.9		33.3	
Change Period, (Y+R _c), s				7.6		7.6		7.6		7.6				7.6		6.9		7.6	
Max Allow Headway (MAH), s				4.0		0.0		4.0		0.0				4.3		4.0		4.3	
Queue Clearance Time (g _s), s				20.4				3.0						7.0		11.0		21.7	
Green Extension Time (g _e), s				1.8		0.0		0.0		0.0				0.9		0.1		0.9	
Phase Call Probability				1.00				0.34						1.00		0.99		1.00	
Max Out Probability				0.00				0.00						0.00		1.00		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				1	6	16	5	2	12	7	4	14	3	8	18				
Adjusted Flow Rate (v), veh/h				432	399	399	10	476	444	51			116	217					
Adjusted Saturation Flow Rate (s), veh/h/ln				1716	1870	1868	1499	1870	1745	1482			1781	1588					
Queue Service Time (g _s), s				18.4	13.6	13.6	1.0	24.1	24.1	3.2			9.0	19.7					
Cycle Queue Clearance Time (g _c), s				18.4	13.6	13.6	1.0	24.1	24.1	5.0			9.0	19.7					
Green Ratio (g/C)				0.15	0.67	0.67	0.01	0.53	0.53	0.05			0.14	0.17					
Capacity (c), veh/h				508	1244	1242	17	989	923	110			205	272					
Volume-to-Capacity Ratio (X)				0.851	0.321	0.321	0.586	0.481	0.481	0.462			0.566	0.797					
Back of Queue (Q), ft/ln (95 th percentile)				329.7	237.9	233.9	27.1	409	381.1	90.9			189.6	327					
Back of Queue (Q), veh/ln (95 th percentile)				12.9	9.4	9.4	0.9	16.1	15.2	3.6			7.5	12.9					
Queue Storage Ratio (RQ) (95 th percentile)				0.55	0.00	0.00	0.16	0.00	0.00	0.00			0.00	0.00					
Uniform Delay (d ₁), s/veh				62.3	10.7	10.7	73.8	22.4	22.4	69.6			59.7	59.6					
Incremental Delay (d ₂), s/veh				4.1	0.7	0.7	28.0	1.7	1.8	3.0			2.4	5.3					
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					
Control Delay (d), s/veh				66.4	11.4	11.4	101.8	24.0	24.1	72.6			62.1	64.9					
Level of Service (LOS)				E	B	B	F	C	C	E			E	E					
Approach Delay, s/veh / LOS				30.7		C		24.9		C		72.6		E		63.9		E	
Intersection Delay, s/veh / LOS				33.8						C									
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS				1.66	B		2.10	B		2.33	B		2.47	B					
Bicycle LOS Score / LOS				1.50	B		1.25	A		0.57	A		1.04	A					

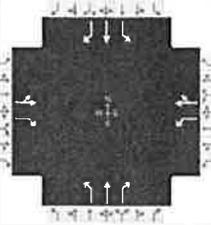
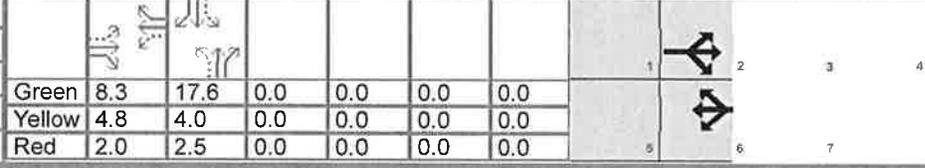
HCS7 Signalized Intersection Results Summary

General Information						Intersection Information												
Agency	LTG					Duration, h	0.25											
Analyst	ACP	Analysis Date	Aug 31, 2018			Area Type	Other											
Jurisdiction	Brevard	Time Period	PM Peak Hour			PHF	1.00											
Urban Street	US 192	Analysis Year	2019			Analysis Period	1 > 7:00											
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - PM Background....															
Project Description	4397.02																	
Demand Information				EB			WB			NB			SB					
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R			
Demand (v), veh/h				235	689	19	29	704	136	6	3	9	281	7	686			
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	3.4	1.2	40.5													18.0	39.6	0.0
Yellow	4.8	4.8	4.8													4.8	4.8	0.0
Red	2.8	2.8	2.8	2.1	2.8	0.0												
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT							
Assigned Phase				1	6	5	2		4	3	8							
Case Number				2.0	4.0	2.0	4.0		8.3	1.0	4.0							
Phase Duration, s				19.8	56.9	11.0	48.1		47.2	24.9	72.1							
Change Period, (Y+R c), s				7.6	7.6	7.6	7.6		7.6	6.9	7.6							
Max Allow Headway (MAH), s				4.0	0.0	4.0	0.0		4.3	4.0	4.3							
Queue Clearance Time (g s), s				11.3		4.3			36.0	17.1	60.5							
Green Extension Time (g e), s				0.9	0.0	0.1	0.0		3.6	1.0	3.6							
Phase Call Probability				1.00		0.68			1.00	1.00	1.00							
Max Out Probability				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				1	6	16	5	2	12	7	4	14	3	8	18			
Adjusted Flow Rate (v), veh/h				235	356	352	29	432	408		18		281	693				
Adjusted Saturation Flow Rate (s), veh/h/ln				1730	1856	1838	1781	1856	1751		354		1781	1587				
Queue Service Time (g s), s				9.3	21.5	21.5	2.3	30.2	30.3		0.5		15.1	58.5				
Cycle Queue Clearance Time (g c), s				9.3	21.5	21.5	2.3	30.2	30.3		34.0		15.1	58.5				
Green Ratio (g/C)				0.09	0.35	0.35	0.02	0.29	0.29		0.28		0.43	0.46				
Capacity (c), veh/h				302	653	647	43	536	506		135		336	732				
Volume-to-Capacity Ratio (X)				0.779	0.544	0.545	0.674	0.806	0.807		0.134		0.835	0.947				
Back of Queue (Q), ft/ln (95 th percentile)				192.2	392	380.8	55.5	558.8	522.7		21		279.8	812.5				
Back of Queue (Q), veh/ln (95 th percentile)				7.6	15.3	15.2	2.2	21.8	20.9		0.8		11.0	32.0				
Queue Storage Ratio (RQ) (95 th percentile)				0.32	0.00	0.00	0.34	0.00	0.00		0.00		0.00	0.00				
Uniform Delay (d 1), s/veh				62.6	36.4	36.4	67.8	46.1	46.1		39.5		33.0	36.1				
Incremental Delay (d 2), s/veh				4.3	3.2	3.3	16.8	12.2	12.9		0.4		5.5	12.6				
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				66.9	39.6	39.6	84.5	58.4	59.1		40.0		38.5	48.7				
Level of Service (LOS)				E	D	D	F	E	E		D		D	D				
Approach Delay, s/veh / LOS				46.4		D	59.6		E	40.0		D	45.7		D			
Intersection Delay, s/veh / LOS				50.2						D								
Multimodal Results				EB			WB			NB			SB					
Pedestrian LOS Score / LOS				1.71		B	2.13		B	2.30		B	2.43		B			
Bicycle LOS Score / LOS				1.27		A	1.20		A	0.52		A	2.09		B			

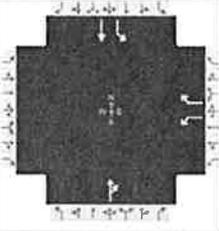
HCS7 Signalized Intersection Results Summary

General Information						Intersection Information											
Agency	LTG					Duration, h	0.25										
Analyst	ACP		Analysis Date	May 7, 2018		Area Type	Other										
Jurisdiction	Brevard		Time Period	AM Peak Hour		PHF	1.00										
Urban Street	John Rodes Blvd		Analysis Year	2019		Analysis Period	1 > 7:00										
Intersection	John Rodes Blvd at She...		File Name	2. John Rodes Blvd at Sheridan Rd - AM Backgro...													
Project Description	4397.02																
Demand Information						EB			WB			NB			SB		
Approach Movement						L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h						69	19	62	107	9	137	23	883	55	45	208	25
Signal Information																	
Cycle, s	57.9	Reference Phase	2			Green	19.6	25.0	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	4.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	Yes	Simult. Gap E/W	On			Red	2.0	2.5	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							2		6		8		4				
Case Number							7.0		6.0		5.0		5.0				
Phase Duration, s							26.4		26.4		31.5		31.5				
Change Period, (Y+R _c), s							6.8		6.8		6.5		6.5				
Max Allow Headway (MAH), s							7.3		7.3		4.0		4.0				
Queue Clearance Time (g _s), s							9.8		14.7		27.0		27.0				
Green Extension Time (g _e), s							5.0		4.9		0.0		0.0				
Phase Call Probability							1.00		1.00		1.00		1.00				
Max Out Probability							0.00		0.01		1.00		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							88	51	107	146		23	883	2	45	208	0
Adjusted Saturation Flow Rate (s), veh/h/ln							1012	1585	1393	1308		1174	1870	1585	624	1767	1585
Queue Service Time (g _s), s							2.3	1.3	3.9	4.8		0.7	25.0	0.0	0.1	4.4	0.0
Cycle Queue Clearance Time (g _c), s							7.8	1.3	12.7	4.8		4.9	25.0	0.0	25.0	4.4	0.0
Green Ratio (g/C)							0.34	0.34	0.34	0.34		0.43	0.43	0.43	0.43	0.43	0.43
Capacity (c), veh/h							453	535	382	441		547	809	686	125	764	686
Volume-to-Capacity Ratio (X)							0.194	0.095	0.280	0.331		0.042	1.091	0.003	0.359	0.272	0.000
Back of Queue (Q), ft/ln (95 th percentile)							43.4	20.6	60.9	79.4		7.4	778.5	0.5	28.6	64.9	0
Back of Queue (Q), veh/ln (95 th percentile)							1.7	0.8	2.4	2.6		0.3	30.7	0.0	1.1	2.4	0.0
Queue Storage Ratio (RQ) (95 th percentile)							0.00	0.18	0.32	0.00		0.03	0.00	0.00	0.11	0.00	0.00
Uniform Delay (d ₁), s/veh							16.2	13.1	20.8	14.3		12.1	16.4	9.3	28.9	10.5	0.0
Incremental Delay (d ₂), s/veh							0.8	0.3	1.4	1.6		0.0	59.4	0.0	1.7	0.2	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							16.9	13.4	22.2	15.9		12.1	75.8	9.3	30.6	10.7	0.0
Level of Service (LOS)							B	B	C	B		B	F	A	C	B	
Approach Delay, s/veh / LOS						15.6		B	18.6		B	74.1		E	14.3		B
Intersection Delay, s/veh / LOS						50.1						D					
Multimodal Results						EB			WB			NB			SB		
Pedestrian LOS Score / LOS						2.17		B	2.13		B	1.89		B	1.90		B
Bicycle LOS Score / LOS						0.72		A	0.91		A	1.99		B	0.91		A

HCS7 Signalized Intersection Results Summary

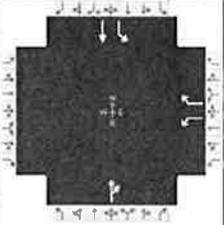
General Information				Intersection Information															
Agency	LTG			Duration, h	0.25														
Analyst	ACP		Analysis Date	May 7, 2018		Area Type	Other												
Jurisdiction	Brevard		Time Period	PM Peak Hour		PHF	1.00												
Urban Street	John Rodes Blvd		Analysis Year	2019		Analysis Period	1 > 7:00												
Intersection	John Rodes Blvd at She...		File Name	2. John Rodes Blvd at Sheridan Rd - PM Backgro...															
Project Description	4397.02																		
Demand Information				EB			WB			NB			SB						
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R				
Demand (v), veh/h				28	11	62	77	21	62	52	364	136	89	583	52				
Signal Information																			
Cycle, s	39.2		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	8.3	17.6	0.0	0.0	0.0	0.0										
			Yellow	4.8	4.0	0.0	0.0	0.0	0.0										
			Red	2.0	2.5	0.0	0.0	0.0	0.0										
Timer Results				EBL		EBT		WBL		WBT		NBL		NBT		SBL		SBT	
Assigned Phase						2				6				8				4	
Case Number						7.0				6.0				5.0				5.0	
Phase Duration, s						15.1				15.1				24.1				24.1	
Change Period, (Y+R c), s						6.8				6.8				6.5				6.5	
Max Allow Headway (MAH), s						7.3				7.3				4.1				4.1	
Queue Clearance Time (g s), s						3.7				5.5				13.8				11.7	
Green Extension Time (g e), s						2.9				2.9				3.9				4.2	
Phase Call Probability						1.00				1.00				1.00				1.00	
Max Out Probability						0.00				0.00				0.34				0.25	
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				39	36	77	83			52	364	98	89	583	38				
Adjusted Saturation Flow Rate (s), veh/h/ln				1236	1585	1404	1649			832	1826	1585	1018	1870	1585				
Queue Service Time (g s), s				0.0	0.7	1.9	1.6			2.1	5.3	1.4	2.6	9.7	0.5				
Cycle Queue Clearance Time (g c), s				1.7	0.7	3.5	1.6			11.8	5.3	1.4	7.9	9.7	0.5				
Green Ratio (g/C)				0.21	0.21	0.21	0.21			0.45	0.45	0.45	0.45	0.45	0.45				
Capacity (c), veh/h				418	332	420	346			351	819	711	502	839	711				
Volume-to-Capacity Ratio (X)				0.093	0.108	0.183	0.240			0.148	0.444	0.138	0.177	0.695	0.053				
Back of Queue (Q), ft/ln (95 th percentile)				12.9	11.7	26.8	28.2			13.7	54.7	12.1	18.4	103.7	4.5				
Back of Queue (Q), veh/ln (95 th percentile)				0.5	0.5	1.1	1.1			0.5	2.1	0.5	0.7	4.1	0.2				
Queue Storage Ratio (RQ) (95 th percentile)				0.00	0.10	0.14	0.00			0.06	0.00	0.05	0.07	0.00	0.02				
Uniform Delay (d 1), s/veh				12.5	12.4	14.3	12.8			13.3	7.4	6.3	10.1	8.6	6.1				
Incremental Delay (d 2), s/veh				0.3	0.5	0.8	1.3			0.2	0.4	0.1	0.2	1.0	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				12.8	13.0	15.0	14.1			13.5	7.8	6.4	10.3	9.6	6.1				
Level of Service (LOS)				B	B	B	B			B	A	A	B	A	A				
Approach Delay, s/veh / LOS				12.9	B	14.5	B			8.1	A	9.5	A						
Intersection Delay, s/veh / LOS				9.7						A									
Multimodal Results				EB			WB			NB			SB						
Pedestrian LOS Score / LOS				2.14	B	2.11	B			1.87	B	1.91	B						
Bicycle LOS Score / LOS				0.61	A	0.75	A			1.34	A	1.66	B						

HCS7 Signalized Intersection Results Summary

General Information						Intersection Information								
Agency	LTG					Duration, h	0.25							
Analyst	ACP	Analysis Date	May 7, 2018			Area Type	Other							
Jurisdiction	Brevard		Time Period	AM Peak Hour		PHF	1.00							
Urban Street	John Rodes Blvd		Analysis Year	2019		Analysis Period	1 > 7:00							
Intersection	John Rodes Blvd at Ellis...		File Name	4. John Rodes Blvd at Ellis Rd - AM Background....										
Project Description	4397.02													
Demand Information														
			EB			WB			NB			SB		
Approach Movement			L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h						77		184		740	211	232	229	
Signal Information														
Cycle, s	94.7	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	Yes	Simult. Gap E/W	On		Green	10.5	50.0	14.1	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On		Yellow	4.8	4.8	4.0	0.0	0.0	0.0			
					Red	2.0	2.0	2.5	0.0	0.0	0.0			
Timer Results														
			EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase						4		6	5	2				
Case Number						9.0		8.3	1.0	4.0				
Phase Duration, s						20.6		56.8	17.3	74.1				
Change Period, (Y+R c), s						6.5		6.8	6.8	6.8				
Max Allow Headway (MAH), s						4.8		3.5	4.0	3.5				
Queue Clearance Time (g s), s						13.0		52.0	10.0	5.9				
Green Extension Time (g e), s						1.2		0.0	0.5	4.2				
Phase Call Probability						1.00		1.00	1.00	1.00				
Max Out Probability						0.00		1.00	0.02	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						7		14		6	16	5		2
Adjusted Flow Rate (v), veh/h						77		184		951		232		229
Adjusted Saturation Flow Rate (s), veh/h/ln						1781		1535		1799		1781		1826
Queue Service Time (g s), s						3.6		11.0		50.0		8.0		3.9
Cycle Queue Clearance Time (g c), s						3.6		11.0		50.0		8.0		3.9
Green Ratio (g/C)						0.15		0.15		0.53		0.66		0.71
Capacity (c), veh/h						266		229		949		273		1297
Volume-to-Capacity Ratio (X)						0.289		0.803		1.002		0.850		0.177
Back of Queue (Q), ft/ln (95 th percentile)						73.3		209.5		863.2		240.4		50.5
Back of Queue (Q), veh/ln (95 th percentile)						2.9		8.0		34.0		9.5		1.9
Queue Storage Ratio (RQ) (95 th percentile)						0.18		0.00		0.00		0.62		0.00
Uniform Delay (d 1), s/veh						35.8		38.9		22.4		29.1		4.5
Incremental Delay (d 2), s/veh						0.7		7.7		29.6		7.9		0.0
Initial Queue Delay (d 3), s/veh						0.0		0.0		0.0		0.0		0.0
Control Delay (d), s/veh						36.5		46.6		52.0		37.1		4.6
Level of Service (LOS)						D		D		F		D		A
Approach Delay, s/veh / LOS			0.0			43.6		D	52.0		D	20.9		C
Intersection Delay, s/veh / LOS			42.1					D						
Multimodal Results														
			EB			WB			NB			SB		
Pedestrian LOS Score / LOS			1.73		B	1.96		B	1.89		B	0.66		A
Bicycle LOS Score / LOS								F	2.06		B	1.25		A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - PM Background...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				142		230		329	90	152	596	

Signal Information															
Cycle, s	51.0	Reference Phase	2												
Offset, s	0	Reference Point	End												
Uncoordinated	Yes	Simult. Gap E/W	On	Green	4.5	15.6	10.8	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0					
				Red	2.0	2.0	2.5	0.0	0.0	0.0					

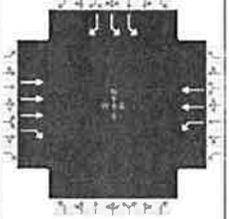
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				17.3		22.4	11.3	33.7
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				9.0		12.7	4.7	13.3
Green Extension Time (g _e), s				1.8		2.9	0.4	2.9
Phase Call Probability				0.99		1.00	0.88	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				7		14		6	16	5	2	
Adjusted Flow Rate (v), veh/h				142		230		419		152	596	
Adjusted Saturation Flow Rate (s), veh/h/ln				1739		1560		1801		1781	1870	
Queue Service Time (g _s), s				3.6		7.0		10.7		2.7	11.3	
Cycle Queue Clearance Time (g _c), s				3.6		7.0		10.7		2.7	11.3	
Green Ratio (g/C)				0.21		0.21		0.31		0.43	0.53	
Capacity (c), veh/h				367		329		553		392	988	
Volume-to-Capacity Ratio (X)				0.387		0.698		0.758		0.387	0.603	
Back of Queue (Q), ft/ln (95 th percentile)				62.2		114.9		167.6		36.7	130.3	
Back of Queue (Q), veh/ln (95 th percentile)				2.4		4.5		6.6		1.4	5.1	
Queue Storage Ratio (RQ) (95 th percentile)				0.15		0.00		0.00		0.09	0.00	
Uniform Delay (d ₁), s/veh				17.3		18.6		16.0		10.8	8.3	
Incremental Delay (d ₂), s/veh				0.8		3.2		1.6		0.6	0.4	
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0	0.0	
Control Delay (d), s/veh				18.1		21.9		17.6		11.4	8.8	
Level of Service (LOS)				B		C		B		B	A	
Approach Delay, s/veh / LOS	0.0			20.4		C	17.6		B	9.3		A
Intersection Delay, s/veh / LOS				14.3						B		

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.94	B	1.90	B	0.67	A
Bicycle LOS Score / LOS				F	1.18	A	1.72	B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	US 192 at SB I-95	File Name	5. US 192 at SB I-95 - AM Background.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h		222	166	166	225					456		94

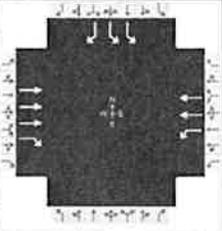
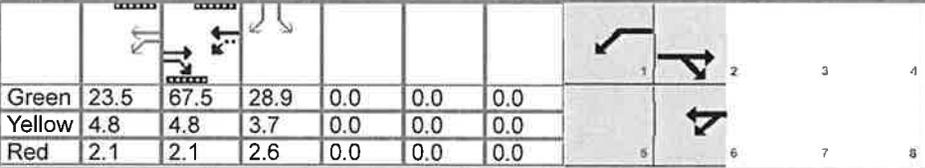
Signal Information				Signal Timing (s)							Signal Phases				
Cycle, s	150.0	Reference Phase	2	Green	7.7	98.7	23.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	4.8	4.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	2.1	2.1	2.6	0.0	0.0	0.0	0.0	0.0	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		2	1	6				4
Case Number		7.3	1.0	4.0				9.0
Phase Duration, s		105.6	14.6	120.2				29.8
Change Period, (Y+R _c), s		6.9	6.9	6.9				6.3
Max Allow Headway (MAH), s		0.0	6.1	0.0				4.2
Queue Clearance Time (g _s), s			6.3					21.2
Green Extension Time (g _e), s		0.0	1.4	0.0				2.3
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		2	12	1	6					7		14	
Adjusted Flow Rate (v), veh/h		222	166	166	225					456		94	
Adjusted Saturation Flow Rate (s), veh/h/ln		1618	1585	1781	1710					1730		1497	
Queue Service Time (g _s), s		2.5	6.0	4.3	2.6					19.2		8.5	
Cycle Queue Clearance Time (g _c), s		2.5	6.0	4.3	2.6					19.2		8.5	
Green Ratio (g/C)		0.66	0.66	0.72	0.76					0.16		0.16	
Capacity (c), veh/h		3194	1043	883	2584					541		234	
Volume-to-Capacity Ratio (X)		0.069	0.159	0.188	0.087					0.842		0.401	
Back of Queue (Q), ft/ln (95 th percentile)		41.9	98.6	72.9	41.5					343.6		158.5	
Back of Queue (Q), veh/ln (95 th percentile)		1.6	3.9	2.9	1.6					13.5		5.9	
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		9.2	9.8	6.4	4.8					61.5		56.9	
Incremental Delay (d ₂), s/veh		0.0	0.3	0.2	0.1					3.6		1.1	
Initial Queue Delay (d ₃), s/veh		0.0	0.0	0.0	0.0					0.0		0.0	
Control Delay (d), s/veh		9.2	10.1	6.7	4.9					65.1		58.0	
Level of Service (LOS)		A	B	A	A					E		E	
Approach Delay, s/veh / LOS	9.6	A		5.6	A		0.0				63.9	E	
Intersection Delay, s/veh / LOS	30.9						C						

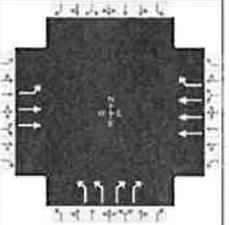
Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	1.37 / A	1.86 / B	2.49 / B	2.49 / B
Bicycle LOS Score / LOS	0.70 / A	0.81 / A		F

HCS7 Signalized Intersection Results Summary

General Information					Intersection Information										
Agency	LTG				Duration, h	0.25									
Analyst	ACP		Analysis Date	Aug 31, 2018		Area Type	Other								
Jurisdiction	Brevard		Time Period	PM Peak Hour		PHF	1.00								
Urban Street	US 192		Analysis Year	2019		Analysis Period	1 > 7:00								
Intersection	US 192 at SB I-95		File Name	5. US 192 at SB I-95 - PM Background.xus											
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h					251	138	468	406					607		186
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	23.5	67.5	28.9	0.0	0.0	0.0									
Yellow	4.8	4.8	3.7	0.0	0.0	0.0									
Red	2.1	2.1	2.6	0.0	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					2	1	6				4				
Case Number					7.3	1.0	4.0				9.0				
Phase Duration, s					74.4	30.4	104.8				35.2				
Change Period, (Y+R _c), s					6.9	6.9	6.9				6.3				
Max Allow Headway (MAH), s					0.0	6.1	0.0				4.2				
Queue Clearance Time (g _s), s						18.7					25.6				
Green Extension Time (g _e), s					0.0	4.8	0.0				3.3				
Phase Call Probability						1.00					1.00				
Max Out Probability						0.00					0.03				
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					7		14
Adjusted Flow Rate (v), veh/h					251	138	468	406					607		186
Adjusted Saturation Flow Rate (s), veh/h/ln					1644	1585	1781	1752					1730		1547
Queue Service Time (g _s), s					3.9	6.9	16.7	5.5					23.6		15.2
Cycle Queue Clearance Time (g _c), s					3.9	6.9	16.7	5.5					23.6		15.2
Green Ratio (g/C)					0.48	0.48	0.66	0.70					0.21		0.21
Capacity (c), veh/h					2378	764	863	2451					714		319
Volume-to-Capacity Ratio (X)					0.106	0.181	0.542	0.166					0.850		0.582
Back of Queue (Q), ft/ln (95 th percentile)					71.7	122.8	273.5	93.7					406.8		261.1
Back of Queue (Q), veh/ln (95 th percentile)					2.7	4.8	10.8	3.6					16.0		10.0
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					19.8	20.6	10.9	7.2					53.5		50.1
Incremental Delay (d ₂), s/veh					0.1	0.5	1.1	0.1					4.5		1.7
Initial Queue Delay (d ₃), s/veh					0.0	0.0	0.0	0.0					0.0		0.0
Control Delay (d), s/veh					19.9	21.1	12.0	7.3					57.9		51.8
Level of Service (LOS)					B	C	B	A					E		D
Approach Delay, s/veh / LOS				20.3	C		9.8	A		0.0			56.5	E	
Intersection Delay, s/veh / LOS				29.8						C					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				1.40	A		1.87	B		2.48	B		2.48	B	
Bicycle LOS Score / LOS				0.70	A		1.21	A						F	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1> 7:00		
Intersection	US 192 at NB I-95	File Name	6. US 192 at NB I-95 - AM Background.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	117	585			324	537	98		526			

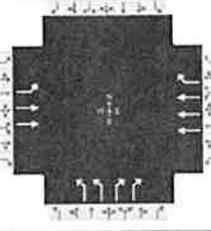
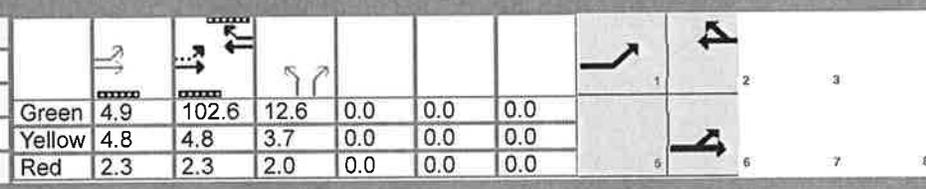
Signal Information													
Cycle, s	150.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	6.1	92.1	31.8	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	3.7	0.0	0.0	0.0			
				Red	2.3	2.3	2.0	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		7.3		9.0		
Phase Duration, s	13.2	112.5		99.2		37.5		
Change Period, (Y+R _c), s	7.1	7.1		7.1		5.7		
Max Allow Headway (MAH), s	5.0	0.0		0.0		6.2		
Queue Clearance Time (g _s), s	5.6					29.3		
Green Extension Time (g _e), s	0.6	0.0		0.0		2.6		
Phase Call Probability	0.99					1.00		
Max Out Probability	0.00					1.00		

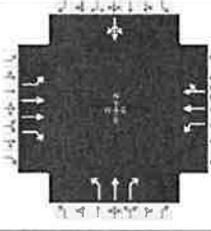
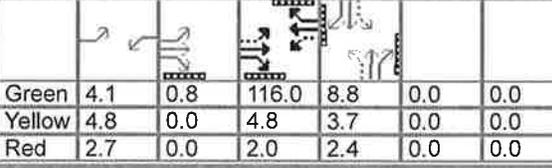
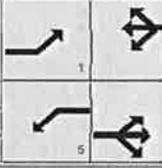
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6			2	12	7		14			
Adjusted Flow Rate (v), veh/h	117	585			324	537	98		526			
Adjusted Saturation Flow Rate (s), veh/h/ln	1725	1781			1644	1585	1689		1403			
Queue Service Time (g _s), s	3.6	8.8			4.1	29.7	3.5		27.3			
Cycle Queue Clearance Time (g _c), s	3.6	8.8			4.1	29.7	3.5		27.3			
Green Ratio (g/C)	0.67	0.70			0.61	0.61	0.21		0.21			
Capacity (c), veh/h	719	2501			3030	973	717		596			
Volume-to-Capacity Ratio (X)	0.163	0.234			0.107	0.552	0.137		0.883			
Back of Queue (Q), ft/ln (95 th percentile)	61.8	144.6			69.1	410.6	70		406.1			
Back of Queue (Q), veh/ln (95 th percentile)	2.4	5.7			2.6	16.2	2.7		16.0			
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	9.0	8.0			12.0	16.9	47.9		57.3			
Incremental Delay (d ₂), s/veh	0.1	0.2			0.1	2.3	0.2		14.1			
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (d), s/veh	9.1	8.2			12.0	19.1	48.1		71.3			
Level of Service (LOS)	A	A			B	B	D		E			
Approach Delay, s/veh / LOS	8.3	A	16.5	B	67.7	E	0.0					
Intersection Delay, s/veh / LOS	28.5						C					

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.06	B	1.38	A	2.49	B	2.49	B				
Bicycle LOS Score / LOS	1.07	A	0.96	A	F							

HCS7 Signalized Intersection Results Summary

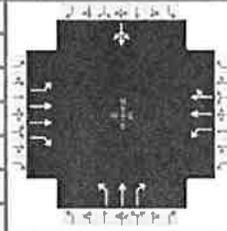
General Information						Intersection Information									
Agency	LTG					Duration, h	0.25								
Analyst	ACP		Analysis Date	Aug 31, 2018		Area Type	Other								
Jurisdiction	Brevard		Time Period	PM Peak Hour		PHF	1.00								
Urban Street	US 192		Analysis Year	2019		Analysis Period	1 > 7:00								
Intersection	US 192 at NB I-95		File Name	6. US 192 at NB I-95 - PM Background.xus											
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				106	704			759	662	138		195			
Signal Information															
Cycle, s	140.0	Reference Phase	2	Green	4.9	102.6	12.6	0.0	0.0	0.0	1	2	3		
Offset, s	0	Reference Point	End	Yellow	4.8	4.8	3.7	0.0	0.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Red	2.3	2.3	2.0	0.0	0.0	0.0	6	7	8		
Force Mode	Fixed	Simult. Gap N/S	On												
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				1	6		2		4						
Case Number				1.0	4.0		7.3		9.0						
Phase Duration, s				12.0	121.7		109.7		18.3						
Change Period, (Y+R _c), s				7.1	7.1		7.1		5.7						
Max Allow Headway (MAH), s				5.0	0.0		0.0		6.2						
Queue Clearance Time (g _s), s				4.1					11.5						
Green Extension Time (g _e), s				0.5	0.0		0.0		1.1						
Phase Call Probability				0.98					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				1	6			2	12	7		14			
Adjusted Flow Rate (v), veh/h				106	704		759	662		138		195			
Adjusted Saturation Flow Rate (s), veh/h/ln				1668	1781		1685	1585		1702		1403			
Queue Service Time (g _s), s				2.1	6.3		6.6	26.8		5.4		9.5			
Cycle Queue Clearance Time (g _c), s				2.1	6.3		6.6	26.8		5.4		9.5			
Green Ratio (g/C)				0.78	0.82		0.73	0.73		0.09		0.09			
Capacity (c), veh/h				563	2915		3704	1162		306		252			
Volume-to-Capacity Ratio (X)				0.188	0.241		0.205	0.570		0.451		0.773			
Back of Queue (Q), ft/ln (95 th percentile)				28.5	73.8		95.6	335.8		110.6		172.2			
Back of Queue (Q), veh/ln (95 th percentile)				1.1	2.9		3.7	13.2		4.3		6.8			
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				3.9	2.9		5.9	8.6		60.4		62.3			
Incremental Delay (d ₂), s/veh				0.2	0.2		0.1	2.0		2.2		12.3			
Initial Queue Delay (d ₃), s/veh				0.0	0.0		0.0	0.0		0.0		0.0			
Control Delay (d), s/veh				4.1	3.1		6.0	10.6		62.6		74.6			
Level of Service (LOS)				A	A		A	B		E		E			
Approach Delay, s/veh / LOS				3.2	A		8.2	A		69.6	E		0.0		
Intersection Delay, s/veh / LOS				14.6					B						
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				2.02	B		1.35	A		2.48	B		2.48	B	
Bicycle LOS Score / LOS				1.16	A		1.27	A			F				

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP		Analysis Date	Aug 31, 2018		Area Type	Other								
Jurisdiction	Brevard		Time Period	AM Peak Hour		PHF	1.00								
Urban Street	US 192		Analysis Year	2019		Analysis Period	1 > 7:00								
Intersection	US 192 at Coastal Ln		File Name	7. US 192 at Coastal Ln - AM Background.xus											
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h				84	1231	44	41	778	56	33	6	29	11	5	23
Signal Information															
Cycle, s	150.0	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	4.1	0.8	116.0	8.8	0.0	0.0									
Yellow	4.8	0.0	4.8	3.7	0.0	0.0									
Red	2.7	0.0	2.0	2.4	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase				1	6	5	2		4		8				
Case Number				1.1	3.0	1.1	4.0		5.0		8.0				
Phase Duration, s				12.3	123.5	11.6	122.8		14.9		14.9				
Change Period, (Y+R _c), s				7.5	6.8	7.5	6.8		6.1		6.1				
Max Allow Headway (MAH), s				4.0	0.0	4.0	0.0		4.3		4.3				
Queue Clearance Time (g _s), s				3.4		2.7			8.8		5.3				
Green Extension Time (g _e), s				0.2	0.0	0.1	0.0		0.1		0.2				
Phase Call Probability				0.97		0.82			0.97		0.97				
Max Out Probability				0.00		0.00			0.02		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				1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h				84	1231	28	41	422	412	33	6	9		39	
Adjusted Saturation Flow Rate (s), veh/h/ln				1781	1781	1572	1767	1870	1826	1382	1870	1585		1608	
Queue Service Time (g _s), s				1.4	17.6	0.6	0.7	9.9	9.9	3.5	0.5	0.8		0.2	
Cycle Queue Clearance Time (g _c), s				1.4	17.6	0.6	0.7	9.9	9.9	6.8	0.5	0.8		3.3	
Green Ratio (g/C)				0.81	0.78	0.78	0.80	0.77	0.77	0.06	0.06	0.06		0.06	
Capacity (c), veh/h				571	2771	1224	387	1446	1411	99	110	93		125	
Volume-to-Capacity Ratio (X)				0.147	0.444	0.023	0.106	0.292	0.292	0.335	0.055	0.097		0.312	
Back of Queue (Q), ft/ln (95 th percentile)				19.1	239.1	8	9.8	156.2	150.9	60.1	10.3	15.6		68.6	
Back of Queue (Q), veh/ln (95 th percentile)				0.8	9.4	0.3	0.4	6.2	6.0	2.4	0.4	0.6		2.7	
Queue Storage Ratio (RQ) (95 th percentile)				0.04	0.00	0.02	0.03	0.00	0.00	0.21	0.00	0.07		0.00	
Uniform Delay (d ₁), s/veh				3.4	5.6	3.8	4.4	5.0	5.0	71.3	66.7	66.8		68.0	
Incremental Delay (d ₂), s/veh				0.1	0.5	0.0	0.1	0.5	0.5	2.0	0.2	0.4		1.4	
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	
Control Delay (d), s/veh				3.5	6.2	3.8	4.5	5.5	5.5	73.3	66.9	67.3		69.4	
Level of Service (LOS)				A	A	A	A	A	A	E	E	E		E	
Approach Delay, s/veh / LOS				5.9	A	5.5	A		71.4	E		69.4		E	
Intersection Delay, s/veh / LOS				8.2						A					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				2.07	B	1.63	B	2.33	B	2.50	C				
Bicycle LOS Score / LOS				1.60	B	1.21	A	0.57	A	0.55	A				

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	US 192 at Coastal Ln	File Name	7. US 192 at Coastal Ln - PM Background.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	52	819	179	173	1196	50	190	24	113	38	10	86

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	4.3	2.1	94.2	18.9	0.0	0.0							
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	0.0	4.8	3.7	0.0	0.0							
				Red	2.7	0.0	2.0	2.4	0.0	0.0							

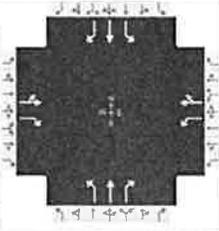
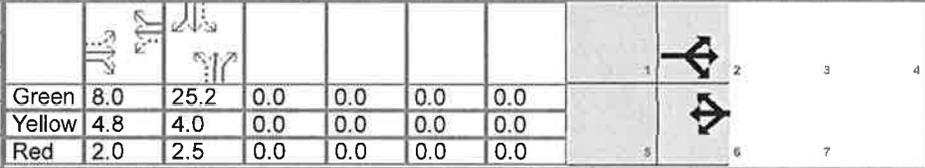
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	11.8	101.0	14.0	103.2		25.0		25.0
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.4		4.4
Queue Clearance Time (g _s), s	3.3		6.2			20.9		13.1
Green Extension Time (g _e), s	0.0	0.0	0.3	0.0		0.0		0.8
Phase Call Probability	0.87		1.00			1.00		1.00
Max Out Probability	0.22		0.17			1.00		0.53

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	52	819	84	173	627	619	190	24	27			134
Adjusted Saturation Flow Rate (s), veh/h/ln	1739	1781	1572	1781	1870	1844	1269	1826	1572			1571
Queue Service Time (g _s), s	1.3	13.7	2.6	4.2	22.0	22.1	7.8	1.6	2.1			6.8
Cycle Queue Clearance Time (g _c), s	1.3	13.7	2.6	4.2	22.0	22.1	18.9	1.6	2.1			11.1
Green Ratio (g/C)	0.70	0.67	0.67	0.72	0.69	0.69	0.14	0.14	0.14			0.14
Capacity (c), veh/h	330	2397	1058	518	1287	1269	122	246	212			245
Volume-to-Capacity Ratio (X)	0.157	0.342	0.079	0.334	0.487	0.488	1.559	0.097	0.127			0.547
Back of Queue (Q), ft/ln (95 th percentile)	20.8	219.7	39.4	66.6	338.6	331	613.5	35.6	39.6			208.7
Back of Queue (Q), veh/ln (95 th percentile)	0.8	8.6	1.5	2.6	13.3	13.2	23.6	1.4	1.5			8.2
Queue Storage Ratio (RQ) (95 th percentile)	0.05	0.00	0.12	0.18	0.00	0.00	2.19	0.00	0.18			0.00
Uniform Delay (d ₁), s/veh	8.3	9.7	7.9	7.0	10.2	10.2	67.8	53.1	53.3			57.1
Incremental Delay (d ₂), s/veh	0.2	0.4	0.1	0.4	1.3	1.3	287.4	0.2	0.3			2.5
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
Control Delay (d), s/veh	8.5	10.1	8.1	7.4	11.6	11.6	355.1	53.2	53.6			59.6
Level of Service (LOS)	A	B	A	A	B	B	F	D	D			E
Approach Delay, s/veh / LOS	9.8		A	11.1		B	291.3		F		59.6	E
Intersection Delay, s/veh / LOS	37.6						D					

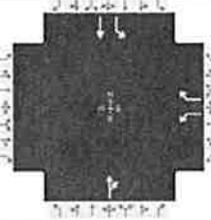
Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.19	B	1.65	B
Bicycle LOS Score / LOS	1.28	A	1.66	B

APPENDIX K
HCS SUMMARY SHEETS – BACKGROUND
CONDITIONS WITH IMPROVEMENTS

HCS7 Signalized Intersection Results Summary

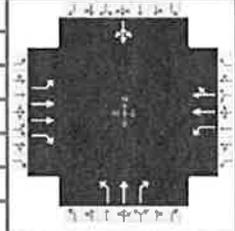
General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other										
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00										
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1 > 7:00										
Intersection	John Rodes Blvd at She...	File Name	2. John Rodes Blvd at Sheridan Rd - AM Backgro...												
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand (v), veh/h	69	19	62	107	9	137	23	883	55	45	208	25			
Signal Information															
Cycle, s	46.5	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	8.0	25.2										0.0	0.0	0.0
	Yellow	4.8	4.0	0.0	0.0	0.0	0.0								
	Red	2.0	2.5	0.0	0.0	0.0	0.0								
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					2		6		8		4				
Case Number					7.0		6.0		5.0		5.0				
Phase Duration, s					14.8		14.8		31.7		31.7				
Change Period, (Y+R _c), s					6.8		6.8		6.5		6.5				
Max Allow Headway (MAH), s					7.3		7.3		4.0		4.0				
Queue Clearance Time (g _s), s					9.1		10.0		21.0		24.2				
Green Extension Time (g _e), s					0.0		0.0		4.2		0.0				
Phase Call Probability					1.00		1.00		1.00		1.00				
Max Out Probability					1.00		1.00		0.09		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		88	51	107	146		23	883	2	45	208	0			
Adjusted Saturation Flow Rate (s), veh/h/ln		658	1585	1393	1308		1174	1870	1585	624	1767	1585			
Queue Service Time (g _s), s		2.2	1.3	0.9	4.8		0.5	19.0	0.0	3.1	2.8	0.0			
Cycle Queue Clearance Time (g _c), s		7.1	1.3	8.0	4.8		3.3	19.0	0.0	22.2	2.8	0.0			
Green Ratio (g/C)		0.17	0.17	0.17	0.17		0.54	0.54	0.54	0.54	0.54	0.54			
Capacity (c), veh/h		251	273	182	225		719	1014	859	237	958	859			
Volume-to-Capacity Ratio (X)		0.350	0.187	0.587	0.649		0.032	0.871	0.002	0.190	0.217	0.000			
Back of Queue (Q), ft/ln (95 th percentile)		48.2	23	74.3	108.9		3.5	213.9	0.2	18.2	28.2	0			
Back of Queue (Q), veh/ln (95 th percentile)		1.9	0.9	2.9	3.6		0.1	8.4	0.0	0.7	1.1	0.0			
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.21	0.39	0.00		0.02	0.00	0.00	0.07	0.00	0.00			
Uniform Delay (d ₁), s/veh		19.8	16.5	23.1	17.9		6.4	9.2	4.9	18.9	5.5	0.0			
Incremental Delay (d ₂), s/veh		3.0	1.2	10.9	11.7		0.0	3.1	0.0	0.4	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			
Control Delay (d), s/veh		22.8	17.7	34.0	29.6		6.4	12.3	4.9	19.3	5.6	0.0			
Level of Service (LOS)		C	B	C	C		A	B	A	B	A				
Approach Delay, s/veh / LOS	20.9	C		31.5	C		12.2	B		8.1	A				
Intersection Delay, s/veh / LOS	15.4						B								
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.17	B		2.13	B		1.86	B		1.88	B				
Bicycle LOS Score / LOS	0.72	A		0.91	A		1.99	B		0.91	A				

HCS7 Signalized Intersection Results Summary

General Information						Intersection Information								
Agency	LTG					Duration, h	0.25							
Analyst	ACP		Analysis Date	May 7, 2018		Area Type	Other							
Jurisdiction	Brevard		Time Period	AM Peak Hour		PHF	1.00							
Urban Street	John Rodes Blvd		Analysis Year	2019		Analysis Period	1 > 7:00							
Intersection	John Rodes Blvd at Ellis...		File Name	4. John Rodes Blvd at Ellis Rd - AM Background...										
Project Description	4397.02													
														
Demand Information			EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R		
Demand (v), veh/h				77		184		740	211	232	229			
Signal Information														
Cycle, s	97.0	Reference Phase	2											
Offset, s	0	Reference Point	End											
Uncoordinated	Yes	Simult. Gap E/W	On	Green	8.5	54.3	14.1	0.0	0.0	0.0				
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0				
				Red	2.0	2.0	2.5	0.0	0.0	0.0				
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT			
Assigned Phase							4		6	5	2			
Case Number							9.0		8.3	1.0	4.0			
Phase Duration, s							20.6		61.1	15.3	76.4			
Change Period, (Y+R _c), s							6.5		6.8	6.8	6.8			
Max Allow Headway (MAH), s							4.8		3.5	4.0	3.5			
Queue Clearance Time (g _s), s							13.3		49.9	8.0	5.9			
Green Extension Time (g _e), s							0.8		4.2	0.5	4.2			
Phase Call Probability							1.00		1.00	1.00	1.00			
Max Out Probability							0.15		0.00	0.01	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				7		14		6	16	5	2			
Adjusted Flow Rate (v), veh/h				77		184		951		232	229			
Adjusted Saturation Flow Rate (s), veh/h/ln				1781		1535		1799		1781	1826			
Queue Service Time (g _s), s				3.8		11.3		47.9		6.0	3.9			
Cycle Queue Clearance Time (g _c), s				3.8		11.3		47.9		6.0	3.9			
Green Ratio (g/C)				0.15		0.15		0.56		0.67	0.72			
Capacity (c), veh/h				260		224		1008		270	1309			
Volume-to-Capacity Ratio (X)				0.296		0.820		0.943		0.860	0.175			
Back of Queue (Q), ft/ln (95 th percentile)				75.9		219.5		631.6		155.7	50.8			
Back of Queue (Q), veh/ln (95 th percentile)				3.0		8.4		24.9		6.1	2.0			
Queue Storage Ratio (RQ) (95 th percentile)				0.19		0.00		0.00		0.40	0.00			
Uniform Delay (d ₁), s/veh				37.0		40.3		19.9		25.1	4.5			
Incremental Delay (d ₂), s/veh				0.8		9.9		4.1		7.9	0.0			
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0	0.0			
Control Delay (d), s/veh				37.8		50.2		24.0		32.9	4.5			
Level of Service (LOS)				D		D		C		C	A			
Approach Delay, s/veh / LOS	0.0			46.5			D	24.0			C	18.8		B
Intersection Delay, s/veh / LOS	26.1						C							
Multimodal Results			EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.73	B		1.96	B		1.89	B		0.65	A			
Bicycle LOS Score / LOS					F		2.06	B		1.25	A			

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	US 192 at Coastal Ln	File Name	7. US 192 at Coastal Ln - PM Background Improv...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	52	819	179	173	1196	50	190	24	113	38	10	86

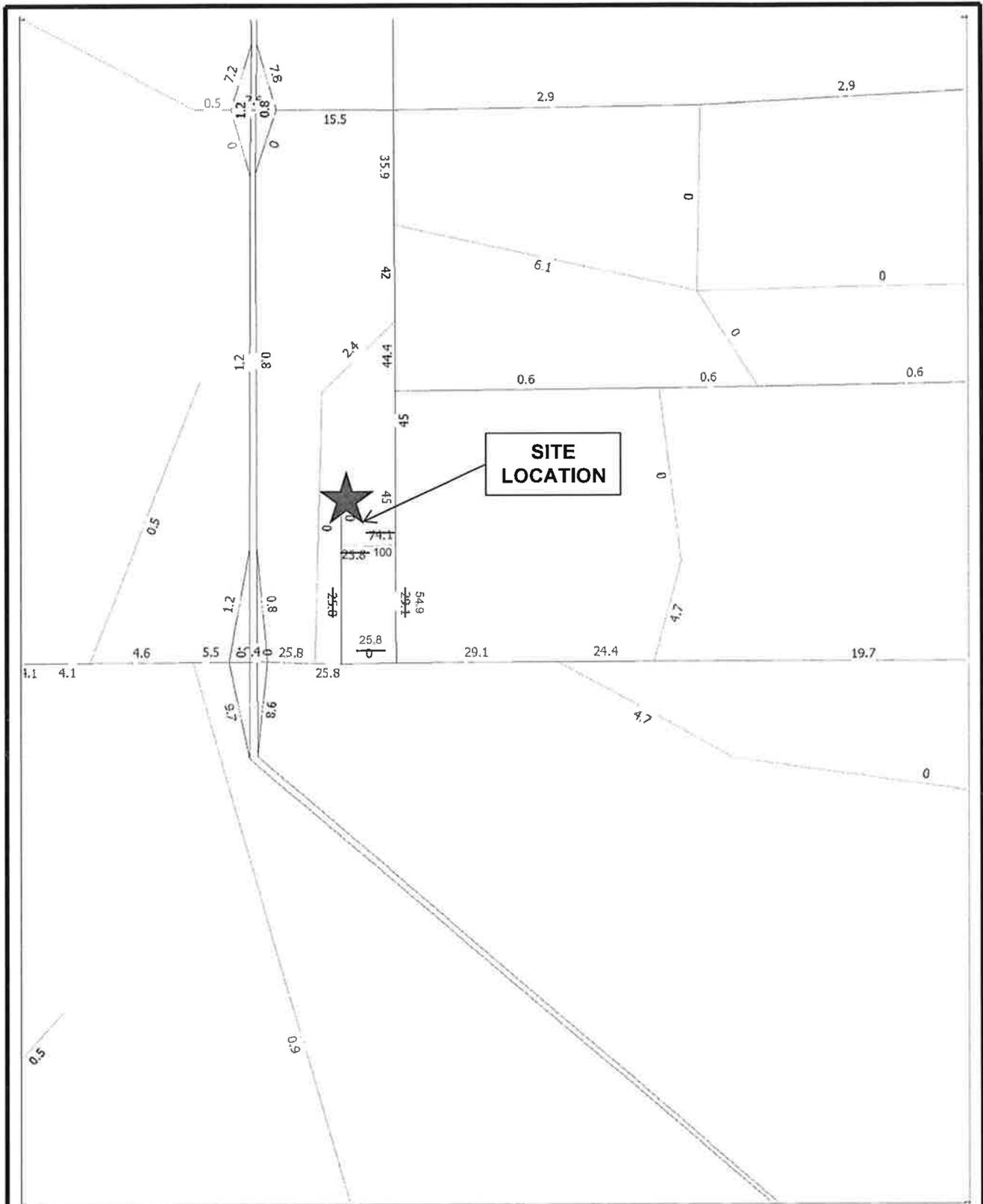
Signal Information				Signal Timing (s)																				
Cycle, s	140.0	Reference Phase	2	Green	4.3	3.6	81.7	29.9	0.0	0.0	Yellow	4.8	0.0	4.8	3.7	0.0	0.0	Red	2.7	0.0	2.0	2.4	0.0	0.0
Offset, s	0	Reference Point	End																					
Uncoordinated	No	Simult. Gap E/W	On																					
Force Mode	Fixed	Simult. Gap N/S	On																					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	11.8	88.5	15.5	92.2		36.0		36.0
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.4		4.4
Queue Clearance Time (g _s), s	3.7		7.4			31.9		12.0
Green Extension Time (g _e), s	0.1	0.0	0.6	0.0		0.0		1.4
Phase Call Probability	0.87		1.00			1.00		1.00
Max Out Probability	0.00		0.00			1.00		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	1	6	16	5	2	12	7	4	14	3	8	18	
Adjusted Flow Rate (v), veh/h	52	819	84	173	627	619	190	24	27		134		
Adjusted Saturation Flow Rate (s), veh/h/ln	1739	1781	1572	1781	1870	1844	1269	1826	1572		1563		
Queue Service Time (g _s), s	1.7	17.4	3.3	5.4	27.6	27.6	19.9	1.5	1.9		5.0		
Cycle Queue Clearance Time (g _c), s	1.7	17.4	3.3	5.4	27.6	27.6	29.9	1.5	1.9		10.0		
Green Ratio (g/C)	0.61	0.58	0.58	0.64	0.61	0.61	0.21	0.21	0.21		0.21		
Capacity (c), veh/h	279	2079	918	460	1140	1124	232	390	336		367		
Volume-to-Capacity Ratio (X)	0.187	0.394	0.092	0.376	0.550	0.551	0.820	0.062	0.080		0.365		
Back of Queue (Q), ft/ln (95 th percentile)	29.7	283.4	53.9	93.9	435.3	424.6	332.6	31.9	35.4		188		
Back of Queue (Q), veh/ln (95 th percentile)	1.1	11.2	2.1	3.7	17.1	17.0	12.8	1.2	1.4		7.4		
Queue Storage Ratio (RQ) (95 th percentile)	0.07	0.00	0.16	0.25	0.00	0.00	1.19	0.00	0.16		0.00		
Uniform Delay (d ₁), s/veh	13.5	15.8	12.8	11.5	16.0	16.1	60.6	43.9	44.0		47.1		
Incremental Delay (d ₂), s/veh	0.3	0.6	0.2	0.5	1.9	1.9	20.3	0.1	0.1		0.6		
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		
Control Delay (d), s/veh	13.8	16.3	13.0	12.0	18.0	18.0	80.9	43.9	44.2		47.7		
Level of Service (LOS)	B	B	B	B	B	B	F	D	D		D		
Approach Delay, s/veh / LOS	15.9		B	17.2		B	73.1		E		47.7		D
Intersection Delay, s/veh / LOS	23.2						C						

Multimodal Results	EB			WB			NB			SB		
Pedestrian LOS Score / LOS	2.21		B	1.67		B	2.31		B	2.60		C
Bicycle LOS Score / LOS	1.28		A	1.66		B	0.89		A	0.71		A

APPENDIX L
2019 MODEL DISTRIBUTION



cube

(Licensed to Lassiter Transportation Group, Inc.)

Oasis of West
Melbourne



NTS

2019 Model Trip
Distribution

Project No.: 4397.02

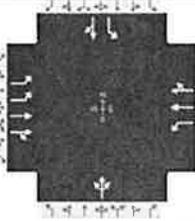
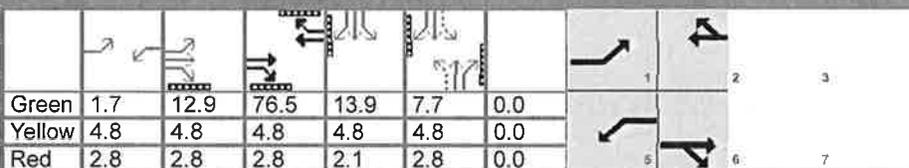
Appendix K

LTG Engineering
& Planning

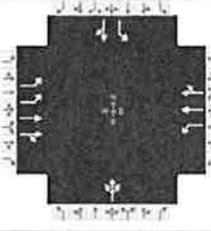
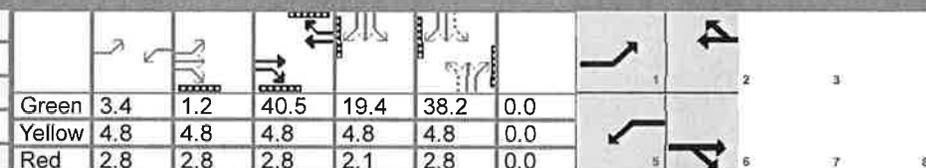
1970 Dairy Road – W. Melbourne, Florida 32904
Telephone: 321.499.4679 Fax: 321.499.4680 EB# 0009227

APPENDIX M
HCS SUMMARY SHEETS – BUILD-OUT
CONDITIONS

HCS7 Signalized Intersection Results Summary

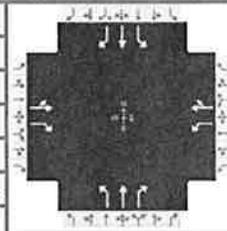
General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other										
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00										
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00										
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - AM Build-Out.xus												
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R			
Demand (v), veh/h	432	795	3	10	743	186	19	8	24	153	3	214			
Signal Information															
Cycle, s	150.0	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	1.7	12.9	76.5	13.9	7.7	0.0									
Yellow	4.8	4.8	4.8	4.8	4.8	0.0									
Red	2.8	2.8	2.8	2.1	2.8	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase	1			6			5			2					
Case Number	2.0			4.0			2.0			4.0					
Phase Duration, s	29.8			104.6			9.3			84.1					
Change Period, (Y+R _c), s	7.6			7.6			7.6			7.6					
Max Allow Headway (MAH), s	4.0			0.0			4.0			0.0					
Queue Clearance Time (g _s), s	20.4						3.0								
Green Extension Time (g _e), s	1.8			0.0			0.0			0.0					
Phase Call Probability	1.00						0.34								
Max Out Probability	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	1	6	16	5	2	12	7	4	14	3	8	18			
Adjusted Flow Rate (v), veh/h	432	399	399	10	481	448		51	14	153	217				
Adjusted Saturation Flow Rate (s), veh/h/ln	1716	1870	1868	1499	1870	1740		1492		1781	1588				
Queue Service Time (g _s), s	18.4	14.4	14.4	1.0	25.4	25.4		3.2		11.9	19.2				
Cycle Queue Clearance Time (g _c), s	18.4	14.4	14.4	1.0	25.4	25.4		4.9		11.9	19.2				
Green Ratio (g/C)	0.15	0.65	0.65	0.01	0.51	0.51		0.05		0.16	0.19				
Capacity (c), veh/h	507	1210	1208	17	955	888		110		238	302				
Volume-to-Capacity Ratio (X)	0.852	0.330	0.330	0.586	0.504	0.504		0.465		0.642	0.719				
Back of Queue (Q), ft/ln (95 th percentile)	329.8	251.5	247.3	27.1	431	400.6		91		242.3	316.6				
Back of Queue (Q), veh/ln (95 th percentile)	12.9	9.9	9.9	0.9	17.0	16.0		3.6		9.5	12.5				
Queue Storage Ratio (RQ) (95 th percentile)	0.55	0.00	0.00	0.16	0.00	0.00		0.00		0.00	0.00				
Uniform Delay (d ₁), s/veh	62.3	11.9	11.9	73.8	24.2	24.2		69.7		58.5	57.0				
Incremental Delay (d ₂), s/veh	4.2	0.7	0.7	28.0	1.9	2.0		3.0		5.6	3.2				
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				
Control Delay (d), s/veh	66.5	12.6	12.6	101.8	26.1	26.3		72.7		64.0	60.2				
Level of Service (LOS)	E	B	B	F	C	C		E		E	E				
Approach Delay, s/veh / LOS	31.5			C			27.0			C					
Intersection Delay, s/veh / LOS	35.0						D								
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS	1.66	B		2.10	B		2.33	B		2.47	B				
Bicycle LOS Score / LOS	1.50	B		1.26	A		0.57	A		1.10	A				

HCS7 Signalized Intersection Results Summary

General Information						Intersection Information										
Agency	LTG					Duration, h	0.25									
Analyst	ACP	Analysis Date	Aug 31, 2018			Area Type	Other									
Jurisdiction	Brevard	Time Period	PM Peak Hour			PHF	1.00									
Urban Street	US 192	Analysis Year	2019			Analysis Period	1 > 7:00									
Intersection	John Rodes Blvd at US...	File Name	1. John Rodes Blvd at US 192 - PM Build-Out.xus													
Project Description	4397.02															
Demand Information				EB			WB			NB			SB			
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R	
Demand (v), veh/h				235	689	19	29	704	172	6	3	9	301	7	686	
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
				Yellow	4.8	4.8	4.8	4.8	4.8	0.0						
				Red	2.8	2.8	2.8	2.1	2.8	0.0						
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT					
Assigned Phase				1	6	5	2		4	3	8					
Case Number				2.0	4.0	2.0	4.0		8.3	1.0	4.0					
Phase Duration, s				19.8	56.9	11.0	48.1		45.8	26.3	72.1					
Change Period, (Y+R _c), s				7.6	7.6	7.6	7.6		7.6	6.9	7.6					
Max Allow Headway (MAH), s				4.0	0.0	4.0	0.0		4.3	4.0	4.3					
Queue Clearance Time (g _s), s				11.3		4.3			34.6	18.3	60.5					
Green Extension Time (g _e), s				0.9	0.0	0.1	0.0		3.6	1.0	3.6					
Phase Call Probability				1.00		0.68			1.00	1.00	1.00					
Max Out Probability				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				1	6	16	5	2	12	7	4	14	3	8	18	
Adjusted Flow Rate (v), veh/h				235	356	352	29	453	423	18		301	693			
Adjusted Saturation Flow Rate (s), veh/h/ln				1730	1856	1838	1781	1856	1729	366		1781	1587			
Queue Service Time (g _s), s				9.3	21.5	21.5	2.3	32.2	32.2	0.4		16.3	58.5			
Cycle Queue Clearance Time (g _c), s				9.3	21.5	21.5	2.3	32.2	32.2	32.6		16.3	58.5			
Green Ratio (g/C)				0.09	0.35	0.35	0.02	0.29	0.29	0.27		0.43	0.46			
Capacity (c), veh/h				302	653	647	43	536	500	134		354	732			
Volume-to-Capacity Ratio (X)				0.779	0.544	0.545	0.674	0.845	0.846	0.134		0.851	0.947			
Back of Queue (Q), ft/ln (95 th percentile)				192.2	392	380.8	55.5	598.7	555.1	21.3		299.8	812.6			
Back of Queue (Q), veh/ln (95 th percentile)				7.6	15.3	15.2	2.2	23.4	22.2	0.8		11.8	32.0			
Queue Storage Ratio (RQ) (95 th percentile)				0.32	0.00	0.00	0.34	0.00	0.00	0.00		0.00	0.00			
Uniform Delay (d ₁), s/veh				62.6	36.3	36.4	67.8	46.8	46.8	40.3		33.0	36.1			
Incremental Delay (d ₂), s/veh				4.3	3.2	3.3	16.8	15.1	16.0	0.4		5.8	12.6			
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				66.9	39.6	39.6	84.5	61.9	62.9	40.7		38.8	48.7			
Level of Service (LOS)				E	D	D	F	E	E		D		D	D		
Approach Delay, s/veh / LOS				46.4		D	63.1		E	40.7		D	45.7		D	
Intersection Delay, s/veh / LOS				51.4					D							
Multimodal Results				EB			WB			NB			SB			
Pedestrian LOS Score / LOS				1.71		B	2.13		B	2.30		B	2.43		B	
Bicycle LOS Score / LOS				1.27		A	1.23		A	0.52		A	2.13		B	

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1> 7:00		
Intersection	John Rodes Blvd at She...	File Name	2. John Rodes Blvd at Sheridan Rd - AM Build-Ou...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	69	19	62	107	9	137	23	939	56	45	222	25

Signal Information													
Cycle, s	49.2	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	8.0	27.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				Red	2.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0

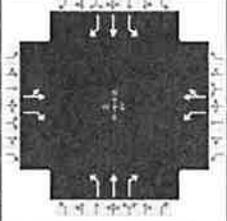
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		7.0		6.0		5.0		5.0
Phase Duration, s		14.8		14.8		34.4		34.4
Change Period, (Y+R _c), s		6.8		6.8		6.5		6.5
Max Allow Headway (MAH), s		7.3		7.3		4.0		4.0
Queue Clearance Time (g _s), s		9.6		10.0		23.5		27.0
Green Extension Time (g _e), s		0.0		0.0		4.4		0.0
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		1.00		1.00		0.17		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	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h		88	51	107	146		23	939	3	45	222	0
Adjusted Saturation Flow Rate (s), veh/h/ln		602	1585	1393	1308		1159	1870	1585	592	1767	1585
Queue Service Time (g _s), s		2.4	1.4	0.4	5.2		0.5	21.5	0.0	3.5	3.1	0.0
Cycle Queue Clearance Time (g _c), s		7.6	1.4	8.0	5.2		3.6	21.5	0.0	25.0	3.1	0.0
Green Ratio (g/C)		0.16	0.16	0.16	0.16		0.57	0.57	0.57	0.57	0.57	0.57
Capacity (c), veh/h		228	258	157	213		731	1060	899	223	1001	898
Volume-to-Capacity Ratio (X)		0.385	0.198	0.681	0.686		0.031	0.886	0.003	0.201	0.222	0.000
Back of Queue (Q), ft/ln (95 th percentile)		53.1	25	89.9	122.1		3.6	248.3	0.3	19.9	30.6	0
Back of Queue (Q), veh/ln (95 th percentile)		2.1	1.0	3.5	4.1		0.1	9.8	0.0	0.8	1.1	0.0
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.22	0.47	0.00		0.02	0.00	0.00	0.08	0.00	0.00
Uniform Delay (d ₁), s/veh		21.5	17.8	24.6	19.4		6.2	9.3	4.6	20.1	5.3	0.0
Incremental Delay (d ₂), s/veh		3.8	1.3	18.7	14.5		0.0	4.5	0.0	0.4	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
Control Delay (d), s/veh		25.4	19.2	43.2	33.9		6.2	13.8	4.6	20.6	5.4	0.0
Level of Service (LOS)		C	B	D	C		A	B	A	C	A	
Approach Delay, s/veh / LOS	23.1	C		37.8	D		13.6	B		7.9	A	
Intersection Delay, s/veh / LOS	17.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.18	B	2.14	B	1.86	B	1.87	B
Bicycle LOS Score / LOS	0.72	A	0.91	A	2.08	B	0.93	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1> 7:00		
Intersection	John Rodes Blvd at She...	File Name	2. John Rodes Blvd at Sheridan Rd - PM Build-O...				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	28	11	62	78	21	62	52	394	136	89	638	52

Signal Information				Signal Timing (s)										
Cycle, s	41.1	Reference Phase	2	Green	8.6	19.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	4.8	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	Yes	Simult. Gap E/W	On	Red	2.0	2.5	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		2		6		8		4
Case Number		7.0		6.0		5.0		5.0
Phase Duration, s		15.4		15.4		25.7		25.7
Change Period, (Y+R c), s		6.8		6.8		6.5		6.5
Max Allow Headway (MAH), s		7.3		7.3		4.1		4.1
Queue Clearance Time (g s), s		3.9		5.9		15.4		13.2
Green Extension Time (g e), s		2.9		2.9		3.9		4.3
Phase Call Probability		1.00		1.00		1.00		1.00
Max Out Probability		0.00		0.00		0.48		0.36

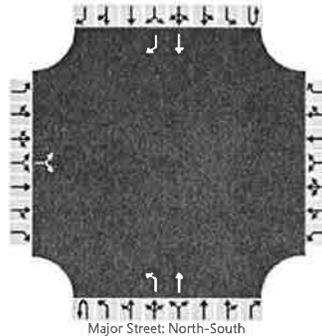
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h		39	36	78	83		52	394	98	89	638	38
Adjusted Saturation Flow Rate (s), veh/h/ln		1214	1585	1404	1649		790	1826	1585	990	1870	1585
Queue Service Time (g s), s		0.0	0.8	2.0	1.7		2.3	6.0	1.4	2.7	11.2	0.5
Cycle Queue Clearance Time (g c), s		1.9	0.8	3.9	1.7		13.4	6.0	1.4	8.6	11.2	0.5
Green Ratio (g/C)		0.21	0.21	0.21	0.21		0.47	0.47	0.47	0.47	0.47	0.47
Capacity (c), veh/h		402	327	402	341		331	854	741	496	875	741
Volume-to-Capacity Ratio (X)		0.097	0.110	0.194	0.244		0.157	0.461	0.132	0.179	0.729	0.051
Back of Queue (Q), ft/ln (95 th percentile)		13.9	12.5	29.4	30.1		15.1	62.2	12.5	19.4	127.9	4.7
Back of Queue (Q), veh/ln (95 th percentile)		0.5	0.5	1.2	1.2		0.6	2.4	0.5	0.8	5.0	0.2
Queue Storage Ratio (RQ) (95 th percentile)		0.00	0.11	0.15	0.00		0.07	0.00	0.05	0.07	0.00	0.02
Uniform Delay (d 1), s/veh		13.2	13.1	15.2	13.5		14.1	7.4	6.2	10.3	8.8	5.9
Incremental Delay (d 2), s/veh		0.4	0.5	0.8	1.3		0.2	0.4	0.1	0.2	1.7	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		13.5	13.7	16.1	14.9		14.4	7.8	6.2	10.4	10.5	6.0
Level of Service (LOS)		B	B	B	B		B	A	A	B	B	A
Approach Delay, s/veh / LOS	13.6	B		15.4	B		8.1	A		10.2	B	
Intersection Delay, s/veh / LOS	10.2						B					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.14	B	2.11	B
Bicycle LOS Score / LOS	0.61	A	0.75	A

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	ACP	Intersection	John Rodes Blvd at Proj
Agency/Co.	LTG	Jurisdiction	Brevard
Date Performed	5/7/2018	East/West Street	Project Frontage Road
Analysis Year	2019	North/South Street	John Rodes Boulevard
Time Analyzed	AM Peak-Hour Build-Out	Peak Hour Factor	1.00
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	4397.02		

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	0		0	0	0	0	1	1	0	0	0	1	1			
Configuration			LR							L	T				T	R			
Volume (veh/h)		57		37						9	640				356	14			
Percent Heavy Vehicles (%)		2		2						2									
Proportion Time Blocked																			
Percent Grade (%)		0																	
Right Turn Channelized																	No		
Median Type Storage		Left Only																1	

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2							4.1							
Critical Headway (sec)		6.42		6.22							4.12							
Base Follow-Up Headway (sec)		3.5		3.3							2.2							
Follow-Up Headway (sec)		3.52		3.32							2.22							

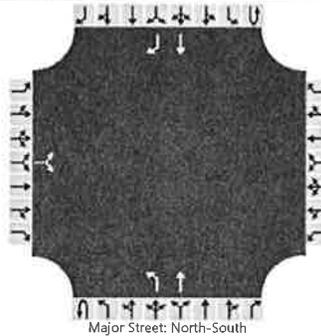
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			94								9							
Capacity, c (veh/h)			466								1188							
v/c Ratio			0.20								0.01							
95% Queue Length, Q ₉₅ (veh)			0.7								0.0							
Control Delay (s/veh)			14.7								8.1							
Level of Service (LOS)			B								A							
Approach Delay (s/veh)		14.7									0.1							
Approach LOS		B																

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ACP	Intersection	John Rodes Blvd at Proj				
Agency/Co.	LTG	Jurisdiction	Brevard				
Date Performed	5/7/2018	East/West Street	Project Frontage Road				
Analysis Year	2019	North/South Street	John Rodes Boulevard				
Time Analyzed	PM Peak-Hour Build-Out	Peak Hour Factor	1.00				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	4397.02						

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	0		0	0	0		0	1	1	0	0	1	1
Configuration			LR							L	T				T	R
Volume (veh/h)		30		19						36	404				1085	56
Percent Heavy Vehicles (%)		2		2						2						
Proportion Time Blocked																
Percent Grade (%)	0															
Right Turn Channelized													No			
Median Type Storage	Left Only								1							

Critical and Follow-up Headways

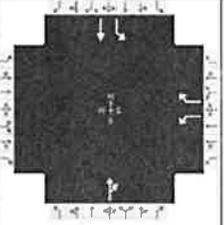
Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.42		6.22						4.12						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.52		3.32						2.22						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			49							36						
Capacity, c (veh/h)			247							612						
v/c Ratio			0.20							0.06						
95% Queue Length, Q ₉₅ (veh)			0.7							0.2						
Control Delay (s/veh)			23.1							11.3						
Level of Service (LOS)			C							B						
Approach Delay (s/veh)	23.1								0.9							
Approach LOS	C															

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - AM Build-Out.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				79		184		785	219	232	240	

Signal Information													
Cycle, s	111.7	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	10.4	65.4	15.8	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0			
				Red	2.0	2.0	2.5	0.0	0.0	0.0			

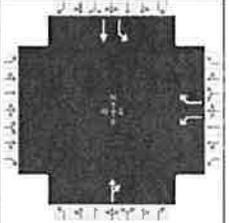
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				22.3		72.2	17.2	89.3
Change Period, (Y+R _c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g _s), s				15.1		60.5	9.9	6.4
Green Extension Time (g _e), s				0.7		4.6	0.5	4.6
Phase Call Probability				1.00		1.00	1.00	1.00
Max Out Probability				0.36		0.00	0.03	0.00

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement				7		14		6	16	5	2	
Adjusted Flow Rate (v), veh/h				79		184		1004		232	240	
Adjusted Saturation Flow Rate (s), veh/h/ln				1781		1535		1800		1781	1826	
Queue Service Time (g _s), s				4.5		13.1		58.5		7.9	4.4	
Cycle Queue Clearance Time (g _c), s				4.5		13.1		58.5		7.9	4.4	
Green Ratio (g/C)				0.14		0.14		0.59		0.70	0.74	
Capacity (c), veh/h				253		218		1055		265	1349	
Volume-to-Capacity Ratio (X)				0.312		0.843		0.952		0.874	0.178	
Back of Queue (Q), ft/ln (95 th percentile)				91.8		257.5		800.8		289.7	59.5	
Back of Queue (Q), veh/ln (95 th percentile)				3.6		9.8		31.5		11.4	2.3	
Queue Storage Ratio (RQ) (95 th percentile)				0.23		0.00		0.00		0.74	0.00	
Uniform Delay (d ₁), s/veh				43.1		46.8		21.7		32.6	4.4	
Incremental Delay (d ₂), s/veh				0.8		15.4		8.3		12.8	0.0	
Initial Queue Delay (d ₃), s/veh				0.0		0.0		0.0		0.0	0.0	
Control Delay (d), s/veh				44.0		62.2		30.0		45.4	4.4	
Level of Service (LOS)				D		E		C		D	A	
Approach Delay, s/veh / LOS	0.0			56.7		E	30.0		C	24.6		C
Intersection Delay, s/veh / LOS	32.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.74	B	1.96	B	1.89	B	0.65	A
Bicycle LOS Score / LOS				F	2.14	B	1.27	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information			
Agency	LTG			Duration, h	0.25		
Analyst	ACP	Analysis Date	May 7, 2018	Area Type	Other		
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00		
Urban Street	John Rodes Blvd	Analysis Year	2019	Analysis Period	1 > 7:00		
Intersection	John Rodes Blvd at Ellis...	File Name	4. John Rodes Blvd at Ellis Rd - PM Build-Out.xus				
Project Description	4397.02						



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h				150		230		353	94	152	641	

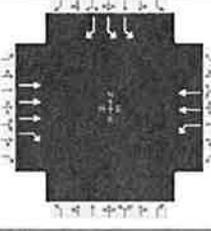
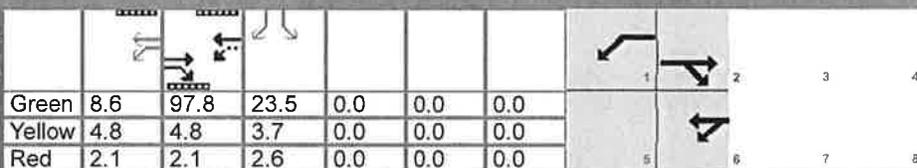
Signal Information													
Cycle, s	52.7	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	Yes	Simult. Gap E/W	On	Green	4.6	17.0	11.1	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	4.0	0.0	0.0	0.0			
				Red	2.0	2.0	2.5	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase				4		6	5	2
Case Number				9.0		8.3	1.0	4.0
Phase Duration, s				17.6		23.8	11.4	35.1
Change Period, (Y+R c), s				6.5		6.8	6.8	6.8
Max Allow Headway (MAH), s				4.8		3.5	4.0	3.5
Queue Clearance Time (g s), s				9.2		13.8	4.7	14.7
Green Extension Time (g e), s				1.9		3.1	0.4	3.1
Phase Call Probability				1.00		1.00	0.89	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				7		14		6	16	5		2
Adjusted Flow Rate (v), veh/h				150		230		447		152		641
Adjusted Saturation Flow Rate (s), veh/h/ln				1739		1560		1802		1781		1870
Queue Service Time (g s), s				3.9		7.2		11.8		2.7		12.7
Cycle Queue Clearance Time (g c), s				3.9		7.2		11.8		2.7		12.7
Green Ratio (g/C)				0.21		0.21		0.32		0.45		0.54
Capacity (c), veh/h				365		328		581		385		1006
Volume-to-Capacity Ratio (X)				0.411		0.702		0.769		0.395		0.637
Back of Queue (Q), ft/ln (95 th percentile)				69.4		119.9		185.1		37.6		149.7
Back of Queue (Q), veh/ln (95 th percentile)				2.7		4.6		7.3		1.5		5.9
Queue Storage Ratio (RQ) (95 th percentile)				0.17		0.00		0.00		0.10		0.00
Uniform Delay (d 1), s/veh				18.0		19.3		16.1		11.0		8.6
Incremental Delay (d 2), s/veh				0.9		3.3		1.6		0.7		0.5
Initial Queue Delay (d 3), s/veh				0.0		0.0		0.0		0.0		0.0
Control Delay (d), s/veh				18.9		22.6		17.7		11.6		9.1
Level of Service (LOS)				B		C		B		B		A
Approach Delay, s/veh / LOS	0.0			21.2		C	17.7		B	9.6		A
Intersection Delay, s/veh / LOS	14.5						B					

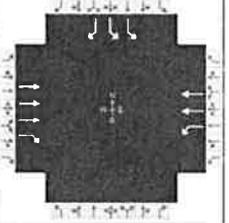
Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.71	B	1.94	B	1.90	B	0.67	A
Bicycle LOS Score / LOS				F	1.23	A	1.80	B

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information											
Agency	LTG			Duration, h	0.25										
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other										
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00										
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00										
Intersection	US 192 at SB I-95	File Name	5. US 192 at SB I-95 - AM Build-Out.xus												
Project Description	4397.02														
Demand Information				EB			WB			NB			SB		
Approach Movement				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h					223	166	189	232					457		94
Signal Information															
Cycle, s	150.0	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	8.6	97.8	23.5	0.0	0.0	0.0									
Yellow	4.8	4.8	3.7	0.0	0.0	0.0									
Red	2.1	2.1	2.6	0.0	0.0	0.0									
Timer Results				EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT				
Assigned Phase					2	1	6				4				
Case Number					7.3	1.0	4.0				9.0				
Phase Duration, s					104.7	15.5	120.2				29.8				
Change Period, (Y+R c), s					6.9	6.9	6.9				6.3				
Max Allow Headway (MAH), s					0.0	6.1	0.0				4.2				
Queue Clearance Time (g s), s						6.9					21.3				
Green Extension Time (g e), s					0.0	1.6	0.0				2.3				
Phase Call Probability						1.00					1.00				
Max Out Probability						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					2	12	1	6					7		14
Adjusted Flow Rate (v), veh/h					223	166	189	232					457		94
Adjusted Saturation Flow Rate (s), veh/h/ln					1618	1585	1781	1710					1730		1497
Queue Service Time (g s), s					2.5	6.1	4.9	2.7					19.3		8.5
Cycle Queue Clearance Time (g c), s					2.5	6.1	4.9	2.7					19.3		8.5
Green Ratio (g/C)					0.65	0.65	0.72	0.76					0.16		0.16
Capacity (c), veh/h					3164	1033	885	2583					542		235
Volume-to-Capacity Ratio (X)					0.070	0.161	0.213	0.090					0.842		0.400
Back of Queue (Q), ft/ln (95 th percentile)					43	100.7	84	43.1					344		158.4
Back of Queue (Q), veh/ln (95 th percentile)					1.6	4.0	3.3	1.6					13.5		5.9
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					9.5	10.1	6.5	4.8					61.4		56.9
Incremental Delay (d 2), s/veh					0.0	0.3	0.3	0.1					3.6		1.1
Initial Queue Delay (d 3), s/veh					0.0	0.0	0.0	0.0					0.0		0.0
Control Delay (d), s/veh					9.6	10.5	6.8	4.9					65.1		58.0
Level of Service (LOS)					A	B	A	A					E		E
Approach Delay, s/veh / LOS				10.0		A	5.7	A	0.0				63.9		E
Intersection Delay, s/veh / LOS				30.5						C					
Multimodal Results				EB			WB			NB			SB		
Pedestrian LOS Score / LOS				1.37		A	1.86		B	2.49		B	2.49		B
Bicycle LOS Score / LOS				0.70		A	0.83		A						F

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	US 192 at SB I-95	File Name	5. US 192 at SB I-95 - PM Build-Out.xus		
Project Description	4397.02				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h		258	138	480	410					610		186

Signal Information				Signal Timing (s)											
Cycle, s	140.0	Reference Phase	2	Green	24.3	66.6	29.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Offset, s	0	Reference Point	End	Yellow	4.8	4.8	3.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uncoordinated	No	Simult. Gap E/W	On	Red	2.1	2.1	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Force Mode	Fixed	Simult. Gap N/S	On												

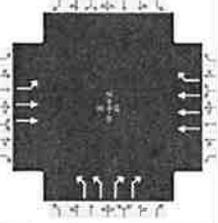
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2	1	6				4
Case Number		7.3	1.0	4.0				9.0
Phase Duration, s		73.5	31.2	104.7				35.3
Change Period, ($Y+R_c$), s		6.9	6.9	6.9				6.3
Max Allow Headway (MAH), s		0.0	6.1	0.0				4.2
Queue Clearance Time (g_s), s			19.4					25.8
Green Extension Time (g_e), s		0.0	4.9	0.0				3.3
Phase Call Probability			1.00					1.00
Max Out Probability			0.00					0.03

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					7		14
Adjusted Flow Rate (v), veh/h		258	138	480	410					610		186
Adjusted Saturation Flow Rate (s), veh/h/ln		1644	1585	1781	1752					1730		1547
Queue Service Time (g_s), s		4.1	7.0	17.4	5.6					23.8		15.2
Cycle Queue Clearance Time (g_c), s		4.1	7.0	17.4	5.6					23.8		15.2
Green Ratio (g/C)		0.48	0.48	0.66	0.70					0.21		0.21
Capacity (c), veh/h		2346	754	861	2448					717		321
Volume-to-Capacity Ratio (X)		0.110	0.183	0.557	0.168					0.851		0.580
Back of Queue (Q), ft/ln (95 th percentile)		75	124.6	282.1	95.4					408.4		260.7
Back of Queue (Q), veh/ln (95 th percentile)		2.9	4.9	11.1	3.7					16.1		10.0
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		20.3	21.1	11.1	7.2					53.4		50.0
Incremental Delay (d_2), s/veh		0.1	0.5	1.2	0.1					4.5		1.7
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0					0.0		0.0
Control Delay (d), s/veh		20.4	21.6	12.3	7.4					57.9		51.7
Level of Service (LOS)		C	C	B	A					E		D
Approach Delay, s/veh / LOS	20.8	C		10.0	B		0.0			56.5	E	
Intersection Delay, s/veh / LOS	29.8						C					

Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	1.40 / A	1.87 / B	2.48 / B	2.48 / B
Bicycle LOS Score / LOS	0.71 / A	1.22 / A		F

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	US 192 at NB I-95	File Name	6. US 192 at NB I-95 - AM Build-Out.xus		
Project Description	4397.02				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	117	587			354	540	98			532		

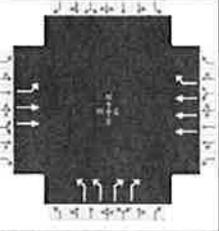
Signal Information													
Cycle, s	150.0	Reference Phase	2										
Offset, s	0	Reference Point	End										
Uncoordinated	No	Simult. Gap E/W	On	Green	6.2	91.9	32.1	0.0	0.0	0.0			
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	3.7	0.0	0.0	0.0			
				Red	2.3	2.3	2.0	0.0	0.0	0.0			

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6		2		4		
Case Number	1.0	4.0		7.3		9.0		
Phase Duration, s	13.3	112.2		99.0		37.8		
Change Period, (Y+R _c), s	7.1	7.1		7.1		5.7		
Max Allow Headway (MAH), s	5.0	0.0		0.0		6.2		
Queue Clearance Time (g _s), s	5.6					29.6		
Green Extension Time (g _e), s	0.6	0.0		0.0		2.5		
Phase Call Probability	0.99					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
Approach Movement												
Assigned Movement	1	6			2	12	7		14			
Adjusted Flow Rate (v), veh/h	117	587			354	540	98		532			
Adjusted Saturation Flow Rate (s), veh/h/ln	1725	1781			1644	1585	1689		1403			
Queue Service Time (g _s), s	3.6	8.9			4.5	30.0	3.5		27.6			
Cycle Queue Clearance Time (g _c), s	3.6	8.9			4.5	30.0	3.5		27.6			
Green Ratio (g/C)	0.67	0.70			0.61	0.61	0.21		0.21			
Capacity (c), veh/h	698	2496			3021	971	722		600			
Volume-to-Capacity Ratio (X)	0.168	0.235			0.117	0.556	0.136		0.886			
Back of Queue (Q), ft/ln (95 th percentile)	62.3	146.3			76.6	415.6	69.8		410.8			
Back of Queue (Q), veh/ln (95 th percentile)	2.4	5.8			2.9	16.4	2.7		16.2			
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	9.1	8.0			12.1	17.1	47.7		57.2			
Incremental Delay (d ₂), s/veh	0.2	0.2			0.1	2.3	0.2		14.4			
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (d), s/veh	9.3	8.3			12.2	19.4	47.9		71.6			
Level of Service (LOS)	A	A			B	B	D		E			
Approach Delay, s/veh / LOS	8.4	A		16.5	B		67.9	E	0.0			
Intersection Delay, s/veh / LOS	28.5						C					

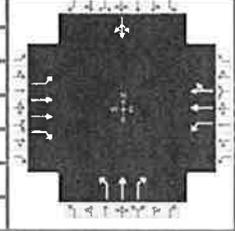
Multimodal Results	EB	WB	NB	SB
Pedestrian LOS Score / LOS	2.06	B	1.38	A
Bicycle LOS Score / LOS	1.07	A	0.98	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information								
Agency	LTG			Duration, h	0.25							
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other							
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00							
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00							
Intersection	US 192 at NB I-95	File Name	6. US 192 at NB I-95 - PM Build-Out.xus									
Project Description	4397.02											
Demand Information				EB		WB		NB		SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	106	713			775	664	138		218			
Signal Information												
Cycle, s	140.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	4.9	101.6	13.6	0.0	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	4.8	3.7	0.0	0.0	0.0		
				Red	2.3	2.3	2.0	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		7.3		9.0			
Phase Duration, s				12.0	120.7		108.7		19.3			
Change Period, (Y+R _c), s				7.1	7.1		7.1		5.7			
Max Allow Headway (MAH), s				5.0	0.0		0.0		6.2			
Queue Clearance Time (g _s), s				4.1					12.7			
Green Extension Time (g _e), s				0.5	0.0		0.0		0.9			
Phase Call Probability				0.98					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	1	6			2	12	7		14			
Adjusted Flow Rate (v), veh/h	106	713			775	664	138		218			
Adjusted Saturation Flow Rate (s), veh/h/ln	1668	1781			1685	1585	1702		1403			
Queue Service Time (g _s), s	2.1	6.6			7.0	27.7	5.3		10.7			
Cycle Queue Clearance Time (g _c), s	2.1	6.6			7.0	27.7	5.3		10.7			
Green Ratio (g/C)	0.78	0.81			0.73	0.73	0.10		0.10			
Capacity (c), veh/h	551	2890			3668	1150	330		272			
Volume-to-Capacity Ratio (X)	0.193	0.247			0.211	0.577	0.418		0.801			
Back of Queue (Q), ft/ln (95 th percentile)	30	80.7			101.9	346.8	109.2		195			
Back of Queue (Q), veh/ln (95 th percentile)	1.1	3.2			4.0	13.7	4.2		7.7			
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	4.1	3.1			6.2	9.1	59.5		61.9			
Incremental Delay (d ₂), s/veh	0.2	0.2			0.1	2.1	1.8		14.7			
Initial Queue Delay (d ₃), s/veh	0.0	0.0			0.0	0.0	0.0		0.0			
Control Delay (d), s/veh	4.4	3.3			6.3	11.2	61.3		76.6			
Level of Service (LOS)	A	A			A	B	E		E			
Approach Delay, s/veh / LOS	3.4		A	8.6		A	70.7		E	0.0		
Intersection Delay, s/veh / LOS	15.4						B					
Multimodal Results				EB		WB		NB		SB		
Pedestrian LOS Score / LOS	2.02		B	1.35		A	2.48		B	2.48		B
Bicycle LOS Score / LOS	1.16		A	1.28		A			F			

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other
Jurisdiction	Brevard	Time Period	AM Peak Hour	PHF	1.00
Urban Street	US 192	Analysis Year	2019	Analysis Period	1> 7:00
Intersection	US 192 at Coastal Ln	File Name	7. US 192 at Coastal Ln - AM Build-Out.xus		
Project Description	4397.02				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	92	1231	44	41	778	56	33	6	29	11	5	56

Signal Information				Signal Timing (s)								
Cycle, s	150.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	4.1	0.8	112.6	12.1	0.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.8	0.0	4.8	3.7	0.0	0.0		
				Red	2.7	0.0	2.0	2.4	0.0	0.0		

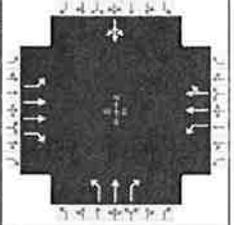
Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	12.4	120.2	11.6	119.4		18.2		18.2
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.3		4.3
Queue Clearance Time (g _s), s	3.8		2.8			12.0		8.4
Green Extension Time (g _e), s	0.2	0.0	0.0	0.0		0.1		0.2
Phase Call Probability	0.98		0.82			0.99		0.99
Max Out Probability	0.00		0.00			0.61		0.03

Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	92	1231	28	41	422	412	33	6	9		72	
Adjusted Saturation Flow Rate (s), veh/h/ln	1781	1781	1572	1767	1870	1826	1341	1870	1585		1601	
Queue Service Time (g _s), s	1.8	19.3	0.7	0.8	10.9	10.9	3.6	0.4	0.8		1.2	
Cycle Queue Clearance Time (g _c), s	1.8	19.3	0.7	0.8	10.9	10.9	10.0	0.4	0.8		6.4	
Green Ratio (g/C)	0.78	0.76	0.76	0.78	0.75	0.75	0.08	0.08	0.08		0.08	
Capacity (c), veh/h	552	2693	1189	372	1404	1371	99	151	128		157	
Volume-to-Capacity Ratio (X)	0.167	0.457	0.024	0.110	0.300	0.301	0.332	0.040	0.070		0.460	
Back of Queue (Q), ft/ln (95 th percentile)	25.1	268.5	9.2	11.5	179.1	172.9	59.9	10	15		126.1	
Back of Queue (Q), veh/ln (95 th percentile)	1.0	10.6	0.4	0.5	7.1	6.9	2.4	0.4	0.6		5.0	
Queue Storage Ratio (RQ) (95 th percentile)	0.06	0.00	0.03	0.03	0.00	0.00	0.21	0.00	0.07		0.00	
Uniform Delay (d ₁), s/veh	4.2	6.8	4.5	5.3	6.0	6.0	71.1	63.6	63.8		66.3	
Incremental Delay (d ₂), s/veh	0.1	0.6	0.0	0.1	0.5	0.6	1.9	0.1	0.2		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	
Control Delay (d), s/veh	4.3	7.4	4.6	5.5	6.6	6.6	73.1	63.7	64.0		68.4	
Level of Service (LOS)	A	A	A	A	A	A	E	E	E		E	
Approach Delay, s/veh / LOS	7.1		A	6.5		A	70.2		E	68.4		E
Intersection Delay, s/veh / LOS	10.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.08	B	1.63	B	2.32	B	2.50	B
Bicycle LOS Score / LOS	1.60	B	1.21	A	0.57	A	0.61	A

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	LTG			Duration, h	0.25
Analyst	ACP	Analysis Date	Aug 31, 2018	Area Type	Other
Jurisdiction	Brevard	Time Period	PM Peak Hour	PHF	1.00
Urban Street	US 192	Analysis Year	2019	Analysis Period	1 > 7:00
Intersection	US 192 at Coastal Ln		File Name	7. US 192 at Coastal Ln - PM Build-Out.xus	
Project Description	4397.02				



Demand Information	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Demand (v), veh/h	84	819	179	173	1196	50	190	24	113	38	10	104

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		4.8	3.2	81.7	29.9	0.0	0.0				
		Yellow		4.8	0.0	4.8	3.7	0.0	0.0				
		Red		2.7	0.0	2.0	2.4	0.0	0.0				

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		4		8
Case Number	1.1	3.0	1.1	4.0		5.0		8.0
Phase Duration, s	12.3	88.5	15.5	91.7		36.0		36.0
Change Period, (Y+R _c), s	7.5	6.8	7.5	6.8		6.1		6.1
Max Allow Headway (MAH), s	4.0	0.0	4.0	0.0		4.4		4.4
Queue Clearance Time (g _s), s	4.7		7.4			31.9		13.5
Green Extension Time (g _e), s	0.2	0.0	0.6	0.0		0.0		1.4
Phase Call Probability	0.96		1.00			1.00		1.00
Max Out Probability	0.00		0.00			1.00		0.01

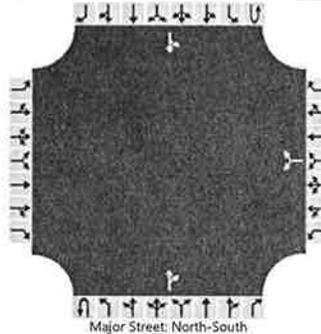
Movement Group Results	EB			WB			NB			SB		
	L	T	R	L	T	R	L	T	R	L	T	R
Approach Movement												
Assigned Movement	1	6	16	5	2	12	7	4	14	3	8	18
Adjusted Flow Rate (v), veh/h	84	819	84	173	627	619	190	24	27		152	
Adjusted Saturation Flow Rate (s), veh/h/ln	1739	1781	1572	1781	1870	1844	1248	1826	1572		1569	
Queue Service Time (g _s), s	2.7	17.4	3.3	5.4	27.8	27.8	18.4	1.5	1.9		5.6	
Cycle Queue Clearance Time (g _c), s	2.7	17.4	3.3	5.4	27.8	27.8	29.9	1.5	1.9		11.5	
Green Ratio (g/C)	0.62	0.58	0.58	0.64	0.61	0.61	0.21	0.21	0.21		0.21	
Capacity (c), veh/h	282	2079	918	460	1134	1118	215	390	336		367	
Volume-to-Capacity Ratio (X)	0.297	0.394	0.092	0.376	0.553	0.554	0.882	0.062	0.080		0.414	
Back of Queue (Q), ft/ln (95 th percentile)	48.5	283.4	53.9	93.9	439.4	429.1	353.4	31.9	35.4		210.6	
Back of Queue (Q), veh/ln (95 th percentile)	1.9	11.2	2.1	3.7	17.3	17.2	13.6	1.2	1.4		8.3	
Queue Storage Ratio (RQ) (95 th percentile)	0.11	0.00	0.16	0.25	0.00	0.00	1.26	0.00	0.16		0.00	
Uniform Delay (d ₁), s/veh	13.9	15.8	12.8	11.5	16.3	16.3	62.1	43.9	44.0		47.7	
Incremental Delay (d ₂), s/veh	0.6	0.6	0.2	0.5	1.9	2.0	31.8	0.1	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	
Control Delay (d), s/veh	14.5	16.3	13.0	12.0	18.3	18.3	93.8	43.9	44.2		48.5	
Level of Service (LOS)	B	B	B	B	B	B	F	D	D		D	
Approach Delay, s/veh / LOS	15.9		B	17.5		B	83.3		F	48.5		D
Intersection Delay, s/veh / LOS	24.3						C					

Multimodal Results	EB	WB	NB	SB				
Pedestrian LOS Score / LOS	2.21	B	1.67	B	2.31	B	2.60	C
Bicycle LOS Score / LOS	1.30	A	1.66	B	0.89	A	0.74	A

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	ACP	Intersection	Coastal Ln at Proj Front
Agency/Co.	LTG	Jurisdiction	Brevard
Date Performed	5/7/2018	East/West Street	Project Frontage Road
Analysis Year	2019	North/South Street	Coastal Lane
Time Analyzed	AM Peak-Hour Build-Out	Peak Hour Factor	1.00
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	4397.02		

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	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume (veh/h)						33		0			0	8		0	0	
Percent Heavy Vehicles (%)						2		2						2		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized																
Median Type Storage						Left Only										1

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2								4.1	
Critical Headway (sec)						6.42		6.22								4.12	
Base Follow-Up Headway (sec)						3.5		3.3								2.2	
Follow-Up Headway (sec)						3.52		3.32								2.22	

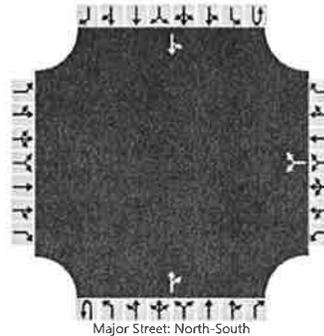
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						33										0	
Capacity, c (veh/h)						930										1612	
v/c Ratio						0.04										0.00	
95% Queue Length, Q ₉₅ (veh)						0.1										0.0	
Control Delay (s/veh)						9.0										7.2	
Level of Service (LOS)						A										A	
Approach Delay (s/veh)						9.0											
Approach LOS						A											

HCS7 Two-Way Stop-Control Report

General Information				Site Information			
Analyst	ACP	Intersection	Coastal Ln at Proj Front				
Agency/Co.	LTG	Jurisdiction	Brevard				
Date Performed	5/7/2018	East/West Street	Project Frontage Road				
Analysis Year	2019	North/South Street	Coastal Lane				
Time Analyzed	PM Peak-Hour Build-Out	Peak Hour Factor	1.00				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	4397.02						

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		0	1	0	0	0	1	0	0	0	1	0	
Configuration							LR					TR		LT			
Volume (veh/h)						18		0			0	32		0	0		
Percent Heavy Vehicles (%)						2		2						2			
Proportion Time Blocked																	
Percent Grade (%)						0											
Right Turn Channelized																	
Median Type Storage						Left Only							1				

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.42		6.22							4.12		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.52		3.32							2.22		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						18									0		
Capacity, c (veh/h)						918									1580		
v/c Ratio						0.02									0.00		
95% Queue Length, Q ₉₅ (veh)						0.1									0.0		
Control Delay (s/veh)						9.0									7.3		
Level of Service (LOS)						A									A		
Approach Delay (s/veh)						9.0											
Approach LOS						A											

APPENDIX N
TURN LANE WARRANTS

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

4-lane roadway

INPUT

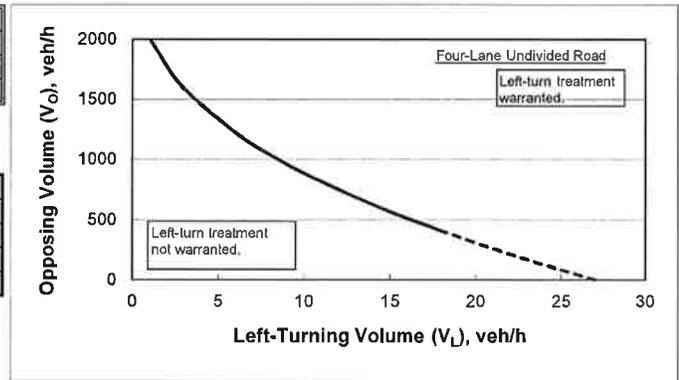
Variable	Value
Left-turning volume (V_L), veh/h:	36
Advancing volume (V_A), veh/h:	440
Opposing volume (V_O), veh/h:	1141

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0



Note: When $V_O < 400$ veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h ($V_A > 400$ veh/h).

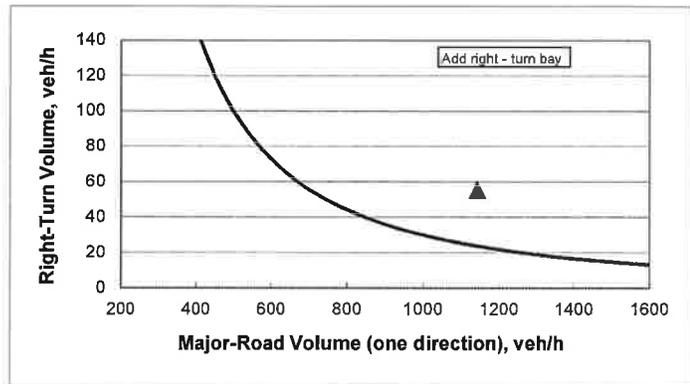
Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	4-lane roadway	
	Variable	Value
Major-road speed, mph:		45
Major-road volume (one direction), veh/h:		1141
Right-turn volume, veh/h:		56

OUTPUT

	Variable	Value
Limiting right-turn volume, veh/h:		24
Guidance for determining the need for a major-road right-turn bay for a 4-lane roadway:		
Add right-turn bay.		



APPENDIX O
FUTURE LAND USE AND
ZONING MEMORANDUM

Ref: 4397.03

TECHNICAL MEMORANDUM

To: Christy Fischer

From: George Galan, P.E.

Date: May 7, 2018

Subject: Oasis of West Melbourne – Future Land Use and Zoning Comparisons

INTRODUCTION

The 0.90-acre parcel being examined is being annexed into the City of West Melbourne. As part of the annexation process, the future land use designation and the zoning are being changed from Brevard County designations to City designations. The following table compares the maximum potential daily trip generation of the County designations with the requested City designations.

FUTURE LAND USE DESIGNATIONS

The parcel is assigned a County future land use designation of RES-6, the detailed description of which is attached to the analysis. RES-6 permits a maximum residential density of 6 dwelling units per acre, but with bonuses, it allows up to 13.5 dwelling units per acre. This analysis assumes the property receives the maximum density of 13.5 du/ac which will be categorized as Multifamily Housing Mid-Rise (Land Use Code 221) according to the Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition, for trip generation comparison. Therefore, under the County future land use designation the maximum yield for this site is 12 multifamily dwelling units.

The requested City future land use designation is Urban Density Residential (UD-RES), the detailed description of which is attached to the analysis. UD-RES permits a maximum residential density of 18 dwelling units per acre, but with bonuses, it allows up to 25 dwelling units per acre. This analysis assumes the property receives the maximum density of 25 du/ac which will be categorized as Multifamily Housing Mid-Rise (Land Use Code 221) according to the ITE, Trip Generation Manual, 10th Edition, for trip generation comparison. Therefore, under the City future land use designation the maximum yield for this site is 22 multifamily dwelling units.

ZONING DESIGNATIONS

The parcel is assigned a County zoning designation of AU, the detailed description of which is attached to the analysis. AU permits a maximum residential density of 0.4 dwelling units per acre. This zoning, however, is a holding category, and due to the size of the site, it is non-conforming and does not meet the County's minimum zoning requirements for AU. This analysis assumes the property is permitted one single family detached dwelling unit which will be categorized as Single Family Detached (Land Use Code 210) according to the ITE, Trip Generation Manual, 10th Edition, for trip generation comparison. Therefore, under the County zoning designation, the maximum yield for this site is one dwelling unit. It should be noted for comparison purposes that less weight should be given to the AU zoning, and more emphasis should be placed on the future land use designation's yield since this property is in an urban area, the lot is non-conforming, and future land use designation is more in keeping with surrounding development trends.

The requested City zoning designation is R-3, the detailed description of which is attached to the analysis. R-3 permits a maximum residential density of 25 dwelling units per acre in keeping with the underlying requested future land use designation of UD-RES. This analysis assumes the property receives the maximum density of 25 du/ac which will be categorized as Multifamily Housing Mid-Rise (Land Use Code 221) according to the ITE, Trip Generation Manual, 10th Edition, for trip generation comparison. Therefore, under the City R-3 designation the maximum yield for this site is 22 multifamily dwelling units.

COMPARISON RESULTS

Table 1 shows that based on the Future Land Use amendment, an increase of 55 daily trips is likely. This trip increase amounts to 0.3% of the adopted maximum average daily vehicle capacity of John Rodes Boulevard. This increase is de minimis, and further capacity analysis is not necessary.

**Table 1
 Potential Trip Generation Increase
 Oasis of West Melbourne**

Future Land Use								
	FLU	Density		Acres (x)	Number of Units	ITE Land Use Code	Equation	Daily Trips
City	UDR	25	DU/AC	0.9	22	221	$T=5.45(x)-1.75$	118
County	RES-6	13.5	DU/AC	0.9	12	221	$T=5.45(x)-1.75$	64
Potential Increase:								55
Zoning								
	Zoning	Density		Acres(x)	Number of Units	ITE Land Use Code	Equation	Daily Trips
City	R-3	25	DU/AC	0.9	22	221	$T=5.45(x)-1.75$	118
County	AU	0.4	DU/AC	0.9	1	210	$\ln(T)=0.92\ln(x)+2.71$	15
Potential Increase:								103

Sincerely,

LTG, Inc.



George Galan, PE
 Senior Project Manager

- Attachments: Brevard County Future Land Use Designation Description RES-6 excerpt
 City of West Melbourne Future Land Use Designation Description UD-RES excerpt
 Brevard County Zoning Designation Description AU excerpt
 City of West Melbourne Zoning Designation Description R-3 excerpt

**Brevard County Future Land Use
Designation Description RES-6 Excerpt**

provided that minimum infrastructure requirements set forth in Policy 1.2 are available. Such higher densities should be relegated to interior portions of the PUD tract, away from perimeters, to enhance blending with adjacent areas and to maximize the integration of open space within the development and promote inter-connectivity with surrounding uses. This density bonus shall not be utilized for properties within the Coastal High Hazard Area (CHHA).

**Residential 6 (maximum of 6 dwelling units per acre)
Policy 1.6**

The Residential 6 land use designation affords a transition in density between the higher urbanized areas and lower intensity land uses. This land use designation permits a maximum density of up to six (6) units per acre, except as otherwise may be provided for within this element. The Residential 6 land use designation may be considered for lands within the following generalized locations, unless otherwise limited by this Comprehensive Plan:

Criteria:

- A. Areas adjacent to existing Residential 6 land use designation; or
- B. Areas which serve as a transition between existing land uses or land use designations with density greater than six (6) units per acre and areas with density of less than six (6) units per acre; or
- C. Unincorporated areas which are adjacent to incorporated areas and may be considered a logical transition for Residential 6.
- D. Up to a 25% density bonus to permit up to 7.5 dwelling units per acre may be considered where the Planned Unit Development concept is utilized, where deemed compatible by the County with adjacent development, provided that minimum infrastructure requirements set forth in Policy 1.2 are available. Such higher densities should be relegated to interior portions of the PUD tract, away from perimeters, to enhance blending with adjacent areas and to maximize the integration of open space within the development and promote inter-connectivity with surrounding uses. This density bonus shall not be utilized for properties within the CHHA.

**Residential 4 (maximum of 4 dwelling units per acre)
Policy 1.7**

The Residential 4 land use designation affords an additional step down in density from more highly urbanized areas. This land use designation permits a maximum density of up to four (4) units per acre, except as otherwise may be provided for within

**City of West Melbourne Future Land Use
Designation Description RES-6 Excerpt**

Future Land Use

Land Use and Development



Policies

2.1 Residential Category Identification

The adopted Future Land Use Map shall identify appropriate locations for the following land use categories, as defined in the following descriptions of each land use designation. Density is expressed as dwelling units per gross acreage of each development (du/acre or du/ac).

Table 1 – Residential Future Land Use Categories

Land Use Category	Land Uses	Maximum Density
Low Density (LD-RES)	Single Family Residences	5 dwelling units (du)/acre
Medium Density (MD-RES)	Single and Multi-Family Residences	10 du/acre
Urban Density (UD-RES)	Single and Multi-Family Residences	18 du/acre Density bonus up to 25 du/acre
Manufactured Homes (MH-RES)	Manufactured and Mobile Homes Residences	6 du/acre

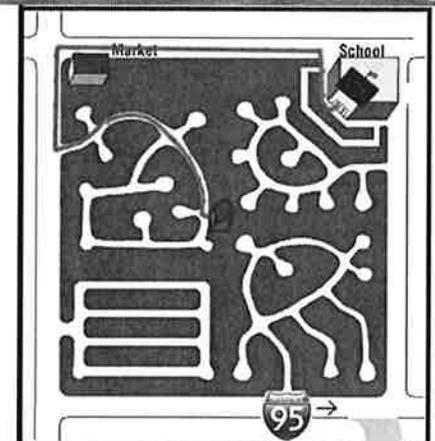


Residential land uses are intended for the development and support of existing and future neighborhood areas and low density residential areas. The city's neighborhoods are designed to provide the community safe, vibrant places to live and share life with family, friends, and neighbors. Types of residential uses include: Low Density, Medium Density, Urban Density and Manufactured or Mobile Home.

2.2 Residential Future Land Uses

Residential land uses are intended for the development and support of existing and future neighborhood areas and low density residential areas. The city's neighborhoods are designed to provide the community safe, vibrant places to live and share life with family, friends, and neighbors. A variety of transportation alternatives (walking, biking, auto, and transit) should interconnect adjacent neighborhoods and activity centers. In order to foster neighborhood connection to other neighborhoods, civic spaces are encouraged to be located along the transitional areas that link the city's residential areas together. Residential land use categories are:

- a. *Low Density Residential (LD-RES):*
The Low Density Residential land use designation consists of single family residential uses. Commercial uses are not allowed in low-density residential land areas. The maximum density allowed in the LD-RES land use designation is 5 du/acre.
- b. *Medium Density Residential (MD-RES):*
The Medium Density Residential land use designation consists of single and multi-family residential uses. Mixed-use neighborhood commercial centers which contribute to the overall livability of denser residential areas are allowed adjacent to MD-RES land uses. The maximum density



Driving-only transportation pattern

Future Land Use

Land Use and Development



allowed in the MD-RES land use designation is 10 du/acre.

c. *Urban Density Residential (UD-RES):*

The Urban Density Residential land use designation consists of a variety of single-family and multi-family residential uses. Mixed-use neighborhood commercial centers which contribute to the overall livability of denser residential areas are allowed adjacent to Urban Density Residential land uses. The maximum density for the UD-RES land use designation is 18 du/acre. A density bonus of an additional 7 du/acre, up to 25 du/acre, may be available via zoning permit approval if for each additional unit per acre, up to 7 dwelling units, at least one of the following criteria are met (for example, for 2 additional units, at least 2 of the criteria must be met, and so on):

- i. Connection to municipal water and sewer systems.
- ii. Proximity of one (1) mile or less to any of the city's mixed-use designated areas.
- iii. Proximity of less than one mile to developments with the same density.
- iv. A transportation access management system that compliments the existing transportation system(s).
- v. Fire station proximity of two (2) miles or less to the proposed development.
- vi. A park is at least three-fourths (3/4) of a mile in proximity to the proposed development.
- vii. Elementary schools are within two (2) miles or less to the proposed development.
- viii. Wetlands occupy less than 50 percent of the total site.
- ix. A perimeter buffer surrounds the development.

d. *Manufactured Home or Mobile Home Residential (MH-RES):*

The Manufactured Home or Mobile Home Residential land use designation consists of manufactured home or mobile home parks land areas. Commercial properties and business uses are not allowed in areas designated for manufactured home or mobile home residential land uses, unless they are accessory uses solely for the use of the residents. The maximum density allowed in the MH-RES land use designation is 6 du/acre.

2.3 Economic and Business Development Category Identification

The adopted Future Land Use Map shall identify appropriate locations for the following land use categories, as defined in the following descriptions of each land use designation. Intensity is expressed as Floor Area Ratio (FAR), a common architectural ratio which is measured by taking the total square footage of the building divided by the total square footage of the lot.

West Melbourne's future land use framework will encourage all housing neighborhoods to be better integrated in order to provide better multi-modal accessibility between the city's residential resources and other community facilities, business centers, and park resources.



Walkable connected transportation network

Economic and business development land uses are intended for the development and support of existing and future commercial, professional, and industrial activity centers. The city's commercial, professional, and industrial activity centers are designed to provide the community a healthy economic and business environment by supporting the city's quality of life. Types of economic and business development land uses include: commercial and industrial.

**Brevard County Zoning Designation
Description AU Excerpt**

Sec. 62-1334. - Agricultural residential, AU and AU(L).

The AU agricultural residential zoning classification encompasses lands devoted to agricultural pursuits and single-family residential development of spacious character.

The classification is divided into two types, AU and AU(L). The AU is the standard agricultural residential classification, while the AU(L) is a low intensity sub-classification more suited to smaller lots where the neighborhood has a more residential than agricultural character.

(1) *Permitted uses.*

a. (1) Permitted uses within the AU classification are as follows:

Single-family detached residential dwelling.

All agricultural pursuits, including the packing, processing, and sales of commodities raised on the premises as provided in chapter 86, article IV.

Raising and grazing of animals.

Dude ranches, with a minimum area of 40 acres. Barns or stables shall be 200 feet from any property line.

Fowl raising and beekeeping.

Parks and public recreational facilities.

Plant nurseries.

Private golf courses.

Private camps.

Foster homes.

(2) Permitted uses within the AU(L) sub-classification are as follows:

Single-family detached residential dwelling.

Agricultural pursuits of a personal non-commercial nature. Structures for the housing of livestock and animals shall not be permitted within 100 feet of any existing residence under different ownership, except where otherwise permitted in section 62-2108.

Parks and public recreational facilities.

Foster homes.

b. Permitted uses with conditions are as follows (see division 5, subdivision II, of this article):

Fish camps (section 62-1835.4.5).

Group homes, level I, subject to the requirements set forth in section 62-1835.9.

Landscaping business (section 62-1837).

Mobile home residential dwelling (section 62-1837.7.5).

Power substations, telephone exchanges and transmission facilities (section 62-1839).

Preexisting use (section 62-1839.7).

Private parks and playgrounds (section 62-1840).

Resort dwellings.

Temporary living quarters during construction of a residence.

Tenant dwellings: Mobile homes (section 62-1843).

Tenant dwellings: One unit is permitted for each five acres of land under the same ownership. Tenant dwellings must be 100 feet from property of different ownership (section 62-1842.5).

(2) *Accessory buildings or uses.* Accessory buildings and uses customary to residential and agricultural uses are permitted. (Refer to definition cited in section 62-1102 and standards cited in section 62-2100.5).

(3) *Conditional uses.* Conditional uses are as follows:

Airplane runways (section 62-1905).

Bed and breakfast inns (section 62-1912).

Boarding of horses and horses for hire (section 62-1913).

Captive wildlife (section 62-1958).

Change of nonconforming agricultural use.

Composting facility.

Farmers' market (section 62-1929).

Guesthouses or servants' quarters, without kitchen facilities (section 62-1932).

Hog farms (section 62-1934).

Land alteration (over five acres) (section 62-1936).

Private heliports (section 62-1943.5).

Roadside stand (section 62-1945.5).

Security mobile homes.

Single-family residential second kitchen facility.

Skateboard ramps (section 62-1948).

Substantial expansion of a preexisting use (section 62-1949.7).

Veterinary hospital, office or clinic, pet kennels (section 62-1956).

Wireless telecommunication facilities and broadcast towers.

Zoological parks (section 62-1960).

(4) *Minimum lot size.* An area of not less than two and one-half acres is required, having a minimum width of 150 feet and a minimum depth of 150 feet.

(5) *Setbacks.*

- a. Structures shall be set back not less than 25 feet from the front lot line, not less than ten feet from the side lot lines, and not less than 20 feet from the rear lot line. If a corner lot is contiguous to a key lot, then the side street setback shall be not less than 25 feet.
 - b. Accessory buildings shall be located to the rear of the front building line of the principal building and shall be set back not less than 15 feet from the side lot lines and not less than 15 feet from the rear lot lines.
 - c. Setbacks for barns and stalls are as follows:
 - 1. *Front*: 125 feet from the front lot line.
 - 2. *Side*: 50 feet from the side lot line.
 - 3. *Rear*: 50 feet from the rear lot line.
- (6) *Minimum floor area*. Minimum floor area is 750 square feet of living area.
- (7) *Maximum height of structures*. Maximum height of structures is as follows:
- a. Residential structures: 35 feet.
 - b. Structures accessory to an agricultural use: 45 feet.

(Code 1979, § 14-20.08(D); Ord. No. 95-47, §§ 8, 9, 10-19-95; Ord. No. 95-49, § 18, 10-19-95; Ord. No. 95-51, § 3, 10-19-95; Ord. No. 96-16, §§ 8, 9, 3-28-96; Ord. No. 96-46, § 10, 10-22-96; Ord. No. 97-29, § 2, 8-12-97; Ord. No. 97-46, § 1, 12-2-97; Ord. No. 98-03, § 6, 1-29-98; Ord. No. 98-08, § 2, 2-10-98; Ord. No. 98-11, § 3, 2-26-98; Ord. No. 98-62, § 5, 12-3-98; Ord. No. 2002-49, § 5, 9-17-02; Ord. No. 2003-03, § 6, 1-14-03; Ord. No. 03-40, § 1, 8-12-03; Ord. No. 04-29, § 6, 8-5-04; Ord. No. 2004-52, § 4, 12-14-04; Ord. No. 2005-25, § 5, 5-19-05; Ord. No. 05-27, § 2, 5-19-05; Ord. No. 2007-59, § 9, 12-6-07; Ord. No. 2009-06, § 2(Exh. A), 2-5-09; Ord. No. 2010-22, § 10, 11-23-10; Ord. No. 2011-17, § 4, 5-26-11; Ord. No. 2013-38, § 1, 11-19-13; Ord. No. 2013-38, § 1, 11-19-13; Ord. No. 2014-30, § 3, 10-2-14)

Editor's note— Ord. No. 2013-38, § 1, adopted November 19, 2013, amended § 62-1334 to read as set out herein. Previously § 62-1334 was titled agricultural residential, AU and AU(L).

**City of West Melbourne Zoning
Designation Description R-3 Excerpt**

DIVISION 7. - R-3 MULTIPLE-FAMILY DWELLING DISTRICT

Sec. 98-316. - Intent.

The R-3 multiple-family dwelling district is intended to apply to those areas classified so as to include, but not be limited to, higher density residential developments of large apartment houses, group development projects, planned unit developments, and other multifamily projects. Lot, height and other building restrictions are intended to accommodate an intense degree of development, maintaining an adequate amount of open space for residential uses, some nonresidential uses compatible with the character of the district or as accessory uses to serve high density residential uses.

(Ord. No. 45, art. VI, § 5, 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996)

Sec. 98-317. - Principal uses and structures.

The principal uses and structures in the R-3 multiple-family dwelling district are as follows:

- (1) Single-family dwellings, including townhouses.
- (2) Two-family dwellings.
- (3) Multiple-family dwellings.
- (4) Planned unit developments.

(Ord. No. 45, art. VI, § 5(a), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997; Ord. No. 2009-33, § 2, 5-19-2009; Ord. No. 2011-06, § 1, 2-15-2011)

Sec. 98-318. - Accessory uses and structures.

The accessory uses and structures in the R-3 multiple-family dwelling district are as follows:

- (1) Noncommercial nurseries and greenhouses.
- (2) Customary accessory uses of a residential nature, clearly incidental and subordinate to the principal use, including garages and carports in keeping with the residential character of the district.
- (3) Parking lots and facilities in conjunction with one or more principal uses, provided that an opaque screen or fence or a landscape area conforming to chapter 94 be provided wherever such facilities abut a residential use.
- (4) Limited retail and service establishments when operated within a single complex of 40 or more residential units, including the following:
 - a. Drugstores and sundry stores.
 - b. Confectionery shops and coffeeshops.
 - c. Newsstands.
 - d. Personal services, such as barbershops and beauty shops.
 - e. Delicatessens.

f. Eating and drinking establishments.

g. Laundry and similar uses.

No commercial display from such limited retail and service establishments shall be visible from outside a principal building. Such accessory use shall not exceed two percent of the gross floor area of a principal use.

- (5) Home occupations located within a detached single-family home and subject to division 4 of article V of this chapter.

(Ord. No. 45, art. VI, § 5(b), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997)

Sec. 98-319. - Conditional uses.

The conditional uses in the R-3 multiple-family dwelling district are as follows:

- (1) Public parks and recreational structures and facilities.
- (2) Golf courses.
- (3) Sewer lift stations.
- (4) Public and private clubs and lodges not involved in the conduct of commercial activities.
- (5) Professional and general office buildings.
- (6) Principal structures or structures otherwise permissible by conditional use that exceed 40 feet in height.

(Ord. No. 45, art. VI, § 5(c), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 2009-15, § 32, 1-20-2009)

Note— Ord. No. 2009-15, § 32, adopted Jan. 20, 2009, renamed former section 98-319, special exceptions, as set out herein.

Sec. 98-320. - Prohibited uses and structures.

The prohibited uses and structures in the R-3 multiple-family dwelling district are as follows:

- (1) Retail, personal service and other commercial establishments not in conformance with sections 98-317 through 98-319.
- (2) All uses not specifically or provisionally permitted in this division.
- (3) Any use not keeping with the residential character or professional character of the district.

(Ord. No. 45, art. VI, § 5(d), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996)

Sec. 98-321. - Density.

For any permitted use within the R-3 multiple-family dwelling district, the density shall not exceed 15 dwelling units per acre, or that allowed by the comprehensive plan future land use designation or policies further restricting density. For townhouse projects that are part of a larger development project, density shall be calculated utilizing the larger development project land area, provided the overall density does not exceed that allowed by this zoning district or the comprehensive plan future land use designation or its policies further restricting density.

(Ord. No. 45, art. VI, § 5(e), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 2009-33, § 2, 5-19-2009)

Sec. 98-322. - Lot and structure requirements.

The lot and structure requirements in the R-3 multiple-family dwelling district are as follows:

- (1) Minimum lot area: 12,000 square feet for single-family, two-family, multiple-family; 3,000 square feet for townhouses.
- (2) Minimum lot width: 100 feet for single-family, two-family, multiple-family; 24 feet for townhouses.
- (3) Minimum lot depth: 100 feet.
- (4) Maximum building coverage: 45 percent, except townhouses which can have 50 percent building coverage.
- (5) Minimum living or floor area:
 - a. Efficiency apartment: 450 square feet.
 - b. One-bedroom apartment: 550 square feet.
 - c. Two-bedroom apartment: 650 square feet.
 - d. Three-bedroom apartment: 800 square feet.
 - e. More than three-bedroom apartment: 800 square feet, plus 100 square feet for each additional bedroom.
 - f. Townhouses: 900 square feet.
- (6) Maximum height: 40 feet, unless the properties are located within a specific distance from the interchanges of I-95 as described in subsection (7) below.
- (7) If the property is located within the one-mile I-95 interchange radius of I-95 and Palm Bay Road or within the half-mile radius of I-95 and New Haven Avenue, and meets the following criteria, then the maximum building height may be 60 feet:
 - a. The minimum land area for the project site shall be five acres, or if included as part of a larger development project the overall site shall equal five acres.
 - b. Architecture. Architectural renderings shall be submitted along with the multifamily construction drawings to assist in identifying a unified architectural theme throughout the site. Exterior building facades, roof materials and signage shall use similar building materials and display a consistent use of these elements in the overall design. The architectural design shall incorporate the following design features that break up the expanses of wall and roof areas and distinguish an entrance area:
 1. Roofline accessories: Cornice molding, parapets, fake dormers and similar features shall be used to vary the building height by at least ten feet for at least 15 percent of the roofline.

2. Building massing relief features: Columns, facade engravings/etchings, recessing and protruding wall planes, overhangs, lighting or other similar features on any wall plane that exceeds 100 feet in length.
 3. Special pavement treatment at the entrance: Brick, stone, etched or painted surfaces or other contrasting natural looking materials.
 4. Site amenities. Benches, bicycle racks, tables, gazebos, and other exterior site amenities shall be indicated on the conceptual site plan.
- (8) Minimum yard requirements for structures not exceeding 40 feet in height:
- a. Front: 30 feet.
 - b. Side, interior: 15 feet.
 - c. Side, corner: 25 feet.
 - d. Rear: 25 feet; 20 feet when abutting an alley.
- (9) Minimum yard requirements for structures exceeding 40 feet in height:
- a. Front: 30 feet, plus three feet additional for every five feet or portion thereof of building height over 40 feet.
 - b. Side, interior: 15 feet, plus three feet additional for every five feet or portion thereof of building height over 40 feet.
 - c. Side, corner: 25 feet, plus three feet additional for every five feet or portion thereof of building height over 40 feet.
 - d. Rear: 25 feet; 20 feet when abutting an alley; plus three feet additional for every five feet or portion thereof of building height over 40 feet.
- (10) Minimum yard requirements for townhouses:
- a. Front: 25 feet.
 - b. Side, interior: 0 feet.
 - c. Side, corner: 25 feet; or if the property is adjacent to an undeveloped common area tract or dedicated easement that is at least 15 feet in width, the side corner setback is 0 feet.
 - d. Rear: 20 feet.

(Ord. No. 45, art. VI, § 5(f), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 2008-33, § 1, 7-1-2008; Ord. No. 2009-15, § 33, 1-20-2009; Ord. No. 2009-33, § 2, 5-19-2009; Ord. No. 2009-68, § 4, 12-15-2009; Ord. No. 2010-32, § 4, 12-7-2010; Ord. No. 2016-20, § 1, 11-22-2016)

Sec. 98-323. - Site plan review and approval.

Site plans for all construction in the R-3 multiple-family dwelling district shall be submitted to and approved by the city in accordance with article X of chapter 66, except for those developments for which plat approval is otherwise required by applicable ordinances and laws, such as single-family subdivisions and townhouses, which shall conform with the subdivision code.

(Ord. No. 45, art. VI, § 5(i), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-

1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997; Ord. No. 2009-33, § 2, 5-19-2009)

Sec. 98-324. - Setbacks.

In addition to the yard requirements set forth in section 98-322, the following setbacks shall be required for any structure on any size lot in the R-3 multiple-family dwelling district when subdivision of land in accordance with chapter 86 is not required:

- (1) Setbacks for individual buildings from any public or private right-of-way and from any public or private parking area shall be as follows:
 - a. From rights-of-way: 20 feet.
 - b. From parking areas: 15 feet.

(Ord. No. 45, art. VI, § 5(j), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997)

Sec. 98-325. - Recreation land and recreation fees.

In the R-3 multiple-family dwelling district, recreational areas and/or fees in lieu of recreational areas shall be required to be dedicated or paid in accordance with chapter 86.

(Ord. No. 45, art. VI, § 5(k), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996; Ord. No. 98-1, § 5, 10-21-1997)

Sec. 98-326. - Interpretation of criteria as minimum requirements.

The criteria as set forth by this division for the R-3 multiple-family dwelling district shall be deemed the minimum necessary for compliance. The planning and zoning board shall reserve the right to determine, at the time of site plan approval, such additional requirements as may be necessary to ensure the safety, health and general welfare of the residents.

(Ord. No. 45, art. VI, § 5(l), 8-4-1970; Ord. No. 75-4, § 2(d), 1-14-1975; Ord. No. 78-10, § 1(2), 4-18-1978; Ord. No. 80-18, § 1, 6-3-1980; Ord. No. 81-22, § 3, 11-5-1981; Ord. No. 94-9, § 5, 3-1-1994; Ord. No. 96-16, §§ 5, 6, 6-4-1996)

Sec. 98-327. - Reserved.

Sec. 98-328. - Development bonus for townhouse project enhancements.

Townhouse structures will be allowed to be on lots that measure 18 feet in width instead of the minimum lot width of 24 feet if the following criteria are met:

- (1) *Environmental buildings and project layout.* The applicant commits to using green building standards, which means using Energy Star and Water Star fixtures and equipment, as well as exceeding the minimum insulation standards required by the State of Florida. A copy of the building materials and mechanisms used to achieve these environmental priorities will be submitted simultaneously with the multifamily conceptual site plan.

- (2) *Architecture.* Architectural renderings shall be submitted along with the multifamily construction drawings to assist in identifying a unified architectural theme throughout the site. Exterior building facades, roof materials and signage shall use similar building materials and display a consistent use of these elements in the overall design. The architectural design shall incorporate the following design features that break up the expanses of wall and roof areas and distinguish an entrance area:
- a. *Roofline accessories:* Cornice molding, parapets, fake dormers and similar features.
 - b. *Balconies:* For second story windows, at least one balcony shall be provided per unit facing the front yard.
 - c. *Building massing relief features:* Columns, facade engravings/etchings, recessing and protruding wall planes, overhangs, lighting or other similar features.
 - d. *Special pavement treatment at the entrance:* Brick, stone, etched or painted surfaces or other contrasting natural looking materials.

(Ord. No. 2009-68, § 5, 12-15-2009)

Secs. 98-329—98-360. - Reserved.

**OASIS OF WEST MELBOURNE OFF SITE IMPROVEMENTS
ENGINEER'S COST ESTIMATE - CONNECTOR ROAD**

ITEM DESCRIPTION	UNIT	UNIT COST	QTY	SUBTOTAL
Mobilization	LS	\$15,000.00	1	\$15,000.00
Geotechnical Investigation	LS	\$5,000.00	1	\$5,000.00
Engineering	LS	\$27,000.00	1	\$27,000.00
Erosion and Sediment Control Incl. Monitoring	LS	\$20,000.00	1	\$20,000.00
Sawcut & Demo	LS	\$3,500.00	1	\$3,500.00
Relocate existing monument sign	LS	\$2,750.00	--	--
Rough Grade and Finish	LS	\$54,000.00	1	\$54,000.00
Maintenance of Traffic	LS	\$16,000.00	1	\$16,000.00
Construction Entrance	EA	\$4,500.00	2	\$9,000.00
2" Type S-111 Asphaltic Concrete	SY	\$16.00	4039	\$64,624.00
10" Limerock Base	SY	\$18.00	4039	\$72,702.00
12" Stabilized Base	SY	\$6.50	4039	\$26,253.50
Concrete Flume	EA	\$900.00	2	\$1,800.00
Type F Curb	LF	\$17.50	2989	\$52,307.50
Ribbon Curb	LF	\$14.50	41	\$594.50
Stem Wall and D Curb	LF	\$80.00	303	\$24,240.00
Handicap Ramp with Truncated Domes	EA	\$960.00	9	\$8,640.00
Raised Concrete Sidewalk	SF	\$5.50	8398	\$46,189.00
Import Fill	CY	\$16.50	6800	\$112,200.00
Clearing and Grubbing	AC	\$13,500.00	2	\$27,000.00
Type 4 Inlet	EA	\$5,700.00	9	\$51,300.00
Stormwater Manhole	EA	\$2,700.00	1	\$2,700.00
18" RCP	LF	\$49.00	71	\$3,479.00
24" RCP	LF	\$71.00	103	\$7,313.00
Sod & Final Grade Ditch Line	LS	\$14,500.00	1	\$14,500.00
Signage and Striping	LS	\$10,000.00	1	\$10,000.00
Staking	LS	\$7,500.00	1	\$7,500.00
Clean, Sweep, and Trash Removal	LS	\$6,500.00	1	\$6,500.00
Testing & Certified As-Built Survey	LS	\$20,000.00	1	\$20,000.00
Overhead	LS	\$64,500.00	1	\$64,500.00
TOTAL				\$ 773,842.50
CONTINGENCY - 3%				\$ 23,215.28
LAND VALUE				\$ 40,000.00
GRAND TOTAL				\$ 837,057.78

NOTES:

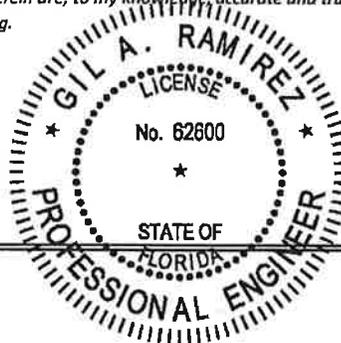
1. This estimate only includes improvements which are impact fee creditable: 1280 LF of new roadway (235 lf of extending Costal Lane, 1045 LF of connecting Costal Lane and John Rodes Blvd,) and associated drainage, striping, and new sidewalk along connector road only.
2. This estimate of conceptual cost was developed to determine a reasonable cost to construct the improvements as indicated on the Conceptual Intersection Improvement Plan.
3. Estimate shall not be used as a basis for bids or the preparation of bid documents.
4. Estimate does not include costs for replacement or repair of any miscellaneous items not indicated on the submitted plan.
5. Estimate assumes existing soils are adequate.

I affirm, by affixing my signature below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.

Name: Gil Ramirez, P.E.

Signature: Gilberto A Ramirez
2018.11.05 12:23:54 -05'00'

Date: November 5, 2018



This item has been electronically signed and sealed by: Gil A. Ramirez, PE on 11/5/18 using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

EXH C p. 1 of 2

**OASIS OF WEST MELBOURNE OFF SITE IMPROVEMENTS
ENGINEER'S COST ESTIMATE - JOHN RODES TURN LANES**

ITEM DESCRIPTION	UNIT	UNIT COST	QTY	SUBTOTAL
Survey/Engineering	LS	\$3,000.00	1	\$3,000.00
Relocate existing monument sign	LS	\$2,750.00	1	\$2,750.00
Milling and Resurfacing	LS	\$15,000.00	1	\$15,000.00
Rough Grade and Finish	LS	\$4,000.00	1	\$4,000.00
Maintenance of Traffic	LS	\$14,500.00	1	\$14,500.00
2" Type 5-111 Asphaltic Concrete	SY	\$16.00	461	\$7,376.00
10" Limerock Base	SY	\$18.00	461	\$8,298.00
12" Stabilized Base	SY	\$6.50	461	\$2,996.50
Signage and Striping	LS	\$6,500.00	1	\$6,500.00
TOTAL				\$ 64,420.50
CONTINGENCY - 3%				\$ 1,932.62
GRAND TOTAL				\$ 66,353.12

NOTES:

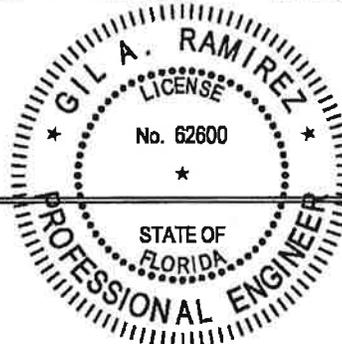
1. This estimate only includes improvements which are impact fee creditable: additional pavement for widening for the installation of a left turn bay and the installation of a 260 LF right turn lane, including the associated milling & resurfacing and striping.
2. This estimate of conceptual cost was developed to determine a reasonable cost to construct the improvements as indicated on the Conceptual Roadway Plan.
3. Estimate shall not be used as a basis for bids or the preparation of bid documents.
4. Estimate does not include costs for replacement or repair of any miscellaneous items not indicated on the submitted plan.
5. Estimate assumes existing soils are adequate.

I affirm, by affixing my signature below, that the findings contained herein are, to my knowledge, accurate and truthful and were developed using current procedures standard to the practice of professional engineering.

Name: Gil Ramirez, P.E.

Signature: Gilberto A Ramirez
2018.11.05 12:24:37 -05'00'

Date: November 5, 2018

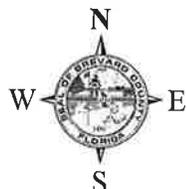
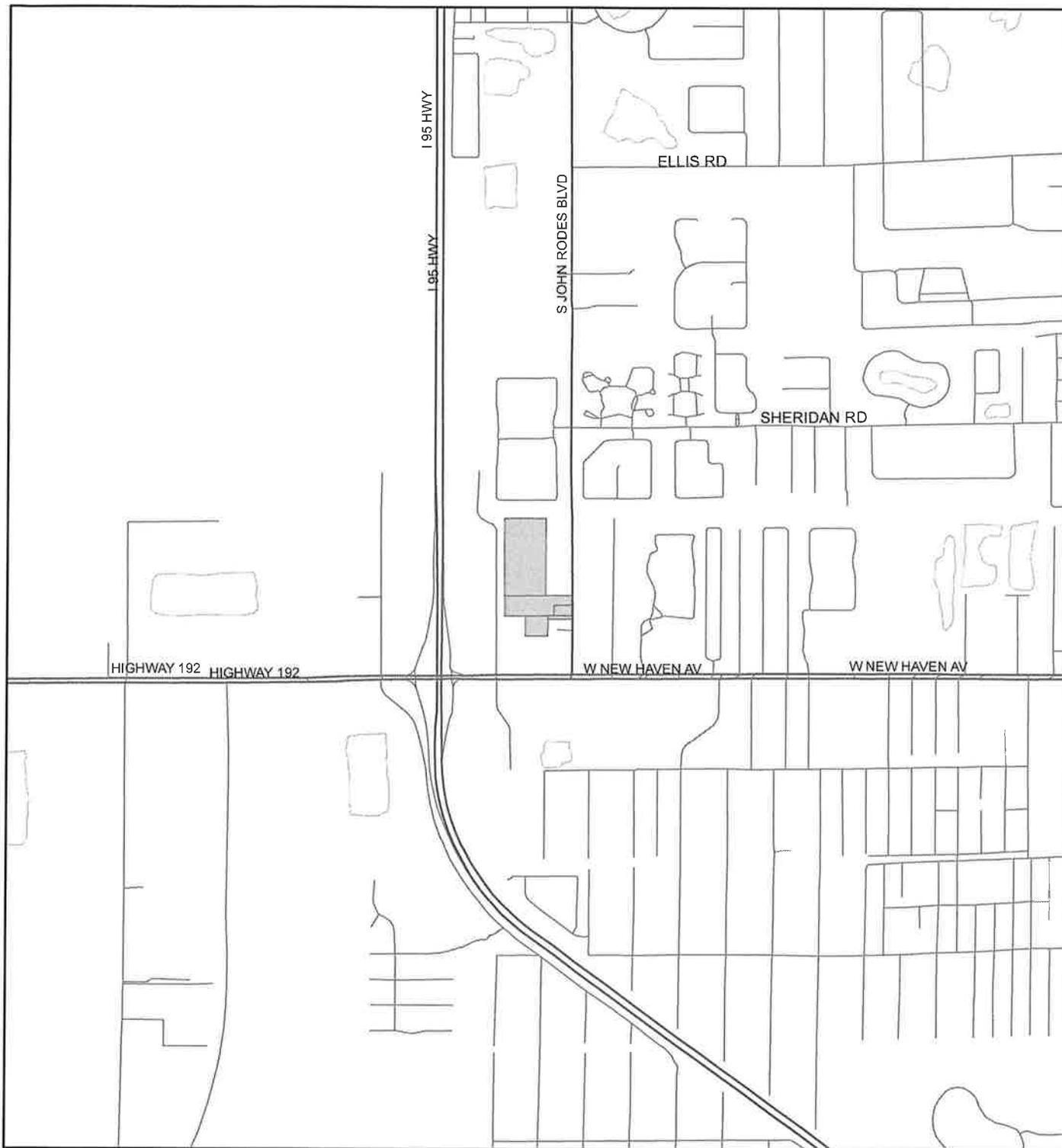


This item has been electronically signed and sealed by: Gil A. Ramirez, PE on 11/5/18 using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

EXH C p. 2 of 2

LOCATION MAP

OASIS at WEST MELBOURNE



1:24,000 or 1 inch = 2,000 feet

 Subject Property

This map was compiled from recorded documents and does not reflect an actual survey. The Brevard County Board of County Commissioners does not assume responsibility for errors or omissions hereon.

Produced by BoCC - GIS Date: 7/6/2018