

**JUSTIFICATION LETTER**

Date: 06/10/2016

To: City of Dania Beach Building Department

Re: **JUSTIFICATION LETTER – BUILDING & GENERAL COMMENTS**

Att. Corinne Lajoie  
The Palms at Dania Beach  
1301 South Federal Highway  
Dania Beach, FL 33004

From: Anthony Leon  
3Design, Inc.  
4300 Biscayne Blvd.  
Suite #G-04  
Miami, FL 33137

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Related to the Project mentioned above, below are the requested written justification for General Comments made in the prior DRC meeting. The comment is related to the height from the F.F.E. of the commercial canopies facing the South Federal Highway.

The Code established the following in Section 510-30 – Appearance:

***J) Canopies, if utilized, shall be restricted to a clearance of fourteen (14) feet in height for areas accommodating vehicles and a maximum clearance of ten (10) feet in height for non-vehicular areas, and shall be consistent with the main building design. The canopy columns shall be architecturally finished to match the building.***

But based in the exception established in Section 510-20 – Applicability, we are proposing the height of the commercial canopies in the north, west and south facades at 12'-0" from building F.F.E. instead of 10'-0" established in Section 510-30. Our proposal is due to architectural considerations between building height / width and to promote the maximum exposure of the storefront's commercial spaces to the surrounding streets. The section 510 - 20 read as follows:

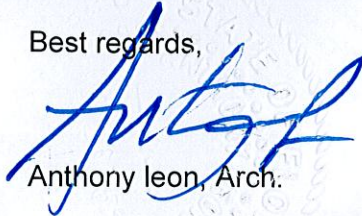
***(B) This article shall apply to all new commercial development with frontage on the roadways listed in subsection (A), including any modifications, additions, or renovations to building exteriors fronting on a listed arterial, or signage changes valued in excess of five hundred dollars.***



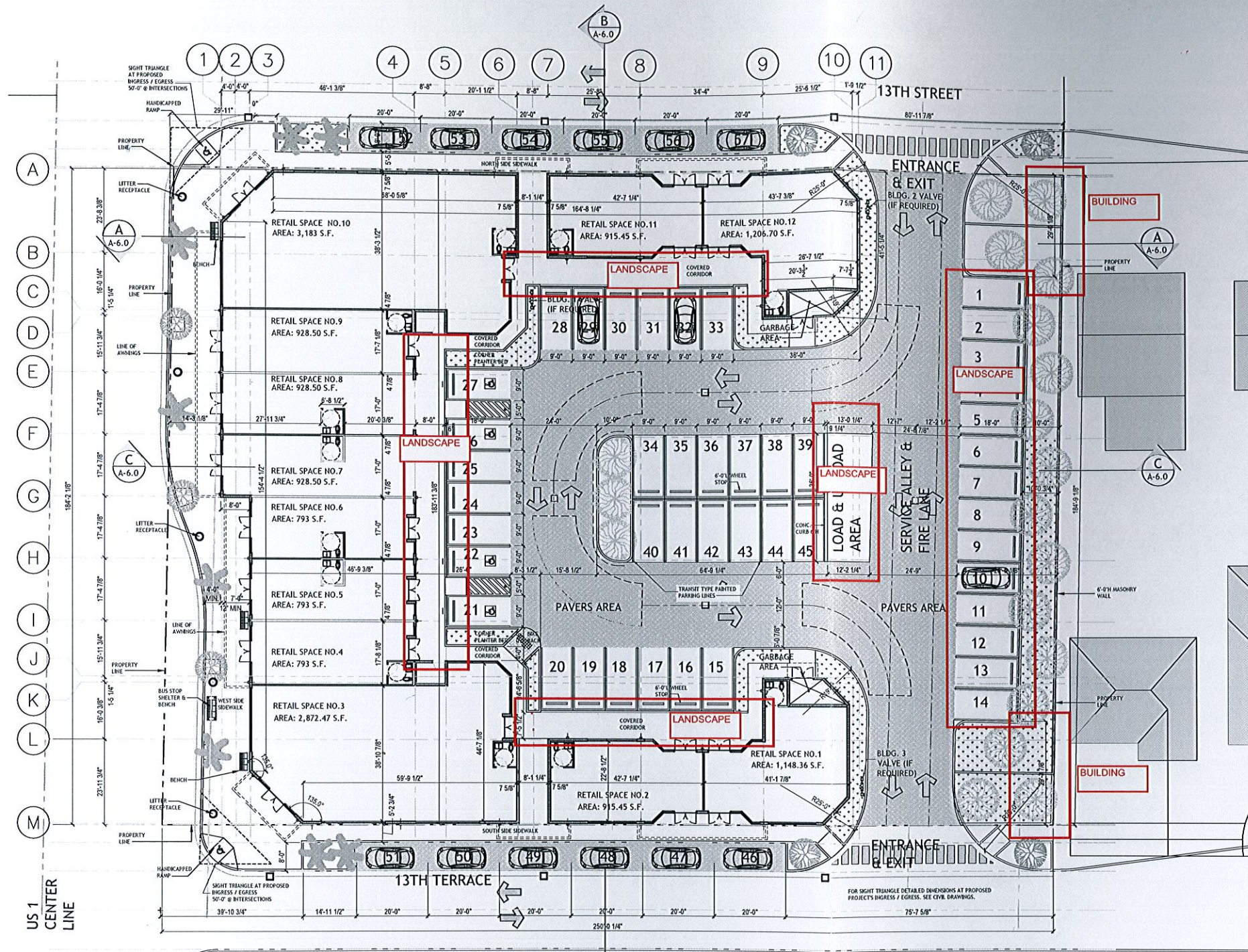
*(\$500.00) by the building division when calculating the valuation of the work for which the permit is sought.*

If for any reason you need to contact us to discuss the variances requested, please feel free to contact us as your convenience.

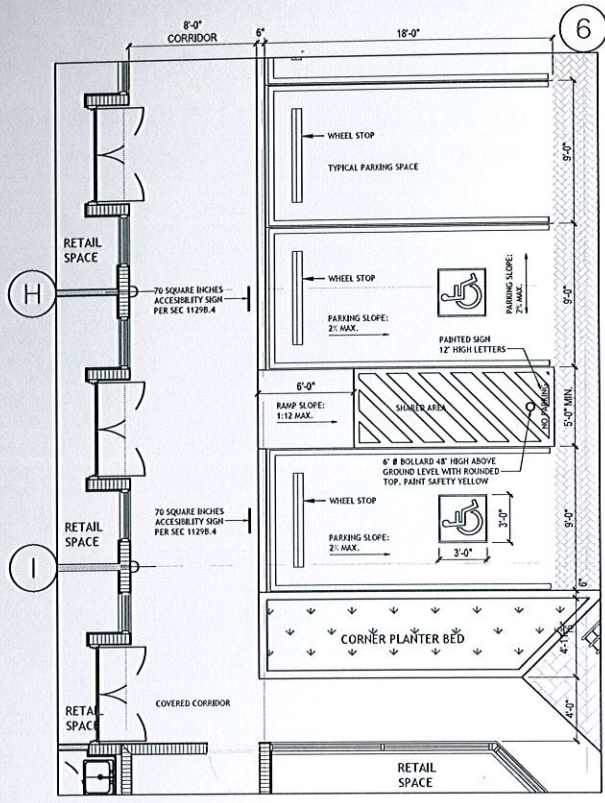
Best regards,



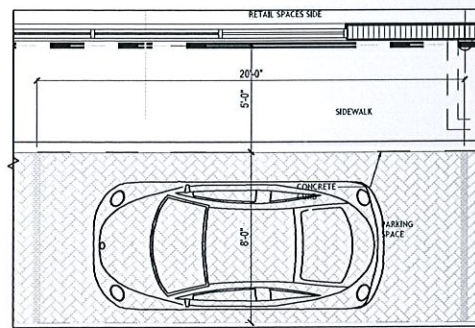
Anthony Leon, Arch.



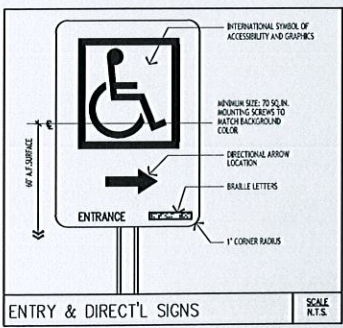
ARCHITECTURAL FLOOR PLAN  
SCALE: 1/16"=1'-0"



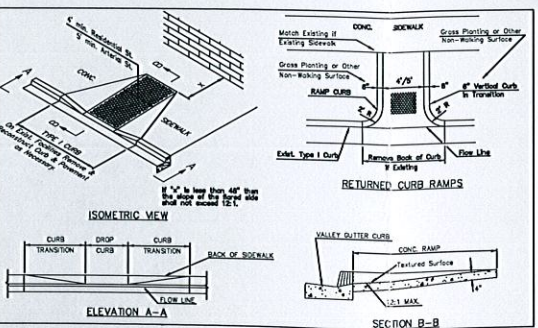
SPACE PARKING FOR THE HANDICAPPED  
SCALE: 3/16"=1'-0"



PARALLEL PARKING DETAIL  
SCALE: 1/4"=1'-0"



ENTRY & DIRECT'L SIGNS  
SCALE: N.T.S.



RAMP FOR THE HANDICAPPED  
N.T.S.

NOTES:  
1. Ramps are designed to the Uniform Federal Accessibility Standards to comply with the Americans with Disabilities Act.  
2. Ramps Shall Have a Tactile Surface, Textured to a Depth Not Exceeding 1/8" by use of Tamp or roller in conformance with Requirements of FDOT Roadway and Traffic Design Standards, Detail 304 Or Most Recent Modifications.

DRAWN BY:  
REVISIONS:

AA0000569  
ANTHONY LEON  
0016752  
**3 DESIGN**  
ARCHITECTURE  
4300 Biscayne Blvd. #4G-04, Miami, FL 33137  
P: 305-438-9377 | F: 305-438-9379

NEW CONSTRUCTION FOR:  
THE PALMS AT DANIA BEACH  
1301 South Federal Highway  
Dania Beach, FL 33004

SEN

A-2.0  
ARCHITECTURAL  
SITE PLAN



CIVIL ENGINEERING CONSULTANTS

June 9, 2016

Department of Fire Rescue and Emergency Services  
Dania Beach District

**RE: The Palms at Dania Beach – Statement of Verification**  
**1301 S. Federal Highway**  
**Dania Beach, FL 33004**  
**PZ#: SP-127-15**

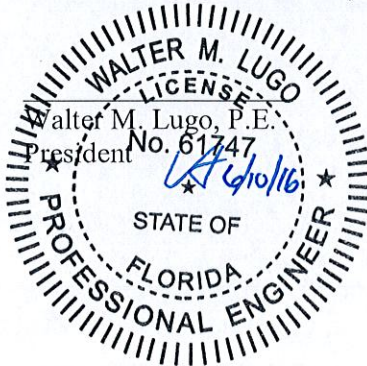
This project will not have a fire line.

There is an existing 6” water main which is located within the subject property and it is currently conflicting with proposed improvements. Said water main will be cut/capped and relocated with a new larger 8” water main.

There are two existing fire hydrants which are 120’ and 150’ from the northwest and southwest corners of the property.

Further coordination with the Department of Public Services and Fire Department is recommended to finalize the water main relocations.

Sincerely,  
OCEAN ENGINEERING, INC.



333 NE 24<sup>th</sup> Street, Suite 408 Miami, FL 33137  
Office: (786)-253-5252  
Fax: (786) 475-8250  
wlugo@oceanengineeringinc.com  
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**THE PALMS AT DANIA BEACH**  
1301 SOUTH FEDERAL HIGHWAY, DANIA BEACH, FL

DOCUMENTS SUBMITTED FOR COMMISSION HEARING – JUNE 28, 2016  
SUBMISSION DATE: MAY 5, 2016  
**CHECKLIST**

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1. (1) One set of plans 24"x 36" signed & sealed
  - (15) 24x36 - Architectural
  - (4) 24x36 - Landscape
  - (5) 24x36 – Civil
  
2. (1) One set of plans 11"x 17" signed & sealed
  - (15) 11x17 - Architectural
  - (4) 11x17 - Landscape
  - (5) 11x17 – Civil
  
3. Civil Comment responses
4. (1) One Data CD

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Date: May 4, 2016

Project: Dania Square

Application No.: PZ # SP-127-15

**Below are our responses to staff comments dated March 24, 2016:**

**Comments from Annie Christine Carrie at City of Dania Beach**

**Comment 6. Provide stormwater management calculations based on SFWMD Permit Volume IV. More specifically we need to know the following information: 10-year, 25-year and 100-year, 24-hour and 72-hour flood stage elevations. Provide geotechnical report including percolation test to support k-value in the calculations.**

*Response: Please see attached geotechnical report and drainage calculations.*

**Comment 7. Provide typical dimensions of disabled and regular parking.**

*Response: Refer to Architectural plans.*

**Comment 8. Public sidewalks shall be 5 foot wide, minimum.**

*Response: Refer to Architectural plans.*

**Comment 9. Provide geometric dimensions in your civil drawings.**

*Response: See attached sheet C-400*

**Comment 10. Cub return radius MUST be 25' (minimum). Driveway width MUST 24'.**

*Response: See attached sheet C-400 and Architectural plans.*

**Comment 11. Provide water demand estimates per AWWA M22 for preliminary sizing of water meter. Please provide information in the attached worksheet. This is necessary to determine anticipated size of water meter which will give you an estimate of required impact fees.**

*Response: See attached Utility Demand Worksheet and sheet C-300.*

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**Comment 12. Confirm with Fire Department adequacy of proposed water loop and pipe diameter for this site.**

*Response: We are currently coordinating with Sherie Dunleavy and the engineering section to resolve the water connection and relocation of the existing main that bisects our project.*

**13. A separate meeting needs to be arranged with Public Services Department to discuss proposed water and fire line connections. All wet taps shall be based on the city's tapping criteria. Please contact Sherie Dunleavy, Office Manager, Public Services Department to make an appointment, phone number 954-924- 3882, email: [sdunleavy@ci.dania-beach.fl.us](mailto:sdunleavy@ci.dania-beach.fl.us).**

*Response: We are currently coordinating with Sherie Dunleavy and the engineering section to resolve the water connection and relocation of the existing main that bisects our project.*

**15. Proposed on-street parallel parking is subject for further discussion. Proposed dimensions as proposed is not acceptable. Provide cross-section including paving, grading and drainage.**

*Response: See provided cross section on Architectural plan and also sheet C-400. The PGD plans for offsite roadway improvements will be submitted during the building permit process.*

**REVIEW COMPLETE BY Corinne Lajoie (954) 924-6805 X 3704**

**Comment 6. WATER: Identify projected water demand for the project.**

*Response: Refer to sheet C-300 and Utility Demand Worksheet.*

**SITE PLAN REVIEW COMMENTS**

**Plan Reviewer:** Sean Brown, Battalion Chief / Plans Examiner; F. Ross; D. Suarez

**2. A set of Civil Plans indicating the following:**

**a. All existing and proposed water main sizes**

*Response: We are coordinating with Public Works. All proposed watermains are minimum of 8-inches in diameter. See attached Sheet C-300.*

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**b. Existing and proposed fire hydrant locations**

*Response: See attached sheet C-300*

**c. Dimensions of the three nearest adjacent hydrants to the project site**

*Response: See attached sheet C-300*

**d. Locations of all Post Indicating Valves or Underground Gate Valves, Double Detector Check Valves, etc.**

*Response: The proposed buildings will not be sprinkled therefore, fire lines, PIV's, DDCV and all other fire related GV's are not required. See sheet C-300.*

**e. Locations of all fire department connections (Siamese and Fire Hose Valves on standpipes) on the interior and exterior of the building or structure (for buildings or structures with fire sprinkler systems)**

*Response: Buildings are not sprinkled, therefore no fire sprinkler system required for project.*

**3. A detail sheet accompanying the Civil Plans with the following details:**

**a. Fire Hydrant Detail**

*Response: There are no proposed fire hydrant for this project. Fire hydrant detail not required.*

**b. Bollard / Impact Protection Detail for Hydrants, FDC's & DDCV's**

*Response: Bollards shown around proposed backflow preventers. See sheet C-300.*

**c. Roadway Pavement Marker (RPM) Detail for Fire Hydrant Locations (Blue Reflective Markers)**

*Response: Not required as no new fire hydrant are proposed for project.*

**d. Post Indicating Valve Detail (where applicable)**

*Response: Buildings are not sprinkled, therefore no fire sprinkler system required for project.*

**e. Underground Gate Valve Detail (where applicable)**

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*Response: See sheet C-500.*

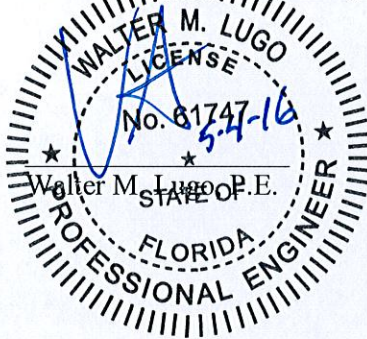
**f. Backflow Preventer / Double Detector Check Valve (DDCV) Detail (where applicable)**

*Response: All underground GV's and backflow preventers are shown on plans. See sheet C-300.*

**g. Signage Detail for the Fire Department Connections (where applicable)**

*Response: Buildings are not sprinkled, therefore no proposed Fire Department Connection.*

Sincerely,  
OCEAN ENGINEERING, INC.



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**AVIATION DEPARTMENT - Fort Lauderdale/Hollywood International Airport**  
2200 SW 45<sup>th</sup> Street, Suite 101 • Dania Beach, Florida 33312 • 954-359-6100

March 15, 2016

Marc LaFerrier, AICP  
Planning Director  
City of Dania Beach  
100 West Dania Beach Blvd  
Dania Beach, FL 33004

**RE: The Palms at Dania Beach, Dania Beach FL  
Broward County Aviation Department (BCAD) Review**

Dear Mr. LaFerrier:

The Broward County Aviation Department (BCAD) has reviewed the proposed The Palms at Dania Beach development located south of Fort Lauderdale-Hollywood International Airport (FLL). Since the proposed project is within 20,000 feet of FLL, its development and operation is subject to Federal Aviation Regulation (FAR) Part 77, Florida Statutes Chapter 333 and/or the Broward County Airport Zoning Ordinance. These standards seek to ensure that any proposed construction, use of high lift equipment, such as cranes, or other potential hazards will not negatively impact the safe and efficient use of the airport and surrounding airspace. Taking into consideration the proximity of this project to FLL, BCAD is providing the following comments regarding the proposed development:

- Based on the location of the proposed project, FAR Part 77, Subpart B and Section 5-182(n)(2) of the Broward County Land Development Code, require the applicant to obtain a "Determination of No Hazard to Air Navigation" from the Federal Aviation Administration (FAA). The receipt of a favorable determination is required for all critical building points and temporary construction cranes and must be received prior to any construction activity. If you have not already done so, please use the following web address to initiate the Federal Review (FAA 7460-1) process: <https://ocaaa.faa.gov/ocaaa/external/portal.jsp>.
- Following the receipt of a favorable FAA determination, the applicant may also need to obtain "airspace obstruction permits" from the Florida Department of Transportation (FDOT). This documentation is necessary to determine if the project will adversely affect public health or safety. If required, these permits must be obtained prior to the commencement of any construction. The following web address can be used to acquire

Broward County Board of County Commissioners  
Mark D. Bogen • Beam Furr • Dale V.C. Holness • Marty Kiar • Chip LaMarca • Stacy Ritter • Tim Ryan • Barbara Sharief • Lois Wexler  
[www.broward.org/www.fil.net](http://www.broward.org/www.fil.net)

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additional information pertaining to the FAA and FDOT airspace obstruction review and permitting process: <http://www.dot.state.fl.us/aviation/obstructions.shtm>.

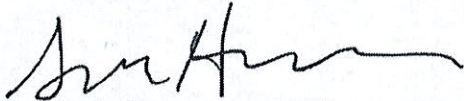
- No building, structure or vegetation on the site may exceed 26 feet AGL as shown on the architectural elevations and site plan, unless submitted to BCAD for additional review.
- The proposed development must not generate light, glare, smoke or other emissions that could be disorienting to pilots operating in the vicinity of the airfield.
- The proposed development must not attract wildlife that would be a potential safety hazard to aircraft operations.

Adherence to these conditions is required for BCAD approval of the proposed The Palms at Dania Beach development and is based on the Site Plan, DRC-1, dated February 25, 2016, prepared by 3 Design Architecture and Architectural Plans, Sheet DRC-4 dated February 25, 2016, prepared by 3 Design Architecture. If the proposed plans are revised substantially from those submitted for this review, BCAD requests that the revised development plans be submitted for an additional review.

This review also serves to advise to the applicant of potential aircraft over-flight and noise impacts on this property due to its proximity to the Airport. Further information regarding the current and potential impacts of airport operations on the subject property may be obtained from the Broward County Aviation Department, Airport Development Planning Division. The applicant should note that the project is not eligible for federal funding to mitigate aircraft noise.

Please do not hesitate to contact me if you have questions or require additional information at 954.359.6258.

Sincerely,



Scarlet R. Hammons, AICP  
Principal Planner

cc: Michael P. Pacitto, P.G., Director Planning and Environmental



CITY OF DANIA BEACH  
COMMUNITY DEVELOPMENT DEPARTMENT  
ROUTING SHEET

Routing Date: March 3, 2016

PZ Log No: SP-127-15

Project: DANIA SQUARE- THE PALMS

Comments Due: March 24, 2016

PLEASE REVIEW THE ABOVE REFERENCED PROJECT FOR COMMENTS TO BE INCORPORATED IN THE COMMUNITY DEVELOPMENT DIRECTOR'S STAFF REPORT TO THE PLANNING AND ZONING BOARD AND/OR CITY COMMISSION.

- Complies with code as submitted.
- Comments to be addressed & plans resubmitted prior to public hearing.
- Denied.

\_\_\_\_\_  
Department

\_\_\_\_\_  
Date

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CITY OF DANIA BEACH  
COMMUNITY DEVELOPMENT DEPARTMENT  
COST RECOVERY

Project: DANIA SQUARE- THE PALMS

PZ Log No: SP-127-15

Plan Reviewer: PLANNER

Please log your time spent on reviewing the plans.

Time spent: \_\_\_\_\_

Overtime: \_\_\_\_\_

Rate per hour: \_\_\_\_\_

\* Cost recovery – no charge on single family home plans, permits and variances.

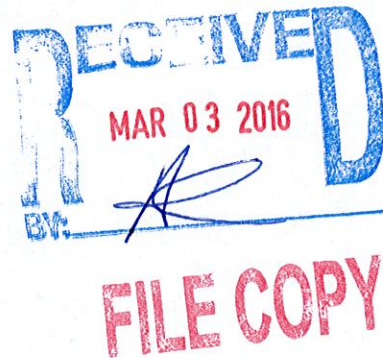
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THE PALMS AT DANIA BEACH  
1301 SOUTH FEDERAL HIGHWAY, DANIA BEACH, FL

2<sup>ND</sup> STAFF DRC MEETING DOCUMENTS SUBMITTED – FEBRUARY 4, 2016  
**CHECKLIST**

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1. (6) Six sets of plans 24"x 36"
  - o (8) 24x36 - Architectural
  - o (3) 24x36 - Landscape
  - o (5) 24x36 – Civil
2. (6) Comments response letter from 3Design Inc.
3. (6) Six Traffic reports
4. (6) Fire Hydrant flow test results
5. (6) 24x36 Photometric plans – included in drawing sets
6. (6) Signed & sealed Survey
7. (6) Geotechnical study & Percolation test
8. Cost recovery check - \$5,000.00
9. (6) Example for proposed commercial signage
10. (6) S/S Drainage Calculations
11. (6) Comments response letter from Ocean Engineering



**COMMENT RESPONSE SHEET**

Date: 02/25/2016

To: City of Dania Beach Building Department

Re: DRC Second Submittal for The Palms at Dania Beach  
 1301 South Federal Highway  
 Dania Beach, FL 33004

From: Anthony Leon  
 3Design, Inc.  
 4300 Biscayne Blvd.  
 Suite #G-04  
 Miami, FL 33137

Below are the written responses to the review comments as have been requested. If we may be of any further assistance during the review, please do not hesitate to contact us at your convenience.

**Landscape**

#	Comment	Response
1	Existing trees on site	Tree survey table with all information required included
2	Submit irrigation system plan	Irrigation plan included.
3	Distance between the abutting property and parking shall be 3' to 5' separated by a continuous hedge	See Landscape drawings
4	Provide a masonry wall 5' to 8'H separated five feet from the residential zone	Masonry wall provided as requested. See architectural drawings
5	Landscape general comments	All landscape comments addressed in landscape drawings
6	Terminal peninsulas shall be at least 10 feet wide	Parking peninsulas were joined to achieve this requirement
7	Separation between building walls and VUA shall be a landscaped area of 5'-0" wide	Landscaped area of 4'-0" provided ( <b>Variance required</b> )
8	All equipment & dumpster shall be screened	Equipment will be screened & dumpster shall be located in a separated room
9	Additional landscape comments	Comments addressed in second submission drawings

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**Site Plan**

#	Comment	Response
1	Provide a pavement parking plan	Parking plan with all comments requested included
2	Civil drawings with details	Civil drawings included with requested comments
3	Fire Hydrant Flow Test	6 copies of the Fire Flow Test report included
4	Statement of verification from the design professional of record, an official company letterhead indicating that all requirements all in compliances with the Broward County Land Use Code	Refer to comments response letter from Ocean Engineering
5	Civil sheet accompanying the civil plans	Included

**Fire Department Access requirements**

#	Comment	Response
1	Fire Department general requirements	All applicable requirements addressed
2		

**ENGINEERING COMMENTS**

#	Comment	Response
1	Right of way dedication on Federal Highway	Right of Way as indicated in Broward County Traffic way Plan
2	Traffic Study	6 copies included in this submittal
3	Survey Map	6 signed & sealed surveys are included.
4	Zone "X" floor level requirement	The finished floor is as required, 6" min. above the lowest edge of pavement elevation fronting the property on US-1
5	Sight triangle at proposed ingress/egress	Shown in DRC-2
6	Storm water management calculations, Geotechnical report & percolation test	Test report included in the submission
7	Handicapped parking dimensions	Shown in drawing DRC-4
8	Public sidewalk width	Public sidewalk width in the site plan is more than the 4'-0" min. required by the City of Dania Beach, Community Redevelopment Agency

9	Water Demand Estimates	Refer to comments response letter from Ocean Engineering
10	Dania Code of Ordinances (Article 415 – Sidewalks and Swales)	The owner will address all improvements within the road right of way and the offsite development on SE 13 <sup>th</sup> St and SE 13 <sup>th</sup> Terrace
11	Proposed on Street parallel parking is subject to further discussion. Proposed dimensions as proposed is not acceptable	Street parallel parking was designed as the proposed typical cross sections sent in the First List of Comments by the City of Dania Beach
12	Coordination meeting with the City's Community redevelopment Agency	Date to be determined
13	Provide drawing file disk of the approved site plan in Florida State Plane Coordinate (NAD83)	Upon approval of the final submittal

**GENERAL COMMENTS – Reviewed by Corinne Lajoie**

#	Comment	Response
1	Additional application FEE (Cost recovery)	Check included in the documents submittal
2	Photometric plan	Included
3	Commercial signage	Example of proposed model, colors and location included
4	Mail receptacles	Slot type for mail receptacles shall be specified
5	Vehicular use areas, roofed structures, pervious and impervious surface area	Calculations included in dwg. DRC-1
6	Parking requirements	All parking requirements are addressed. Section 303-80 requires that parking must be 30' from secondary streets. We are providing a distance of 29'-3 7/8" in the south side, 29'-0" at north side <b>(Variance required)</b>
7	Loading & unloading dimensions	Dimensions indicated in site plan drawing
8	Site plan furniture	All site plan furniture indicated in site plan drawing
9	Rooftop mechanical equipment	To be located beside concrete parapets. See DRC-3
10	Principal Arterial Design Standards	The applicable points were indicated in submitted drawings. <b>Point H</b> , see DRC-1 / <b>Point I</b> – Stucco and façade colors to be determined / <b>Point J</b> – Canopies height. The maximum clearance is 10'-0" for non-vehicular areas, but we are proposing a 12'-0" height <b>(Variance required)</b> , <b>Point L</b> - mechanical equipment located out of sight of main road or residential area. See DRC-4



		& DRC-6
11	Must provide latest revised set of plans on disk prior to going to public hearing	To be submitted as required
12	Exterior building material	Painted Stucco. Any additional materials to be specified in final plans
13	SFED-MU, Per Section 303-80	The applicable points are indicated in submitted drawings
14		



CIVIL ENGINEERING CONSULTANTS

February 4, 2016

City of Dania Beach  
Community Development Department  
1201 Stirling Road  
Dania Beach, FL 33004  
954-924-3742

**RE: Dania Square 1301 S. Federal Hwy / SP-127-15**

Below are our responses to your comments:

**Site Plan Review Comments**

**2. A set of civil plans indication the following:**

- a. All existing and proposed water main sizes

*Civil sheet C300 Water and Sewer Plan displays all existing and proposed water mains within the vicinity of the proposed project site. Water Atlas information was provided by the City of Dania Beach Public Works Department.*

- b. Existing and proposed fire hydrants locations

*Field verification and water atlas sheets confirms that there exists (2) fire hydrants within the project vicinity:*

- 1) South fire hydrant is located approximately 150' to the south. It is located at the NWC of S. Federal Hwy & SW 14th St fronting McDonalds Restaurant.*
- 2) North fire hydrant is the closer of the two hydrants. It is located approximately 120' to the north at the NWC of S. Federal Hwy & SW 13th St fronting Palms Inn.*

*Refer to sheet C300 for approximate locations of the 2 existing fire hydrants.*

- c. Dimensions of the three nearest adjacent hydrants to the project site.

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*See above for the two nearest fire hydrants. The third closest hydrant would be  $\pm 430'$  to the south at the NWC of S. Federal Hwy & SW 15th St fronting a small strip mall.*

**3. A detail sheet accompanying the civil plans with the following details:**

- e. Underground Gate Valve Detail (where applicable)

*Please refer to civil sheet C500 Utility Details plan for requested information.*

**Engineering Comments**

Comment 5: Show sight triangle at proposed ingress/egress. This must be reflected on the landscaping plan as well. Use FDOT Index 546 for guidance.

*Sight triangles for proposed the ingress/egress are illustrated on Civil sheet C400 Pavement Marking Plan. The proposed layout was designed in accordance to the most recent Florida Department of Transportation Design Index 546: Sight Distance at Intersections for the following criteria:*

- I. S.E. 13th Ter. & S.E. 13th St: Passenger vehicle on a 30 MPH 2-lane undivided roadway.  $D_1$  value: 240' &  $D_r$ -value: 150'*
- II. Federal Hwy: Passenger vehicle on a 35 MPH 4-lane undivided roadway with optional lane.  $D_1$  value: 310' &  $D_r$ -value: 150'*

Comment 6: Provide stormwater management calculations based on SFWMD Permit Volume IV. More specifically we need to know the following information: 10-year, 25-year, and 100-year, 24 hours and 72-hour flood stage elevations. Provide geotechnical report including percolation test to support k-value in the calculations.

*See attached drainage calculations with Cascade modeling for the 5yr/24hr, 10yr/24hr, 25yr/72hr and 100yr/72hr storm events per SFWMD specifications.*

Comment 9: Provide water demand estimates per AWWA M22 for preliminary sizing of water meter. Please provide information in the attached worksheet. This is necessary to determine anticipated size of water meter which will give you an estimate of required impact fees.

*Comment acknowledged. Sizing of meters per AWWA M22 will be executed during construction documents phase. See attached worksheet with requested information.*

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Pg. 2



CIVIL ENGINEERING CONSULTANTS

Comment 10: A separate meeting needs to be arranged with Public Services Department to discuss proposed water and fire line connections. All wet taps shall be based on the city's tapping criteria. Please contact Sherie Dunleavy, Office Manager, Public Services Department to make an appointment, phone number 954-924-3882.

***Comment acknowledged.***

Comment 13: In compliance with Article 805 of the City Code of Ordinance, applicants shall provide a projection of water demand and sewage and solid waste generation in tabular format.

***Below illustrates the projected utility demand for the proposed project per City of Dania Beach Code of Ordinance.***

**Table 1: Daily Water Demand Estimate Calculations**

Water Demand Generation Table				
Description	Category	Area / Units	Rate*	Calculated Volume
Building 1	Retail	11,568.63	0.1 gpd/s.f	1,157 gpd
Building 2	Retail	2,279.22	0.1 gpd/s.f	228 gpd
Building 3	Retail	2,174.26	0.1 gpd/s.f	217 gpd
			Total	1,602 gpd

\* Rate per City of Dania Beach Code of Ordinance Ch28, part 8, sec 805-60



CIVIL ENGINEERING CONSULTANTS

**Table 2: Daily Sanitary Sewer Generation Estimate Calculations**

Sanitary Sewer Generation Table					
Description	Category	Area / Units	Rate*	Calculated Volume	Calculated ERC Equivalent
Building 1	Retail	11,568.63	0.1 gpd/s.f	1,157 gpd	4
Building 2	Retail	2,279.22	0.1 gpd/s.f	228 gpd	1
Building 3	Retail	2,174.26	0.1 gpd/s.f	217 gpd	1
* Rate per City of Dania Beach Code of Ordinance Ch28, part 8, sec 805-70					
			Total	1,602 gpd	5 ERC

**Table 3: Daily Solid Waste Generation Estimate Calculations**

Solid Waste Generation Table				
Description	Category	Area / Units	Rate*	Calculated Weight
Building 1	Department Store	11,568.63	4 lbs./100 s.f/day	463 lbs.
Building 2	Department Store	2,279.22	4 lbs./100 s.f/day	91 lbs.
Building 3	Department Store	2,174.26	4 lbs./100 s.f/day	87 lbs.
* Rate per City of Dania Beach Code of Ordinance Ch28, part 8, sec 805-80				
			Total	641 lbs.



CIVIL ENGINEERING CONSULTANTS

Comment 15: Provide drawing file (dwg or dgn) disk of the approved site plan in Florida State Plane Coordinate (NAD 83). This should be addressed as part of the final submittal.

***Comment acknowledged.***

Should you have any questions or concerns regarding any information provide in this document, please contact me at your earliest convenience. (786)253-5252

Sincerely,  
**OCEAN ENGINEERING, INC.**

A handwritten signature in blue ink, appearing to be 'W. Lugo', is written over a horizontal line.

Walter M. Lugo, P.E.  
President



CIVIL ENGINEERING CONSULTANTS

STORMWATER DRAINAGE CALCULATIONS  
FOR  
CITY OF DANIA BEACH  
PUBLIC WORKS DEPARTMENT

Dania Square  
1301 S. Federal Hwy.  
Dania Beach, FL 33004

February 2016

**PREPARED BY:**

**WALTER M. LUGO, P.E.**  
Florida Registration # 61747  
Ocean Engineering, Inc.  
333 N.E. 24<sup>th</sup> ST  
Miami, FL 33137  
CA 29490



DRAINAGE CALCULATIONS



**PROJECT DESCRIPTION:**

*Dania Square* is located within Township 51, Range 42, Section 03 in Dania Beach, FL 33004. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map #12011C0567H, this project lies within Flood Zone X (EL: UND). The proposed development encompasses approximately 1.01 acres with no existing structures on the current lot. Several large trees and a chain link fence line the perimeter. The future development is proposing to construct (3) one-story commercial/retail buildings with an accompanying surface parking lot. Offsite improvements include on-street parking stalls, newly constructed sidewalks and landscaping.

**PROPOSED DRAINAGE MODIFICATIONS:**

Preliminary drainage calculations indicate that 260LF of proposed 18" H.D.P.E exfiltration trench along with the proposed landscape swale are capable in retaining the stormwater runoff volume generated by the required storm event. Rain water discharge produced by roof top areas will discharge into the designed exfiltration trench and will self percolate into the groundwater table. Proposed onsite grading allows all other on-site runoff to flow into the several proposed drainage swales. Proposed grading is designed to inhibit any offsite discharge.

**SITE DATA INFORMATION**

	sq. ft.	ac.	%	Proposed Elevations	
				Highest	Lowest
Total Area	44,115.48	1.01	100.0%	9.95	8.45
Building Area:	16,022.11	0.37	36.3%	9.95	9.95
Lake Area (water features, pools, etc...):	-	-	0.0%		
Pervious Areas (landscape, swales etc...):	6,617.33	0.15	15.0%	9.60	8.45
Impervious Area (sidewalk, driveways, etc...):	21,476.05	0.49	48.7%	9.95	8.50

**GROUND STORAGE CALCULATIONS**

**Depth to Water Table**

	Elevation (ft.)
Average Developed Elevation:	9.20
Average Water Table Elevation:	2.00
Average Depth to Water Table:	7.20

**Developed Available Storage**

Soil type: Coastal	Depth to Water Table (ft.)	Comp. Avail. Storage (in.)	Comp. CN Value
	1.0	0.45	96
	2.0	1.88	84
	3.0	4.05	71
	4.0	6.75	60

**Available Soil Storage**

Because the average grade after development will place the water table > 7.20' below the surface, the developed available storage for this site is taken to be 6.75 inches

Calculated soil storage:

$$\text{Soil Storage (S)} = \left( \frac{\text{Pervious Area}}{\text{Total Area}} \right) \times \text{Developed available storage}$$

- (S) = 15.0% 6.75 inches
- (S) = 1.01 inches

**Rainfall Data (P):**

A- 5 year 24hr storm event:	7.00 inches
B- 10 year 24hr storm event:	8.50 inches
C- 25 year 72hr storm event:	14.00 inches
D- 100 year 72hr storm event:	17.00 inches

**Calculated Runoff**

Estimated stormwater runoff (Q) generated by the specified rainfall event (P) for a given site with a weighted soil moisture storage value for maximum retention parameter (S).

$$Q = \frac{(P - 0.2S)^2}{(P + 0.8S)}$$

where:

Q = direct runoff (inches)

P = rainfall (inches)

S = soil storage (inches) as determined based on soil type and depth to water table.

(Q <sub>5</sub> ) =	5.92 inches
(Q <sub>10</sub> ) =	7.40 inches
(Q <sub>25</sub> ) =	12.85 inches
(Q <sub>100</sub> ) =	15.84 inches

**VOLUME OF RUNOFF (V)**

Volumes of runoff generated during a specified storm (V)

$$\text{Runoff Volume (V)} = \frac{(\text{Total Area}) \times (Q)}{12}$$

(V <sub>5</sub> ) =	.499 ac-ft	21,750 CF
(V <sub>10</sub> ) =	.624 ac-ft	27,187 CF
(V <sub>25</sub> ) =	1.085 ac-ft	47,256 CF
(V <sub>100</sub> ) =	1.337 ac-ft	58,242 CF

**STORAGE PROVIDED**

Surface volume storage developed by the proposed landscape swale area is calculated by:

$$\text{Swale storage volume (V)} = \frac{(\text{Top Area} + \text{Btm. Area}) \times \text{Height}}{2}$$

Swale	Top Area (SF)	Bottom Area (SF)	Average Area (SF)	Height (FT)	Volume (CF)
SW-1			0.00		0.00
SW-2			0.00		0.00
SW-3			0.00		0.00
SW-4			0.00		0.00
SW-5			0.00		0.00
Total Swale Areas =					0.00

Volume of storage provided by the proposed swale areas=

0.00 CF

Required volume to be treated by proposed Exfiltration Trench =

21,749.89

0.00 =  
=

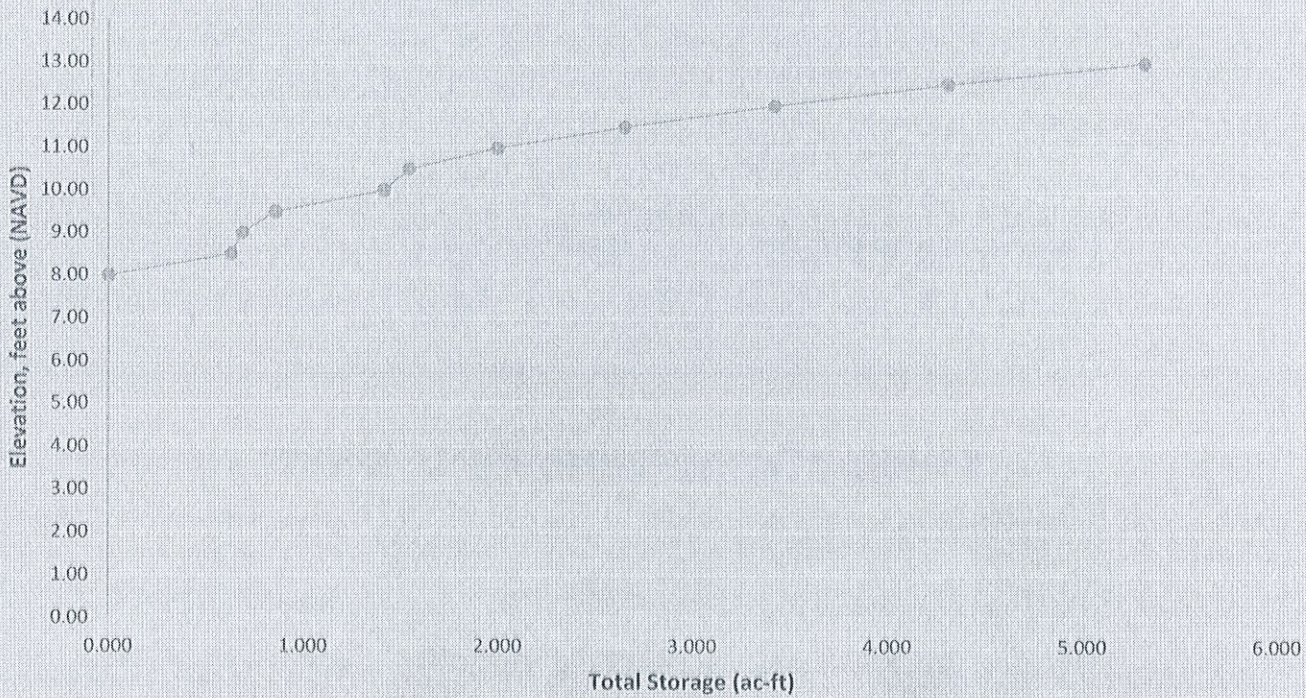
21,749.89 CF  
0.499 AC-FT

**Stage / Storage Information**

Description	Type of Storage	Area (ac.)	Starting Elevation	Ending Elevation
Impervious	L	0.49	8.50	9.95
Pervious	L	0.15	8.45	9.60

Stage(ft.) NAVD	Impervious	Pervious	Exfiltration Trench vol.	Total Storage (ac-ft)
7.50				0.000
8.00				0.000
8.50		0.000	0.505	0.628
9.00	0.043	0.020	0.505	0.686
9.50	0.170	0.073	0.505	0.855
10.00	0.383	0.159	0.505	1.414
10.50	0.680	0.278	0.505	1.543
11.00	1.063	0.429	0.505	1.997
11.50	1.530	0.614	0.505	2.649
12.00	2.083	0.832	0.505	3.420
12.50	2.720	1.083	0.505	4.308
13.00	3.443	1.367	0.505	5.315

**Stage - Storage Curve**



**I. LAND USE:**

1. Proposed Lake Area =	0.000 ac.	0.00%		
2. Proposed Buildings =	0.368 ac.	36.32%		
3. Proposed Green Building =	0.000 ac.	0.00%	Red	= Input value
4. Proposed Pavement & Others =	0.493 ac.	48.68%	Blue	= Calculated value
5. Proposed Green Areas =	0.152 ac.	15.00%		
<b>6 Total =</b>	<b>1.013 ac.</b>	<b>100%</b>		

Total overall impervious surface = 85.00%

**II. WATER QUALITY CRITERIA:**

Quality standards shall be provided during a 3 year, 1 hour storm event for one of the following three combinations:

1. If a wet detention system, then whichever is the greater of the following:
  - a. The first inch of runoff from the entire project site.
  - b. The amount of 2.5 inches times the percent impervious for the project site.
2. Exfiltration trench requires the volume required for the wet detention system.

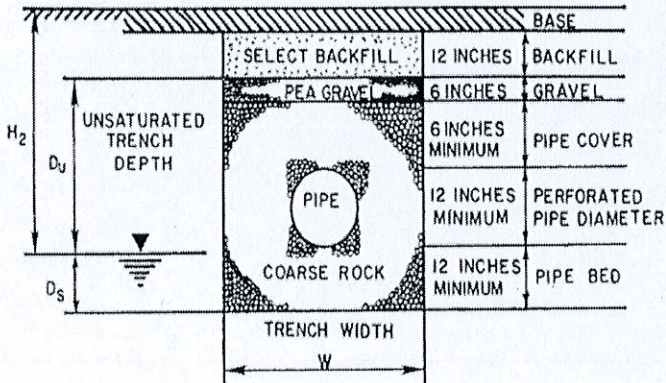
**III. WATER QUALITY COMPUTATIONS:**

1. Compute the first inch of runoff from the entire developed project site:  
= 1.00 inch X 1.013 acres X (1 foot / 12 inches)  
= 0.1 ac-ft for the first inch of runoff
2. Compute 2.5 inches times the percent impervious for the developed project site:
  - a. Site area for water quality pervious / impervious calculations only:  
= Total Project - ( Lake Area + Buildings + Green Buildings)  
= 1.013 acres - ( 0.000 acres + 0.368 acres + 0.000 acres)  
= 0.64 acres of site area for water quality calculations
  - b. Impervious area for water quality pervious / impervious calculations only:  
= Site area for water quality - Pervious area  
= 0.645 acres - 0.152 acres  
= 0.49 acres of impervious area for water quality calculations
  - c. Percentage of impervious area for water quality:  
= Impervious area for water quality / Site area for water quality x 100%  
= 0.493 acres / 0.645 acres x 100%  
= 76.4 % Impervious
  - d. For 2.5 inches times the percentage of impervious area:  
= 2.5 inches X 76.45 %  
= 1.91 inches to be treated
  - e. Compute volume required for quality detention:  
= Inches to be treated X ( Total Site Area - Lake Area )  
= 1.911 inches X ( 1.013 acres - 0.000 acres ) x ( 1 foot / 12 inches )  
= 0.16 ac-ft required for detention storage
3. The first inch of runoff from the entire developed site = 0.084 ac-ft  
2.5 inches times the percentage of impervious area = 0.161 ac-ft

The volume of 0.161 ac-ft controls

**EXFILTRATION TRENCH CALCULATIONS:**

1. Design Formula:  $L = 2 * (0.5 * V_{wq} + V_{add}) / ( K((H_2 * W) + (2 * H_2 * D_u) - (D_u^2) + (2 * H_2 * D_s)) + (1.39 * 10^4 * W * D_u) )$
2. Design Information:
  - $V_{wq}$  = Water Quality Vol. to be Exfiltrated: 5.99 ac-in
  - W = Trench Width: 6.00 ft.
  - K = Hydraulic Conductivity: 2.100E-04 cfs/sq-ft per ft head
  - H<sub>2</sub> = Depth of Water Table: 6.50 ft.
  - D<sub>u</sub> = Non-Saturated Trench Depth: 5.17 ft.
  - D<sub>s</sub> = Saturated Trench Depth: 1.50 ft.
  - Total Trench Depth: 6.67 ft.
3. Exfiltration Trench Required: **239 ft.**
4. Exfiltration Trench Provided: **260 ft.**
5. Exfiltration Trench WQ/Storage Vol Provided: **5.99 ac-in** or **0.499 ac-ft**
6. Max. Allowable Storage:
  - 3.28" over the entire site: **0.499 ac-ft**
  - Volume in pipe (50%): **0.005 ac-ft**
  - Total Storage Volume Provided in Exfiltration Trench: **0.505 ac-ft**



Thickness (in)	Elev (ft)	Description
	8.50	Lowest Elevation
4		Concrete Sidewalk Thickness
12		Select Backfill
12	7.17	Top of Trench (Top of Pea Gravel)
6		Pea Gravel
6		Pipe Cover
	N/A	Weir Elevation (if applicable)
12	5.50	Inside Top of Pipe
18		Pipe Size
12	4.00	Invert of Pipe
42		Pipe Bed
0.50		Bottom of Trench
2.00		Water Table / Control Water Elevation

**CHECKS**

OK	Dry System (Pipe Invert Higher than Water)
OK	More WQ Volume Provided than Required

CASCADE MODELS

Project Name: Dania Square  
 Reviewer: Walter Lugo  
 Project Number: 2015-1021-49  
 Period Begin: Feb 03, 2016;0000 hr End: Feb 05, 2016;0000 hr Duration: 48 hr  
 Time Step: 0.2 hr, Iterations: 5

Basin 1: Dania Square

Method: Generalized Unit Hydrograph  
 Rainfall Distribution: SFWMD - 24 hr  
 Design Frequency: 10 year  
 1 Day Rainfall: 8.5 inches  
 Area: 1.01 acres  
 Ground Storage: 1.01 inches  
 Time of Concentration: 0.167 hours  
 Peak Rate Factor: 242  
 Initial Stage: 2 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
8.00	0.00
8.50	0.63
9.00	0.69
9.50	0.86
10.00	1.41
10.50	1.54

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

```

=====
Struc  Max (cfs)  Time (hr)  Min (cfs)  Time (hr)
=====
  
```

BASIN MAXIMUM AND MINIMUM STAGES

```

=====
Basin  Max (ft)  Time (hr)  Min (ft)  Time (hr)
=====
Dania Square  8.45  25.80  2.00  0.00
  
```

BASIN WATER BUDGETS (all units in acre-ft)

```

=====
Basin  Total  Structure  Structure  Initial  Final  Residual
      Runoff  Inflow  Outflow  Storage  Storage
=====
Dania Square  0.57  0.00  0.00  0.00  0.57  0.00
  
```

Project Name: Dania Square  
 Reviewer: Walter Lugo  
 Project Number: 2015-1021-49  
 Period Begin: Feb 03, 2016;0000 hr End: Feb 07, 2016;0000 hr Duration: 96 hr  
 Time Step: 0.2 hr, Iterations: 5

Basin 1: Dania Square

Method: Generalized Unit Hydrograph  
 Rainfall Distribution: SFWMD - 3day  
 Design Frequency: 25 year  
 3 Day Rainfall: 14 inches  
 Area: 1.01 acres  
 Ground Storage: 1.01 inches  
 Time of Concentration: 0.167 hours  
 Peak Rate Factor: 242  
 Initial Stage: 2 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
8.00	0.00
8.50	0.63
9.00	0.69
9.50	0.86
10.00	1.41
10.50	1.54

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)

BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
Dania Square	9.61	73.80	2.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
Dania Square	0.98	0.00	0.00	0.00	0.98	0.00



Project Name: Dania Square  
 Reviewer: Walter Lugo  
 Project Number: 2015-1021-49  
 Period Begin: Feb 03, 2016;0000 hr End: Feb 07, 2016;0000 hr Duration: 96 hr  
 Time Step: 0.2 hr, Iterations: 5

Basin 1: Dania Square

Method: Generalized Unit Hydrograph  
 Rainfall Distribution: SFWMD - 3day  
 Design Frequency: 100 year  
 3 Day Rainfall: 17 inches  
 Area: 1.01 acres  
 Ground Storage: 1.01 inches  
 Time of Concentration: 0.167 hours  
 Peak Rate Factor: 242  
 Initial Stage: 2 ft NGVD

Stage (ft NGVD)	Storage (acre-ft)
8.00	0.00
8.50	0.63
9.00	0.69
9.50	0.86
10.00	1.41
10.50	1.54

STRUCTURE MAXIMUM AND MINIMUM DISCHARGES

Struc	Max (cfs)	Time (hr)	Min (cfs)	Time (hr)
=====	=====	=====	=====	=====

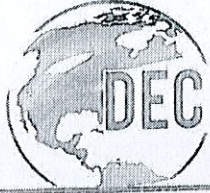
BASIN MAXIMUM AND MINIMUM STAGES

Basin	Max (ft)	Time (hr)	Min (ft)	Time (hr)
=====	=====	=====	=====	=====
Dania Square	9.82	73.80	2.00	0.00

BASIN WATER BUDGETS (all units in acre-ft)

Basin	Total Runoff	Structure Inflow	Structure Outflow	Initial Storage	Final Storage	Residual
=====	=====	=====	=====	=====	=====	=====
Dania Square	1.21	0.00	0.00	0.00	1.21	0.00

PERCOLATION TEST RESULTS



# DYNATECH ENGINEERING CORP.

WWW.DYNATECHENGINEERING.COM

Miami, January 8<sup>th</sup>, 2016

Mr. Enrique Barton  
DANIA SQUARE INVESTMENT  
1301 S. Federal Highway  
Dania Beach, FL 33004

Re: The Palms at Dania Beach @  
1301 South Federal Highway  
Dania Beach, FL

Dear Mr. Barton:

Pursuant to your request, DYNATECH ENGINEERING CORP. (DEC) completed a Percolation Test on January 8<sup>th</sup>, 2016 at the above referenced project. The purpose of our investigation was to help determine the hydraulic conductivity for drainage design.

The above hydraulic conductivity represents an ultimate value. The designer should decide on the required safety factor. This value is based on the existing soils at the location of the test. In the event the test location is changed or the soil removed and replaced; the test will need to be re-evaluated.

Groundwater was measured immediately at the completion of each boring and was found at an average depth of approximately 7'-0" below existing ground surface at the time of drilling. Existing ground surface elevation was not provided to us at the time of drilling. Design engineers must verify existing ground elevations as well as FEMA Flood and County highest and lowest groundwater elevation for their design. Fluctuation in water level is anticipated due to seasonal variations and run off as well as varying ground elevations construction dewatering and pumping activities in the area and global warming. Site contractor must familiarize himself with site conditions in the event groundwater controls and dewatering is needed during construction. Surface flooding may result under hurricane conditions and should be taken into consideration in the design of the project. The contractor shall monitor and make sure that groundwater levels on adjacent properties are not adversely impacted due to the contractors dewatering activities. Specialty groundwater and water proofing contractors shall be consulted for all work below the groundwater level.

In case of existing structures, existing footings new foundations and proposed drainage lines, provisions shall be made by the structural engineer, the civil engineer, and site contractor to protect all footings from future erosion, undermining and exposure. The geotechnical engineer shall be notified of these conditions to evaluate the applicability of his recommendations.



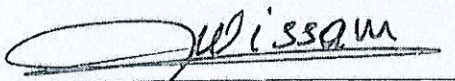
Re: 1301 South Federal Highway, Dania Beach, FL

This report was prepared in compliance with the 2014 Florida Building Code. Site elevations were not provided to us for the test locations. Depths reported on the field boring logs represent the depth below existing ground surface as they existed on the date of drilling. In the event of subsequent filling, excavations or site work, the reported depths must be adjusted to represent proper depths.

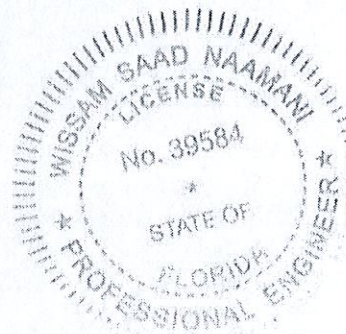
The boring log (s) attached present (s) a detailed description of the soils encountered at test location (s). The soil stratification shown on the boring log (s) is based on the examination of the recovered soil samples and interpretation of the driller's field log (s). It indicates only the approximate boundaries between soil types. The actual transitions between adjacent soil types may be gradual. Regardless of the thoroughness of a geotechnical exploration there is always the possibility that conditions may be different from those of the test locations; therefore, DYNATECH ENGINEERING CORP. does not guarantee any subsoil conditions between the bore test holes. In accepting and using this report the client understands and accepts that all data from the borings are strictly for foundation analysis only and are not to be used for excavation or back filling estimates and pricing. Owner and site contractor must familiarize himself with site conditions prior to bidding. For Environmental due diligence; a Phase I and/or Phase II Environmental Site Assessments is recommended. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval. The scope of services performed in the execution of this investigation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user. Said user must contact DEC in writing to verify applicability of this report for their use. All work must be conducted under the supervision of our geotechnical engineer. The discovery of any site or subsurface conditions during construction which deviate from the information obtained from our subsoil investigation is always likely and should be reported to us for our evaluation. All work shall be conducted in compliance with the Florida Building Code FBC and OSHA workers protection rules and all applicable Federal, State, County and City rules and regulations.

It has been a pleasure working with you and look forward to do so in the near future.

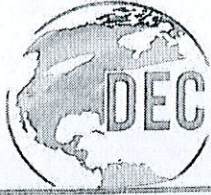
Sincerely yours,



Wissam Naamani, P.E.  
DYNATECH ENGINEERING CORP.  
Florida Reg. No. 39584  
Special Inspector No. 757  
Certificate of Authorization No.: CA 5491



In



# DYNATECH ENGINEERING CORP.

WWW.DYNATECHENGINEERING.COM

**PERCOLATION TEST ACCORDING TO S.F.W.M.D.**  
**D.O.T. STANDARD TEST**

DATE : 01-08-16  
 CLIENT : DANIA SQUARE INVESTMENT GROUP  
 PROJECT : The Palms at Dania Beach @  
 PROJECT LOCATION : 1301 S. Federal Highway, Dania Beach, FL 33004  
 LOCATION OF TEST : SAS  
 DIAMETER OF HOLE : 7"  
 TEST NO. : P-1

TEST DEPTH (feet) : 0-10'  
 AVERAGE FLOW (GPM) : 6.2  
 AVERAGE K (CFS/Sq. Ft-Ft Head) : 2.10 x 10<sup>-4</sup>

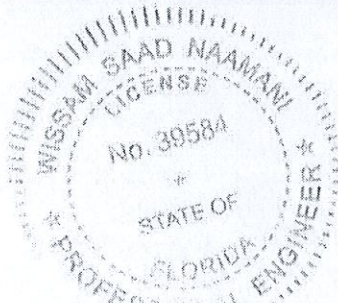
\* The above hydraulic conductivity represents an ultimate value. The designer should decide on the required safety factor. This value is based on the existing soils at the location of the test.

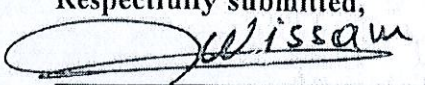
Water Table 7' Below existing ground surface.

**SUBSURFACE INVESTIGATION**

<u>Depth Below Ground Surface</u>	<u>Soil Description</u>
0'-0" to 0'-6"	Top soil and grass
0'-6" to 1'-0"	Brownish medium sand
1'-0" to 2'-0"	Gray medium sand
2'-0" to 4'-6"	Light tan medium sand
4'-6" to 6'-6"	Brown medium sand
6'-6" to 9'-0"	Tan medium sand slightly silty
9'-0" to 15'-0"	Tan sandy limerock

Field Tech: AS



Respectfully submitted,  


Wissam Naamani, P.E.  
 DYNATECH ENGINEERING CORP.  
 Florida Reg. No. 39584  
 Certificate of Authorization No.: CA 5491

\* As a mutual protection to the clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statement conclusions or extracts from or regarding our reports is reserved pending on our written approval.

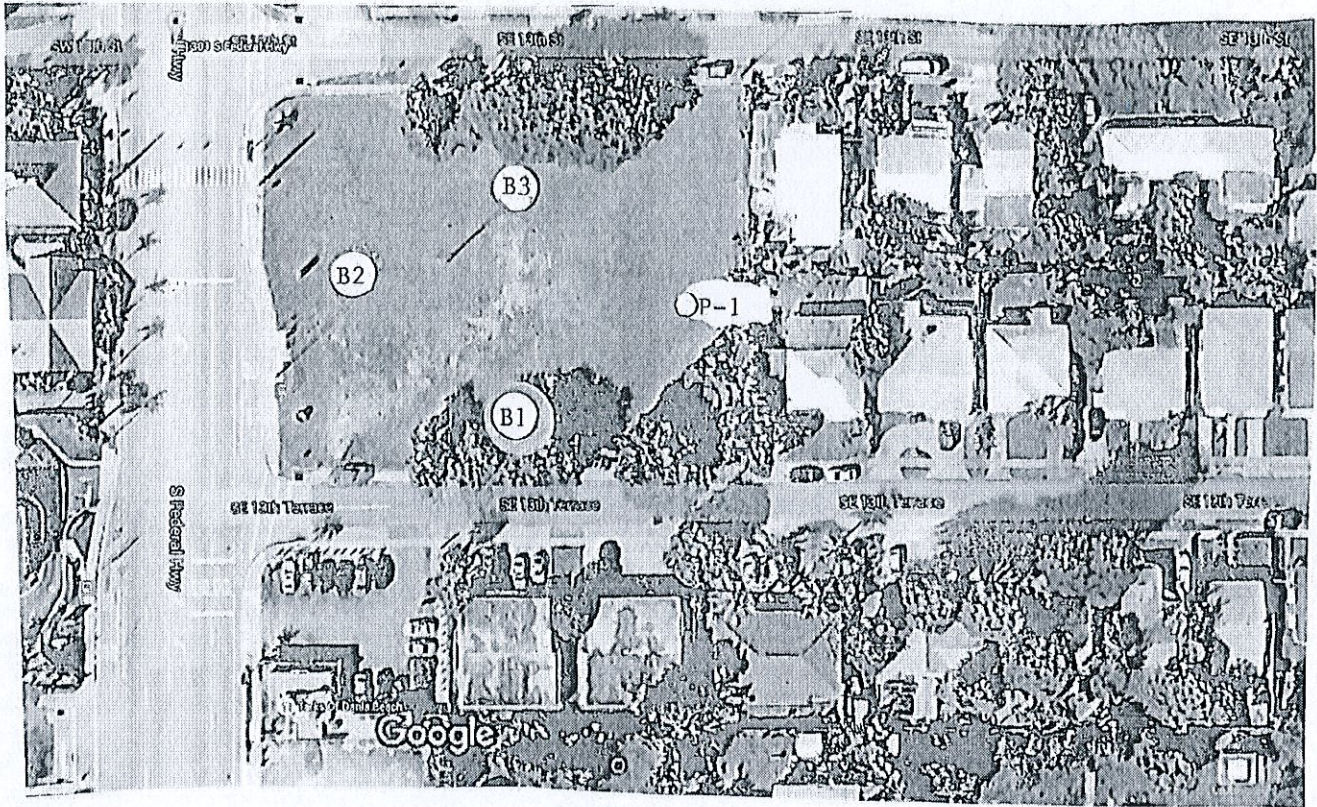


SITE PLAN

⊙ B# : Boring Test Location

○ P-# : Percolation Test Location

N



## DYNATECH ENGINEERING CORP.

Client: Dania Square Investment Group, LLC.

Scale: N.T.S.

Project: 1301 South Federal Highway, Dania Beach, FL 33004

Date: January 08, 2016

## GENERAL NOTES

Soil borings on unmarked vacant property should be considered preliminary with further boring(s) to be drilled after building pad(s) are staked out.

Soil borings on existing structures that are to be demolished should be considered preliminary and additional borings would need to be performed after the structure(s) has been demolished and proposed new building staked out.

As a mutual protection to clients, the public and ourselves, all reports are submitted as confidential property of clients, and authorization for publication of statements, conclusions, extracts from or regarding our reports is reserved pending our written approval.

## KEY CLASSIFICATION & SYMBOLS

### Correlation of Penetration Resistance With Relative Density and Consistency

	<u>Cone Penetration Tests (Kg/cm<sup>2</sup>)</u>	<u>Standard Penetration (Blows/ft.)</u>	<u>Relative Density</u>
Sands	0-16	0-4	Very Loose
	17-40	5-10	Loose
	41-80	11-20	Firm
	81-120	21-30	Very Firm
	Over 120	31-50	Dense
Silts & Clay	0-3	0-2	Very Loose
	4-9	3-4	Soft
	10-17	5-8	Firm
	18-31	9-15	Stiff
	32-60	16-30	Very Stiff
	Over 60	31-50	Hard

	<u>Particle Size</u>
Boulders	> 12 in.
Cobble	3 in. to 1 in.
Gravel	4.76 mm to 3in.
Sand	0.07 mm to 4.67 mm.
Silt	0.005 mm. to 0.074 mm
Clay	< 0.005 mm

### Modifiers

5% - 10 %	Slightly Silty or Clayey
10% - 30%	Silty or Clayey
30% - 50%	Very Silty or Very Clayey
0% - 5%	Slightly Trace
6% - 10%	Trace
11% - 20%	Little
21% - 35%	Some
> 35% And	

### Rock Hardness Description

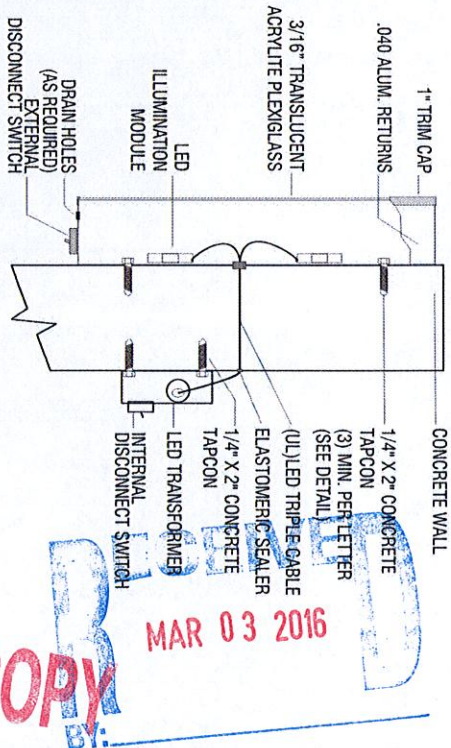
Soft  
Medium  
Moderate Hard  
Hard  
Very Hard

Rock core crumbles when handled  
Can break with your hands.  
Thin edges or rock core can be broken with fingers  
Thin edges or rock core cannot be broken with fingers  
Rock core rings when struck with hammer (cherts)





**ILLUMINATED CHANNEL LETTERS**  
BACK SIDE INTERIOR WIRING



**ELECTRICAL INFORMATION**

- a) (1) U.L. LED TRANSFORMER, 2 AMP, TOTAL LOAD 2 AMP.
- b) ALL ELECTRIC COMPONENTS ARE U/L LISTED
- c) 120 VOLTS 1/2" #12 THUN FNW WIRE
- d) ALL BALLAST INDIVIDUAL FUSED
- e) EXTERNAL AND INTERNAL DISCONNECT SWITCH
- f) SIGN GROUNDED ACCORDING TO NEC 250
- g) DEDICATED 20 AMPS CIRCUIT # BREAKER FROM ELECTRICAL PANEL
- h) ONE TIME CLOCK 20 AMPS FROM ELECTRICAL PANEL OR PHOTOCELL
- i) ALL COMPONENTS PAINTED AS PER CODE
- j) ALL MATERIALS & FASTENERS MEET 3004.4

**APPROVAL:**

Print Name:.....  
Signature:.....  
Date:.....

**COLOR INFORMATION**

- FACES: RED, BLUE AND WHITE ACRYLIC w/ VINYL GRAPHICS
- RETURNS: BLACK (SUGGESTED)
- TRIM CAP: BLACK (SUGGESTED)



**DRAWING**  
**YORK ELECTRIC CORP.**  
EC 13004787  
2517 SW 13 St. Miami, FL 33145  
T: 305.642.8207 F: 305.642.8239

JOB NAME: IGA CULINARY GROUP LLC	ADDRESS: 10795 Biscayne Blvd Miami FL
SCALE: 3/16" = 1'	CITY: MIAMI
DESCRIPTION: SIGN — ILLUMINATED PLEX-FACE CHANNEL LETTERS AND LOGO INSTALLED ON CONCRETE WALL	

**FILE COPY**

MAR 03 2016

STATIC & PSI  
RESIDUAL 58 PSI

Flow 750 GPM

**CODE REQUIREMENTS:**  
 FIRE HYDRANT No. 1  
 10' MIN. CLEARANCE  
 10' MIN. CLEARANCE  
 10' MIN. CLEARANCE

**LEGAL DESCRIPTION:**  
 NORTH FEDERAL HIGHWAY  
 13100 STREET  
 13100 STREET

**PROPERTY INFORMATION:**  
 SITE: 13100 STREET  
 13100 STREET  
 13100 STREET

**OWNER:**  
 NEW CONSTRUCTION FOR  
 THE PALMS AT DANA BEACH  
 1301 South Federal Highway  
 Dana Beach, FL 33504

**PROJECT INFORMATION:**  
 PROJECT NO.: 13100 STREET  
 SHEET NO.: 13100 STREET  
 DATE: 02/25/2016

**REVISIONS:**  
 1. 02/25/2016: ORIGINAL  
 2. 02/25/2016: REVISIONS

**DESIGNER:**  
 ARCHITECTURE  
 13100 STREET  
 13100 STREET  
 13100 STREET

**DATE:**  
 02/25/2016

**GENERAL NOTES:**  
 1. ALL WORK SHALL BE ACCORDING TO THE LATEST EDITIONS OF THE BUILDING CODES AND REGULATIONS.  
 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.  
 3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES AT ALL TIMES.  
 4. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND STRUCTURES.  
 5. THE CONTRACTOR SHALL MAINTAIN SAFE ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES.  
 6. THE CONTRACTOR SHALL MAINTAIN ALL RECORDS AND DRAWINGS.  
 7. THE CONTRACTOR SHALL MAINTAIN ALL RECORDS AND DRAWINGS.

**PERMITS & INSPECTIONS:**

ITEM	DATE	STATUS
PERMIT NO. 13100 STREET	02/25/2016	ISSUED
PERMIT NO. 13100 STREET	02/25/2016	ISSUED
PERMIT NO. 13100 STREET	02/25/2016	ISSUED

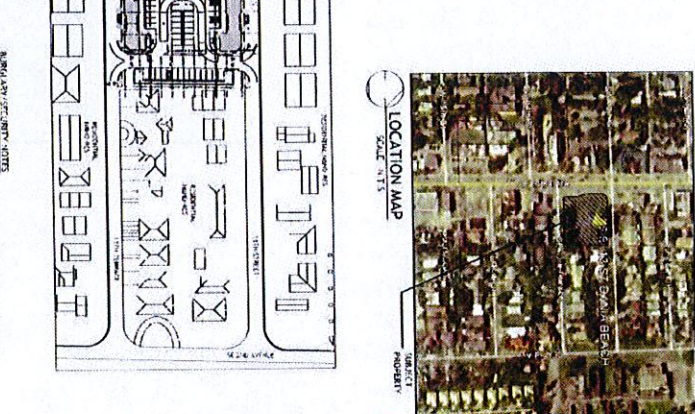
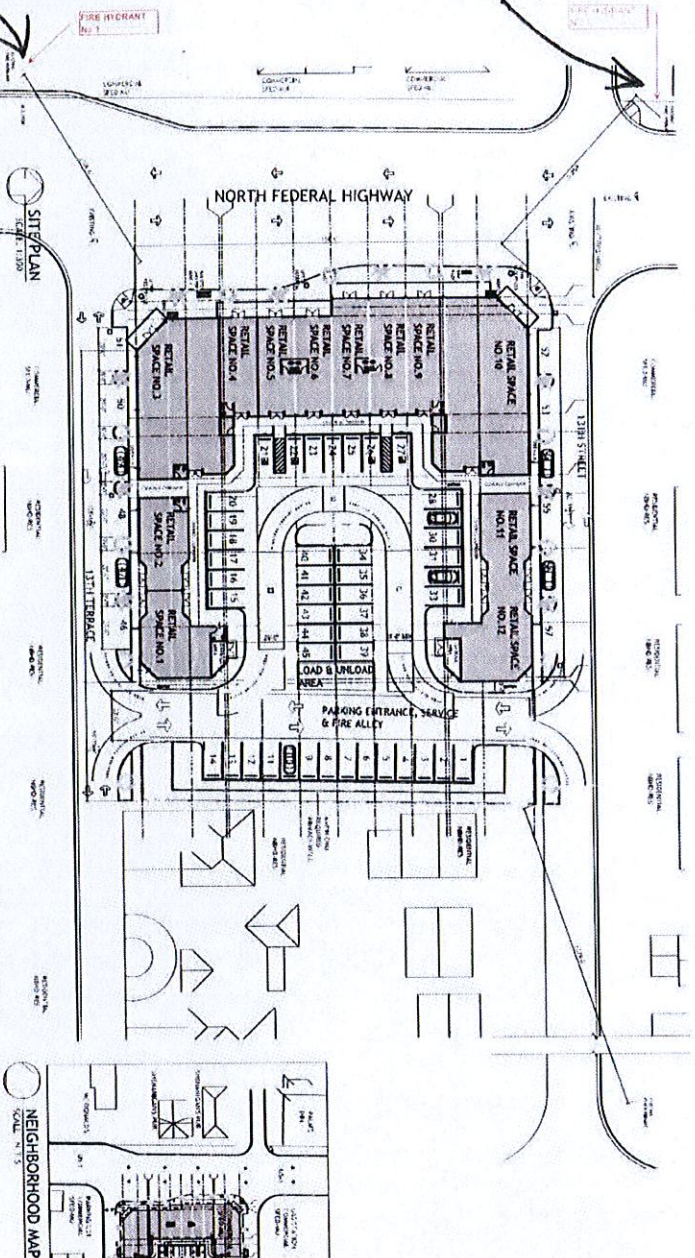
**DEVELOPMENT REVIEW COMMITTEE (DRCC) 2nd MEETING FEB 25, 2016**

**AGENDA:**  
 1. APPROVAL OF MINUTES  
 2. PRESENTATION BY ARCHITECTURE  
 3. PUBLIC COMMENT  
 4. BOARD DISCUSSION  
 5. BOARD ACTION

**RESOLUTION:**  
 THE BOARD HAS REVIEWED THE PROJECT AND HAS APPROVED THE DEVELOPMENT PLAN SUBJECT TO THE FOLLOWING CONDITIONS:  
 1. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND UTILITIES.  
 2. THE CONTRACTOR SHALL MAINTAIN ALL RECORDS AND DRAWINGS.  
 3. THE CONTRACTOR SHALL MAINTAIN ALL RECORDS AND DRAWINGS.

**DRC-1**

**NEW CONSTRUCTION FOR THE PALMS AT DANA BEACH**  
 1301 South Federal Highway  
 Dana Beach, FL 33504



**FILE COPY**

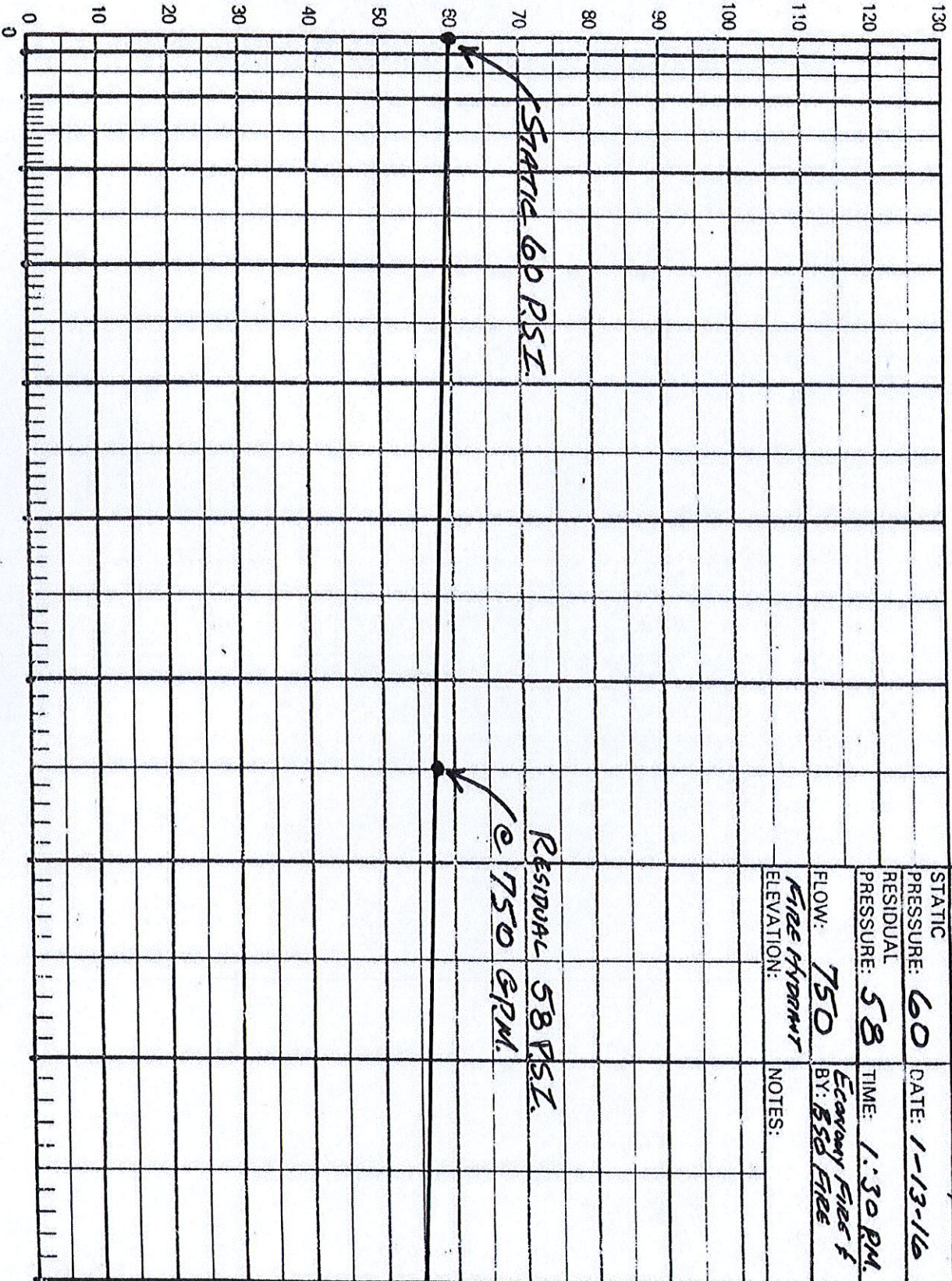
**DESIGN ARCHITECTURE**

**MAR 03 2016**

300 B...  
 813 937-...  
 1155 7...  
 P. 306-937-7777

PRESSURE — POUNDS PER SQUARE INCH  
(Multiply Scale by  $\frac{1}{100}$ )

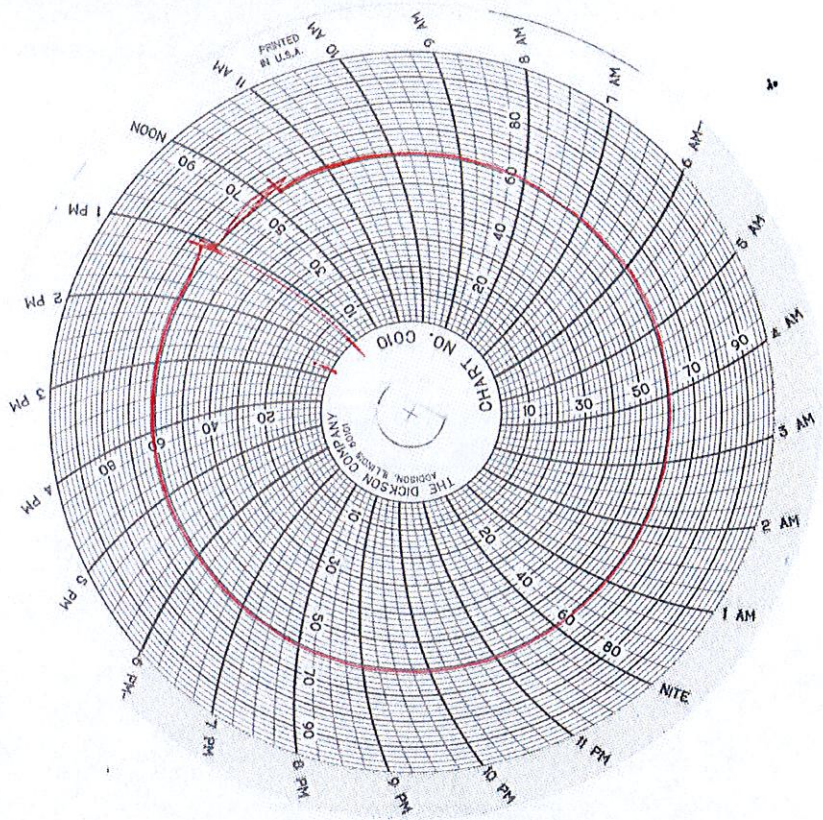
HYDRAULIC GRAPH Pressure vs. (Flow)<sup>1.85</sup>



500 14th St. S. EDORAC, MONT.  
LOCATION: DANIEL BENNETT, E.L.

STATIC PRESSURE: 60 DATE: 1-13-16  
RESIDUAL PRESSURE: 58  
FLOW: 750 TIME: 1:30 PM.  
FIRE HYDRANT BY: BSO FIRE  
ELEVATION: NOTES:

FLOW — GALLONS PER MINUTE  
(Multiply Scale by  $\frac{1}{100}$ )



# The Palms at Dania Beach Traffic Impact Study

City of Dania Beach, Florida



FILE COPY

Prepared for  
**DESIGN TECH STUDIOS**

Prepared by  
**THOMAS A. HALL, INC.**

February 22, 2016

# **The Palms at Dania Beach**

**City of Dania Beach, Florida**

**Prepared for:**

**DESIGN TECH STUDIOS**

**Prepared by:**

**THOMAS A. HALL, INC.**

**February 22, 2016**

*2/22/2016*  
*Peter Partington*  
Peter Partington, P.E.  
FL Registration No. 45099  
1521 NE 53rd Street  
Ft. Lauderdale, FL 33334

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## **Introduction**

The Palms at Dania Beach is a new retail project proposed for development in the City of Dania Beach, Florida. The project site is located on the east side of Federal Highway (US 1) between SE 13<sup>th</sup> Street and SE 13<sup>th</sup> Terrace. Although the site plan indicates that the development will be approximately 18,200 square feet in size, the twelve retail spaces have a leasable area of approximately 16,407 square feet. The remainder of the built area is covered corridors between buildings. The site is currently vacant. The proposed project is expected to be built out in 2018.

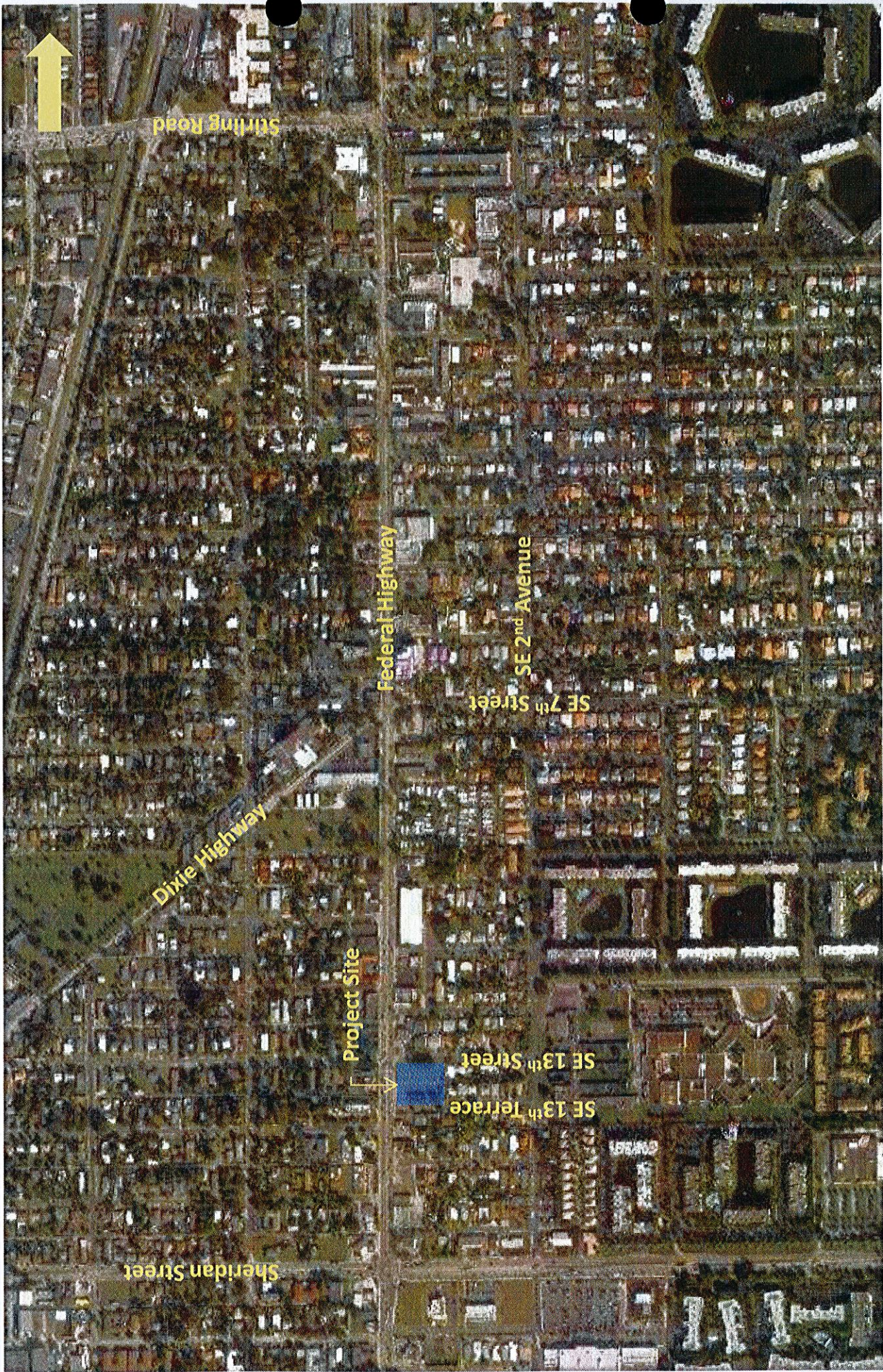
Access to the project will be by means of driveway connections to SE 13<sup>th</sup> Street and SE 13<sup>th</sup> Terrace on the east side of the project site.

The purpose of this study is to analyze the impacts of trips generated by the proposed new development on the adjacent roadway network. City of Dania Beach City Engineer, Rudy Navarro, defined the study area, which includes the signalized intersections of Federal Highway at Stirling Road, Federal Highway at SE 7<sup>th</sup> Street (Dixie Highway), Federal Highway at Sheridan Street, and Sheridan Street at SE 2<sup>nd</sup> Avenue, as well as the project entrance/exit driveway intersections with SE 13<sup>th</sup> Street and SE 13<sup>th</sup> Terrace.

Route 1 of the Broward County Transit System and “the Breeze” express bus both run along Federal Highway in front of the proposed development site and are the only mass transit options in the study area. Despite the excellent opportunity for retail patrons to use mass transit (there is a bus stop on the southeast corner of the property), no reduction in vehicular project trips has been assumed in this study as a result of transit use.

**Figure 1 – Site Location**, shows the location of the proposed development.





Thomas A. Hall, Inc.

**Figure 1 – Site Location**  
The Palms at Dania Beach  
Dania Beach, Florida

## Data Collection

Four-hour (7-9:00 a.m. and 4-6:00 p.m.), turning-movement counts were collected at the signalized intersections of Federal Highway at SE 7<sup>th</sup> Street, Federal Highway at Sheridan Street, Sheridan Street at SE 2<sup>nd</sup> Avenue, Federal Highway at SE 13<sup>th</sup> Street and Federal Highway at SE13th Terrace. An existing turning-movement count obtained in June 2015 for another project was used for the intersection of Federal Highway at Stirling Road. Copies of the traffic counts may be found in **Appendix A – Traffic Counts**.

The turning-movement counts were collected to provide a baseline of existing traffic operational conditions at the significant intersections within the study area. Unfortunately, the Florida Department of Transportation elected to close the Dania Beach Boulevard bridge over the Intracoastal Waterway at the beginning of 2016 and it is expected to remain closed until the end of March. Consequently, traffic volumes on Federal Highway and, particularly, Sheridan Street have increased in the study area as beach-oriented traffic has had to rely upon Sheridan Street for access.

A preliminary field review was conducted on February 3, 2016 to obtain pertinent roadway geometry, pavement markings, signing, etc. In addition to the field review, aerial maps were consulted to verify intersection spacing, storage lane lengths and lane assignments.

Existing signal timing and phasing plans were obtained from Broward County's Traffic Engineering Division. Copies of the existing traffic signal timing and phasing plans may be found in **Appendix C – Traffic Signal Timing Plans**.

Federal Highway (SR 5/US 1) is a north-south, five-lane, arterial roadway with a posted speed limit of 35 mph.

Stirling Road (SR 848) is an east-west, six-lane, median-divided arterial highway with a posted speed limit of 45 mph west of Federal Highway. Stirling Road is an undivided two-lane local street east of Federal Highway with a posted speed limit of 30 mph.

Sheridan Street (SR 822) is an east-west, four-lane, median-divided arterial highway and has a posted speed limit of 40 mph.

SE 7<sup>th</sup> Street (Dixie Highway) is an east-west, two-lane, undivided local street on either side of Federal Highway and has a posted speed limit of 30 mph west of Federal Highway and 25 mph east of Federal Highway.

SE 2<sup>nd</sup> Avenue is a north-south, two-lane, undivided local collector roadway with a posted speed limit of 25 mph.

SE 13<sup>th</sup> Street and SE 13<sup>th</sup> Terrace are east-west, two-lane, undivided local streets with a posted speed limit of 25 mph. SE 13<sup>th</sup> Terrace terminates to west at Federal Highway with a McDonald's restaurant driveway forming the west approach to the intersection.

## **Analyses**

### ***Adjustment Factors***

The June 2015 and February 2016 turning-movement counts were adjusted to peak season by the application of Peak Season Conversion Factors (1.08 and 1.01, respectively) obtained from the Florida Department of Transportation's (FDOT) *2014 Peak Season Factor Category Report*. **Table 1 – AM Peak-hour Turning-movement Counts** and **Table 2 – PM Peak-hour Turning-movement Counts** show both the "raw" and the seasonally-adjusted a.m. and p.m. peak-hour traffic volumes within the study area.

As was mentioned previously, the February 2016 turning-movement counts are distorted by the closure of the Dania Beach Boulevard bridge over the Intracoastal Waterway. Because a turning-movement count was available for the intersection of Federal Highway at Stirling Road from a previous study, the adjusted peak-season through volumes on Federal Highway contained in that count were compared to the adjusted peak-season through volumes at the nearby intersection of Federal Highway at SE 7<sup>th</sup> Street. The comparison of adjusted peak-season turning-movement counts indicated that volumes were increased by 17.75 percent in the morning peak hour and 11.6 percent in the afternoon peak hour. Using these percentages, the major street volumes on Federal Highway and Sheridan Street were reduced to approximate normal values on both roadways.

An Annual Growth Factor was derived from a comparison of 2010 and 2014 Annual Average Daily Traffic (AADT) reports obtained from FDOT's *2014 Florida Online Traffic Information* for count stations on nearby roadway segments. Although most count stations showed that traffic volumes have actually declined over time, an areawide average annual compound growth rate of 0.82 percent was applied to all roadway turning-movement counts. Copies of the FDOT traffic reports, the annual growth rate worksheet, and seasonal adjustment factors are provided in **Appendix B – Adjustment Factors**.

### ***Existing Conditions***

Synchro intersection operations analysis software was used to construct a model of the existing roadway network in the study area. The model relied upon the adjusted peak-season, peak-hour, turning-movement counts shown in Tables 1 and 2, geometric, pavement marking and signal information obtained from field reviews, and traffic signal timing and phasing plans provided by Broward County's Traffic Engineering Division. Copies of the Synchro reports for existing weekday peak-hour, peak-season conditions may be found in **Appendix D – Existing Conditions Analyses**.

Note that, while signal timing parameters such as cycle lengths, initial greens, yellow and red clearance intervals, etc. obtained from the existing traffic signal timing plans for the signalized intersections were used in all analyses, intersection splits were optimized in all runs, including the existing conditions analyses. This was done to reflect actual operating conditions in the field. Because the studied intersection signals are fully actuated and under system control, the length of individual phases, particularly on the side street approaches, vary depending on the size of the approach volumes.

**Table 3 - AM Peak-hour Queue Length, Level of Service and Delay Findings** and **Table 4 - PM Peak-hour Queue Length, Level of Service and Delay Findings**, summarize the critical elements of the analyses. As Tables 3 and 4 show, the existing intersections of Federal Highway at Stirling Road and at SE 7<sup>th</sup> Street operate at an acceptable Level of Service (LOS) D or better in both the morning and afternoon peak hours. The intersection of Federal Highway at Sheridan Street, however, operates at LOS E in both the morning and afternoon peak hours. The unsignalized intersections of Federal Highway at SE 13<sup>th</sup> Street; Federal Highway at SE 13<sup>th</sup> Terrace; and Sheridan Street at SE 2<sup>nd</sup> Avenue all operate at LOS A during morning and afternoon peak hours.

In addition to the LOS E operation at the intersection of Federal Highway at Sheridan Street, several left-turn lane storage lengths are exceeded. In particular, the northbound left-turn lane at the intersection of Federal Highway at Stirling Road and the southbound left-turn lane at the intersection of Federal Highway at Sheridan Street have queues that far exceed the existing left-turn lane. However, at the intersection of Federal Highway at Stirling Road, the northbound left-turn lane continues to exist to the south as a two-way left-turn lane so left-turning traffic simply uses the two-way left-turn lane as an extension of the northbound left-turn lane. A similar approach is taken by southbound left-turning traffic approaching the intersection of Federal Highway at Sheridan Street.





**Table 3**  
**AM Peak Hour Queue Length, Level of Service and Delay Summary**  
**The Palms at Dania Beach**

Intersection	Turn Lane Length	Existing Conditions				Background Traffic Conditions				Total Traffic Conditions w/New Signal			
		Movement	LOS	Delay	Queue Length	Movement	LOS	Delay	Queue Length	Movement	LOS	Delay	Queue Length
Federal Highway at Stirling Road	N/A	Overall	D	47.2	N/A	Overall	D	47.9	N/A	Overall	D	48.0	N/A
	N/A	EBL	F	97.0	269	EBL	F	97.8	290	EBL	F	97.8	290
	N/A	EBT	F	96.1	271	EBT	F	95.6	286	EBT	F	95.6	286
	N/A	EBR	B	13.3	82	EBR	B	13.1	84	EBR	B	13.1	84
	N/A	WBLTR	F	90.4	188	WBLTR	F	90.9	190	WBLTR	F	90.9	190
	225	NBL	E	64.3	456	NBL	E	67.1	469	NBL	E	68.6	477
	N/A	NBTR	C	28.5	394	NBTR	C	27.9	424	NBTR	C	27.3	420
	185	SBL	B	17.5	20	SBL	B	17.9	21	SBL	B	17.8	21
N/A	SBTR	D	44.2	573	SBTR	D	46.6	601	SBTR	D	47.0	606	
Federal Highway at SE 7th Street/Dixie Highway	N/A	Overall	B	19.9	N/A	Overall	C	20.2	N/A	Overall	C	20.4	N/A
	N/A	EBLTR	F	86.8	117	EBTR	F	86.9	117	EBTR	F	86.3	119
	110	WBL	F	84.2	63	WBL	F	84.1	63	WBL	F	84.1	63
	N/A	WBTR	D	49.1	64	WBT	D	48.9	63	WBT	D	48.9	63
	250	NBL	B	12.5	16	NBL	B	12.5	16	NBL	B	12.8	16
	N/A	NBTR	C	21.9	603	NBTR	C	22.3	601	NBTR	C	22.3	601
	90	SBL	A	9.9	24	SBL	B	10.5	24	SBL	B	11.1	24
	N/A	SBTR	A	7.5	238	SBTR	A	7.9	244	SBTR	A	8.5	253
Federal Highway at Sheridan Street	N/A	Overall	E	72.9	N/A	Overall	E	76.0	N/A	Overall	E	76.9	N/A
	275	EBL	F	111.2	467	EBL	F	116.3	479	EBL	F	119.9	488
	N/A	EBTR	F	88.0	501	EBTR	F	89.4	509	EBTR	F	87.8	505
	280	WBL	F	99.4	224	WBL	F	101.8	229	WBL	F	106.1	232
	N/A	WBT	F	81.6	281	WBT	F	82.0	283	WBT	F	82.3	283
	230	WBR	B	17.1	62	WBR	B	17.8	67	WBR	B	18.3	71
	350	NBL	C	33.3	235	NBL	D	35.4	253	NBL	D	36.2	259
	N/A	NBT	E	75.8	856	NBT	F	82.1	895	NBT	F	83.8	904
	65	NBR	A	0.3	0	NBR	A	0.3	0	NBR	A	0.3	0
	300	SBL	F	129.5	408	SBL	F	132.7	425	SBL	F	134.5	430
	N/A	SBTR	D	50.5	386	SBTR	D	53.3	400	SBTR	D	53.1	402
	Federal Highway at SE 13th Street	N/A	Overall	A	0.5	N/A	Overall	A	0.5	N/A	Overall	A	0.8
N/A		EBL	E	45.4	8	EBL	E	49.4	8	EBL	F	52.9	10
N/A		WBL	D	28.5	8	WBL	D	30.5	8	WBL	D	31.0	14
100		NBL	B	10.1	0	NBL	B	10.2	0	NBL	B	10.2	0
150		SBL	B	11.5	0	SBL	B	11.7	0	SBL	B	11.8	2
Federal Highway at SE 13th Terrace	N/A	Overall	A	0.7	N/A	Overall	A	0.8	N/A	Overall	A	1.2	N/A
	N/A	EBL	C	22.3	14	EBL	C	23.4	14	EBL	C	23.8	16
	N/A	WBL	E	37.7	4	WBL	E	40.6	4	WBL	F	73.3	2
	50	NBL	B	10.2	2	NBL	B	10.3	2	NBL	B	10.4	2
	50	SBL	A	0.0	0	SBL	A	0.0	0	SBL	B	11.6	0
Sheridan Street at SE 2nd Avenue	N/A	Overall	A	2.2	N/A	Overall	A	2.3	N/A	Overall	A	2.3	N/A
	250	EBL	B	10.6	8	EBL	B	10.7	10	EBL	B	10.7	10
	250	WBL	B	10.1	6	WBL	B	10.1	8	WBL	B	10.1	8
	N/A	NBL	B	11.6	4	NBL	B	11.6	4	NBL	B	11.6	4
	N/A	SBL	B	14.7	28	SBL	C	15.0	30	SBL	C	15.1	30
SE 13th Street at Project Entrance	N/A	Overall	N/A	N/A	N/A	Overall	N/A	N/A	N/A	Overall	A	2.3	N/A
	N/A	WBL	N/A	N/A	N/A	WBL	N/A	N/A	N/A	WBL	A	7.3	0
	N/A	WBT	N/A	N/A	N/A	WBT	N/A	N/A	N/A	WBT	A	0.0	0
	N/A	NBL	N/A	N/A	N/A	NBL	N/A	N/A	N/A	NBL	A	8.6	0
SE 13th Terrace at Project Entrance	N/A	Overall	N/A	N/A	N/A	Overall	N/A	N/A	N/A	Overall	A	5.6	N/A
	N/A	EBL	N/A	N/A	N/A	EBL	N/A	N/A	N/A	EBL	A	7.3	0
	N/A	EBT	N/A	N/A	N/A	EBT	N/A	N/A	N/A	EBT	A	0.0	0
	N/A	SBL	N/A	N/A	N/A	SBL	N/A	N/A	N/A	SBL	A	8.5	0

**Table 4**  
**PM Peak Hour Queue Length, Level of Service and Delay Summary**  
**The Palms at Dania Beach**

Intersection	Turn Lane Length	Existing Conditions			Background Traffic Conditions					Total Traffic Conditions w/New Signal			
		Movement	LOS	Delay	Queue Length	Movement	LOS	Delay	Queue Length	Movement	LOS	Delay	Queue Length
Federal Highway at Stirling Road	N/A	<b>Overall</b>	<b>D</b>	<b>48.3</b>	<b>N/A</b>	<b>Overall</b>	<b>D</b>	<b>49.9</b>	<b>N/A</b>	<b>Overall</b>	<b>D</b>	<b>51.1</b>	<b>N/A</b>
	N/A	EBL	F	107.6	390	EBL	F	107.9	395	EBL	F	107.9	395
	N/A	EBT	F	105.9	394	EBT	F	108.6	408	EBT	F	108.6	408
	N/A	EBR	B	18.4	151	EBR	B	18.6	154	EBR	B	19.5	161
	N/A	WBLTR	F	90.6	192	WBLTR	F	90.6	192	WBLTR	F	90.6	192
	225	NBL	F	91.6	408	NBL	F	91.9	408	NBL	F	91.4	416
	N/A	NBTR	A	6.0	136	NBTR	A	6.1	141	NBTR	A	6.1	146
	185	SBL	B	13.9	24	SBL	B	14.0	24	SBL	B	14.0	24
N/A	SBTR	D	52.0	964	SBTR	D	54.7	995	SBTR	E	58.8	1017	
Federal Highway at SE 7th Street/Dixie Highway	N/A	<b>Overall</b>	<b>B</b>	<b>11.8</b>	<b>N/A</b>	<b>Overall</b>	<b>B</b>	<b>11.6</b>	<b>N/A</b>	<b>Overall</b>	<b>B</b>	<b>12.3</b>	<b>N/A</b>
	N/A	EBLTR	F	88.1	131	EBTR	F	88.1	131	EBTR	F	87.6	134
	110	WBL	E	72.8	50	WBL	E	72.8	50	WBL	E	72.8	50
	N/A	WBTR	E	64.6	118	WBT	E	64.6	118	WBT	E	64.6	118
	250	NBL	A	4.4	4	NBL	A	4.4	4	NBL	A	4.5	5
	N/A	NBTR	A	3.5	119	NBTR	A	3.5	121	NBTR	A	3.7	125
	90	SBL	A	5.0	18	SBL	A	4.9	17	SBL	A	5.8	19
	N/A	SBTR	A	8.7	610	SBTR	A	8.4	624	SBTR	A	9.8	665
Federal Highway at Sheridan Street	N/A	<b>Overall</b>	<b>E</b>	<b>60.1</b>	<b>N/A</b>	<b>Overall</b>	<b>E</b>	<b>61.4</b>	<b>N/A</b>	<b>Overall</b>	<b>E</b>	<b>62.7</b>	<b>N/A</b>
	275	EBL	E	58.0	240	EBL	E	60.2	246	EBL	E	63.2	488
	N/A	EBTR	F	79.8	444	EBTR	F	82.5	444	EBTR	F	82.8	505
	280	WBL	E	77.1	273	WBL	E	76.6	284	WBL	E	77.8	232
	N/A	WBT	E	64.2	304	WBT	E	64.9	305	WBT	E	65.3	283
	230	WBR	A	9.1	78	WBR	A	9.2	78	WBR	A	9.3	71
	350	NBL	E	67.7	260	NBL	E	70.4	264	NBL	E	74.7	259
	N/A	NBT	D	53.1	448	NBT	D	53.8	457	NBT	E	56.6	904
	65	NBR	A	7.7	28	NBR	A	7.5	27	NBR	A	7.5	0
	300	SBL	E	57.1	422	SBL	E	59.6	437	SBL	E	61.2	430
	N/A	SBTR	E	65.9	600	SBTR	E	67.0	611	SBTR	E	67.6	402
Federal Highway at SE 13th Street	N/A	<b>Overall</b>	<b>A</b>	<b>1.3</b>	<b>N/A</b>	<b>Overall</b>	<b>A</b>	<b>1.3</b>	<b>N/A</b>	<b>Overall</b>	<b>A</b>	<b>2.6</b>	<b>N/A</b>
	N/A	EBL	F	56.5	32	EBL	F	60.3	8	EBL	F	76.9	42
	N/A	WBL	C	23.4	4	WBL	C	24.4	8	WBL	F	54.0	36
	100	NBL	B	11.7	2	NBL	B	11.8	0	NBL	B	11.8	2
	150	SBL	B	11.6	0	SBL	B	11.7	0	SBL	B	12.1	4
Federal Highway at SE 13th Terrace	N/A	<b>Overall</b>	<b>A</b>	<b>0.6</b>	<b>N/A</b>	<b>Overall</b>	<b>A</b>	<b>0.6</b>	<b>N/A</b>	<b>Overall</b>	<b>A</b>	<b>9.2</b>	<b>N/A</b>
	N/A	EBL	F	54.2	10	EBL	F	55.6	10	EBL	F	61.1	10
	N/A	WBL	D	25.8	8	WBL	D	27.0	8	WBL	F	311.0	126
	50	NBL	B	11.6	2	NBL	B	11.8	2	NBL	B	11.9	2
	50	SBL	B	11.7	2	SBL	B	11.8	2	SBL	B	12.1	2
Sheridan Street at SE 2nd Avenue	N/A	<b>Overall</b>	<b>A</b>	<b>1.9</b>	<b>N/A</b>	<b>Overall</b>	<b>A</b>	<b>2.0</b>	<b>N/A</b>	<b>Overall</b>	<b>A</b>	<b>2.0</b>	<b>N/A</b>
	250	EBL	B	11.4	8	EBL	B	11.4	8	EBL	B	11.5	8
	250	WBL	B	11.2	18	WBL	B	11.2	18	WBL	B	11.2	18
	N/A	NBL	B	12.4	10	NBL	B	12.4	10	NBL	B	12.4	10
	N/A	SBL	B	14.0	12	SBL	B	14.1	12	SBL	B	14.4	14
SE 13th Street at Project Entrance	N/A	<b>Overall</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>Overall</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>Overall</b>	<b>A</b>	<b>3.5</b>	<b>N/A</b>
	N/A	WBL	N/A	N/A	N/A	WBL	N/A	N/A	N/A	WBL	A	7.4	0
	N/A	WBT	N/A	N/A	N/A	WBT	N/A	N/A	N/A	WBT	A	0.0	0
	N/A	NBL	N/A	N/A	N/A	NBL	N/A	N/A	N/A	NBL	A	9.0	2
SE 13th Terrace at Project Entrance	N/A	<b>Overall</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>Overall</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>Overall</b>	<b>A</b>	<b>5.5</b>	<b>N/A</b>
	N/A	EBL	N/A	N/A	N/A	EBL	N/A	N/A	N/A	EBL	A	7.3	2
	N/A	EBT	N/A	N/A	N/A	EBT	N/A	N/A	N/A	EBT	A	0.0	0
	N/A	SBL	N/A	N/A	N/A	SBL	N/A	N/A	N/A	SBL	A	8.7	4



## ***Background Traffic Conditions***

Future build-out year traffic volumes without the project were derived by applying the 0.82 percent annual growth rate to the adjusted peak-season, turning-movement counts. In addition, trips associated with the approved, but not yet constructed, Wyndham Hotel and Wingate Inn were added as “committed development.” Tables 1 and 2 show the peak-season background traffic volumes expected during the future build-out year of 2017.

**Appendix E – Background Traffic Conditions Analyses** contains copies of the Synchro reports for the studied intersections. In addition to reporting existing intersection operating conditions, Tables 3 and 4 also provide a summary of the critical elements of the background conditions analyses and demonstrate that the studied intersections are all expected to continue to operate at LOS D or better in 2017 without the project with the exception of the intersection of Federal Highway at Sheridan Street, which will continue at LOS E.

As in the Existing Conditions Analysis, left-turn queue storage lengths on Federal Highway, while not increasing substantially, are expected to continue to exceed the northbound left-turn lane approaching Stirling Road and the southbound left-turn lane approaching Sheridan Street.

## ***Project Trip Generation***

**Table 5 – Daily Trip Generation, Table 6 – AM Peak-hour Trip Generation and Table 7 – PM Peak-hour Trip Generation** depict the trip generation for the project site. Trip generation characteristics were obtained from the ITE *Trip Generation* manual, 9<sup>th</sup> Edition. As the tables show, the proposed development Palms at Dania Beach is anticipated to generate 1,573 new daily trips, 39 new a.m. peak-hour trips and 133 new p.m. peak-hour trips.

## ***Project Distribution and Assignment***

Cardinal distribution information was determined by a review of existing traffic volumes and knowledge of the local roadway network. **Figure 2 – Project Traffic Distribution** shows the traffic distribution on study area roadways.

**Figure 3 – Project Trip Assignment** shows the peak-hour project trips assigned to the study area roadway network in accordance with the project traffic distribution.

**Table 5**  
**Daily Trip Generation**  
**The Palms at Dania Beach**

Land Use	ITE Code	Intensity	Trip Generation Rate <sup>(1)</sup>	Total Trips		Internal Trips		Adjusted Trips		Pass-by Trips		New Trips		
				In	Out	In	Out	In	Out	In	Out	In	Out	Total
Proposed Use														
Shopping Center	820	16,407/SF	$\text{Ln}(T) = 0.65 \text{Ln}(X) + 5.83$ (50/50)	1,049	2,098	0	0	1,049	1,049	2,098	524	25.00%	787	1,573
<b>Total</b>				<b>1,049</b>	<b>2,098</b>	<b>0</b>	<b>0</b>	<b>1,049</b>	<b>1,049</b>	<b>2,098</b>	<b>524</b>		<b>787</b>	<b>1,573</b>

<sup>(1)</sup> Source: Institute of Transportation Engineers' Trip Generation manual, 9th Edition.

**Table 6**  
**AM Peak-hour Trip Generation**  
**The Palms at Dania Beach**

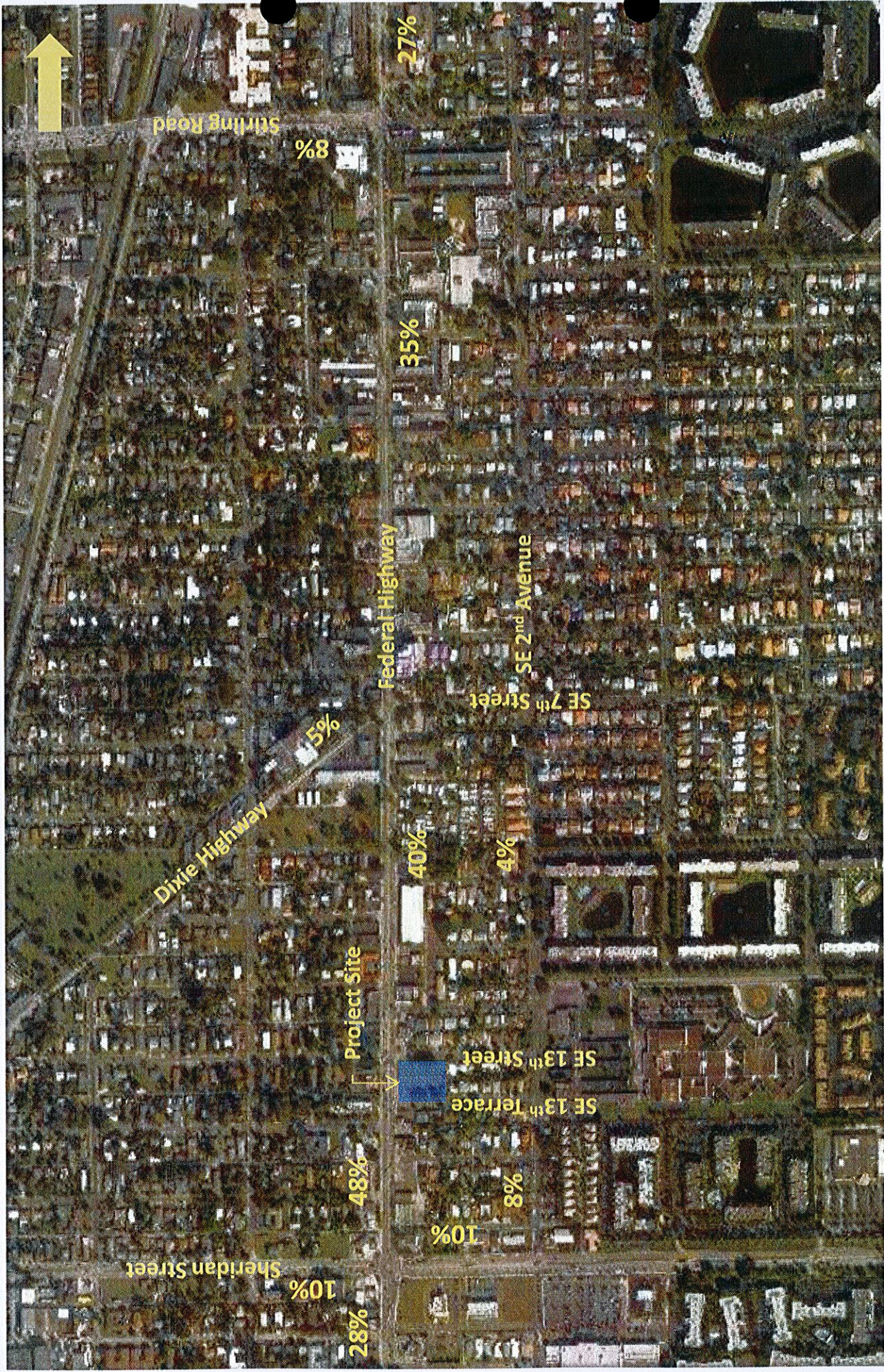
Land Use	ITE Code	Intensity	Trip Generation Rate <sup>(1)</sup>	Total Trips		Internal Trips		Adjusted Trips		Pass-by Trips		New Trips		
				In	Out	In	Out	In	Out	In	Out	In	Out	Total
Proposed Use														
Shopping Center	820	16,407/SF	$\text{Ln}(T) = 0.61 \text{Ln}(X) + 2.24$ (62/38)	32	52	0	0	32	20	52	13	25.00%	24	39
<b>Total</b>				<b>32</b>	<b>52</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>20</b>	<b>52</b>	<b>13</b>		<b>24</b>	<b>39</b>

<sup>(1)</sup> Source: Institute of Transportation Engineers' Trip Generation manual, 9th Edition.

**Table 7**  
**PM Peak-hour Trip Generation**  
**The Palms at Dania Beach**

Land Use	ITE Code	Intensity	Trip Generation Rate <sup>(1)</sup>	Total Trips		Internal Trips		Adjusted Trips		Pass-by Trips		New Trips		
				In	Out	In	Out	In	Out	In	Out	In	Out	Total
Proposed Use														
Shopping Center	820	16,407/SF	$\text{Ln}(T) = 0.67 \text{Ln}(X) + 3.31$ (48/52)	86	178	0	0	86	92	178	45	25.00%	64	133
<b>Total</b>				<b>86</b>	<b>178</b>	<b>0</b>	<b>0</b>	<b>86</b>	<b>92</b>	<b>178</b>	<b>45</b>		<b>64</b>	<b>133</b>

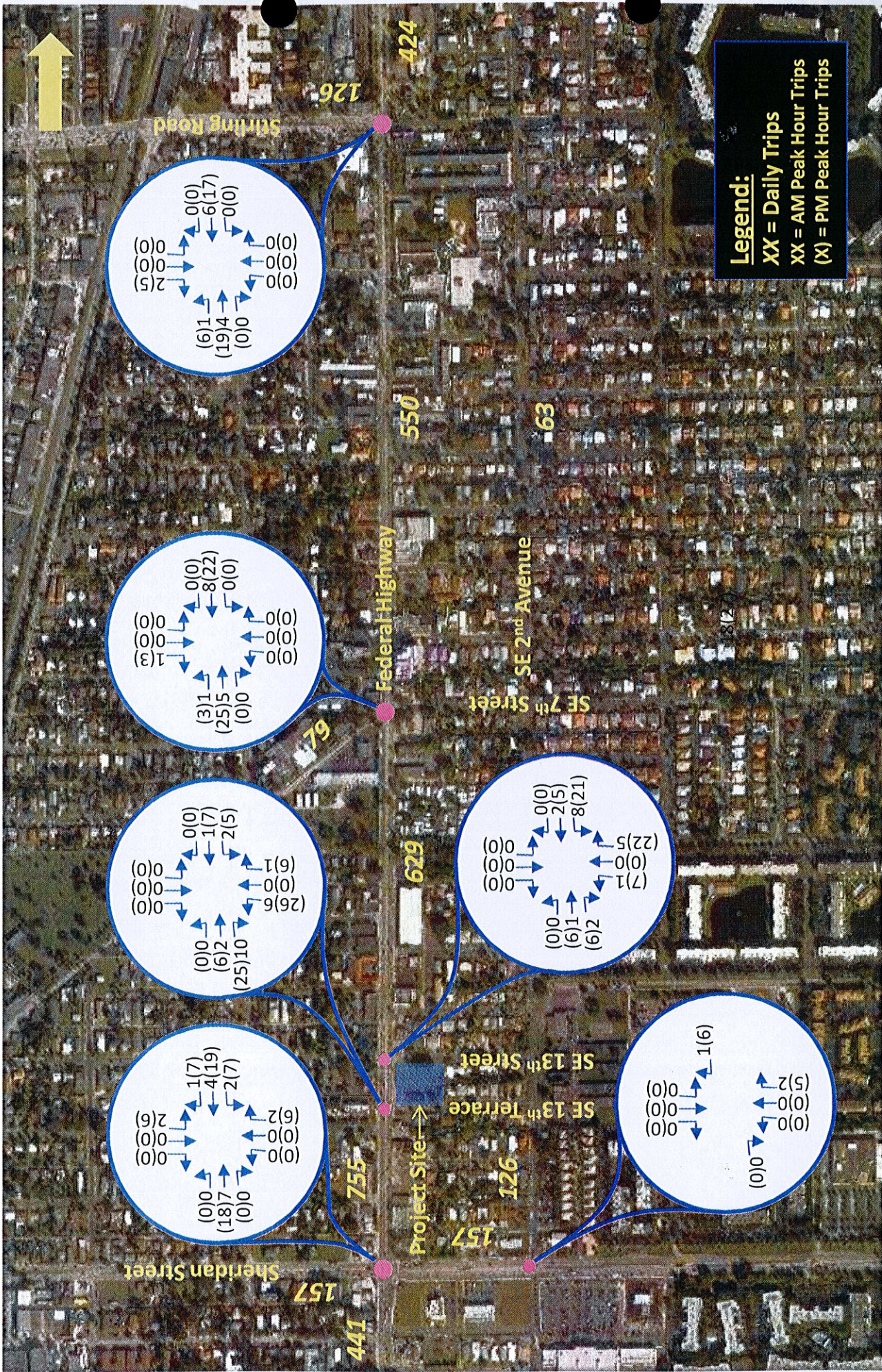
<sup>(1)</sup> Source: Institute of Transportation Engineers' Trip Generation manual, 9th Edition.



Thomas A. Hall, Inc.

**Figure 2 – Project Trip Distribution**

The Palms at Dania Beach  
 Dania Beach, Florida

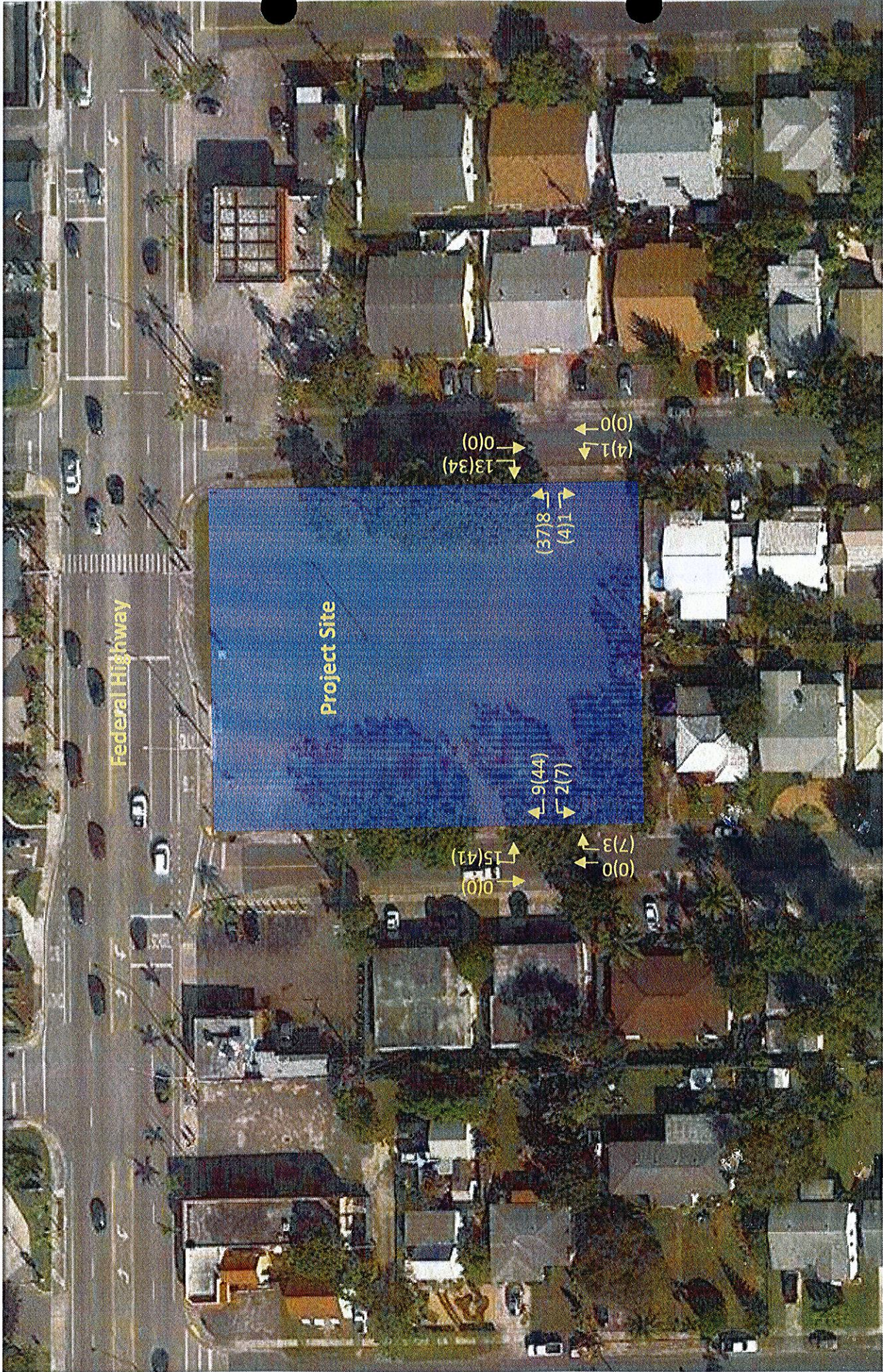


**Legend:**  
 XX = Daily Trips  
 XX = AM Peak Hour Trips  
 (X) = PM Peak Hour Trips

Thomas A. Hall, Inc.

**Figure 3 – Project Trip Assignment**

The Palms at Dania Beach  
 Dania Beach, Florida



**Figure 4 – Project Driveway Volumes**

The Palms at Dania Beach  
 Dania Beach, Florida

## ***Total Traffic Conditions***

Future total traffic volumes including project traffic were obtained by adding the background traffic volumes to the project traffic volumes. The resulting future total traffic volumes are shown in **Table 1 – AM Peak-hour Turning-movement Counts** and **Table 2 – PM Peak-hour Turning-movement Counts**.

**Appendix F – Total Traffic Conditions Analyses** contains copies of the Synchro reports for this third analysis condition. Tables 3 and 4 provide a summary of the critical elements of these analyses and demonstrate that the studied intersections, including the new intersections of the project driveways with SE 13<sup>th</sup> Street and with SE 13<sup>th</sup> Terrace, all are expected to operate at LOS D or better with the exception of Federal Highway, which remains at LOS E. This means that, even with the addition of project trips on the local roadway network, no change in intersection or approach levels of service is expected as a result of the construction of the Palms at Dania Beach development.

As in the Existing and Background Conditions Analyses, left-turn queue storage lengths on Federal Highway, while not increasing substantially, are expected to continue to exceed the northbound left-turn lane approaching Stirling Road and the southbound left-turn lane approaching Sheridan Street during peak hours.

## **Roadway Link Capacity Analysis**

**Table 8 – Peak Hour Link Capacity Analysis** shows the peak hour volumes for the most heavily affected segments of the five major roadways within the study area that carry project traffic. The peak-hour link volumes were obtained by applying a “K” factor of 9 to the AADT volumes provided in the *FDOT 2014 Online Traffic* report (and included in Appendix B) and “grown” up to reflect 2017 volumes by the application of the 0.82 percent annual growth factor described previously. The table compares the peak-hour volumes to the available capacity on the roadways, as noted by Broward County’s MPO. The “Project Trips” are the vehicular trips associated with the proposed Palms at Dania Beach development. The “Roadway Capacity” was obtained from the MPO’s *Roadway Capacity and Level of Service for 2009 & 2035* report and represents a roadway capacity of LOS D. As Table 8 demonstrates, none of the affected roadways is expected to be overcapacity at the time of project build out.

**Table 8**  
**Peak Hour Link Capacity Analysis**  
**The Palms at Dania Beach**

Roadway	2017 Peak-hour Volume	Project Trips	Total Volume	Roadway Capacity <sup>(1)</sup>	Over Capacity Y/N
Stirling W. of Federal	1,982	11	1,993	4,880	N
Federal N. of Stirling	2,582	36	2,618	3,220	N
Federal N. of Sheridan	2,444	49	2,493	3,220	N
Sheridan W. of Federal	2,444	13	2,457	3,220	N
Sheridan E. of Federal	2,259	13	2,272	3,560	N

<sup>(1)</sup>Roadway capacity values obtained from the Broward County MPO document *Roadway Capacity and Level of Service for 2009 & 2035*.

### Traffic Circulation

A review of the project site plan, which is provided in **Appendix G – Project Site Plan**, revealed that vehicular access to the site is to be by means of a two-way driveway that runs north-south across the site on the east side. All buildings are to be to the west of this driveway. In addition to the main driveway, a loop runs to the west around a central parking and loading zone. Turning radii for the interior driveways appear sufficient for both passenger vehicles and fire trucks.

Pedestrian access to the site is provided by sidewalks on the north, south and west sides of the property. In addition, covered corridors connect the retail spaces within the site. To encourage alternate modes of transportation, a bike rack is prominently featured on the west side of the site adjacent to Federal Highway.

### Parking

A total of 57 parking spaces are provided for the Palms at Dania Beach. Forty-five of these parking spaces are within the property and another 12 parallel parking spaces ring the property on the north and south sides. Fifty-four parking spaces are required per City of Dania Beach’s Code of Ordinances (Chapter 28, Part 2, Article 265.50). Therefore, the proposed 57 parking spaces exceeds the code requirement. Note that the bicycle rack mentioned above will have at least six spaces for bicycles, per the code requirement that bicycle rack spaces equal ten percent or more of the vehicular parking spaces.

## **Conclusions**

Based on the results of this analysis, it is concluded that the proposed Palms at Dania Beach retail development will not have a significant impact on the adjacent roadway network. All studied intersections are expected to continue to operate at their same levels of service (an acceptable LOS D or better) with the addition of the project traffic at build out in 2017 with the exception of the intersection of Federal Highway at Sheridan Street. This intersection is expected to continue to operate at LOS E as it does now. Queue storage requirements will be similar with or without the project and roadway link analyses further demonstrate that none of the studied roadways will be negatively affected by the addition of the small number of peak-hour trips associated with the proposed development.



**Appendix A – Traffic Counts**

SHERIDAN STREET AT US 1  
 BROWARD COUNTY, FLORIDA  
 COUNTED BY:  
 SIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/2/2016  
 File I.D.: DANIA  
 Page: 1

Date	ALL VEHICLES																Total
	SHERIDAN ST. From West				SHERIDAN ST. From East				US 1 From South				US 1 From North				
	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	
2/2/2016																	
7:00	0	36	111	32	0	37	75	38	0	65	131	31	0	48	101	8	713
7:15	2	57	77	20	0	35	84	45	0	84	188	34	0	58	155	13	852
7:30	3	84	140	23	0	57	113	74	0	82	228	10	0	65	157	15	1051
7:45	1	88	155	21	2	52	99	60	1	76	417	16	0	66	160	11	1225
Hr Total	6	265	483	96	2	181	371	217	1	307	964	91	0	237	573	47	3841
8:00	1	71	134	20	1	41	108	83	0	79	295	17	0	68	131	15	1064
8:15	0	80	191	35	1	41	98	69	0	73	308	14	0	64	118	13	1105
8:30	2	76	182	17	2	35	154	129	0	126	354	32	0	128	195	29	1461
8:45	1	70	200	27	0	39	167	74	0	81	234	31	0	120	166	11	1221
Hr Total	4	297	707	99	4	156	527	355	0	359	1191	94	0	380	610	68	4851
	* BREAK *																
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	* BREAK *																
16:00	1	72	169	14	0	53	122	73	0	93	282	23	0	105	247	14	1268
16:15	2	68	211	12	1	40	197	60	0	97	276	35	0	94	243	11	1347
16:30	0	66	146	11	2	44	97	57	0	91	273	32	0	105	196	20	1140
16:45	3	64	157	24	1	37	150	53	0	91	228	31	0	103	183	14	1139
Hr Total	6	270	683	61	4	174	566	243	0	372	1059	121	0	407	869	59	4894
17:00	0	47	157	12	0	45	126	38	0	80	279	34	0	81	240	12	1151
17:15	1	39	145	12	0	44	110	74	3	70	192	14	0	80	165	14	963
17:30	2	54	180	11	3	61	125	60	0	54	164	23	0	80	212	11	1040
17:45	5	69	113	14	0	41	113	70	0	56	176	25	0	85	268	18	1053
Hr Total	8	209	595	49	3	191	474	242	3	260	811	96	0	326	885	55	4207
*TOTAL*	24	1041	2468	305	13	702	1938	1057	4	1298	4025	402	0	1350	2937	229	17793

SHERIDAN STREET AT US 1  
 BROWARD COUNTY, FLORIDA  
 COUNTED BY:  
 SIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/2/16  
 File I.D.: DANIA  
 Page: 2

ALL VEHICLES

SHERIDAN ST.                      SHERIDAN ST.                      US 1                      US 1  
 From West                      From East                      From South                      From North

Uturn Left Thru Right Uturn Left Thru Right Uturn Left Thru Right Uturn Left Thru Right Total  
 Date 2/2/2016

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 2/2/2016  
 Peak start 07:45                      07:45                      07:45                      07:45  
 Volume                      4    315    662    93    6    169    459    341    1    354    1374    79    0    326    604    68                      4855  
 Percent                      0%    29%    62%    9%    1%    17%    47%    35%    0%    20%    76%    4%    0%    33%    61%    7%  
 Pk total                      1074                                      975                                      1808                                      993  
 Highest                      8:15                                      8:30                                      7:45                                      8:30  
 Volume                      0    80    191    35    2    35    154    129    1    76    417    16    0    128    195    29  
 Hi total                      306                                      320                                      510                                      352  
 PHF                      0.88                                      0.76                                      0.89                                      0.71

Peak Hour Analysis By Entire Intersection for the Period: 11:00 to 01:00 on 2/2/2016  
 Peak start 12:00                      12:00                      12:00                      12:00  
 Volume                      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0                      0  
 Percent                      #####                      #####                      #####                      #####                      #####                      #####                      #####                      #####                      #####                      #####                      #####  
 Pk total                      0                                      0                                      0  
 Highest                      12:15                                      12:45                                      12:15                                      12:30  
 Volume                      0    0    0    0    0    0    0    0    0    0    0    0    0    0    0    0  
 Hi total                      0                                      0                                      0  
 PHF                      #####                                      #####                                      #####                                      #####

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 2/2/2016  
 Peak start 17:00                      17:00                      17:00                      17:00  
 Volume                      8    209    595    49    3    191    474    242    3    260    811    96    0    326    885    55                      4207  
 Percent                      1%    24%    69%    6%    0%    21%    52%    27%    0%    22%    69%    8%    0%    26%    70%    4%  
 Pk total                      861                                      910                                      1170                                      1266  
 Highest                      17:30                                      17:30                                      17:00                                      17:45  
 Volume                      2    54    180    11    3    61    125    60    0    80    279    34    0    85    268    18  
 Hi total                      247                                      249                                      393                                      371  
 PHF                      0.87                                      0.91                                      0.74                                      0.85

1 AT SE 7TH STREET  
 HOWARD COUNTY, FLORIDA  
 COUNTED BY:  
 SIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/3/2016  
 File I.D.: DANIA  
 Page: 3

Date	ALL VEHICLES																Total
	SE 7TH STREET From West			SE 7TH STREET From East			US 1 From South			US 1 From North							
	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	
2/3/2016																	
7:00	0	5	1	6	0	2	6	13	0	3	200	0	0	6	159	10	411
7:15	0	9	4	2	1	6	11	9	0	5	268	1	0	9	158	13	496
7:30	0	3	0	2	0	8	14	6	0	2	248	0	0	2	144	11	440
7:45	0	12	2	5	0	12	10	7	0	11	359	3	0	6	187	30	644
Hr Total	0	29	7	15	1	28	41	35	0	21	1075	4	0	23	648	64	1991
8:00	0	14	2	1	0	8	4	8	0	6	325	4	0	8	250	12	642
8:15	0	9	0	4	0	1	5	10	0	3	359	2	0	10	246	17	666
8:30	0	7	5	2	0	6	2	14	1	3	337	2	0	11	267	12	669
8:45	0	12	2	4	0	4	7	10	0	3	301	4	0	3	272	11	633
Hr Total	0	42	9	11	0	19	18	42	1	15	1322	12	0	32	1035	52	2610
	* BREAK *																
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	* BREAK *																
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	* BREAK *																
16:00	0	17	4	4	0	3	8	10	0	4	257	5	0	3	275	14	604
16:15	0	6	6	3	0	3	8	8	0	3	275	4	0	11	261	24	612
16:30	0	6	3	6	0	2	8	11	0	6	260	6	0	9	267	19	603
16:45	0	12	3	9	0	6	9	11	0	6	321	11	1	16	310	22	737
Hr Total	0	41	16	22	0	14	33	40	0	19	1113	26	1	39	1113	79	2556
17:00	0	9	3	5	0	2	7	16	0	4	331	4	0	12	308	21	722
17:15	0	6	6	6	0	6	9	11	0	5	296	6	0	12	303	23	689
17:30	0	13	9	5	0	5	11	11	0	5	332	4	0	8	317	23	743
17:45	0	10	4	2	0	6	9	10	0	3	329	11	0	12	326	15	737
Hr Total	0	38	22	18	0	19	36	48	0	17	1288	25	0	44	1254	82	2891
*TOTAL*	0	150	54	66	1	80	128	165	1	72	4798	67	1	138	4050	277	10048

1 AT SE 7TH STREET  
 HOWARD COUNTY, FLORIDA  
 COUNTED BY:  
 SIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/3/16  
 File I.D.: DANIA  
 Page: 4

Date	ALL VEHICLES																Total
	SE 7TH STREET From West				SE 7TH STREET From East				US 1 From South				US 1 From North				
	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	
2/3/2016																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 2/3/2016																	
Peak start	7:45				7:45				7:45				7:45				
Volume	0	42	9	12	0	27	21	39	1	23	1380	11	0	35	950	71	
Percent	0%	67%	14%	19%	0%	31%	24%	45%	0%	2%	98%	1%	0%	3%	90%	7%	
Pk total	63				87				1415				1056				
Highest	7:45				7:45				7:45				8:30				
Volume	0	12	2	5	0	12	10	7	0	11	359	3	0	11	267	12	
Hi total	19				29				373				290				
PHF	0.83				0.75				0.95				0.91				

Peak Hour Analysis By Entire Intersection for the Period: 11:00 to 01:00 on 2/3/2016																	
Peak start	12:00				12:00				12:00				12:00				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Percent	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	
Pk total	0				0				0				0				
Highest	12:00				12:00				12:30				12:30				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hi total	0				0				0				0				
PHF	#####				#####				#####				#####				

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 2/3/2016																	
Peak start	17:00				17:00				17:00				17:00				
Volume	0	38	22	18	0	19	36	48	0	17	1288	25	0	44	1254	82	
Percent	0%	49%	28%	23%	0%	18%	35%	47%	0%	1%	97%	2%	0%	3%	91%	6%	
Pk total	78				103				1330				1380				
Highest	17:30				17:30				17:45				17:45				
Volume	0	13	9	5	0	5	11	11	0	3	329	11	0	12	326	15	
Hi total	27				27				343				353				
PHF	0.72				0.95				0.97				0.98				

SHERIDAN STREET AT SE 2ND AVENUE  
 BROWARD COUNTY, FLORIDA  
 COUNTED BY:  
 UNSIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/4/2016  
 File I.D.: DANIA  
 Page: 5

Date	ALL VEHICLES																Total
	SHERIDAN STREET From West				SHERIDAN STREET From East				SE 2ND AVENUE From South				SE 2ND AVENUE From North				
	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	
2/4/2016																	
7:00	9	25	90	7	6	23	129	13	0	0	1	5	0	1	0	35	
7:15	5	11	133	6	2	25	176	3	0	0	0	2	0	0	0	24	
7:30	8	13	109	6	7	14	135	7	0	0	0	6	0	2	0	10	
7:45	8	16	147	8	6	15	217	5	0	0	0	5	0	0	0	44	
Hr Total	30	65	479	27	21	77	657	28	0	0	1	18	0	3	0	113	
8:00	8	14	259	10	0	9	265	6	0	0	0	2	0	0	0	16	
8:15	10	5	191	12	3	13	259	0	0	0	0	8	0	0	0	17	
8:30	11	4	213	13	2	27	264	7	0	0	0	9	0	1	0	22	
8:45	3	4	153	6	8	22	198	5	0	0	0	4	0	0	0	16	
Hr Total	32	27	816	41	13	71	986	18	0	0	0	23	0	1	0	71	
	* BREAK *																
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	* BREAK *																
16:00	4	8	246	25	5	31	239	13	0	0	1	13	0	0	0	14	
16:15	5	9	222	28	6	31	282	11	0	0	0	14	0	0	0	10	
16:30	1	15	245	32	6	31	276	11	0	0	0	14	0	0	0	9	
16:45	2	13	228	21	7	26	258	8	0	0	0	16	0	0	0	26	
Hr Total	12	45	941	106	24	119	1055	43	0	0	1	57	0	0	0	59	
17:00	4	15	223	26	8	20	246	17	0	0	0	12	0	0	0	19	
17:15	4	14	249	21	7	36	299	9	0	0	0	15	0	0	0	15	
17:30	6	5	244	31	7	44	269	18	0	0	0	20	0	0	0	9	
17:45	4	11	216	35	8	40	269	17	0	0	0	15	0	0	0	14	
Hr Total	18	45	932	113	30	140	1083	61	0	0	0	62	0	0	0	57	
*TOTAL*	92	182	3168	287	88	407	3781	150	0	0	2	160	0	4	0	300	

SHERIDAN STREET AT SE 2ND AVENUE  
 BROWARD COUNTY, FLORIDA  
 COUNTED BY:  
 UNSIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/4/16  
 File I.D.: DANIA  
 Page: 6

ALL VEHICLES

Date	SHERIDAN STREET				SHERIDAN STREET				SE 2ND AVENUE				SE 2ND AVENUE				Total
	From West				From East				From South				From North				
	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	
2/4/2016																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 2/4/2016																	
Peak start	7:45				7:45				7:45				7:45				
Volume	37	39	810	43	11	64	1005	18	0	0	0	24	0	1	0	99	2151
Percent	4%	4%	87%	5%	1%	6%	92%	2%	0%	0%	0%	100%	0%	1%	0%	99%	
Pk total	929				1098				24				100				
Highest	8:00				8:30				8:30				7:45				
Volume	8	14	259	10	2	27	264	7	0	0	0	9	0	0	0	44	
Hi total	291				300				9				44				
PHF	0.80				0.92				0.67				0.57				

Peak Hour Analysis By Entire Intersection for the Period: 11:00 to 01:00 on 2/4/2016																	
Peak start	12:00				12:00				12:00				12:00				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	
Pk total	0				0				0				0				
Highest	12:30				12:30				12:30				12:30				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hi total	0				0				0				0				
PHF	####				####				####				####				

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 2/4/2016																	
Peak start	17:00				17:00				17:00				17:00				
Volume	18	45	932	113	30	140	1083	61	0	0	0	62	0	0	0	57	2541
Percent	2%	4%	84%	10%	2%	11%	82%	5%	0%	0%	0%	100%	0%	0%	0%	100%	
Pk total	1108				1314				62				57				
Highest	17:15				17:15				17:30				17:00				
Volume	4	14	249	21	7	36	299	9	0	0	0	20	0	0	0	19	
Hi total	288				351				20				19				
PHF	0.96				0.94				0.78				0.75				

1 AT SE 13TH STREET  
 HOWARD COUNTY, FLORIDA  
 COUNTED BY:  
 UNSIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/17/2016  
 File I.D.: DANIA  
 Page: 7

Date	ALL VEHICLES																Total
	SE 13TH ST. From West				SE 13TH ST. From East				US 1 From South				US 1 From North				
	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	
2/17/2016																	
7:00	0	0	1	2	0	3	1	1	0	0	200	3	0	0	167	0	378
7:15	0	1	0	0	0	0	0	3	0	0	274	0	0	0	166	1	445
7:30	0	2	0	0	0	0	1	1	0	0	249	1	0	0	153	1	408
7:45	0	1	0	0	0	0	0	3	0	0	373	0	0	0	203	1	581
Hr Total	0	4	1	2	0	3	2	8	0	0	1096	4	0	0	689	3	1812
8:00	0	2	0	1	0	0	0	5	0	0	335	0	0	0	259	0	602
8:15	0	2	0	1	0	0	0	1	0	0	363	1	0	0	251	0	619
8:30	0	1	0	0	0	0	0	0	0	2	340	1	0	2	273	0	619
8:45	0	0	0	0	0	2	0	0	0	1	307	0	0	1	278	1	590
Hr Total	0	5	0	2	0	2	0	6	0	3	1345	2	0	3	1061	1	2430
	* BREAK *																
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	* BREAK *																
16:00	0	0	0	0	0	0	0	2	0	0	265	1	0	2	280	0	550
16:15	0	1	0	2	0	1	0	1	0	9	272	1	0	4	261	2	554
16:30	0	0	1	4	0	0	0	2	0	6	260	6	0	0	269	6	554
16:45	0	2	0	3	0	0	0	2	0	7	328	3	1	2	319	4	671
Hr Total	0	3	1	9	0	0	0	7	0	22	1125	11	1	8	1129	12	2329
17:00	0	1	0	6	0	1	0	2	0	5	330	4	0	1	312	2	664
17:15	0	0	0	3	0	0	0	3	0	4	295	8	0	1	314	0	628
17:30	0	1	0	3	0	0	0	2	0	4	334	3	0	6	318	3	674
17:45	0	6	0	5	0	0	0	1	0	10	329	4	0	0	334	0	689
Hr Total	0	8	0	17	0	1	0	8	0	23	1288	19	0	8	1278	5	2655
*TOTAL*	0	20	2	30	0	6	2	29	0	48	4854	36	1	19	4157	21	9226



1 AT SE 13TH STREET  
 BROWARD COUNTY, FLORIDA  
 COUNTED BY:  
 UNSIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/17/16  
 File I.D.: DANIA  
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ALL VEHICLES

SE 13TH ST.                      SE 13TH ST.                      US 1                      US 1  
 From West                      From East                      From South                      From North

Uturn Left Thru Right Uturn Left Thru Right Uturn Left Thru Right Uturn Left Thru Right Total  
 Date 2/17/2016

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 2/17/2016

	8:00				8:00				8:00				8:00				
Peak start	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	
Volume	0	5	0	2	0	2	0	6	0	3	1345	2	0	3	1061	1	2430
Percent	0%	71%	0%	29%	0%	25%	0%	75%	0%	0%	100%	0%	0%	0%	100%	0%	
Pk total	7			8				1350							1065		
Highest	8:00			8:00				8:15							8:45		
Volume	0	2	0	1	0	0	0	5	0	0	363	1	0	1	278	1	
Hi total	3			5				364							280		
PHF	0.58			0.40				0.93							0.95		

Peak Hour Analysis By Entire Intersection for the Period: 11:00 to 01:00 on 2/17/2016

	12:00				12:00				12:00				12:00				
Peak start	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	12:00	
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	
Pk total	0			0				0							0		
Highest	12:30			12:30				12:30							12:30		
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hi total	0			0				0							0		
PHF	#####			#####				#####							#####		

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 2/17/2016

	17:00				17:00				17:00				17:00				
Peak start	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	17:00	
Volume	0	8	0	17	0	1	0	8	0	23	1288	19	0	8	1278	5	2655
Percent	0%	32%	0%	68%	0%	11%	0%	89%	0%	2%	97%	1%	0%	1%	99%	0%	
Pk total	25			9				1330							1291		
Highest	17:45			17:15				17:45							17:45		
Volume	0	6	0	5	0	0	0	3	0	10	329	4	0	0	334	0	
Hi total	11			3				343							334		
PHF	0.57			0.75				0.97							0.97		

AT SE 13TH TERRACE  
 BROWARD COUNTY, FLORIDA  
 COUNTED BY:  
 UNSIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/17/2016  
 File I.D.: DANIA  
 Page: 9

Date	ALL VEHICLES																Total
	SE 13TH TERR. From West			SE 13TH TERR. From East			US 1 From South			US 1 From North							
	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	
2/17/2016																	
7:00	0	0	0	5	0	1	0	1	0	4	202	2	0	0	167	5	387
7:15	0	0	0	6	0	2	0	3	0	4	271	0	0	0	162	4	452
7:30	0	3	0	10	0	1	1	0	0	10	241	1	0	0	145	8	420
7:45	0	2	0	11	0	0	0	1	0	3	359	0	0	1	200	2	579
Hr Total	0	5	0	32	0	4	1	5	0	21	1073	3	0	1	674	19	1838
8:00	0	2	0	10	0	1	0	1	0	3	318	0	0	0	255	5	595
8:15	0	1	0	8	0	0	0	0	0	5	355	0	0	0	248	4	621
8:30	0	3	0	6	0	0	0	1	0	7	335	2	0	0	271	2	627
8:45	0	1	0	8	0	1	0	1	0	3	296	0	0	0	277	3	590
Hr Total	0	7	0	32	0	2	0	3	0	18	1304	2	0	0	1051	14	2433
	* BREAK *																
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	* BREAK *																
16:00	0	1	0	0	0	0	0	1	0	0	265	1	0	0	280	0	548
16:15	0	1	0	3	0	0	0	4	0	4	276	2	0	2	258	4	554
16:30	0	0	0	4	0	3	0	5	0	6	262	4	0	3	264	6	557
16:45	0	0	0	2	0	3	0	3	0	3	334	1	0	1	316	5	668
Hr Total	0	2	0	9	0	6	0	13	0	13	1137	8	0	6	1118	15	2327
17:00	0	1	0	2	0	0	0	1	0	4	333	2	0	2	311	6	662
17:15	0	1	0	0	0	0	0	5	0	5	299	3	0	0	316	1	630
17:30	0	1	0	0	0	0	0	3	0	5	333	3	0	7	308	6	666
17:45	0	0	0	2	0	2	0	4	0	1	339	3	0	1	335	3	690
Hr Total	0	3	0	4	0	2	0	13	0	15	1304	11	0	10	1270	16	2648
*TOTAL*	0	17	0	77	0	14	1	34	0	67	4818	24	0	17	4113	64	9246

1 AT SE 13TH TERRACE  
 BROWARD COUNTY, FLORIDA  
 COUNTED BY:  
 UNSIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 2/17/16  
 File I.D.: DANIA  
 Page: 10

ALL VEHICLES

SE 13TH TERR.                      SE 13TH TERR.                      US 1                      US 1  
 From West                      From East                      From South                      From North

Uturn Left Thru Right Uturn Left Thru Right Uturn Left Thru Right Uturn Left Thru Right Total  
 Date 2/17/2016

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 2/17/2016

Peak start	8:00				8:00				8:00				8:00						
Volume	0	7	0	32	0	2	0	3	0	18	1304	2	0	0	1051	14			2433
Percent	0%	18%	0%	82%	0%	40%	0%	60%	0%	1%	98%	0%	0%	0%	99%	1%			
Pk total	39				5				1324				1065						
Highest	8:00				8:00				8:15				8:45						
Volume	0	2	0	10	0	1	0	1	0	5	355	0	0	0	277	3			
Hi total	12				2				360				280						
PHF	0.81				0.63				0.92				0.95						

Peak Hour Analysis By Entire Intersection for the Period: 11:00 to 01:00 on 2/17/2016

Peak start	12:00				12:00				12:00				12:00						
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####
Pk total	0				0				0				0						
Highest	12:30				12:30				12:30				12:30						
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hi total	0				0				0				0						
PHF	#####				#####				#####				#####						

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 2/17/2016

Peak start	17:00				17:00				17:00				17:00						
Volume	0	3	0	4	0	2	0	13	0	15	1304	11	0	10	1270	16			2648
Percent	0%	43%	0%	57%	0%	13%	0%	87%	0%	1%	98%	1%	0%	1%	98%	1%			
Pk total	7				15				1330				1296						
Highest	17:00				17:45				17:45				17:45						
Volume	0	1	0	2	0	2	0	4	0	1	339	3	0	1	335	3			
Hi total	3				6				343				339						
PHF	0.58				0.63				0.97				0.96						

STIRLING RD. AT US 1  
 ST. LUCAS COUNTY, FLORIDA  
 COUNTED BY:  
 SIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 6/23/2015  
 File I.D.: DANIA  
 Page: 11

Date	ALL VEHICLES																Total
	STIRLING RD. From West				STIRLING RD. From East				US 1 From South				US 1 From North				
	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	
6/23/2015																	
7:00	2	36	6	34	0	0	14	4	0	28	88	1	0	1	84	9	307
7:15	5	68	5	37	0	3	12	5	0	70	138	0	1	5	92	17	458
7:30	3	70	16	34	0	2	16	2	0	69	195	6	0	4	136	29	582
7:45	4	44	13	53	0	2	18	8	0	76	246	3	0	3	143	35	648
Hr Total	14	218	40	158	0	7	60	19	0	243	667	10	1	13	455	90	1995
8:00	3	61	13	50	0	4	25	4	0	65	169	3	0	10	113	31	551
8:15	2	34	14	52	0	7	14	3	0	77	239	1	0	2	161	25	631
8:30	2	65	21	58	0	3	23	3	0	86	193	2	0	4	191	37	688
8:45	2	68	16	45	0	4	14	1	0	91	184	4	0	0	197	35	661
Hr Total	9	228	64	205	0	18	76	11	0	319	785	10	0	16	662	128	2531
	* BREAK *																
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	* BREAK *																
16:00	2	35	29	54	0	15	15	2	1	53	145	6	0	0	219	46	622
16:15	2	55	21	79	0	8	19	2	0	55	149	6	0	5	197	49	647
16:30	3	66	25	71	0	7	28	3	0	49	169	3	0	0	222	58	704
16:45	5	40	17	56	0	6	22	1	1	60	185	4	0	7	263	47	714
Hr Total	12	196	92	260	0	36	84	8	2	217	648	19	0	12	901	200	2687
17:00	4	62	27	74	0	7	20	2	0	50	168	5	0	5	216	57	697
17:15	2	58	21	72	0	7	21	4	2	57	184	3	0	4	272	62	769
17:30	6	65	18	85	0	3	14	2	0	71	189	6	0	5	258	32	754
17:45	3	59	36	83	0	8	12	2	0	44	153	10	0	7	281	50	748
Hr Total	15	244	102	314	0	25	67	10	2	222	694	24	0	21	1027	201	2968
*TOTAL*	50	886	298	937	0	86	287	48	4	1001	2794	63	1	62	3045	619	10181

STIRLING RD. AT US 1  
 BROWARD COUNTY, FLORIDA  
 COUNTED BY:  
 SIGNALIZED

THOMAS A. HALL, INC.  
 1355 ADAMS STREET  
 HOLLYWOOD, FL 33019  
 954-288-4447

Site Code: 10031  
 Start Date: 6/23/15  
 File I.D.: DANIA  
 Page: 12

ALL VEHICLES

STIRLING RD. From West      STIRLING RD. From East      US 1 From South      US 1 From North

Uturn Left Thru Right Uturn Left Thru Right Uturn Left Thru Right Uturn Left Thru Right Total  
 Date 6/23/2015

Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 6/23/2015

	STIRLING RD. From West				STIRLING RD. From East				US 1 From South				US 1 From North				Total
Peak start	8:00				8:00				8:00				8:00				
Volume	9	228	64	205	0	18	76	11	0	319	785	10	0	16	662	128	2531
Percent	2%	45%	13%	41%	0%	17%	72%	10%	0%	29%	70%	1%	0%	2%	82%	16%	
Pk total	506				105				1114				806				
Highest	8:45				8:00				8:15				8:45				
Volume	2	68	16	45	0	4	25	4	0	77	239	1	0	0	197	35	
Hi total	131				33				317				232				
PHF	0.97				0.80				0.88				0.87				

Peak Hour Analysis By Entire Intersection for the Period: 11:00 to 01:00 on 6/23/2015

	STIRLING RD. From West				STIRLING RD. From East				US 1 From South				US 1 From North				Total
Peak start	12:00				12:00				12:00				12:00				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Percent	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	####	
Pk total	0				0				0				0				
Highest	12:30				12:30				12:30				12:30				
Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hi total	0				0				0				0				
PHF	####				####				####				####				

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 6/23/2015

	STIRLING RD. From West				STIRLING RD. From East				US 1 From South				US 1 From North				Total
Peak start	17:00				17:00				17:00				17:00				
Volume	15	244	102	314	0	25	67	10	2	222	694	24	0	21	1027	201	2968
Percent	2%	36%	15%	47%	0%	25%	66%	10%	0%	24%	74%	3%	0%	2%	82%	16%	
Pk total	675				102				942				1249				
Highest	17:45				17:15				17:30				17:45				
Volume	3	59	36	83	0	7	20	2	2	57	184	3	0	7	281	50	
Hi total	181				29				246				338				
PHF	0.93				0.88				0.96				0.92				

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2014 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 5036 - SR 5 / US 1 - S OF SR A1A/DANIA BCH BLVD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2014	28000 C	N 13500	S 14500	9.00	54.50	4.60
2013	28000 C	N 14000	S 14000	9.00	54.60	4.20
2012	26500 C	N 12500	S 14000	9.00	55.00	3.40
2011	29500 C	N 14000	S 15500	9.00	54.50	3.40
2010	30500 C	N 16000	S 14500	9.37	54.06	3.40
2009	28000 C	N 14500	S 13500	9.31	53.74	8.10
2008	36000 C	N 17000	S 19000	9.70	54.48	8.10
2007	35500 C	N 17000	S 18500	9.10	53.47	2.10
2006	35500 C	N 18000	S 17500	9.48	53.59	3.00
2005	34500 C	N 17000	S 17500	10.60	58.90	2.70
2004	35000 C	N 17500	S 18000	10.40	56.30	2.70
2003	35000 C	N 17500	S 17500	9.20	55.90	2.70
2002	39500 C	N 19500	S 20000	9.50	55.00	3.80
2001	37500 C	N 19000	S 18500	9.70	55.60	3.50
2000	36000 C	N 18000	S 18000	9.40	56.30	5.70
1999	35000 C	N 17500	S 17500	9.40	56.40	2.60

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE  
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE  
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN  
 \*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2014 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0422 - SR 5/US 1 - N OF SR 822/SHERIDAN ST

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2014	26500 C	N 13500	S 13000	9.00	54.50	11.70
2013	28000 C	N 13500	S 14500	9.00	54.60	11.50
2012	30000 C	N 15000	S 15000	9.00	55.00	22.20
2011	29500 C	N 14500	S 15000	9.00	54.50	21.60
2010	28000 C	N 13500	S 14500	9.37	54.06	17.20
2009	30000 C	N 15000	S 15000	9.31	53.74	20.30
2008	36500 C	N 18500	S 18000	9.70	54.48	3.20
2007	33500 C	N 17500	S 16000	9.10	53.47	3.20
2006	31000 C	N 15500	S 15500	9.48	53.59	3.20
2005	31000 C	N 16000	S 15000	10.60	58.90	2.70
2004	34000 C	N 16000	S 18000	10.40	56.30	2.70
2003	34000 C	N 16500	S 17500	9.20	55.90	6.80
2002	33000 C	N 16000	S 17000	9.50	55.00	6.80
2001	32000 C	N 15500	S 16500	9.70	55.60	3.50
2000	34000 C	N 16500	S 17500	9.40	56.30	3.80
1999	30500 C	N 15000	S 15500	9.40	56.40	4.80

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE  
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE  
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN  
 \*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2014 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 5301 - SR 848 / STIRLING RD - W OF SR 5/US 1

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR	
2014	21500	C	E 11000	W 10500	9.00	54.20	3.00
2013	18600	C	E 9500	W 9100	9.00	53.60	2.30
2012	27500	C	E 14000	W 13500	9.00	52.20	2.30
2011	23500	C	E 11500	W 12000	9.00	52.50	2.60
2010	25500	C	E 13000	W 12500	8.35	52.69	2.60
2009	27500	C	E 13500	W 14000	8.53	53.89	2.60
2008	16500	C	E 9000	W 7500	8.81	54.16	2.20
2007	27500	C	E 14000	W 13500	8.63	55.75	2.20
2006	28000	C	E 14000	W 14000	8.40	55.34	4.20
2005	26000	C	E 13000	W 13000	8.20	51.70	4.00
2004	27000	C	E 14000	W 13000	9.10	55.30	4.00
2003	27000	C	E 13500	W 13500	8.60	57.50	3.70
2002	31000	C	E 16000	W 15000	8.70	56.40	3.10
2001	30000	C	E 15500	W 14500	9.00	60.20	3.70
2000	30500	C	E 15500	W 15000	8.90	57.80	3.00
1999	33500	C	E 16000	W 17500	9.60	62.50	3.30

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE  
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE  
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN  
 \*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES



FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2014 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 5300 - SR 822 / SHERIDAN ST - W OF SR 5 & E OF 20 AVE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2014	26500 C	E 13000	W 13500	9.00	54.20	3.40
2013	27500 C	E 13500	W 14000	9.00	53.60	3.40
2012	28000 C	E 14000	W 14000	9.00	52.20	4.70
2011	27000 C	E 13500	W 13500	9.00	52.50	4.70
2010	26000 C	E 13000	W 13000	8.35	52.69	4.70
2009	29500 C	E 15000	W 14500	8.53	53.89	3.00
2008	28500 C	E 14000	W 14500	8.81	54.16	3.00
2007	27500 C	E 14000	W 13500	8.63	55.75	3.00
2006	29000 C	E 14500	W 14500	8.40	55.34	3.60
2005	30000 C	E 15500	W 14500	8.20	51.70	3.60
2004	28000 C	E 14000	W 14000	9.10	55.30	3.60
2003	27000 C	E 14000	W 13000	8.60	57.50	3.70
2002	28500 C	E 14500	W 14000	8.70	56.40	3.70
2001	28000 C	E 14000	W 14000	9.00	60.20	4.80
2000	28500 C	E 14000	W 14500	8.90	57.80	3.50
1999	27500 C	E 13500	W 14000	9.60	62.50	3.30

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE  
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE  
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN  
 \*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2014 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 5170 - SR 822 / SHERIDAN ST - E OF SR 5/US 1

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2014	24500 C	E 12000	W 12500	9.00	54.50	1.50
2013	23000 C	E 11500	W 11500	9.00	54.60	2.10
2012	23500 C	E 12000	W 11500	9.00	55.00	2.20
2011	22000 C	E 11000	W 11000	9.00	54.50	2.20
2010	20400 C	E 10500	W 9900	9.37	54.06	2.20
2009	23500 C	E 12000	W 11500	9.31	53.74	2.80
2008	23500 C	E 12000	W 11500	9.70	54.48	2.80
2007	21000 C	E 10500	W 10500	9.10	53.47	2.20
2006	28000 C	E 14000	W 14000	9.48	53.59	1.60
2005	22500 C	E 11000	W 11500	10.60	58.90	1.60
2004	26500 C	E 13500	W 13000	10.40	56.30	1.60
2003	30500 C	E 15000	W 15500	9.20	55.90	2.90
2002	27500 C	E 14000	W 13500	9.50	55.00	2.90
2001	25500 C	E 12500	W 13000	9.70	55.60	4.80
2000	24500 C	E 12000	W 12500	9.40	56.30	3.50
1999	26500 C	E 13000	W 13500	9.40	56.40	3.10

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE  
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE  
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN  
 \*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

## Appendix B – Adjustment Factors

2014 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 8601 CEN.-W OF US1 TO SR7

MOCF: 0.97  
 PSCF

WEEK	DATES	SF	PSCF
1	01/01/2014 - 01/04/2014	0.97	1.00
	01/05/2014 - 01/11/2014	0.99	1.02
3	01/12/2014 - 01/18/2014	1.01	1.04
4	01/19/2014 - 01/25/2014	1.00	1.03
* 5	01/26/2014 - 02/01/2014	0.99	1.02
* 6	02/02/2014 - 02/08/2014	0.98	1.01
* 7	02/09/2014 - 02/15/2014	0.97	1.00
* 8	02/16/2014 - 02/22/2014	0.96	0.99
* 9	02/23/2014 - 03/01/2014	0.96	0.99
*10	03/02/2014 - 03/08/2014	0.96	0.99
*11	03/09/2014 - 03/15/2014	0.96	0.99
*12	03/16/2014 - 03/22/2014	0.96	0.99
*13	03/23/2014 - 03/29/2014	0.96	0.99
*14	03/30/2014 - 04/05/2014	0.97	1.00
*15	04/06/2014 - 04/12/2014	0.98	1.01
*16	04/13/2014 - 04/19/2014	0.98	1.01
*17	04/20/2014 - 04/26/2014	0.99	1.02
18	04/27/2014 - 05/03/2014	1.00	1.03
19	05/04/2014 - 05/10/2014	1.01	1.04
20	05/11/2014 - 05/17/2014	1.01	1.04
21	05/18/2014 - 05/24/2014	1.02	1.05
22	05/25/2014 - 05/31/2014	1.03	1.06
23	06/01/2014 - 06/07/2014	1.03	1.06
24	06/08/2014 - 06/14/2014	1.04	1.07
25	06/15/2014 - 06/21/2014	1.05	1.08
26	06/22/2014 - 06/28/2014	1.05	1.08
27	06/29/2014 - 07/05/2014	1.05	1.08
28	07/06/2014 - 07/12/2014	1.05	1.08
29	07/13/2014 - 07/19/2014	1.05	1.08
30	07/20/2014 - 07/26/2014	1.05	1.08
31	07/27/2014 - 08/02/2014	1.04	1.07
32	08/03/2014 - 08/09/2014	1.04	1.07
33	08/10/2014 - 08/16/2014	1.03	1.06
34	08/17/2014 - 08/23/2014	1.03	1.06
35	08/24/2014 - 08/30/2014	1.03	1.06
36	08/31/2014 - 09/06/2014	1.03	1.06
37	09/07/2014 - 09/13/2014	1.03	1.06
38	09/14/2014 - 09/20/2014	1.04	1.07
39	09/21/2014 - 09/27/2014	1.03	1.06
40	09/28/2014 - 10/04/2014	1.02	1.05
41	10/05/2014 - 10/11/2014	1.01	1.04
42	10/12/2014 - 10/18/2014	1.00	1.03
43	10/19/2014 - 10/25/2014	1.00	1.03
44	10/26/2014 - 11/01/2014	1.00	1.03
45	11/02/2014 - 11/08/2014	1.00	1.03
46	11/09/2014 - 11/15/2014	1.00	1.03
47	11/16/2014 - 11/22/2014	1.00	1.03
48	11/23/2014 - 11/29/2014	0.99	1.02
49	11/30/2014 - 12/06/2014	0.98	1.01
50	12/07/2014 - 12/13/2014	0.98	1.01
51	12/14/2014 - 12/20/2014	0.97	1.00
52	12/21/2014 - 12/27/2014	0.99	1.02
53	12/28/2014 - 12/31/2014	1.01	1.04

\* PEAK SEASON

09-MAR-2015 16:07:53

830UPD

4\_8601\_PKSEASON.TXT

**Annual Growth Factor Worksheet  
The Palms at Dania Beach**

<b>Count Station</b>	<b>2010 AADT</b>	<b>2014 AADT</b>	<b>Annual Compound Growth</b>	<b>Adjusted Annual Compound Growth</b>
Site 865301 - Stirling Road West of US 1	25500	21500	-3.40%	0.00%
Site 865036 - US 1 North of Stirling Road	30500	28000	-1.75%	0.00%
Site 860422 - US 1 North of Sheridan Street	28000	26500	-1.10%	0.00%
Site 865170 - Sheridan Street East of US 1	20400	24500	3.73%	3.73%
Site 865300 - Sheridan Street West of US 1	26000	26500	0.38%	0.38%
Assumed Annual Compound Growth Rate				0.82%

## Appendix C – Traffic Signal Timing Plans

Station : 3096 - US 1 & Dixie Hwy ( Standard File )

Phase	1	2 (ST)	3 (WT)	4 (ET)	5	6	7	8	9	10	11	12	13	14	15	16
Walk		7	5	5												
Ped Clearance		24	20	19												
Min Green		15	6	6												
Gap Ext		3	2	2												
Max1		50	15	25												
Max2																
Yellow Clr		4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr		2	2	2					1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable		ON	ON	ON												
Auto Flash Entry				ON												
Auto Flash Exit		ON														
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON														
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON														
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash				ON	ON	ON
Override Higher Preempt				ON	ON	ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6			
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8			
Max Presence	180	180	180			
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	3	4			
Dwell Cyc Veh 2						
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				









Station : 3173 - US 1 & Sheridan St ( Standard File )

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7 (EL)	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		26		22		26		19								
Min Green	4	12	4	6	4	12	4	6								
Gap Ext	1.5	3	1.5	2.5	1.5	3	1.5	2.5								
Max1	15	40	20	30	20	40	20	30								
Max2																
Yellow Clr	4	4	4.5	4.5	4	4	4.5	4.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green			1		1	
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1			9		9	
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1	3	2	4
Dwell Cyc Veh 2	6	8	6	8	5	7
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				





12					1																										1	1	1	1	1	1	1		2
13						1		1																											1		2		
14								1		1		1	1	1	1																					1	2		
15								1			1																									1	2		
16										1		1																									1	2	
17																																						1	
18																																						1	
19																																						1	
20																																						1	
21																																						1	
22																																						1	
23																																						1	
24																																						1	
25																																						1	
26																																						1	
27																																						1	
28																																						1	
29																																						1	
30																																						1	
31																																						1	
32																																						1	

**User Comments:**



**BROWARD COUNTY TRAFFIC ENGINEERING**  
**ACTUATED TRAFFIC SIGNAL TIMING SHEET**

Intersection Number	3096	Initial Operation Date	UNKNOWN
Controller Type	2070	System Number	
Modification Number	8	Modification Date	09/25/2014
Drawing/Project No	413829-1-52-01	FPL Grid Number	87674232208
Intersection	FEDERAL HWY. (US 1/SR 5) and DIXIE HIGHWAY		
Municipality	DANIA BEACH		

Controller Phase	1	2	3	4	5	6	7	8
Face Number		2,6	4	8				
Direction		N/S	WB	EB				
Initial Green(MIN)		15	6	6				
Vehicle Ext.(GAP)		3.0	2.0	2.0				
Maximum Green I		50	15	25				
Maximum Green II								
Yellow Clearance		4.0	4.0	4.0				
All Red Clearance		2.0	2.0	2.0				
Phase Recall		MIN	OFF	OFF				
Detector Delay								
Walk		7	5	5				
Pedestrian Clearance		24	20	19				
Permissive								
Flash Operation		YELLOW	RED	RED				
Green Return								

**Attachment**

Channel/Drop / IP Address

**NOTES:**

- 1. MOD. 8 UPDATES ALL RED CLEARANCE VALUES.

Submitted By \_\_\_\_\_ Approved By \_\_\_\_\_



**BROWARD COUNTY TRAFFIC ENGINEERING**  
**ACTUATED TRAFFIC SIGNAL TIMING SHEET**

Intersection Number	3173	Initial Operation Date	9/76
Controller Type	2070 LN	System Number	3173
Modification Number	13	Modification Date	09/25/2014
Drawing/Project No	GRP. 1	FPL Grid Number	87673246809
Intersection	FEDERAL HWY. (US 1/SR 5) and SHERIDAN STREET (SR 822)		
Municipality	HOLLYWOOD		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1,8R	2	3	4	5	6	7	8
Direction	SBL	NB	WBL	EB	NBL	SB	EBL	WB
Initial Green(MIN)	4	12	4	6	4	12	4	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.5	1.5	3.0	1.5	2.5
Maximum Green I	15	40	20	30	20	40	20	30
Maximum Green II								
Yellow Clearance	4.0	4.0	4.5	4.5	4.0	4.0	4.5	4.5
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		26		22		26		19
Permissive	5 SECT		5 SECT		5 SECT		5 SECT	
Flash Operation	YELLOW		RED		YELLOW		RED	
Green Return								

**Attachment**

Channel/Drop / IP Address

**NOTES:**

1. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. DUAL ENTRY HARDWIRED EAST/WEST.
3. WB RIGHT HARDWIRED TO PHASE 1 (SBL).
4. MOD. 13 UPDATES YELLOW CLEARANCE VALUES PER FDOT STANDARDS.

Submitted By \_\_\_\_\_ Approved By \_\_\_\_\_





**BROWARD COUNTY TRAFFIC ENGINEERING**  
**ACTUATED TRAFFIC SIGNAL TIMING SHEET**

Intersection Number	3097	Initial Operation Date	UNKNOWN
Controller Type	2070	System Number	3097
Modification Number	17	Modification Date	10/08/2014
Drawing/Project No	413830-1-52-01	FPL Grid Number	87674227701
Intersection	FEDERAL HWY. (US 1/SR 5) and STIRLING ROAD		
Municipality	DANIA BEACH		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3,8	4,7	5	6		
Direction	SBL	NB	WB	EB	NBL	SB		
Initial Green(MIN)	4	7	6	6	4	7		
Vehicle Ext.(GAP)	1.5	3.0	2.0	2.5	1.5	3.0		
Maximum Green I	12	50	20	30	12	50		
<b>Maximum Green II</b>								
Yellow Clearance	4.0	4.0	4.0	5.0	4.0	4.0		
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0		
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN		
<b>Detector Delay</b>								
Walk		7	5	5		7		
Pedestrian Clearance		22	18	18		22		
Permissive	5 SECT				5 SECT			
Flash Operation		YELLOW	RED	RED		YELLOW		
<b>Green Return</b>								

**Attachment**

Channel/Drop / IP Address

**NOTES:**

- IP: 010.192.009.022, MASK: 255.255.255.192, GWAY: 010.192.009.001, PORT: 5032
- ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON---> OMIT PHASES 1+5.
- MOD. 17 UPDATES PHASE 4 YELLOW CLEARANCE VALUE PER FDOT STANDARDS.

Submitted By \_\_\_\_\_ Approved By \_\_\_\_\_

Broward County

Timing Sheet

6/16/2015 3:38:46 PM

Station : 3097 - US 1 & Stirling Rd ( Standard File )

Phase	1 (SL)	2 (NT)	3 (WT)	4 (ER)	5 (NL)	6 (ST)	7	8	9	10	11	12	13	14	15	16
Walk	7	5	5	5	7											
Ped Clearance		22	18	18	22											
Min Green	4	7	6	6	4	7										
Gap Ext	1.5	3	2	2.5	1.5	3	1	1								
Max1	12	50	20	30	12	50										
Max2																
Yellow Clr	4	4	4	5	4	4	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2		1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON										
Auto Flash Entry				ON												
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call				ON					ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	1	1								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6		6	6	6	6
Min Walk						
Ped Clear						
Track Green			1		1	
Min Dwell	8		8	8	8	8
Max Presence	180		180	180	180	180
Track Veh 1			9		9	
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2		1	3	2	4
Dwell Cyc Veh 2	6		6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	3		2	4	2	1
Exit 2			6		6	5
Exit 3						
Exit 4						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Prepared By

Date Implemented

Broward County

Timing Sheet

6/16/2015 3:38:46 PM

Station : 3097 - US 1 & Stirling Rd ( Standard File )

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
<b>Day Plan 1</b>											<b>Easy</b>															
		100	254																							
6		2	2	160	97	2	1	10	50		16	77	33	34	40	53										
9		3	3	160	101	3	1	10	50		18	72	32	38	28	62										
15		4	4	160	2	4	1	10	50		18	76	33	33	26	68										
20		3	3	160	101	3	1	10	50		18	72	32	38	28	62										
<b>Day Plan 2</b>											<b>Easy</b>															
		3	3	160	101	3	1	10	50		18	72	32	38	28	62										
1		100	254																							
6	30	3	3	160	101	3	1	10	50		18	72	32	38	28	62										
<b>Day Plan 3</b>											<b>Easy</b>															
		3	3	160	101	3	1	10	50		18	72	32	38	28	62										
1		100	254																							
6	30	3	3	160	101	3	1	10	50		18	72	32	38	28	62										
23		100	254																							



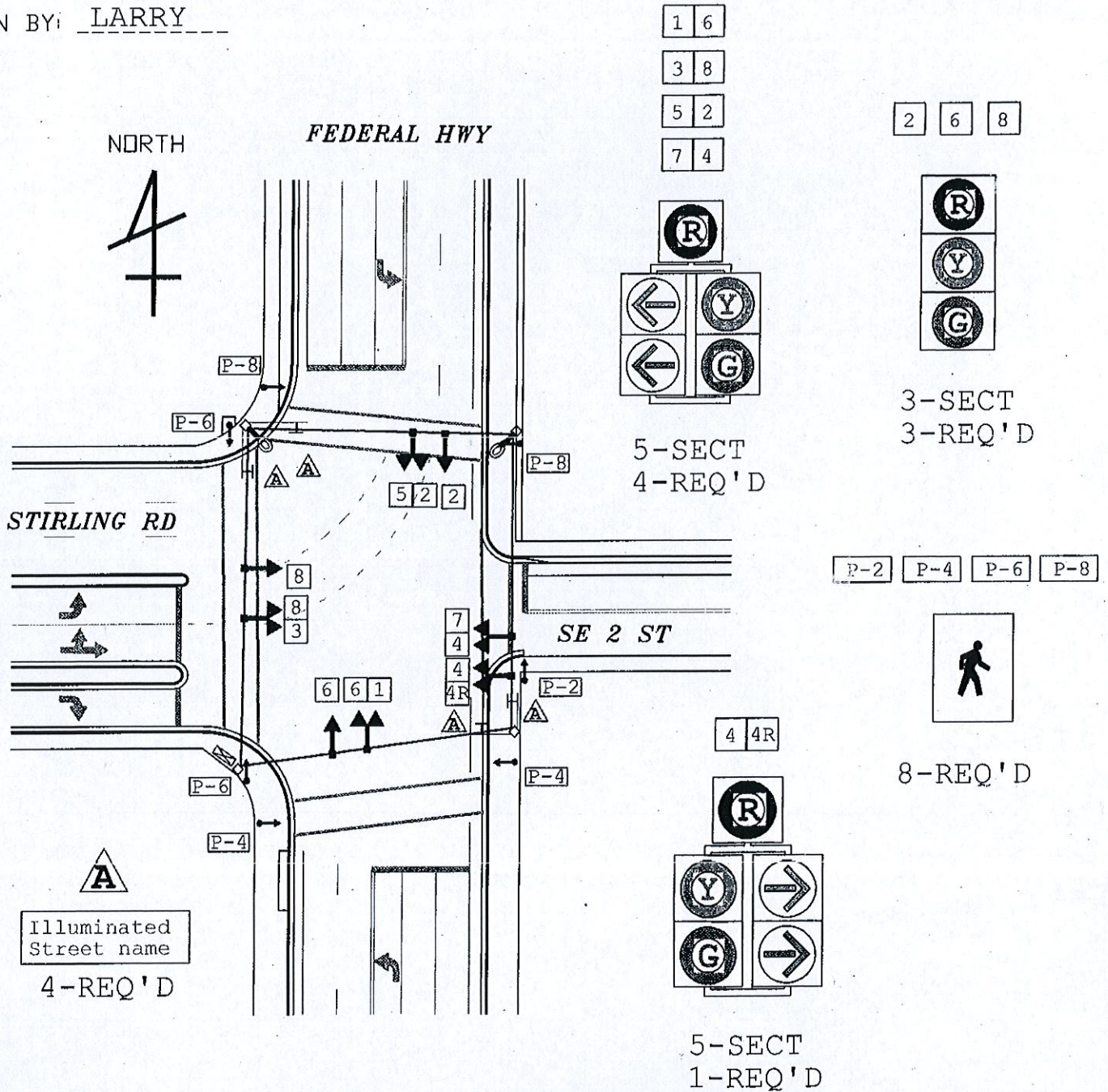
BROWARD COUNTY TRAFFIC ENGINEERING DIVISION  
 TRAFFIC SIGNAL LOCATION SKETCH

LOCATION **FEDERAL HIGHWAY & STIRLING RD/SE 2 ST**

ORDER NO FDOT ISSUE DATE --- REVISION NO. 4 COMPLETION DATE 10-21-08

DWG. NO. 12-03-08-01 FILE NO. 3097 CITY DANIA BEACH SCALE: 1" = 50'

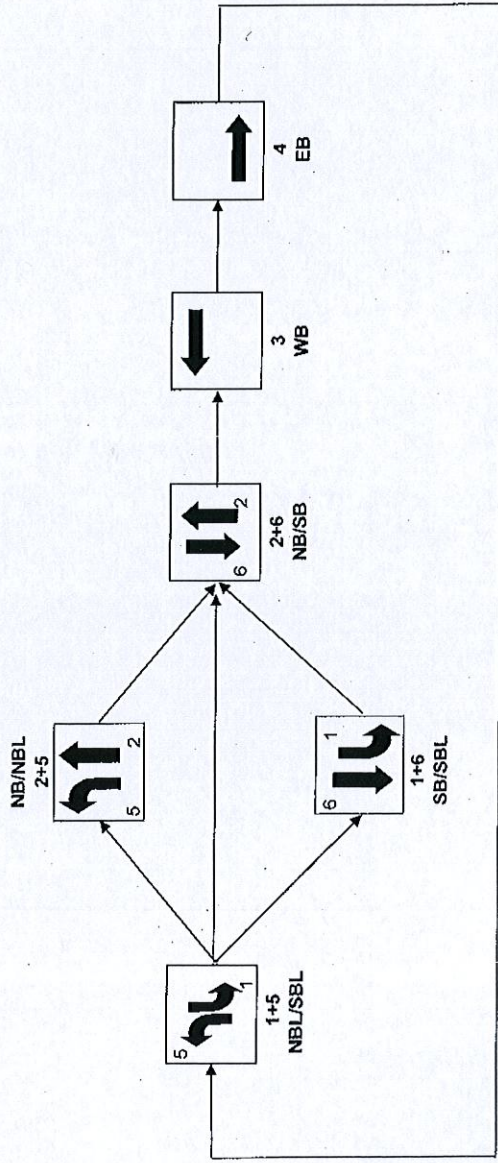
DWN BY: LARRY



PEDESTRIAN UPGRADES, VIDEO DETECTION INSTALLED, FDOT PROJ NO 4138301

Sequence of Operation for (3097) Federal Hwy (US 1/SR 5) and Stirling Road






















Dania Beach



**Appendix D - Existing Conditions Analyses**

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road













2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	69	221	19	82	12	345	848	11	17	715	138
Future Volume (vph)	256	69	221	19	82	12	345	848	11	17	715	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	185		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.998			0.976	
Flt Protected	0.950	0.972			0.992		0.950			0.950		
Satd. Flow (prot)	1665	1703	1568	0	1804	0	1719	3431	0	1719	3356	0
Flt Permitted	0.950	0.972			0.992		0.138			0.293		
Satd. Flow (perm)	1665	1703	1568	0	1804	0	250	3431	0	530	3356	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			228		3			1			15	
Link Speed (mph)		45			30			35			35	
Link Distance (ft)		985			990			2801			1850	
Travel Time (s)		14.9			22.5			54.6			36.0	
Peak Hour Factor	0.97	0.97	0.97	0.80	0.80	0.80	0.88	0.88	0.88	0.87	0.87	0.87
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	264	71	228	24	103	15	392	964	13	20	822	159
Shared Lane Traffic (%)	37%											
Lane Group Flow (vph)	166	169	228	0	142	0	392	977	0	20	981	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15			9	15		9	15	9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	40	40	40	20	40		40	40		40	40	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	40	40	40	20	40		40	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		2.0	4.0		2.0	4.0	
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0		8.0	35.0		8.0	35.0	



Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	29.0	29.0	29.0	29.0	29.0		44.0	93.0		9.0	58.0	
Total Split (%)	18.1%	18.1%	18.1%	18.1%	18.1%		27.5%	58.1%		5.6%	36.3%	
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		38.0	87.0		3.0	52.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	2.5	2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			22.0			22.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	19.6	19.6	19.6		16.7		105.7	99.6		70.1	65.9	
Actuated g/C Ratio	0.12	0.12	0.12		0.10		0.66	0.62		0.44	0.41	
v/c Ratio	0.81	0.81	0.58		0.75		0.83	0.46		0.08	0.71	
Control Delay	97.0	96.1	13.3		90.4		64.3	28.5		17.5	44.2	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	97.0	96.1	13.3		90.4		64.3	28.5		17.5	44.2	
LOS	F	F	B		F		E	C		B	D	
Approach Delay		62.8			90.4			38.7			43.7	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	180	183	0		144		345	258		7	456	
Queue Length 95th (ft)	#269	271	82		188		456	394		20	573	
Internal Link Dist (ft)		905			910			2721			1770	
Turn Bay Length (ft)							225			185		
Base Capacity (vph)	239	244	420		261		519	2135		263	1391	
Starvation Cap Reductn	0	0	0		0		0	0		0	0	
Spillback Cap Reductn	0	0	0		0		0	0		0	0	
Storage Cap Reductn	0	0	0		0		0	0		0	0	
Reduced v/c Ratio	0.69	0.69	0.54		0.54		0.76	0.46		0.08	0.71	

Intersection Summary

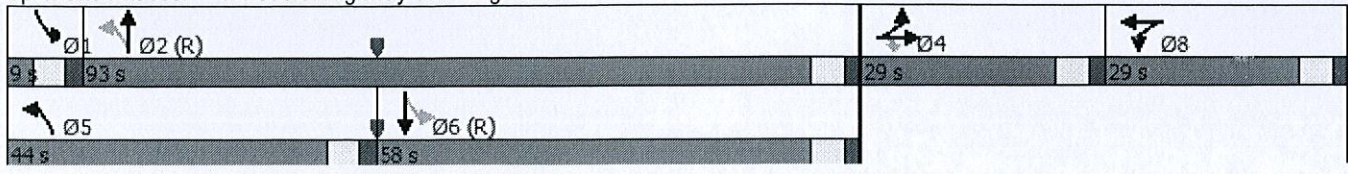
Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 125  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.83  
 Intersection Signal Delay: 47.2  
 Intersection Capacity Utilization 73.8%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Intersection LOS: D  
 ICU Level of Service D

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016




















Splits and Phases: 1: Federal Highway & Stirling Road



Lanes, Volumes, Timings

3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

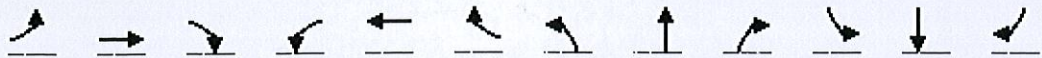
2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	9	12	27	21	39	24	1146	11	35	789	72
Future Volume (vph)	42	9	12	27	21	39	24	1146	11	35	789	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	110		0	250		0	90		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.975			0.902			0.999			0.987	
Flt Protected		0.968		0.950			0.950			0.950		
Satd. Flow (prot)	0	1741	0	1770	1680	0	1719	3435	0	1719	3393	0
Flt Permitted		0.968		0.950			0.282			0.203		
Satd. Flow (perm)	0	1741	0	1770	1680	0	510	3435	0	367	3393	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			50			1			10	
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		930			920			1689			2801	
Travel Time (s)		21.1			25.1			32.9			54.6	
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.95	0.95	0.95	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	51	11	14	36	28	52	25	1206	12	38	867	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	76	0	36	80	0	25	1218	0	38	946	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	40		40	40		40	40		40	40	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	40		40	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		14.0	14.0		14.0	14.0	
Minimum Split (s)	30.0	30.0		31.0	31.0		37.0	37.0		37.0	37.0	

Lanes, Volumes, Timings

3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

2/21/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	32.0	32.0		33.0	33.0		95.0	95.0		95.0	95.0	
Total Split (%)	20.0%	20.0%		20.6%	20.6%		59.4%	59.4%		59.4%	59.4%	
Maximum Green (s)	26.0	26.0		27.0	27.0		89.0	89.0		89.0	89.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		20.0	20.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		10.9		8.4	8.4		122.7	122.7		122.7	122.7	
Actuated g/C Ratio		0.07		0.05	0.05		0.77	0.77		0.77	0.77	
v/c Ratio		0.62		0.39	0.59		0.06	0.46		0.14	0.36	
Control Delay		86.8		84.2	49.1		12.5	21.9		9.9	7.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		86.8		84.2	49.1		12.5	21.9		9.9	7.5	
LOS		F		F	D		B	C		A	A	
Approach Delay		86.8			60.0			21.8			7.6	
Approach LOS		F			E			C			A	
Queue Length 50th (ft)		72		37	31		11	544		5	64	
Queue Length 95th (ft)		117		63	64		m16	m603		m24	238	
Internal Link Dist (ft)		850			840			1609			2721	
Turn Bay Length (ft)				110			250			90		
Base Capacity (vph)		287		298	325		391	2634		281	2604	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.26		0.12	0.25		0.06	0.46		0.14	0.36	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.62  
 Intersection Signal Delay: 19.9  
 Intersection Capacity Utilization 52.2%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

Ø2 (R)	Ø4	Ø8
95 s	32 s	33 s
Ø6 (R)		
95 s		

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	550	77	145	381	283	295	1141	66	271	502	56
Future Volume (vph)	265	550	77	145	381	283	295	1141	66	271	502	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	280		230	350		65	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.981				0.850			0.850		0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3438	0	1770	3539	1583	1719	3438	1538	1719	3387	0
Flt Permitted	0.137			0.154			0.248			0.062		
Satd. Flow (perm)	253	3438	0	287	3539	1583	449	3438	1538	112	3387	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				330			153		8	
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		955			725			913			785	
Travel Time (s)		16.3			12.4			17.8			15.3	
Peak Hour Factor	0.88	0.88	0.88	0.76	0.76	0.76	0.89	0.89	0.89	0.71	0.71	0.71
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	301	625	88	191	501	372	331	1282	74	382	707	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	301	713	0	191	501	372	331	1282	74	382	786	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	40	40		40	40	40	40	40	40	40	40	40
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	40	40		40	40	40	40	40	40	40	40	40
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0	
Minimum Split (s)	11.5	35.5		11.5	32.5	32.5	11.0	39.0	39.0	11.0	39.0	

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	28.0	40.4		20.2	32.6	32.6	38.0	65.4	65.4	34.0	61.4	
Total Split (%)	17.5%	25.3%		12.6%	20.4%	20.4%	23.8%	40.9%	40.9%	21.3%	38.4%	
Maximum Green (s)	21.5	33.9		13.7	26.1	26.1	32.0	59.4	59.4	28.0	55.4	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.5		1.5	2.5	2.5	1.5	3.0	3.0	1.5	3.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		22.0			19.0	19.0		26.0	26.0		26.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	54.0	33.8		39.7	26.0	26.0	82.7	59.4	59.4	90.0	64.2	
Actuated g/C Ratio	0.34	0.21		0.25	0.16	0.16	0.52	0.37	0.37	0.56	0.40	
v/c Ratio	1.05	0.97		0.96	0.87	0.70	0.79	1.00	0.11	1.11	0.58	
Control Delay	111.2	88.0		99.4	81.6	17.1	33.3	75.8	0.3	129.5	50.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	111.2	88.0		99.4	81.6	17.1	33.3	75.8	0.3	129.5	50.5	
LOS	F	F		F	F	B	C	E	A	F	D	
Approach Delay		94.9			62.2			64.1			76.3	
Approach LOS		F			E			E			E	
Queue Length 50th (ft)	~285	389		150	272	38	173	~712	0	~410	405	
Queue Length 95th (ft)	#467	#501		#224	281	62	235	#856	0	#408	386	
Internal Link Dist (ft)		875			645			833			705	
Turn Bay Length (ft)	275			280		230	350		65	300		
Base Capacity (vph)	286	735		198	577	534	510	1276	667	344	1362	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.05	0.97		0.96	0.87	0.70	0.65	1.00	0.11	1.11	0.58	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 40 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.11  
 Intersection Signal Delay: 72.9  
 Intersection Capacity Utilization 93.1%  
 Analysis Period (min) 15  
 Intersection LOS: E  
 ICU Level of Service F









~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings

23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

Splits and Phases: 23: Federal Hwy. & Sheridan St. /Sheridan St.

 Ø1 34 s	 Ø2 (R) 65.4 s	 Ø3 20.2 s	 Ø4 40.4 s
 Ø5 38 s	 Ø6 (R) 61.4 s	 Ø7 28 s	 Ø8 32.6 s

Intersection

Int Delay, s/veh 0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	5	0	2	2	0	6	3	1117	2	3	881	1
Future Vol, veh/h	5	0	2	2	0	6	3	1117	2	3	881	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	58	58	40	40	40	93	93	93	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	9	0	3	5	0	15	3	1201	2	3	927	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1541	2144	464	1679	2144	602	928	0	0	1203	0	0
Stage 1	934	934	-	1209	1209	-	-	-	-	-	-	-
Stage 2	607	1210	-	470	935	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	79	48	545	62	48	443	714	-	-	559	-	-
Stage 1	286	343	-	194	254	-	-	-	-	-	-	-
Stage 2	450	254	-	543	342	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	76	48	545	61	48	443	714	-	-	559	-	-
Mov Cap-2 Maneuver	76	48	-	61	48	-	-	-	-	-	-	-
Stage 1	285	341	-	193	253	-	-	-	-	-	-	-
Stage 2	433	253	-	537	340	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45.4	28.5	0	0
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	714	-	-	101	173	559	-	-
HCM Lane V/C Ratio	0.005	-	-	0.119	0.116	0.006	-	-
HCM Control Delay (s)	10.1	-	-	45.4	28.5	11.5	-	-
HCM Lane LOS	B	-	-	E	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.4	0	-	-



**Intersection**

Int Delay, s/veh 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	7	0	32	2	0	3	18	1083	2	0	873	14
Future Vol, veh/h	7	0	32	2	0	3	18	1083	2	0	873	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	63	63	63	92	92	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	9	0	40	3	0	5	20	1177	2	0	919	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1554	2144	467	1676	2151	590	934	0	0	1179	0	0
Stage 1	926	926	-	1217	1217	-	-	-	-	-	-	-
Stage 2	628	1218	-	459	934	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	77	48	542	62	48	451	710	-	-	571	-	-
Stage 1	289	346	-	192	252	-	-	-	-	-	-	-
Stage 2	437	251	-	551	343	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	75	47	542	56	47	451	710	-	-	571	-	-
Mov Cap-2 Maneuver	75	47	-	56	47	-	-	-	-	-	-	-
Stage 1	281	346	-	187	245	-	-	-	-	-	-	-
Stage 2	420	244	-	511	343	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.3	37.7	0.2	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	710	-	-	256	118	571	-	-
HCM Lane V/C Ratio	0.028	-	-	0.188	0.067	-	-	-
HCM Control Delay (s)	10.2	-	-	22.3	37.7	0	-	-
HCM Lane LOS	B	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.2	0	-	-

**Intersection**

Int Delay, s/veh 2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	76	673	43	76	835	18	0	0	24	0	0	100
Future Vol, veh/h	76	673	43	76	835	18	0	0	24	0	0	100
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	200	250	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	92	92	92	67	67	67	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	95	841	54	83	908	20	0	0	36	0	0	175

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	927	0	0	841	0	0	1650	2123	421	1694	2114	464
Stage 1	-	-	-	-	-	-	1031	1031	-	1083	1083	-
Stage 2	-	-	-	-	-	-	619	1092	-	611	1031	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	733	-	-	790	-	-	65	49	581	60	50	545
Stage 1	-	-	-	-	-	-	249	309	-	232	292	-
Stage 2	-	-	-	-	-	-	443	289	-	448	309	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	733	-	-	790	-	-	37	38	581	47	39	545
Mov Cap-2 Maneuver	-	-	-	-	-	-	37	38	-	47	39	-
Stage 1	-	-	-	-	-	-	217	269	-	202	261	-
Stage 2	-	-	-	-	-	-	269	259	-	366	269	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.8	11.6	14.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	581	733	-	-	790	-	-	545
HCM Lane V/C Ratio	0.062	0.13	-	-	0.105	-	-	0.322
HCM Control Delay (s)	11.6	10.6	-	-	10.1	-	-	14.7
HCM Lane LOS	B	B	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.2	0.4	-	-	0.3	-	-	1.4













Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	284	112	345	27	74	11	246	762	26	23	1127	221
Future Volume (vph)	284	112	345	27	74	11	246	762	26	23	1127	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	185		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.995			0.975	
Flt Protected	0.950	0.978			0.988		0.950			0.950		
Satd. Flow (prot)	1665	1714	1568	0	1797	0	1719	3421	0	1719	3352	0
Flt Permitted	0.950	0.978			0.988		0.050			0.342		
Satd. Flow (perm)	1665	1714	1568	0	1797	0	90	3421	0	619	3352	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			337		3			3			18	
Link Speed (mph)		45			30			35			35	
Link Distance (ft)		985			990			2801			1850	
Travel Time (s)		14.9			22.5			54.6			36.0	
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.96	0.96	0.96	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	305	120	371	31	84	13	256	794	27	25	1225	240
Shared Lane Traffic (%)	31%											
Lane Group Flow (vph)	210	215	371	0	128	0	256	821	0	25	1465	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	40	40	40	20	40		40	40		40	40	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	40	40	40	20	40		40	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		2.0	4.0		2.0	4.0	
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0		8.0	35.0		8.0	35.0	

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	29.0	29.0	29.0	29.0	29.0		26.0	93.0		9.0	76.0	
Total Split (%)	18.1%	18.1%	18.1%	18.1%	18.1%		16.3%	58.1%		5.6%	47.5%	
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		20.0	87.0		3.0	70.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	2.5	2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			22.0			22.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	22.1	22.1	22.1		15.5		104.4	97.9		79.1	74.5	
Actuated g/C Ratio	0.14	0.14	0.14		0.10		0.65	0.61		0.49	0.47	
v/c Ratio	0.91	0.91	0.73		0.73		0.85	0.39		0.07	0.93	
Control Delay	107.6	105.9	18.4		90.6		91.6	6.0		13.9	52.0	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	107.6	105.9	18.4		90.6		91.6	6.0		13.9	52.0	
LOS	F	F	B		F		F	A		B	D	
Approach Delay		65.6			90.6			26.3			51.4	
Approach LOS		E			F			C			D	
Queue Length 50th (ft)	230	235	32		129		231	90		9	784	
Queue Length 95th (ft)	#390	#394	151		192		#408	136		24	#964	
Internal Link Dist (ft)		905			910			2721			1770	
Turn Bay Length (ft)							225			185		
Base Capacity (vph)	239	246	513		260		301	2094		337	1570	
Starvation Cap Reductn	0	0	0		0		0	0		0	0	
Spillback Cap Reductn	0	0	0		0		0	0		0	0	
Storage Cap Reductn	0	0	0		0		0	0		0	0	
Reduced v/c Ratio	0.88	0.87	0.72		0.49		0.85	0.39		0.07	0.93	







Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 2 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 48.3  
 Intersection LOS: D  
 Intersection Capacity Utilization 84.3%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016





















Splits and Phases: 1: Federal Highway & Stirling Road

 Ø1	 Ø2 (R)	 Ø4	 Ø8
9 s	93 s	29 s	29 s
 Ø5	 Ø6 (R)		
26 s	76 s		

Lanes, Volumes, Timings

3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

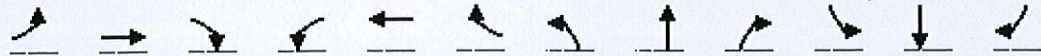
2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	22	18	19	37	49	17	1159	25	45	1129	83
Future Volume (vph)	39	22	18	19	37	49	17	1159	25	45	1129	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	110		0	250		0	90		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt		0.969			0.914			0.997			0.990	
Flt Protected		0.976		0.950			0.950			0.950		
Satd. Flow (prot)	0	1745	0	1770	1703	0	1719	3428	0	1719	3404	0
Flt Permitted		0.976		0.950			0.192			0.196		
Satd. Flow (perm)	0	1745	0	1770	1703	0	347	3428	0	355	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			36			2			7	
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		930			920			1689			2801	
Travel Time (s)		21.1			25.1			32.9			54.6	
Peak Hour Factor	0.72	0.72	0.72	0.95	0.95	0.95	0.97	0.97	0.97	0.98	0.98	0.98
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	54	31	25	20	39	52	18	1195	26	46	1152	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	20	91	0	18	1221	0	46	1237	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	40		40	40		40	40		40	40	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	40		40	40		40	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		14.0	14.0		14.0	14.0	
Minimum Split (s)	30.0	30.0		31.0	31.0		37.0	37.0		37.0	37.0	

Lanes, Volumes, Timings

3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

2/21/2016



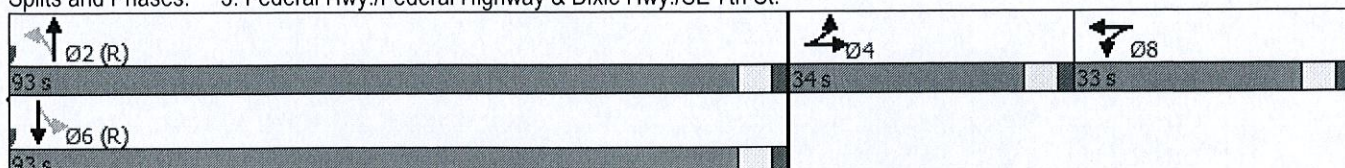
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	34.0	34.0		33.0	33.0		93.0	93.0		93.0	93.0	
Total Split (%)	21.3%	21.3%		20.6%	20.6%		58.1%	58.1%		58.1%	58.1%	
Maximum Green (s)	28.0	28.0		27.0	27.0		87.0	87.0		87.0	87.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		20.0	20.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		13.8		10.1	10.1		118.2	118.2		118.2	118.2	
Actuated g/C Ratio		0.09		0.06	0.06		0.74	0.74		0.74	0.74	
v/c Ratio		0.70		0.18	0.65		0.07	0.48		0.18	0.49	
Control Delay		88.1		72.8	64.6		4.4	3.5		5.0	8.7	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		88.1		72.8	64.6		4.4	3.5		5.0	8.7	
LOS		F		E	E		A	A		A	A	
Approach Delay		88.1			66.0			3.5			8.6	
Approach LOS		F			E			A			A	
Queue Length 50th (ft)		106		20	57		2	61		7	226	
Queue Length 95th (ft)		131		50	118		m4	119		m18	m610	
Internal Link Dist (ft)		850			840			1609			2721	
Turn Bay Length (ft)				110			250			90		
Base Capacity (vph)		311		298	317		256	2532		262	2515	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.35		0.07	0.29		0.07	0.48		0.18	0.49	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 98 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.70  
 Intersection Signal Delay: 11.8  
 Intersection Capacity Utilization 58.5%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.
























Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.



Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

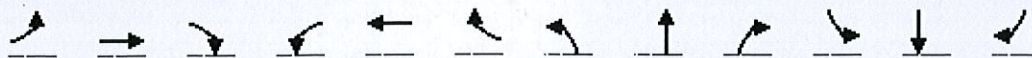
2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	195	536	44	175	427	218	237	730	86	293	797	50
Future Volume (vph)	195	536	44	175	427	218	237	730	86	293	797	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	280		230	350		65	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt		0.989				0.850			0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3466	0	1770	3539	1583	1719	3438	1538	1719	3407	0
Flt Permitted	0.262			0.125			0.136			0.102		
Satd. Flow (perm)	483	3466	0	233	3539	1583	246	3438	1538	185	3407	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				240			109		4	
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		955			725			913			785	
Travel Time (s)		16.3			12.4			17.8			15.3	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.74	0.74	0.74	0.85	0.85	0.85
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	224	616	51	192	469	240	320	986	116	345	938	59
Shared Lane Traffic (%)												
Lane Group Flow (vph)	224	667	0	192	469	240	320	986	116	345	997	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	40	40		40	40	40	40	40	40	40	40	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	40	40		40	40	40	40	40	40	40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0	
Minimum Split (s)	11.5	35.5		11.5	32.5	32.5	11.0	39.0	39.0	11.0	39.0	



Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	25.2	40.0		24.0	38.8	38.8	32.0	61.0	61.0	35.0	64.0	
Total Split (%)	15.8%	25.0%		15.0%	24.3%	24.3%	20.0%	38.1%	38.1%	21.9%	40.0%	
Maximum Green (s)	18.7	33.5		17.5	32.3	32.3	26.0	55.0	55.0	29.0	58.0	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.5		1.5	2.5	2.5	1.5	3.0	3.0	1.5	3.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		22.0			19.0	19.0		26.0	26.0		26.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	50.6	33.3		47.7	31.9	31.9	81.5	57.1	57.1	89.9	61.5	
Actuated g/C Ratio	0.32	0.21		0.30	0.20	0.20	0.51	0.36	0.36	0.56	0.38	
v/c Ratio	0.78	0.92		0.87	0.67	0.47	0.92	0.80	0.19	0.91	0.76	
Control Delay	58.0	79.8		77.1	64.2	9.1	67.7	53.1	7.7	57.1	65.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.0	79.8		77.1	64.2	9.1	67.7	53.1	7.7	57.1	65.9	
LOS	E	E		E	E	A	E	D	A	E	E	
Approach Delay		74.3			52.3			52.7			63.6	
Approach LOS		E			D			D			E	
Queue Length 50th (ft)	168	352		142	235	0	239	513	5	329	564	
Queue Length 95th (ft)	240	#444		#273	304	78	260	448	28	#422	600	
Internal Link Dist (ft)		875			645			833			705	
Turn Bay Length (ft)	275			280		230	350		65	300		
Base Capacity (vph)	305	742		240	725	515	367	1238	624	385	1323	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.73	0.90		0.80	0.65	0.47	0.87	0.80	0.19	0.90	0.75	











Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 48 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 60.1  
 Intersection LOS: E  
 Intersection Capacity Utilization 83.5%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

Splits and Phases: 23: Federal Hwy. & Sheridan St. /Sheridan St.

 Ø1 35 s	  Ø2 (R) 61 s	 Ø3 24 s	 Ø4 40 s
 Ø5 32 s	  Ø6 (R) 64 s	 Ø7 25.2 s	 Ø8 38.8 s

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	8	0	17	1	0	8	23	1159	19	8	1150	5
Future Vol, veh/h	8	0	17	1	0	8	23	1159	19	8	1150	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	57	57	57	75	75	75	97	97	97	97	97	97
Heavy Vehicles, %	1	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	14	0	30	1	0	11	24	1195	20	8	1186	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1850	2467	595	1861	2459	607	1191	0	0	1214	0	0
Stage 1	1205	1205	-	1252	1252	-	-	-	-	-	-	-
Stage 2	645	1262	-	609	1207	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.52	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	46	30	447	45	30	439	565	-	-	554	-	-
Stage 1	197	255	-	182	242	-	-	-	-	-	-	-
Stage 2	430	239	-	449	254	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	43	28	447	40	28	439	565	-	-	554	-	-
Mov Cap-2 Maneuver	43	28	-	40	28	-	-	-	-	-	-	-
Stage 1	189	251	-	174	232	-	-	-	-	-	-	-
Stage 2	402	229	-	413	250	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	56.5	23.4	0.2	0.1
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	565	-	-	112	208	554	-	-
HCM Lane V/C Ratio	0.042	-	-	0.392	0.058	0.015	-	-
HCM Control Delay (s)	11.7	-	-	56.5	23.4	11.6	-	-
HCM Lane LOS	B	-	-	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.6	0.2	0	-	-

**Intersection**

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	3	0	4	2	0	13	15	1174	11	10	1143	16
Future Vol, veh/h	3	0	4	2	0	13	15	1174	11	10	1143	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	58	58	63	63	63	97	97	97	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	5	0	7	3	0	21	15	1210	11	10	1191	17

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1856	2473	604	1863	2475	611	1207	0	0	1222	0	0
Stage 1	1220	1220	-	1247	1247	-	-	-	-	-	-	-
Stage 2	636	1253	-	616	1228	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	45	30	441	45	29	437	557	-	-	550	-	-
Stage 1	191	251	-	184	244	-	-	-	-	-	-	-
Stage 2	433	242	-	445	249	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	41	29	441	43	28	437	557	-	-	550	-	-
Mov Cap-2 Maneuver	41	29	-	43	28	-	-	-	-	-	-	-
Stage 1	186	246	-	179	237	-	-	-	-	-	-	-
Stage 2	401	235	-	430	244	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	54.2	25.8	0.1	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	557	-	-	85	197	550	-	-
HCM Lane V/C Ratio	0.028	-	-	0.142	0.121	0.019	-	-
HCM Control Delay (s)	11.6	-	-	54.2	25.8	11.7	-	-
HCM Lane LOS	B	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0.1	-	-

Intersection												
Int Delay, s/veh	1.9											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	64	839	115	174	975	62	0	0	63	0	0	58
Future Vol, veh/h	64	839	115	174	975	62	0	0	63	0	0	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	200	250	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	94	94	94	78	78	78	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	67	874	120	185	1037	66	0	0	81	0	0	77

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1103	0	0	874	0	0	1896	2480	437	2010	2447	552
Stage 1	-	-	-	-	-	-	1007	1007	-	1440	1440	-
Stage 2	-	-	-	-	-	-	889	1473	-	570	1007	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	629	-	-	768	-	-	42	29	567	35	31	477
Stage 1	-	-	-	-	-	-	258	317	-	139	196	-
Stage 2	-	-	-	-	-	-	304	189	-	474	317	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	629	-	-	768	-	-	26	20	567	23	21	477
Mov Cap-2 Maneuver	-	-	-	-	-	-	26	20	-	23	21	-
Stage 1	-	-	-	-	-	-	231	283	-	124	149	-
Stage 2	-	-	-	-	-	-	193	143	-	363	283	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	1.6	12.4	14
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	567	629	-	-	768	-	-	477
HCM Lane V/C Ratio	0.142	0.106	-	-	0.241	-	-	0.162
HCM Control Delay (s)	12.4	11.4	-	-	11.2	-	-	14
HCM Lane LOS	B	B	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.5	0.4	-	-	0.9	-	-	0.6

## Appendix E – Background Conditions Analyses













Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	70	225	20	83	12	350	889	11	18	745	138
Future Volume (vph)	265	70	225	20	83	12	350	889	11	18	745	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	185		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt			0.850		0.986			0.998			0.977	
Flt Protected	0.950	0.972			0.991		0.950			0.950		
Satd. Flow (prot)	1665	1703	1568	0	1802	0	1719	3431	0	1719	3359	0
Flt Permitted	0.950	0.972			0.991		0.121			0.280		
Satd. Flow (perm)	1665	1703	1568	0	1802	0	219	3431	0	507	3359	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			232		3			1			14	
Link Speed (mph)		45			30			35			35	
Link Distance (ft)		985			990			2801			1850	
Travel Time (s)		14.9			22.5			54.6			36.0	
Peak Hour Factor	0.97	0.97	0.97	0.80	0.80	0.80	0.88	0.88	0.88	0.87	0.87	0.87
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	273	72	232	25	104	15	398	1010	13	21	856	159
Shared Lane Traffic (%)	37%											
Lane Group Flow (vph)	172	173	232	0	144	0	398	1023	0	21	1015	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15			9	15		9	15	9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	40	40	40	20	40		40	40		40	40	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	40	40	40	20	40		40	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		2.0	4.0		2.0	4.0	
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0		8.0	35.0		8.0	35.0	

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	29.0	29.0	29.0	29.0	29.0		44.0	93.0		9.0	58.0	
Total Split (%)	18.1%	18.1%	18.1%	18.1%	18.1%		27.5%	58.1%		5.6%	36.3%	
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		38.0	87.0		3.0	52.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	2.5	2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			22.0			22.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	20.0	20.0	20.0		16.8		105.2	99.0		68.6	64.4	
Actuated g/C Ratio	0.12	0.12	0.12		0.10		0.66	0.62		0.43	0.40	
v/c Ratio	0.83	0.82	0.58		0.75		0.85	0.48		0.08	0.75	
Control Delay	97.8	95.6	13.1		90.9		67.1	27.9		17.9	46.6	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	97.8	95.6	13.1		90.9		67.1	27.9		17.9	46.6	
LOS	F	F	B		F		E	C		B	D	
Approach Delay		63.1			90.9			38.9			46.0	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	185	186	0		146		350	247		7	493	
Queue Length 95th (ft)	#290	#286	84		190		#469	424		21	601	
Internal Link Dist (ft)		905			910			2721			1770	
Turn Bay Length (ft)							225			185		
Base Capacity (vph)	239	244	424		261		506	2124		249	1360	
Starvation Cap Reductn	0	0	0		0		0	0		0	0	
Spillback Cap Reductn	0	0	0		0		0	0		0	0	
Storage Cap Reductn	0	0	0		0		0	0		0	0	
Reduced v/c Ratio	0.72	0.71	0.55		0.55		0.79	0.48		0.08	0.75	

Intersection Summary

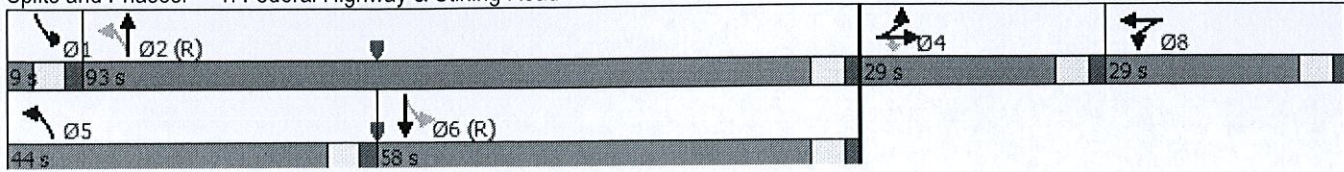
Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 135  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 47.9  
 Intersection Capacity Utilization 75.2%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.



Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

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







Splits and Phases: 1: Federal Highway & Stirling Road



Lanes, Volumes, Timings

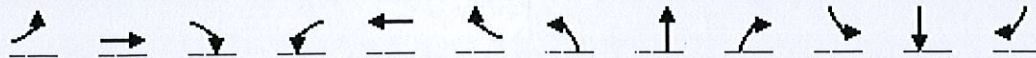
3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	9	12	27	21	40	24	1180	11	36	812	72
Future Volume (vph)	43	9	12	27	21	40	24	1180	11	36	812	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	110		0	250		0	90		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.975			0.902			0.999			0.988	
Flt Protected		0.967		0.950			0.950			0.950		
Satd. Flow (prot)	0	1739	0	1770	1680	0	1719	3435	0	1719	3397	0
Flt Permitted		0.967		0.950			0.274			0.194		
Satd. Flow (perm)	0	1739	0	1770	1680	0	496	3435	0	351	3397	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			51			1			9	
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		930			920			1689			2801	
Travel Time (s)		21.1			25.1			32.9			54.6	
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.95	0.95	0.95	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	52	11	14	36	28	53	25	1242	12	40	892	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	77	0	36	81	0	25	1254	0	40	971	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	40		40	40		40	40		40	40	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	40		40	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8		2	2		6	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		14.0	14.0		14.0	14.0	
Minimum Split (s)	30.0	30.0		31.0	31.0		37.0	37.0		37.0	37.0	

Lanes, Volumes, Timings  
 3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

2/21/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	32.0	32.0		33.0	33.0		95.0	95.0		95.0	95.0	
Total Split (%)	20.0%	20.0%		20.6%	20.6%		59.4%	59.4%		59.4%	59.4%	
Maximum Green (s)	26.0	26.0		27.0	27.0		89.0	89.0		89.0	89.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		20.0	20.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		11.0		8.4	8.4		122.6	122.6		122.6	122.6	
Actuated g/C Ratio		0.07		0.05	0.05		0.77	0.77		0.77	0.77	
v/c Ratio		0.62		0.39	0.59		0.07	0.48		0.15	0.37	
Control Delay		86.9		84.1	48.9		12.5	22.3		10.5	7.9	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		86.9		84.1	48.9		12.5	22.3		10.5	7.9	
LOS		F		F	D		B	C		B	A	
Approach Delay		86.9			59.7			22.1			8.0	
Approach LOS		F			E			C			A	
Queue Length 50th (ft)		74		37	31		11	566		6	77	
Queue Length 95th (ft)		117		63	63		m16	m601		m24	244	
Internal Link Dist (ft)		850			840			1609			2721	
Turn Bay Length (ft)				110			250			90		
Base Capacity (vph)		287		298	325		380	2632		268	2604	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.27		0.12	0.25		0.07	0.48		0.15	0.37	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.62  
 Intersection Signal Delay: 20.2  
 Intersection Capacity Utilization 53.2%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: C  
 ICU Level of Service A

Splits and Phases: 3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

95 s	32 s	33 s
95 s		

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	269	554	78	147	384	288	297	1171	66	275	518	59
Future Volume (vph)	269	554	78	147	384	288	297	1171	66	275	518	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	280		230	350		65	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frnt		0.981				0.850			0.850		0.985	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3438	0	1770	3539	1583	1719	3438	1538	1719	3387	0
Flt Permitted	0.135			0.153			0.223			0.064		
Satd. Flow (perm)	249	3438	0	285	3539	1583	404	3438	1538	116	3387	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				332			153		8	
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		955			725			913			785	
Travel Time (s)		16.3			12.4			17.8			15.3	
Peak Hour Factor	0.88	0.88	0.88	0.76	0.76	0.76	0.89	0.89	0.89	0.71	0.71	0.71
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	306	630	89	193	505	379	334	1316	74	387	730	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	306	719	0	193	505	379	334	1316	74	387	813	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	40	40		40	40	40	40	40	40	40	40	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	40	40		40	40	40	40	40	40	40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0	
Minimum Split (s)	11.5	35.5		11.5	32.5	32.5	11.0	39.0	39.0	11.0	39.0	

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	28.0	40.4		20.2	32.6	32.6	39.0	65.4	65.4	34.0	60.4	
Total Split (%)	17.5%	25.3%		12.6%	20.4%	20.4%	24.4%	40.9%	40.9%	21.3%	37.8%	
Maximum Green (s)	21.5	33.9		13.7	26.1	26.1	33.0	59.4	59.4	28.0	54.4	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.5		1.5	2.5	2.5	1.5	3.0	3.0	1.5	3.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		22.0			19.0	19.0		26.0	26.0		26.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	54.1	33.9		39.8	26.1	26.1	84.1	59.4	59.4	89.1	62.7	
Actuated g/C Ratio	0.34	0.21		0.25	0.16	0.16	0.53	0.37	0.37	0.56	0.39	
v/c Ratio	1.07	0.98		0.97	0.88	0.71	0.80	1.03	0.11	1.12	0.61	
Control Delay	116.3	89.4		101.8	82.0	17.8	35.4	82.1	0.3	132.7	53.3	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	116.3	89.4		101.8	82.0	17.8	35.4	82.1	0.3	132.7	53.3	
LOS	F	F		F	F	B	D	F	A	F	D	
Approach Delay		97.4			63.0			69.6			78.9	
Approach LOS		F			E			E			E	
Queue Length 50th (ft)	~297	393		153	275	43	175	~773	0	~420	434	
Queue Length 95th (ft)	#479	#509		#229	283	67	253	#895	0	#425	400	
Internal Link Dist (ft)		875			645			833			705	
Turn Bay Length (ft)	275			280		230	350		65	300		
Base Capacity (vph)	286	735		198	577	536	504	1276	667	345	1332	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.07	0.98		0.97	0.88	0.71	0.66	1.03	0.11	1.12	0.61	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 40 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.12  
 Intersection Signal Delay: 76.0  
 Intersection Capacity Utilization 94.4%  
 Analysis Period (min) 15









Intersection LOS: E  
 ICU Level of Service F

- ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

Splits and Phases: 23: Federal Hwy. & Sheridan St. /Sheridan St.

 Ø1 34 s	 Ø2 (R) 65.4 s	 Ø3 20.2 s	 Ø4 40.4 s
 Ø5 39 s	 Ø6 (R) 60.4 s	 Ø7 28 s	 Ø8 32.6 s

**Intersection**

Int Delay, s/veh 0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	5	0	2	2	0	6	3	1149	2	3	905	1
Future Vol, veh/h	5	0	2	2	0	6	3	1149	2	3	905	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	58	58	40	40	40	93	93	93	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	9	0	3	5	0	15	3	1235	2	3	953	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1583	2203	477	1726	2203	619	954	0	0	1238	0	0
Stage 1	959	959	-	1243	1243	-	-	-	-	-	-	-
Stage 2	624	1244	-	483	960	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	73	44	534	57	44	432	698	-	-	542	-	-
Stage 1	276	334	-	185	245	-	-	-	-	-	-	-
Stage 2	440	244	-	534	333	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	70	44	534	56	44	432	698	-	-	542	-	-
Mov Cap-2 Maneuver	70	44	-	56	44	-	-	-	-	-	-	-
Stage 1	275	332	-	184	244	-	-	-	-	-	-	-
Stage 2	423	243	-	528	331	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	49.4	30.5	0	0
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	698	-	-	93	161	542	-	-
HCM Lane V/C Ratio	0.005	-	-	0.13	0.124	0.006	-	-
HCM Control Delay (s)	10.2	-	-	49.4	30.5	11.7	-	-
HCM Lane LOS	B	-	-	E	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.4	0	-	-

**Intersection**

Int Delay, s/veh 0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	7	0	33	2	0	3	18	1115	2	0	896	18
Future Vol, veh/h	7	0	33	2	0	3	18	1115	2	0	896	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	63	63	63	92	92	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	9	0	41	3	0	5	20	1212	2	0	943	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1598	2206	481	1724	2214	607	962	0	0	1214	0	0
Stage 1	953	953	-	1252	1252	-	-	-	-	-	-	-
Stage 2	645	1253	-	472	962	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	71	44	531	57	43	439	693	-	-	554	-	-
Stage 1	278	336	-	182	242	-	-	-	-	-	-	-
Stage 2	427	242	-	542	332	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	69	43	531	51	42	439	693	-	-	554	-	-
Mov Cap-2 Maneuver	69	43	-	51	42	-	-	-	-	-	-	-
Stage 1	270	336	-	177	235	-	-	-	-	-	-	-
Stage 2	410	235	-	500	332	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.4	40.6	0.2	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	693	-	-	245	109	554	-	-
HCM Lane V/C Ratio	0.028	-	-	0.202	0.073	-	-	-
HCM Control Delay (s)	10.3	-	-	23.4	40.6	0	-	-
HCM Lane LOS	B	-	-	C	E	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.2	0	-	-



**Intersection**

Int Delay, s/veh 2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	80	678	44	76	842	20	0	0	24	0	0	105
Future Vol, veh/h	80	678	44	76	842	20	0	0	24	0	0	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	200	250	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	92	92	92	67	67	67	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	100	848	55	83	915	22	0	0	36	0	0	184






















Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	937	0	0	848	0	0	1671	2150	424	1715	2139	468
Stage 1	-	-	-	-	-	-	1048	1048	-	1091	1091	-
Stage 2	-	-	-	-	-	-	623	1102	-	624	1048	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	727	-	-	785	-	-	63	48	579	58	48	542
Stage 1	-	-	-	-	-	-	244	303	-	229	289	-
Stage 2	-	-	-	-	-	-	440	286	-	440	303	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	727	-	-	785	-	-	34	37	579	45	37	542
Mov Cap-2 Maneuver	-	-	-	-	-	-	34	37	-	45	37	-
Stage 1	-	-	-	-	-	-	210	261	-	198	258	-
Stage 2	-	-	-	-	-	-	260	256	-	356	261	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.8	11.6	15
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	579	727	-	-	785	-	-	542
HCM Lane V/C Ratio	0.062	0.138	-	-	0.105	-	-	0.34
HCM Control Delay (s)	11.6	10.7	-	-	10.1	-	-	15
HCM Lane LOS	B	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0.4	-	-	1.5

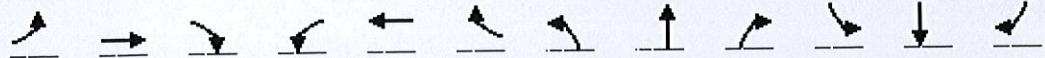
Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	290	112	345	27	74	11	246	789	26	23	1153	221
Future Volume (vph)	290	112	345	27	74	11	246	789	26	23	1153	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	185		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.995			0.976	
Flt Protected	0.950	0.978			0.988		0.950			0.950		
Satd. Flow (prot)	1665	1714	1568	0	1797	0	1719	3421	0	1719	3356	0
Flt Permitted	0.950	0.978			0.988		0.050			0.333		
Satd. Flow (perm)	1665	1714	1568	0	1797	0	90	3421	0	603	3356	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			335		3			3			18	
Link Speed (mph)		45			30			35			35	
Link Distance (ft)		985			990			2801			1850	
Travel Time (s)		14.9			22.5			54.6			36.0	
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.96	0.96	0.96	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	312	120	371	31	84	13	256	822	27	25	1253	240
Shared Lane Traffic (%)	32%											
Lane Group Flow (vph)	212	220	371	0	128	0	256	849	0	25	1493	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15			9	15		9	15	9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	40	40	40	20	40		40	40		40	40	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	40	40	40	20	40		40	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		2.0	4.0		2.0	4.0	
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0		8.0	35.0		8.0	35.0	

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	29.0	29.0	29.0	29.0	29.0		26.0	93.0		9.0	76.0	
Total Split (%)	18.1%	18.1%	18.1%	18.1%	18.1%		16.3%	58.1%		5.6%	47.5%	
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		20.0	87.0		3.0	70.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	2.5	2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			22.0			22.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	22.3	22.3	22.3		15.5		104.2	97.8		78.9	74.4	
Actuated g/C Ratio	0.14	0.14	0.14		0.10		0.65	0.61		0.49	0.46	
v/c Ratio	0.92	0.92	0.73		0.73		0.85	0.41		0.08	0.95	
Control Delay	107.9	108.6	18.6		90.6		91.9	6.1		14.0	54.7	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	107.9	108.6	18.6		90.6		91.9	6.1		14.0	54.7	
LOS	F	F	B		F		F	A		B	D	
Approach Delay		66.9			90.6			26.0			54.0	
Approach LOS		E			F			C			D	
Queue Length 50th (ft)	232	242	34		129		231	92		9	~818	
Queue Length 95th (ft)	#395	#408	154		192		#408	141		24	#995	
Internal Link Dist (ft)		905			910			2721			1770	
Turn Bay Length (ft)							225			185		
Base Capacity (vph)	239	246	512		260		301	2091		329	1569	
Starvation Cap Reductn	0	0	0		0		0	0		0	0	
Spillback Cap Reductn	0	0	0		0		0	0		0	0	
Storage Cap Reductn	0	0	0		0		0	0		0	0	
Reduced v/c Ratio	0.89	0.89	0.72		0.49		0.85	0.41		0.08	0.95	

Intersection Summary







Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 2 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 155  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.95  
 Intersection Signal Delay: 49.5  
 Intersection Capacity Utilization 85.2%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service E

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016





















Splits and Phases: 1: Federal Highway & Stirling Road

 Ø1	 Ø2 (R)	 Ø4	 Ø8
9 s	93 s	29 s	29 s
 Ø5	 Ø6 (R)		
26 s	76 s		

Lanes, Volumes, Timings

3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.
























2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	22	18	19	37	49	17	1183	25	45	1152	83
Future Volume (vph)	39	22	18	19	37	49	17	1183	25	45	1152	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	110		0	250		0	90		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt		0.969			0.914			0.997			0.990	
Flt Protected		0.976		0.950			0.950			0.950		
Satd. Flow (prot)	0	1745	0	1770	1703	0	1719	3428	0	1719	3404	0
Flt Permitted		0.976		0.950			0.186			0.190		
Satd. Flow (perm)	0	1745	0	1770	1703	0	337	3428	0	344	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			36			2			7	
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		930			920			1689			2801	
Travel Time (s)		21.1			25.1			32.9			54.6	
Peak Hour Factor	0.72	0.72	0.72	0.95	0.95	0.95	0.97	0.97	0.97	0.98	0.98	0.98
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	54	31	25	20	39	52	18	1220	26	46	1176	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	110	0	20	91	0	18	1246	0	46	1261	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	40		40	40		40	40		40	40	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	40		40	40		40	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2		6	6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		14.0	14.0		14.0	14.0	
Minimum Split (s)	30.0	30.0		31.0	31.0		37.0	37.0		37.0	37.0	



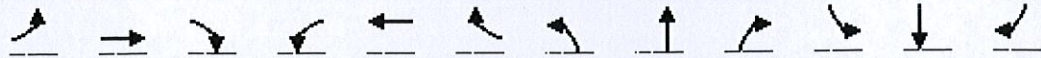
Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	536	44	175	427	220	237	748	86	295	814	52
Future Volume (vph)	197	536	44	175	427	220	237	748	86	295	814	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	280		230	350		65	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frnt		0.989				0.850			0.850		0.991	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3466	0	1770	3539	1583	1719	3438	1538	1719	3407	0
Flt Permitted	0.258			0.127			0.128			0.093		
Satd. Flow (perm)	476	3466	0	237	3539	1583	232	3438	1538	168	3407	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				242			109		5	
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		955			725			913			785	
Travel Time (s)		16.3			12.4			17.8			15.3	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.74	0.74	0.74	0.85	0.85	0.85
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	226	616	51	192	469	242	320	1011	116	347	958	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	226	667	0	192	469	242	320	1011	116	347	1019	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	40	40		40	40	40	40	40	40	40	40	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	40	40		40	40	40	40	40	40	40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0	
Minimum Split (s)	11.5	35.5		11.5	32.5	32.5	11.0	39.0	39.0	11.0	39.0	

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016












Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.4	40.0		23.0	38.6	38.6	32.0	62.0	62.0	35.0	65.0	
Total Split (%)	15.3%	25.0%		14.4%	24.1%	24.1%	20.0%	38.8%	38.8%	21.9%	40.6%	
Maximum Green (s)	17.9	33.5		16.5	32.1	32.1	26.0	56.0	56.0	29.0	59.0	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.5		1.5	2.5	2.5	1.5	3.0	3.0	1.5	3.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		22.0			19.0	19.0		26.0	26.0		26.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	50.0	32.8		47.3	31.5	31.5	81.9	57.3	57.3	90.4	61.8	
Actuated g/C Ratio	0.31	0.20		0.30	0.20	0.20	0.51	0.36	0.36	0.56	0.39	
v/c Ratio	0.79	0.93		0.87	0.67	0.48	0.92	0.82	0.19	0.93	0.77	
Control Delay	60.2	82.5		76.6	64.9	9.2	70.4	53.8	7.5	59.6	67.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	60.2	82.5		76.6	64.9	9.2	70.4	53.8	7.5	59.6	67.0	
LOS	E	F		E	E	A	E	D	A	E	F	
Approach Delay		76.8			52.4			53.8			65.1	
Approach LOS		E			D			D			E	
Queue Length 50th (ft)	172	360		144	240	0	242	522	5	332	577	
Queue Length 95th (ft)	#246	#444		#284	305	78	264	457	27	#437	611	
Internal Link Dist (ft)		875			645			833			705	
Turn Bay Length (ft)	275			280		230	350		65	300		
Base Capacity (vph)	297	731		232	712	512	362	1247	627	380	1326	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.76	0.91		0.83	0.66	0.47	0.88	0.81	0.19	0.91	0.77	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 48 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 61.4  
 Intersection LOS: E  
 Intersection Capacity Utilization 84.0%  
 ICU Level of Service E  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.



Splits and Phases: 23: Federal Hwy. & Sheridan St. /Sheridan St.

 Ø1	  Ø2 (R)	 Ø3	 Ø4
35 s	62 s	23 s	40 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
32 s	65 s	24.4 s	38.6 s

**Intersection**

Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	8	0	17	1	0	8	23	1182	19	8	1172	5
Future Vol, veh/h	8	0	17	1	0	8	23	1182	19	8	1172	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	57	57	57	75	75	75	97	97	97	97	97	97
Heavy Vehicles, %	1	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	14	0	30	1	0	11	24	1219	20	8	1208	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1884	2513	607	1897	2506	619	1213	0	0	1238	0	0
Stage 1	1227	1227	-	1276	1276	-	-	-	-	-	-	-
Stage 2	657	1286	-	621	1230	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.52	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	44	28	439	42	28	432	554	-	-	542	-	-
Stage 1	191	249	-	176	236	-	-	-	-	-	-	-
Stage 2	423	233	-	442	248	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	41	26	439	37	26	432	554	-	-	542	-	-
Mov Cap-2 Maneuver	41	26	-	37	26	-	-	-	-	-	-	-
Stage 1	183	245	-	168	226	-	-	-	-	-	-	-
Stage 2	395	223	-	406	244	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	60.3	24.4	0.2	0.1
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	554	-	-	107	198	542	-	-
HCM Lane V/C Ratio	0.043	-	-	0.41	0.061	0.015	-	-
HCM Control Delay (s)	11.8	-	-	60.3	24.4	11.7	-	-
HCM Lane LOS	B	-	-	F	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1.7	0.2	0	-	-

**Intersection**

Int Delay, s/veh 0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	3	0	4	2	0	13	15	1197	11	10	1165	20
Future Vol, veh/h	3	0	4	2	0	13	15	1197	11	10	1165	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	58	58	63	63	63	97	97	97	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	5	0	7	3	0	21	15	1234	11	10	1214	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1893	2521	617	1899	2526	623	1234	0	0	1245	0	0
Stage 1	1245	1245	-	1271	1271	-	-	-	-	-	-	-
Stage 2	648	1276	-	628	1255	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	43	28	433	42	27	429	544	-	-	539	-	-
Stage 1	184	244	-	178	237	-	-	-	-	-	-	-
Stage 2	425	236	-	437	241	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	40	27	433	40	26	429	544	-	-	539	-	-
Mov Cap-2 Maneuver	40	27	-	40	26	-	-	-	-	-	-	-
Stage 1	179	239	-	173	230	-	-	-	-	-	-	-
Stage 2	393	229	-	422	237	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	55.6	27	0.1	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	544	-	-	83	187	539	-	-
HCM Lane V/C Ratio	0.028	-	-	0.145	0.127	0.019	-	-
HCM Control Delay (s)	11.8	-	-	55.6	27	11.8	-	-
HCM Lane LOS	B	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0.1	-	-

Intersection												
Int Delay, s/veh	2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	66	839	115	174	975	64	0	0	63	0	0	62
Future Vol, veh/h	66	839	115	174	975	64	0	0	63	0	0	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	200	250	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	94	94	94	78	78	78	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	69	874	120	185	1037	68	0	0	81	0	0	83

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1105	0	0	874	0	0	1900	2487	437	2015	2452	553
Stage 1	-	-	-	-	-	-	1011	1011	-	1441	1441	-
Stage 2	-	-	-	-	-	-	889	1476	-	574	1011	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	628	-	-	768	-	-	42	29	567	34	30	477
Stage 1	-	-	-	-	-	-	257	315	-	139	196	-
Stage 2	-	-	-	-	-	-	304	189	-	471	315	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	628	-	-	768	-	-	26	20	567	22	20	477
Mov Cap-2 Maneuver	-	-	-	-	-	-	26	20	-	22	20	-
Stage 1	-	-	-	-	-	-	229	280	-	124	149	-
Stage 2	-	-	-	-	-	-	191	143	-	360	280	-






















Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	1.6	12.4	14.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	567	628	-	-	768	-	-	477
HCM Lane V/C Ratio	0.142	0.109	-	-	0.241	-	-	0.173
HCM Control Delay (s)	12.4	11.4	-	-	11.2	-	-	14.1
HCM Lane LOS	B	B	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.5	0.4	-	-	0.9	-	-	0.6

**Appendix F – Total Traffic Conditions Analyses**

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	70	227	20	83	12	351	893	11	18	751	144
Future Volume (vph)	265	70	227	20	83	12	351	893	11	18	751	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	185		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.998			0.976	
Flt Protected	0.950	0.972			0.991		0.950			0.950		
Satd. Flow (prot)	1665	1703	1568	0	1802	0	1719	3431	0	1719	3356	0
Flt Permitted	0.950	0.972			0.991		0.115			0.279		
Satd. Flow (perm)	1665	1703	1568	0	1802	0	208	3431	0	505	3356	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			234		3			1			15	
Link Speed (mph)		45			30			35			35	
Link Distance (ft)		985			990			2801			1850	
Travel Time (s)		14.9			22.5			54.6			36.0	
Peak Hour Factor	0.97	0.97	0.97	0.80	0.80	0.80	0.88	0.88	0.88	0.87	0.87	0.87
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	273	72	234	25	104	15	399	1015	13	21	863	166
Shared Lane Traffic (%)	37%											
Lane Group Flow (vph)	172	173	234	0	144	0	399	1028	0	21	1029	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	40	40	40	20	40		40	40		40	40	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	40	40	40	20	40		40	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		2.0	4.0		2.0	4.0	
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0		8.0	35.0		8.0	35.0	

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	29.0	29.0	29.0	29.0	29.0		43.0	93.0		9.0	59.0	
Total Split (%)	18.1%	18.1%	18.1%	18.1%	18.1%		26.9%	58.1%		5.6%	36.9%	
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		37.0	87.0		3.0	53.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	2.5	2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			22.0			22.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	20.0	20.0	20.0		16.8		105.2	99.0		68.4	64.2	
Actuated g/C Ratio	0.12	0.12	0.12		0.10		0.66	0.62		0.43	0.40	
v/c Ratio	0.83	0.82	0.58		0.75		0.85	0.48		0.09	0.76	
Control Delay	97.8	95.6	13.1		90.9		68.6	27.3		17.8	47.0	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	97.8	95.6	13.1		90.9		68.6	27.3		17.8	47.0	
LOS	F	F	B		F		E	C		B	D	
Approach Delay		62.9			90.9			38.8			46.5	
Approach LOS		E			F			D			D	
Queue Length 50th (ft)	185	186	0		146		354	242		7	507	
Queue Length 95th (ft)	#290	#286	84		190		#477	420		21	606	
Internal Link Dist (ft)		905			910			2721			1770	
Turn Bay Length (ft)							225			185		
Base Capacity (vph)	239	244	425		261		495	2124		247	1355	
Starvation Cap Reductn	0	0	0		0		0	0		0	0	
Spillback Cap Reductn	0	0	0		0		0	0		0	0	
Storage Cap Reductn	0	0	0		0		0	0		0	0	
Reduced v/c Ratio	0.72	0.71	0.55		0.55		0.81	0.48		0.09	0.76	

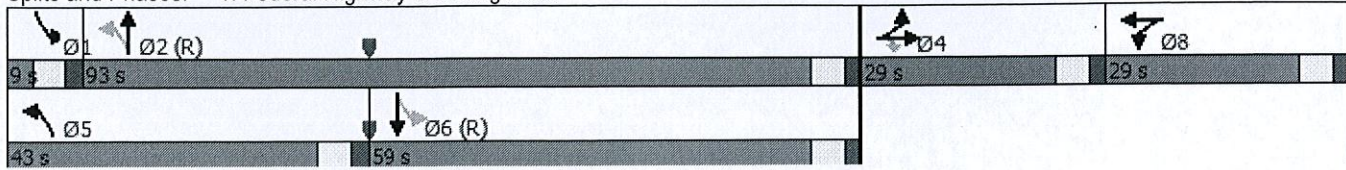
Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 135  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 48.0  
 Intersection Capacity Utilization 75.6%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

Splits and Phases: 1: Federal Highway & Stirling Road





Lanes, Volumes, Timings

3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

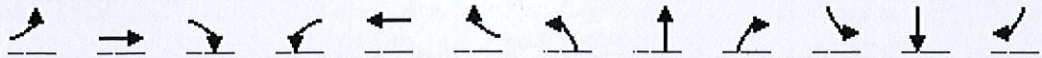
2/21/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	9	13	27	21	40	25	1185	11	36	820	72
Future Volume (vph)	43	9	13	27	21	40	25	1185	11	36	820	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	110		0	250		0	90		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frnt		0.973			0.902			0.999			0.988	
Flt Protected		0.968		0.950			0.950			0.950		
Satd. Flow (prot)	0	1737	0	1770	1680	0	1719	3435	0	1719	3397	0
Flt Permitted		0.968		0.950			0.271			0.193		
Satd. Flow (perm)	0	1737	0	1770	1680	0	490	3435	0	349	3397	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			51			1			9	
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		930			920			1689			2801	
Travel Time (s)		21.1			25.1			32.9			54.6	
Peak Hour Factor	0.83	0.83	0.83	0.75	0.75	0.75	0.95	0.95	0.95	0.91	0.91	0.91
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	52	11	16	36	28	53	26	1247	12	40	901	79
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	36	81	0	26	1259	0	40	980	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	40		40	40		40	40		40	40	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	40		40	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		14.0	14.0		14.0	14.0	
Minimum Split (s)	30.0	30.0		31.0	31.0		37.0	37.0		37.0	37.0	

Lanes, Volumes, Timings

3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

2/21/2016

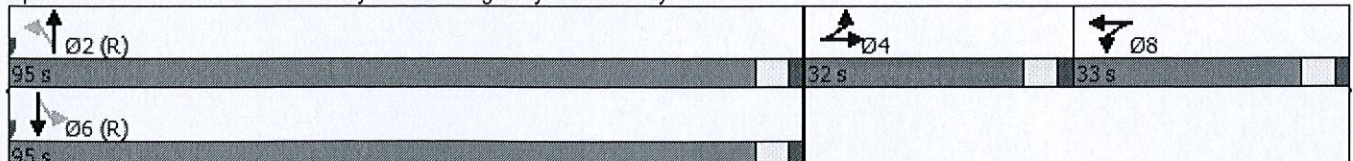


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	32.0	32.0		33.0	33.0		95.0	95.0		95.0	95.0	
Total Split (%)	20.0%	20.0%		20.6%	20.6%		59.4%	59.4%		59.4%	59.4%	
Maximum Green (s)	26.0	26.0		27.0	27.0		89.0	89.0		89.0	89.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		20.0	20.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		11.1		8.4	8.4		122.5	122.5		122.5	122.5	
Actuated g/C Ratio		0.07		0.05	0.05		0.77	0.77		0.77	0.77	
v/c Ratio		0.63		0.39	0.59		0.07	0.48		0.15	0.38	
Control Delay		86.3		84.1	48.9		12.8	22.3		11.1	8.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		86.3		84.1	48.9		12.8	22.3		11.1	8.5	
LOS		F		F	D		B	C		B	A	
Approach Delay		86.3			59.7			22.2			8.6	
Approach LOS		F			E			C			A	
Queue Length 50th (ft)		75		37	31		12	569		8	102	
Queue Length 95th (ft)		119		63	63		m16	m601		m24	253	
Internal Link Dist (ft)		850			840			1609			2721	
Turn Bay Length (ft)				110			250			90		
Base Capacity (vph)		288		298	325		375	2630		267	2602	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.27		0.12	0.25		0.07	0.48		0.15	0.38	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.63  
 Intersection Signal Delay: 20.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 53.4%  
 ICU Level of Service A  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.



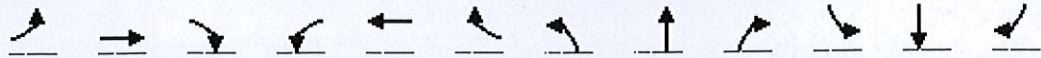
Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	271	554	78	147	384	290	297	1178	66	277	522	60
Future Volume (vph)	271	554	78	147	384	290	297	1178	66	277	522	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	280		230	350		65	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Fr <sub>t</sub>		0.981				0.850			0.850		0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3438	0	1770	3539	1583	1719	3438	1538	1719	3383	0
Flt Permitted	0.133			0.154			0.218			0.064		
Satd. Flow (perm)	245	3438	0	287	3539	1583	394	3438	1538	116	3383	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9				332			153		8	
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		955			725			913			785	
Travel Time (s)		16.3			12.4			17.8			15.3	
Peak Hour Factor	0.88	0.88	0.88	0.76	0.76	0.76	0.89	0.89	0.89	0.71	0.71	0.71
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	308	630	89	193	505	382	334	1324	74	390	735	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	308	719	0	193	505	382	334	1324	74	390	820	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	40	40		40	40	40	40	40	40	40	40	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	40	40		40	40	40	40	40	40	40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0	
Minimum Split (s)	11.5	35.5		11.5	32.5	32.5	11.0	39.0	39.0	11.0	39.0	

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	28.0	40.7		19.9	32.6	32.6	39.0	65.4	65.4	34.0	60.4	
Total Split (%)	17.5%	25.4%		12.4%	20.4%	20.4%	24.4%	40.9%	40.9%	21.3%	37.8%	
Maximum Green (s)	21.5	34.2		13.4	26.1	26.1	33.0	59.4	59.4	28.0	54.4	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.5		1.5	2.5	2.5	1.5	3.0	3.0	1.5	3.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		22.0			19.0	19.0		26.0	26.0		26.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	54.0	34.1		39.4	26.0	26.0	84.3	59.4	59.4	89.0	62.6	
Actuated g/C Ratio	0.34	0.21		0.25	0.16	0.16	0.53	0.37	0.37	0.56	0.39	
v/c Ratio	1.08	0.97		0.99	0.88	0.71	0.81	1.04	0.11	1.13	0.62	
Control Delay	119.9	87.8		106.1	82.3	18.3	36.2	83.8	0.3	134.5	53.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	119.9	87.8		106.1	82.3	18.3	36.2	83.8	0.3	134.5	53.1	
LOS	F	F		F	F	B	D	F	A	F	D	
Approach Delay		97.4			63.9			71.1			79.3	
Approach LOS		F			E			E			E	
Queue Length 50th (ft)	~304	392		153	275	46	175	~782	0	~416	437	
Queue Length 95th (ft)	#488	#505		#232	283	71	259	#904	0	#430	402	
Internal Link Dist (ft)		875			645			833			705	
Turn Bay Length (ft)	275			280		230	350		65	300		
Base Capacity (vph)	285	741		195	577	536	500	1276	307	345	1328	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	1.08	0.97		0.99	0.88	0.71	0.67	1.04	0.11	1.13	0.62	









Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 40 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 140  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.13  
 Intersection Signal Delay: 76.9  
 Intersection LOS: E  
 Intersection Capacity Utilization 94.7%  
 ICU Level of Service F  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

Splits and Phases: 23: Federal Hwy. & Sheridan St. /Sheridan St.

 Ø1 34 s	 Ø2 (R) 65.4 s	 Ø3 19.9 s	 Ø4 40.7 s
 Ø5 39 s	 Ø6 (R) 60.4 s	 Ø7 28 s	 Ø8 32.6 s

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	5	0	2	3	0	11	3	1150	4	11	907	1
Future Vol, veh/h	5	0	2	3	0	11	3	1150	4	11	907	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	58	58	40	40	40	93	93	93	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	9	0	3	8	0	28	3	1237	4	12	955	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1603	2225	478	1746	2224	620	956	0	0	1241	0	0
Stage 1	978	978	-	1245	1245	-	-	-	-	-	-	-
Stage 2	625	1247	-	501	979	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	71	43	534	55	43	431	697	-	-	541	-	-
Stage 1	269	327	-	184	244	-	-	-	-	-	-	-
Stage 2	439	244	-	521	326	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	65	42	534	54	42	431	697	-	-	541	-	-
Mov Cap-2 Maneuver	65	42	-	54	42	-	-	-	-	-	-	-
Stage 1	268	320	-	183	243	-	-	-	-	-	-	-
Stage 2	409	243	-	506	319	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	52.9	31	0	0.1
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	697	-	-	87	173	541	-	-
HCM Lane V/C Ratio	0.005	-	-	0.139	0.202	0.021	-	-
HCM Control Delay (s)	10.2	-	-	52.9	31	11.8	-	-
HCM Lane LOS	B	-	-	F	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.7	0.1	-	-

**Intersection**

Int Delay, s/veh 1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	7	0	33	8	0	4	18	1117	12	2	897	18
Future Vol, veh/h	7	0	33	8	0	4	18	1117	12	2	897	18
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	63	63	63	92	92	92	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	9	0	41	13	0	6	20	1214	13	2	944	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1604	2224	482	1736	2227	614	963	0	0	1227	0	0
Stage 1	958	958	-	1260	1260	-	-	-	-	-	-	-
Stage 2	646	1266	-	476	967	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	70	43	530	56	43	435	692	-	-	547	-	-
Stage 1	276	334	-	180	240	-	-	-	-	-	-	-
Stage 2	427	238	-	539	331	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	67	42	530	50	42	435	692	-	-	547	-	-
Mov Cap-2 Maneuver	67	42	-	50	42	-	-	-	-	-	-	-
Stage 1	268	333	-	175	233	-	-	-	-	-	-	-
Stage 2	409	231	-	496	330	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.8	73.3	0.2	0
HCM LOS	C	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	692	-	-	240	71	547	-	-
HCM Lane V/C Ratio	0.028	-	-	0.206	0.268	0.004	-	-
HCM Control Delay (s)	10.4	-	-	23.8	73.3	11.6	-	-
HCM Lane LOS	B	-	-	C	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	1	0	-	-

**Intersection**

Int Delay, s/veh 2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	80	678	44	76	842	22	0	0	24	0	0	106
Future Vol, veh/h	80	678	44	76	842	22	0	0	24	0	0	106
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	200	250	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	92	92	92	67	67	67	57	57	57
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	100	848	55	83	915	24	0	0	36	0	0	186

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	939	0	0	848	0	0	1671	2152	424	1716	2140	470
Stage 1	-	-	-	-	-	-	1048	1048	-	1092	1092	-
Stage 2	-	-	-	-	-	-	623	1104	-	624	1048	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	726	-	-	785	-	-	63	47	579	58	48	540
Stage 1	-	-	-	-	-	-	244	303	-	229	289	-
Stage 2	-	-	-	-	-	-	440	285	-	440	303	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	726	-	-	785	-	-	34	36	579	45	37	540
Mov Cap-2 Maneuver	-	-	-	-	-	-	34	36	-	45	37	-
Stage 1	-	-	-	-	-	-	210	261	-	197	258	-
Stage 2	-	-	-	-	-	-	258	255	-	356	261	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.8	11.6	15.1
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	579	726	-	-	785	-	-	540
HCM Lane V/C Ratio	0.062	0.138	-	-	0.105	-	-	0.344
HCM Control Delay (s)	11.6	10.7	-	-	10.1	-	-	15.1
HCM Lane LOS	B	B	-	-	B	-	-	C
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0.4	-	-	1.5



**Intersection**

Int Delay, s/veh 2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	5	13	1	8	8	1
Future Vol, veh/h	5	13	1	8	8	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	14	1	9	9	1

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	24
Stage 1	-	-	13
Stage 2	-	-	11
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1596	992
Stage 1	-	-	1010
Stage 2	-	-	1012
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1596	991
Mov Cap-2 Maneuver	-	-	991
Stage 1	-	-	1010
Stage 2	-	-	1011

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	999	-	-	1596	-
HCM Lane V/C Ratio	0.01	-	-	0.001	-
HCM Control Delay (s)	8.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

**Intersection**

Int Delay, s/veh 5.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	15	2	5	3	2	9
Future Vol, veh/h	15	2	5	3	2	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	2	5	3	2	10






















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	9	0	42
Stage 1	-	-	7
Stage 2	-	-	35
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1611	-	969
Stage 1	-	-	1016
Stage 2	-	-	987
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1611	-	959
Mov Cap-2 Maneuver	-	-	959
Stage 1	-	-	1016
Stage 2	-	-	977

Approach	EB	WB	SB
HCM Control Delay, s	6.4	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1611	-	-	-	1052
HCM Lane V/C Ratio	0.01	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	8.5
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	290	112	350	27	74	11	250	808	26	23	1170	221
Future Volume (vph)	290	112	350	27	74	11	250	808	26	23	1170	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	185		0
Storage Lanes	1		1	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt			0.850		0.986			0.995			0.976	
Flt Protected	0.950	0.978			0.988		0.950			0.950		
Satd. Flow (prot)	1665	1714	1568	0	1797	0	1719	3421	0	1719	3356	0
Flt Permitted	0.950	0.978			0.988		0.050			0.326		
Satd. Flow (perm)	1665	1714	1568	0	1797	0	90	3421	0	590	3356	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			335		3			3			17	
Link Speed (mph)		45			30			35			35	
Link Distance (ft)		985			990			2801			1850	
Travel Time (s)		14.9			22.5			54.6			36.0	
Peak Hour Factor	0.93	0.93	0.93	0.88	0.88	0.88	0.96	0.96	0.96	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	312	120	376	31	84	13	260	842	27	25	1272	240
Shared Lane Traffic (%)	32%											
Lane Group Flow (vph)	212	220	376	0	128	0	260	869	0	25	1512	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1	1	1	1		1	1		1	1	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	40	40	40	20	40		40	40		40	40	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	40	40	40	20	40		40	40		40	40	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA	Perm	Split	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4				2			6		
Detector Phase	4	4	4	8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0		2.0	4.0		2.0	4.0	
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0		8.0	35.0		8.0	35.0	

Lanes, Volumes, Timings  
1: Federal Highway & Stirling Road

2/21/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	29.0	29.0	29.0	29.0	29.0		26.0	93.0		9.0	76.0	
Total Split (%)	18.1%	18.1%	18.1%	18.1%	18.1%		16.3%	58.1%		5.6%	47.5%	
Maximum Green (s)	23.0	23.0	23.0	23.0	23.0		20.0	87.0		3.0	70.0	
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0		6.0	6.0		6.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	2.5	2.5	2.5	2.0	2.0		1.5	3.0		1.5	3.0	
Recall Mode	None	None	None	None	None		None	C-Min		None	C-Min	
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			7.0			7.0	
Flash Dont Walk (s)	18.0	18.0	18.0	18.0	18.0			22.0			22.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0			0	
Act Effct Green (s)	22.3	22.3	22.3		15.5		104.2	97.8		78.3	73.7	
Actuated g/C Ratio	0.14	0.14	0.14		0.10		0.65	0.61		0.49	0.46	
v/c Ratio	0.92	0.92	0.74		0.73		0.84	0.42		0.08	0.97	
Control Delay	107.9	108.6	19.5		90.6		91.4	6.1		14.0	58.8	
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay	107.9	108.6	19.5		90.6		91.4	6.1		14.0	58.8	
LOS	F	F	B		F		F	A		B	E	
Approach Delay		67.0			90.6			25.7			58.1	
Approach LOS		E			F			C			E	
Queue Length 50th (ft)	232	242	38		129		233	98		9	-876	
Queue Length 95th (ft)	#395	#408	161		192		#416	146		24	#1017	
Internal Link Dist (ft)		905			910			2721			1770	
Turn Bay Length (ft)							225			185		
Base Capacity (vph)	239	246	512		260		308	2091		320	1554	
Starvation Cap Reductn	0	0	0		0		0	0		0	0	
Spillback Cap Reductn	0	0	0		0		0	0		0	0	
Storage Cap Reductn	0	0	0		0		0	0		0	0	
Reduced v/c Ratio	0.89	0.89	0.73		0.49		0.84	0.42		0.08	0.97	

Intersection Summary











Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 2 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 155  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.97  
 Intersection Signal Delay: 51.1  
 Intersection Capacity Utilization 85.9%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service E

~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings  
 1: Federal Highway & Stirling Road

2/21/2016

Splits and Phases: 1: Federal Highway & Stirling Road

 Ø1  Ø2 (R)	 Ø4  Ø8
	
 Ø5  Ø6 (R)	
	

Lanes, Volumes, Timings

3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

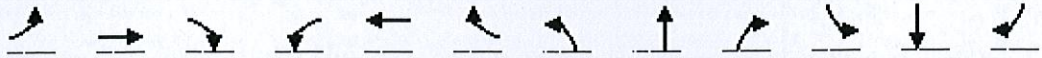
2/21/2016

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	22	21	19	37	49	20	1208	25	45	1174	83
Future Volume (vph)	39	22	21	19	37	49	20	1208	25	45	1174	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	110		0	250		0	90		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Fr t		0.966			0.914			0.997			0.990	
Fit Protected		0.977		0.950			0.950			0.950		
Satd. Flow (prot)	0	1741	0	1770	1703	0	1719	3428	0	1719	3404	0
Fit Permitted		0.977		0.950			0.180			0.183		
Satd. Flow (perm)	0	1741	0	1770	1703	0	326	3428	0	331	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			36			2			7	
Link Speed (mph)		30			25			35			35	
Link Distance (ft)		930			920			1689			2801	
Travel Time (s)		21.1			25.1			32.9			54.6	
Peak Hour Factor	0.72	0.72	0.72	0.95	0.95	0.95	0.97	0.97	0.97	0.98	0.98	0.98
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	54	31	29	20	39	52	21	1245	26	46	1198	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	114	0	20	91	0	21	1271	0	46	1283	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	40		40	40		40	40		40	40	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	40		40	40		40	40		40	40	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		8	8			2			6	
Permitted Phases							2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		14.0	14.0		14.0	14.0	
Minimum Split (s)	30.0	30.0		31.0	31.0		37.0	37.0		37.0	37.0	

Lanes, Volumes, Timings

3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.

2/21/2016



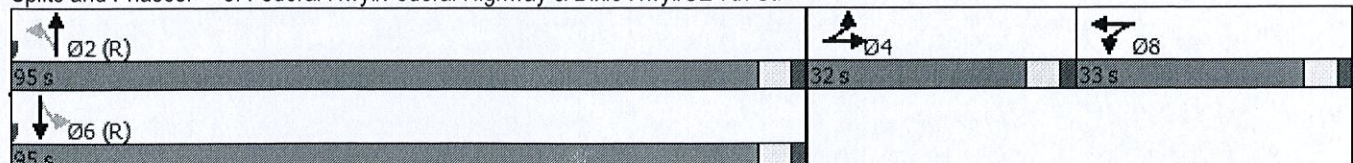
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	32.0	32.0		33.0	33.0		95.0	95.0		95.0	95.0	
Total Split (%)	20.0%	20.0%		20.6%	20.6%		59.4%	59.4%		59.4%	59.4%	
Maximum Green (s)	26.0	26.0		27.0	27.0		89.0	89.0		89.0	89.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	2.0	2.0		2.0	2.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	5.0	5.0		5.0	5.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		20.0	20.0		24.0	24.0		24.0	24.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		14.1		10.1	10.1		117.9	117.9		117.9	117.9	
Actuated g/C Ratio		0.09		0.06	0.06		0.74	0.74		0.74	0.74	
v/c Ratio		0.71		0.18	0.65		0.09	0.50		0.19	0.51	
Control Delay		87.6		72.8	64.6		4.5	3.7		5.8	9.8	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		87.6		72.8	64.6		4.5	3.7		5.8	9.8	
LOS		F		E	E		A	A		A	A	
Approach Delay		87.6			66.0			3.7			9.7	
Approach LOS		F			E			A			A	
Queue Length 50th (ft)		109		20	57		2	67		8	307	
Queue Length 95th (ft)		134		50	118		m5	125		m19	m665	
Internal Link Dist (ft)		850			840			1609			2721	
Turn Bay Length (ft)				110			250			90		
Base Capacity (vph)		290		298	317		240	2525		243	2509	
Starvation Cap Reductn		0		0	0		0	0		0	0	
Spillback Cap Reductn		0		0	0		0	0		0	0	
Storage Cap Reductn		0		0	0		0	0		0	0	
Reduced v/c Ratio		0.39		0.07	0.29		0.09	0.50		0.19	0.51	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 98 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.71  
 Intersection Signal Delay: 12.3  
 Intersection Capacity Utilization 58.7%  
 Analysis Period (min) 15  
 m Volume for 95th percentile queue is metered by upstream signal.

Intersection LOS: B  
 ICU Level of Service B

Splits and Phases: 3: Federal Hwy./Federal Highway & Dixie Hwy./SE 7th St.



Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016













Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	536	44	175	427	226	237	766	86	302	833	59
Future Volume (vph)	203	536	44	175	427	226	237	766	86	302	833	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	275		0	280		230	350		65	300		0
Storage Lanes	1		0	1		1	1		1	1		0
Taper Length (ft)	50			50			50			50		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frnt		0.989				0.850			0.850		0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3466	0	1770	3539	1583	1719	3438	1538	1719	3404	0
Flt Permitted	0.254			0.128			0.113			0.078		
Satd. Flow (perm)	469	3466	0	238	3539	1583	204	3438	1538	141	3404	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				248			109		5	
Link Speed (mph)		40			40			35			35	
Link Distance (ft)		955			725			913			785	
Travel Time (s)		16.3			12.4			17.8			15.3	
Peak Hour Factor	0.87	0.87	0.87	0.91	0.91	0.91	0.74	0.74	0.74	0.85	0.85	0.85
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	5%	5%	5%	5%	5%	5%
Adj. Flow (vph)	233	616	51	192	469	248	320	1035	116	355	980	69
Shared Lane Traffic (%)												
Lane Group Flow (vph)	233	667	0	192	469	248	320	1035	116	355	1049	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		10			10			10			10	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	1		1	1	1	1	1	1	1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (ft)	40	40		40	40	40	40	40	40	40	40	
Trailing Detector (ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0	0	0	0	
Detector 1 Size(ft)	40	40		40	40	40	40	40	40	40	40	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Detector Phase	7	4		3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	4.0	6.0		4.0	6.0	6.0	4.0	12.0	12.0	4.0	12.0	
Minimum Split (s)	11.5	35.5		11.5	32.5	32.5	11.0	39.0	39.0	11.0	39.0	

Total PM.syn



Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Split (s)	24.4	40.0		23.0	38.6	38.6	32.0	62.0	62.0	35.0	65.0	
Total Split (%)	15.3%	25.0%		14.4%	24.1%	24.1%	20.0%	38.8%	38.8%	21.9%	40.6%	
Maximum Green (s)	17.9	33.5		16.5	32.1	32.1	26.0	56.0	56.0	29.0	59.0	
Yellow Time (s)	4.5	4.5		4.5	4.5	4.5	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	1.5	2.5		1.5	2.5	2.5	1.5	3.0	3.0	1.5	3.0	
Recall Mode	None	None		None	None	None	None	C-Min	C-Min	None	C-Min	
Walk Time (s)		7.0			7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		22.0			19.0	19.0		26.0	26.0		26.0	
Pedestrian Calls (#/hr)		0			0	0		0	0		0	
Act Effct Green (s)	50.0	32.8		46.9	31.2	31.2	81.7	56.3	56.3	90.7	61.1	
Actuated g/C Ratio	0.31	0.20		0.29	0.20	0.20	0.51	0.35	0.35	0.57	0.38	
v/c Ratio	0.82	0.94		0.87	0.68	0.49	0.93	0.86	0.19	0.94	0.81	
Control Delay	63.2	82.8		77.8	65.3	9.3	74.7	56.6	7.5	61.2	67.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	63.2	82.8		77.8	65.3	9.3	74.7	56.6	7.5	61.2	67.6	
LOS	E	F		E	E	A	E	E	A	E	E	
Approach Delay		77.8			52.6			56.7			66.0	
Approach LOS		E			D			E			E	
Queue Length 50th (ft)	181	361		145	241	0	253	534	5	336	591	
Queue Length 95th (ft)	#266	#444		#284	305	79	278	471	27	#478	626	
Internal Link Dist (ft)		875			645			833			705	
Turn Bay Length (ft)	275			280		230	350		65	300		
Base Capacity (vph)	293	730		230	710	515	355	1231	621	378	1312	
Starvation Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0		0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.80	0.91		0.83	0.66	0.48	0.90	0.84	0.19	0.94	0.80	











Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 48 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green  
 Natural Cycle: 110  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.94  
 Intersection Signal Delay: 62.7  
 Intersection Capacity Utilization 84.8%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings  
 23: Federal Hwy. & Sheridan St. /Sheridan St.

2/21/2016

Splits and Phases: 23: Federal Hwy. & Sheridan St. /Sheridan St.

 Ø1	  Ø2 (R)	 Ø3	 Ø4
35 s	62 s	23 s	40 s
 Ø5	  Ø6 (R)	 Ø7	 Ø8
32 s	65 s	24.4 s	38.6 s

**Intersection**

Int Delay, s/veh 2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	8	0	17	8	0	30	23	1188	25	29	1177	5
Future Vol, veh/h	8	0	17	8	0	30	23	1188	25	29	1177	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	150	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	57	57	57	75	75	75	97	97	97	97	97	97
Heavy Vehicles, %	1	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	14	0	30	11	0	40	24	1225	26	30	1213	5

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1936	2574	609	1951	2563	625	1219	0	0	1251	0	0
Stage 1	1276	1276	-	1285	1285	-	-	-	-	-	-	-
Stage 2	660	1298	-	666	1278	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.52	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	40	25	438	38	26	428	551	-	-	536	-	-
Stage 1	178	236	-	174	233	-	-	-	-	-	-	-
Stage 2	421	230	-	415	235	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	34	23	438	33	23	428	551	-	-	536	-	-
Mov Cap-2 Maneuver	34	23	-	33	23	-	-	-	-	-	-	-
Stage 1	170	223	-	166	223	-	-	-	-	-	-	-
Stage 2	365	220	-	365	222	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	76.9	54	0.2	0.3
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	551	-	-	91	122	536	-	-
HCM Lane V/C Ratio	0.043	-	-	0.482	0.415	0.056	-	-
HCM Control Delay (s)	11.8	-	-	76.9	54	12.1	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	2.1	1.8	0.2	-	-

**Intersection**

Int Delay, s/veh 9.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	3	0	4	28	0	19	15	1203	36	15	1172	20
Future Vol, veh/h	3	0	4	28	0	19	15	1203	36	15	1172	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	50	-	-	50	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	58	58	58	63	63	63	97	97	97	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	5	5	5	5	5	5
Mvmt Flow	5	0	7	44	0	30	15	1240	37	16	1221	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1914	2571	621	1932	2563	639	1242	0	0	1277	0	0
Stage 1	1263	1263	-	1290	1290	-	-	-	-	-	-	-
Stage 2	651	1308	-	642	1273	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.2	-	-	4.2	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.25	-	-	2.25	-	-
Pot Cap-1 Maneuver	41	26	430	~ 40	26	419	540	-	-	524	-	-
Stage 1	180	239	-	173	232	-	-	-	-	-	-	-
Stage 2	424	228	-	429	237	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	36	25	430	~ 38	25	419	540	-	-	524	-	-
Mov Cap-2 Maneuver	36	25	-	~ 38	25	-	-	-	-	-	-	-
Stage 1	175	232	-	168	226	-	-	-	-	-	-	-
Stage 2	383	222	-	409	230	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	61.1	\$ 311	0.1	0.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	540	-	-	76	60	524	-	-
HCM Lane V/C Ratio	0.029	-	-	0.159	1.243	0.03	-	-
HCM Control Delay (s)	11.9	-	-	61.1	\$ 311	12.1	-	-
HCM Lane LOS	B	-	-	F	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	6.3	0.1	-	-

**Notes**

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

**Intersection**

Int Delay, s/veh 2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	66	839	115	174	975	69	0	0	63	0	0	68
Future Vol, veh/h	66	839	115	174	975	69	0	0	63	0	0	68
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	200	250	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	94	94	94	78	78	78	75	75	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	69	874	120	185	1037	73	0	0	81	0	0	91

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1111	0	0	874	0	0	1900	2492	437	2018	2455	555
Stage 1	-	-	-	-	-	-	1011	1011	-	1444	1444	-
Stage 2	-	-	-	-	-	-	889	1481	-	574	1011	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	624	-	-	768	-	-	42	29	567	34	30	475
Stage 1	-	-	-	-	-	-	257	315	-	139	195	-
Stage 2	-	-	-	-	-	-	304	187	-	471	315	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	624	-	-	768	-	-	25	20	567	22	20	475
Mov Cap-2 Maneuver	-	-	-	-	-	-	25	20	-	22	20	-
Stage 1	-	-	-	-	-	-	229	280	-	124	148	-
Stage 2	-	-	-	-	-	-	187	142	-	359	280	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	1.6	12.4	14.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	567	624	-	-	768	-	-	475
HCM Lane V/C Ratio	0.142	0.11	-	-	0.241	-	-	0.191
HCM Control Delay (s)	12.4	11.5	-	-	11.2	-	-	14.4
HCM Lane LOS	B	B	-	-	B	-	-	B
HCM 95th %tile Q(veh)	0.5	0.4	-	-	0.9	-	-	0.7

**Intersection**

Int Delay, s/veh 3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Traffic Vol, veh/h	27	34	4	9	37	4
Future Vol, veh/h	27	34	4	9	37	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	37	4	10	40	4

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	66
Stage 1	-	-	48
Stage 2	-	-	18
Critical Hdwy	-	4.12	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	2.218	3.518
Pot Cap-1 Maneuver	-	1536	939
Stage 1	-	-	974
Stage 2	-	-	1005
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	1536	936
Mov Cap-2 Maneuver	-	-	936
Stage 1	-	-	974
Stage 2	-	-	1002

Approach	EB	WB	NB
HCM Control Delay, s	0	2.3	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	944	-	-	1536	-
HCM Lane V/C Ratio	0.047	-	-	0.003	-
HCM Control Delay (s)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

**Intersection**

Int Delay, s/veh 5.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	41	21	15	7	7	44
Future Vol, veh/h	41	21	15	7	7	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	23	16	8	8	48

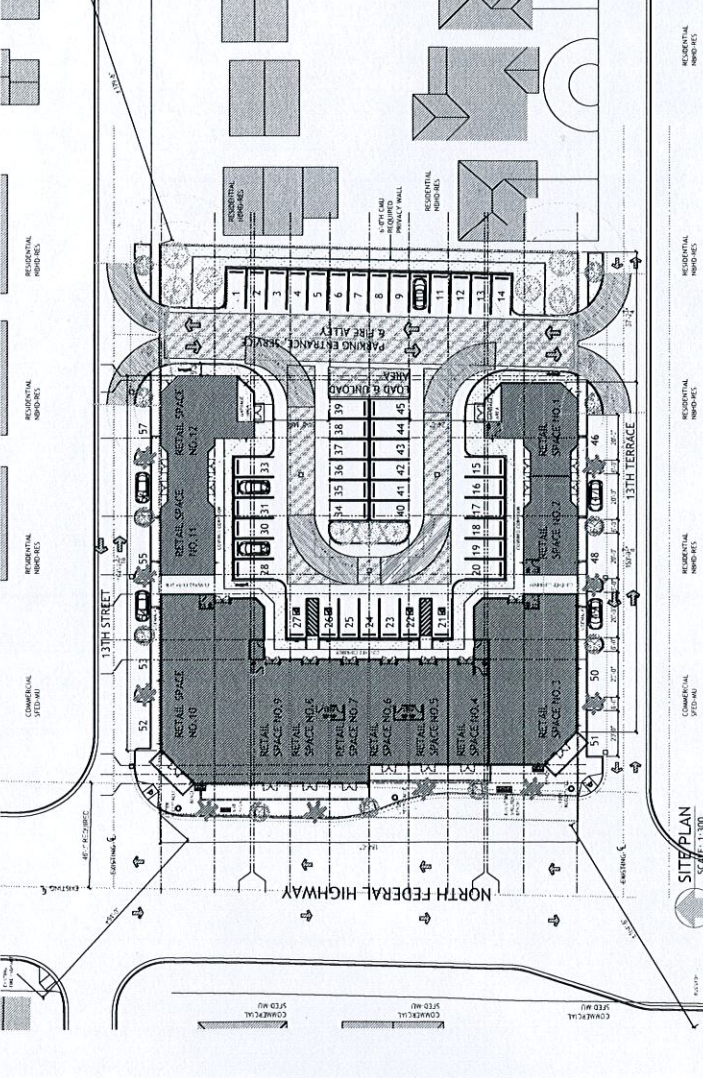
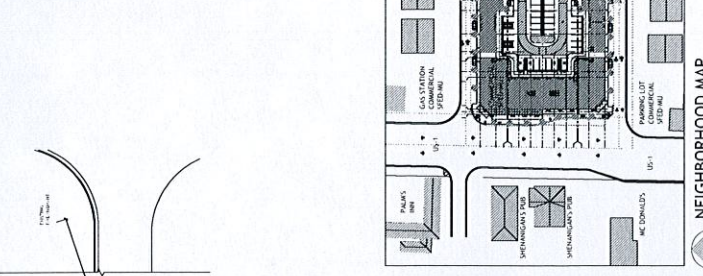
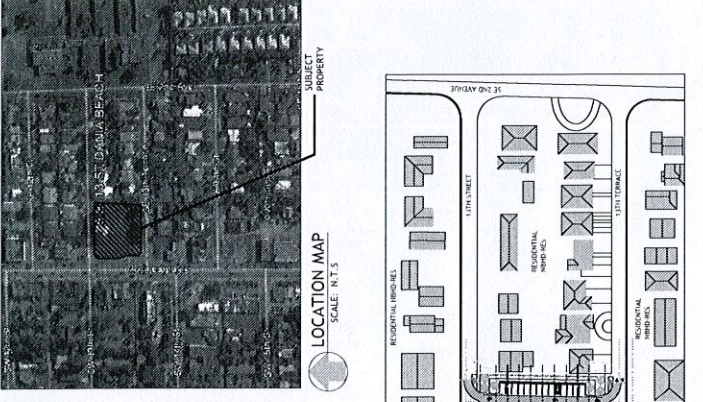
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	24	0	132
Stage 1	-	-	20
Stage 2	-	-	112
Critical Hdwy	4.12	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.218	-	3.518
Pot Cap-1 Maneuver	1591	-	862
Stage 1	-	-	1003
Stage 2	-	-	913
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1591	-	837
Mov Cap-2 Maneuver	-	-	837
Stage 1	-	-	1003
Stage 2	-	-	887

Approach	EB	WB	SB
HCM Control Delay, s	4.8	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1591	-	-	-	1021
HCM Lane V/C Ratio	0.028	-	-	-	0.054
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

**Appendix G – Project Site Plan**





**BURGLARY/SECURITY NOTES**

1. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED WITH A MINIMUM OF 4" CMU WITH REINFORCING BARS AT 16" ON CENTER.
2. ALL EXTERIOR DOORS SHALL BE CONSTRUCTED WITH A MINIMUM OF 1 1/2" SOLID CORE WITH REINFORCING BARS AT 16" ON CENTER.
3. ALL EXTERIOR WINDOWS SHALL BE CONSTRUCTED WITH A MINIMUM OF 1/2" LAMINATED GLASS WITH REINFORCING BARS AT 16" ON CENTER.
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11. ALL EXTERIOR DOORS SHALL BE CONSTRUCTED WITH A MINIMUM OF 1 1/2" SOLID CORE WITH REINFORCING BARS AT 16" ON CENTER.
12. ALL EXTERIOR WINDOWS SHALL BE CONSTRUCTED WITH A MINIMUM OF 1/2" LAMINATED GLASS WITH REINFORCING BARS AT 16" ON CENTER.

**TERMINITE PROTECTION NOTES**

1. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED WITH A MINIMUM OF 4" CMU WITH REINFORCING BARS AT 16" ON CENTER.
2. ALL EXTERIOR DOORS SHALL BE CONSTRUCTED WITH A MINIMUM OF 1 1/2" SOLID CORE WITH REINFORCING BARS AT 16" ON CENTER.
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PERVIOUS & IMPERVIOUS AREAS	MAXIMUM	PROPOSED
LOT TOTAL AREA	44,115.50 S.F.	35,777.20 S.F. (81.1%)
AREA - IMPERVIOUS (85% MAX)	37,498.175 S.F.	6,677.325 S.F. (18.8%)
AREA - PERVIOUS (15% MIN)	6,617.325 S.F.	8,338.30 S.F. (18.8%)

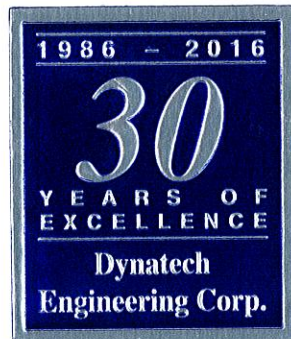
**GENERAL NOTES**

1. ALL EXTERIOR WALLS SHALL BE CONSTRUCTED WITH A MINIMUM OF 4" CMU WITH REINFORCING BARS AT 16" ON CENTER.
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# DYNATECH ENGINEERING CORP.

*Geotechnical, Environmental, Testing Labs.*



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# DYNATECH ENGINEERING CORP.

WWW.DYNATECHENGINEERING.COM

Miami, January 8, 2016

Mr. Enrique Barton  
 DANIA SQUARE INVESTMENT  
 1301 S. Federal Highway  
 Dania Beach, FL 33004

Re: The Palms at Dania Beach @  
 1301 South Federal Highway  
 Dania Beach, FL

Dear Mr. Barton:

Pursuant to your request, DYNATECH ENGINEERING CORP. (DEC) completed a Subsoil Investigation on January 8<sup>th</sup> at the above referenced project. The purpose of our investigation was to help determine the subsoil conditions relative to foundation design of the proposed structures.

A total of three (3) standard penetration boring test was performed according to ASTM-D 1586 down to an average depth of 20' below existing ground surface at the locations shown on the attached sketch only.

The following graph was developed as a general condition below existing ground surface at the time of drilling for the subject site: (Refer to field boring logs for exact locations and soil description):

Average Depth

<u>From</u>	<u>To</u>	<u>Description</u>
0'-0"	0'-3"	Top soil and grass
0'-3"	1'-0"	Tan medium sand with rock fragments
1'-0"	1'-6"	Dark brown sand with organic stain
1'-6"	2'-6"	Brown sand
2'-6"	4'-0"	Tan sand
4'-0"	8'-0"	Brown sand
8'-0"	9'-0"	Tan silty sand
9'-0"	20'-0"	Tan sandy limerock

Groundwater was measured immediately at the completion of each boring and was found at an average depth of approximately 7'-0" below existing ground surface at the time of drilling. Existing ground surface elevation was not provided to us at the time of drilling. Design engineers must verify existing ground elevations as well as FEMA Flood and County highest and lowest groundwater elevation for their design. Fluctuation in water level is anticipated due to seasonal variations and run off as well as varying ground elevations construction dewatering and pumping activities in the area and global warming. Site contractor must familiarize himself with site conditions in the event groundwater controls and dewatering is needed during construction. Surface flooding may result under hurricane conditions and should be taken into consideration in the design of the project. The contractor shall monitor and make sure that groundwater levels on adjacent properties are not adversely impacted due to the contractors dewatering activities. Specialty groundwater and water proofing contractors shall be consulted for all work below the groundwater level.



Re: 1301 South Federal Highway, Dania Beach, FL

Based on our understanding of the proposed structure and our field boring logs; the following are our recommendations for foundations design.

- A- Strip the entire building construction areas of all topsoil, grass, pavements, tree stumps and construction debris down to clean granular material wherever encountered (see field boring logs). Any underground structures, former pools, septic tanks, utilities, root systems and drainages trenches, etc. must be removed in their entirety from beneath the proposed construction area.
- B- Compact all construction areas with a heavy self-propelled roller to a minimum of 95% of ASTM D-1557 but not less than 10 passes in each direction. Localized areas of loose materials, if present, will become evident during site clearing, grubbing and proof rolling, and must be removed prior to filling operations. Backfill construction areas to required elevation using clean granular homogenous material placed in lifts not to exceed 12 inches in thickness and compact as indicated in items B.
- C- **Excavate footing areas only to minimum of 24" depth and remove any black sand with organic stain.**
- D- Care should be taken not use vibration in case of existing structures in the vicinity of the construction area. If vibration cannot be used for compaction, static compaction may be applied. However, in this case, the compacted layer should not exceed 6 inches in thickness.
- E- All construction fill material above the water table shall consist of clean granular homogenous soil, free of organics or other deleterious material, and shall contain no more than 12 percent fines passing a U.S. standard No. 200 sieve and have a Unified Soil Classification System (USCS) designation of GP, GW, GP-GM, GW-GM, SP, or SW. No particle size greater than 3 inches shall be in the top 12 inches of the building pad.  
Fill material below the water table shall consist of washed free draining gravel to about 12 inches above the water table. (i.e.: Ballast rock FDOT No. 57 stone or equivalent) unless dewatering is employed. When dewatering is employed, fill material shall consist of clean, granular homogenous soil, free of organics or other deleterious material, and shall contain no more than 5 percent fines passing a US standard No. 200 sieve.
- F- Verify all compaction efforts by taking an adequate number of field density tests in each layer of compacted material and in each footing pad.
- G- Representative samples of the on-site and proposed fill material shall be collected and tested to determine the classification and compaction characteristics.
- H- All Geotechnical work must be performed under the supervision of our geotechnical engineer or his representative to verify compliance with our specifications and the Florida Building Code.
- I- In case of existing structures, existing footings new foundations and proposed drainage lines, provisions shall be made by the structural engineer, the civil engineer, and site contractor to protect all footings from future erosion, undermining and exposure. The geotechnical engineer shall be notified of these conditions to evaluate the applicability of his recommendations.

The above foundation recommendations being achieved and verified, it is our opinion that the proposed structures be designed for a shallow foundation system with a net static permissible soil bearing pressure not to exceed 2500 P.S.F. All footings shall be based at a depth of not less than 12 inches below the lowest adjacent grade.



Re: 1301 South Federal Highway, Dania Beach, FL

Slabs placed upon compacted fill may be designed using a modulus of subgrade reaction value of 200 pci; and must be provided with proper expansion and control joints.

The following soil parameters shall be used for retaining wall designs:

- Soil unit weight moist: 130 pcf. Submerged: 70 Pcf.
- Angle of internal friction: 30°
- Earth pressure coefficient Ka: 0.33; Kp: 3.0
- Angle of wall friction: 30° for steel piles, 20° for concrete or brick walls; 15° uncoated steel.

Excavations shall not extend within 1 foot of the angle of repose, next to existing footings or structures, unless underpinned. Trenching shall be in compliance with the Florida Building Code, OSHA and Trench Safety Act. Shorings shall be designed and inspected by Florida licensed professional engineer.

Provisions shall be made by the architect, engineer of record and contractor to address differential vibration / dynamic loading; settlements when tying in new to existing structures. Mixing of different foundation types shall not be used unless provided with expansion joints to address differential settlements and vibration transfer.

Also note that as a common engineering practice for existing and new construction; outside ground surfaces must be sloped away from the structure as to avoid water accumulation and ponding. Rain gutters shall be installed and all rain water shall be discharged over splash guards a minimum of 5 feet away from building foundations. Verify all water, sewer, plumbing, sprinkler and drainage lines are properly functioning with no leaks in the vicinity of the foundations.

An arborist must be consulted prior to any land clearing to verify compliance with local codes.

Detailed settlement analysis was beyond the scope of this report. However, we have compared the field test data obtained in this exploration with our experience with structures similar to those proposed for this report. The estimated magnitude of these settlements is ½ to 1 inch. Due to the granular nature of the subsurface materials, the foundation settlements should occur as the loads are applied and should be virtually negligible by the end of the building shell completion.

If dynamic loading is proposed (i.e.: parking garage, etc.) this condition MUST be brought to our attention to re-evaluate the applicability of our recommendations.

This report was prepared in compliance with the 2014 Florida Building Code. Site elevations were not provided to us for the test locations. Depths reported on the field boring logs represent the depth below existing ground surface as they existed on the date of drilling. In the event of subsequent filling, excavations or site work, the reported depths must be adjusted to represent proper depths.

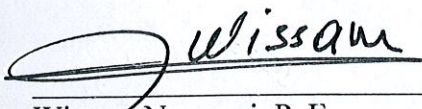


Re: 1301 South Federal Highway, Dania Beach, FL

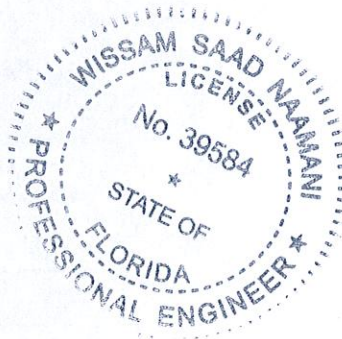
The boring log (s) attached present (s) a detailed description of the soils encountered at test location (s). The soil stratification shown on the boring log (s) is based on the examination of the recovered soil samples and interpretation of the driller's field log (s). It indicates only the approximate boundaries between soil types. The actual transitions between adjacent soil types may be gradual. Regardless of the thoroughness of a geotechnical exploration there is always the possibility that conditions may be different from those of the test locations; therefore, DYNATECH ENGINEERING CORP. does not guarantee any subsoil conditions between the bore test holes. In accepting and using this report the client understands and accepts that all data from the borings are strictly for foundation analysis only and are not to be used for excavation or back filling estimates and pricing. Owner and site contractor must familiarize themselves with site conditions prior to bidding. For Environmental due diligence; a Phase I and/or Phase II Environmental Site Assessments is recommended. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval. The scope of services performed in the execution of this investigation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user. Said user must contact DEC in writing to verify applicability of this report for their use. All work must be conducted under the supervision of our geotechnical engineer. The discovery of any site or subsurface conditions during construction which deviate from the information obtained from our subsoil investigation is always likely and should be reported to us for our evaluation. All work shall be conducted in compliance with the Florida Building Code FBC and OSHA workers protection rules and all applicable Federal, State, County and City rules and regulations.

It has been a pleasure working with you and look forward to do so in the near future.

Sincerely yours,



Wissam Naamani, P. E.  
DYNATECH ENGINEERING CORP.  
Florida Reg. No. 39584  
Special Inspector No. 757  
Certificate of Authorization No.: CA 5491



TEST BORING REPORT

# DYNATECH

ENGINEERING CORP.

## TEST BORING FIELD LOG

CLIENT : DANIA SQUARE INVESTMENT  
 PROJECT : The Palms at Dania Beach @  
 ADDRESS : 1301 South Federal Highway, Dania Beach, FL.  
 LOCATION : See attached sketch

DATE : 01-08-16  
 HOLE NO.: B-1  
 DRILLER: AS

DESCRIPTION OF MATERIALS		Depth	HAMMER BLOWS ON SAMPLER		"N"
0'-0" to 0'-2"	Top soil and grass	2	Hand		H
0'-2" to 0'-6"	Light tan medium sand with rock fragments	4	Hand		H
0'-6" to 1'-0"	Dark brownish medium sand with organic stain	6	5	4	8
			4	3	
1'-0" to 1'-6"	Brown medium sand	8	5	5	11
			6	4	
1'-6" to 3'-6"	Gray medium sand	10	2	2	8
			6	5	
3'-6" to 8'-0"	Brown medium sand	12	11	13	25
			12	12	
8'-0" to 9'-0"	Tan silty sand	14	-		-
9'-0" to 20'-0"	Tan sandy limerock	16	-		-
		18	-		-
		20	16	23	43
			20	21	
		22			
		24			
		26			
		28			
		30			
		32			
		34			
		36			
		38			

**Water Level: 7'-0" Below Existing Land Surface at time of drilling.** As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statement conclusions or extracts from or regarding our reports is reserved pending on our written approval.  
 H: HAND AUGER; A: HOLLOW STEM AUGER; R: REFUSAL





## TEST BORING FIELD LOG

**CLIENT :** DANIA SQUARE INVESTMENT  
**PROJECT :** The Palms at Dania Beach @  
**ADDRESS :** 1301 South Federal Highway, Dania Beach, FL  
**LOCATION :** See attached sketch

**DATE :** 01-08-16  
**HOLE NO.:** B-2  
**DRILLER:** AS

DESCRIPTION OF MATERIALS		Depth	HAMMER BLOWS ON SAMPLER		"N"
0'-0" to 0'-3"	Top soil and grass	2	Hand		H
0'-3" to 1'-6"	Light tan medium sand with rock fragments	4	Hand		H
1'-6" to 2'-0"	Brownish medium sand with organic stain	6	4	3	6
2'-0" to 4'-0"	Light grayish/tan medium sand	8	3	3	13
4'-0" to 9'-0"	Brown medium sand	10	7	6	8
9'-0" to 10'-0"	Tan silty sand	12	5	9	22
10'-0" to 20'-0"	Tan sandy limerock	14	11	10	22
		16	12	12	-
		18	-	-	-
		20	22	21	41
		22	20	20	
		24			
		26			
		28			
		30			
		32			
		34			
		36			
		38			

**Water Level: 7'-0" Below Existing Land Surface at time of drilling.** As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statement conclusions or extracts from or regarding our reports is reserved pending on our written approval.  
 H: HAND AUGER; A: HOLLOW STEM AUGER; R: REFUSAL



## TEST BORING FIELD LOG

**CLIENT :** DANIA SQUARE INVESTMENT  
**PROJECT :** The Palms at Dania Beach @  
**ADDRESS :** 1301 South Federal Highway, Dania Beach, FL.  
**LOCATION :** See attached sketch

**DATE :** 01-08-16  
**HOLE NO.:** B-3  
**DRILLER:** AS

DESCRIPTION OF MATERIALS		Depth	HAMMER BLOWS ON SAMPLER		"N"
0'-0" to 0'-3"	Top soil and grass	2	Hand		H
0'-3" to 1'-0"	Light tan medium sand with rock fragments	4	Hand		H
1'-0" to 1'-6"	Dark brown medium sand with organic stain	6	3	2	5
			3	3	
1'-6" to 2'-6"	Brownish medium sand	8	5	4	11
			7	6	
2'-6" to 4'-0"	Light tan medium sand	10	6	5	13
			8	8	
4'-0" to 8'-0"	Brown medium sand	12	12	12	21
			9	10	
8'-0" to 9'-0"	Tan silty sand	14	-		-
9'-0" to 20'-0"	Tan sandy limerock	16	-		-
		18	-		-
		20	15	16	36
			20	22	
		22			
		24			
		26			
		28			
		30			
		32			
		34			
		36			
		38			

**Water Level: 7'-0" Below Existing Land Surface at time of drilling.** As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statement conclusions or extracts from or regarding our reports is reserved pending on our written approval.  
 H: HAND AUGER; A: HOLLOW STEM AUGER; R: REFUSAL



PERCOLATION TEST



# DYNATECH ENGINEERING CORP.

WWW.DYNATECHENGINEERING.COM

Miami, January 8<sup>th</sup>, 2016

Mr. Enrique Barton  
 DANIA SQUARE INVESTMENT  
 1301 S. Federal Highway  
 Dania Beach, FL 33004

Re: The Palms at Dania Beach @  
 1301 South Federal Highway  
 Dania Beach, FL

Dear Mr. Barton:

Pursuant to your request, DYNATECH ENGINEERING CORP. (DEC) completed a Percolation Test on January 8<sup>th</sup>, 2016 at the above referenced project. The purpose of our investigation was to help determine the hydraulic conductivity for drainage design.

The above hydraulic conductivity represents an ultimate value. The designer should decide on the required safety factor. This value is based on the existing soils at the location of the test. In the event the test location is changed or the soil removed and replaced; the test will need to be re-evaluated.

Groundwater was measured immediately at the completion of each boring and was found at an average depth of approximately 7'-0" below existing ground surface at the time of drilling. Existing ground surface elevation was not provided to us at the time of drilling. Design engineers must verify existing ground elevations as well as FEMA Flood and County highest and lowest groundwater elevation for their design. Fluctuation in water level is anticipated due to seasonal variations and run off as well as varying ground elevations construction dewatering and pumping activities in the area and global warming. Site contractor must familiarize himself with site conditions in the event groundwater controls and dewatering is needed during construction. Surface flooding may result under hurricane conditions and should be taken into consideration in the design of the project. The contractor shall monitor and make sure that groundwater levels on adjacent properties are not adversely impacted due to the contractors dewatering activities. Specialty groundwater and water proofing contractors shall be consulted for all work below the groundwater level.

In case of existing structures, existing footings new foundations and proposed drainage lines, provisions shall be made by the structural engineer, the civil engineer, and site contractor to protect all footings from future erosion, undermining and exposure. The geotechnical engineer shall be notified of these conditions to evaluate the applicability of his recommendations.



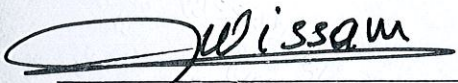
Re: 1301 South Federal Highway, Dania Beach, FL

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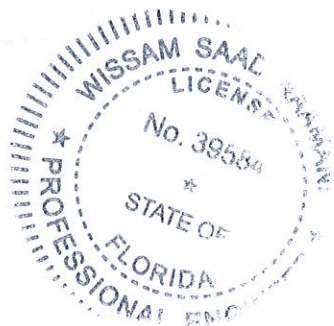
The boring log (s) attached present (s) a detailed description of the soils encountered at test location (s). The soil stratification shown on the boring log (s) is based on the examination of the recovered soil samples and interpretation of the driller's field log (s). It indicates only the approximate boundaries between soil types. The actual transitions between adjacent soil types may be gradual. Regardless of the thoroughness of a geotechnical exploration there is always the possibility that conditions may be different from those of the test locations; therefore, DYNATECH ENGINEERING CORP. does not guarantee any subsoil conditions between the bore test holes. In accepting and using this report the client understands and accepts that all data from the borings are strictly for foundation analysis only and are not to be used for excavation or back filling estimates and pricing. Owner and site contractor must familiarize himself with site conditions prior to bidding. For Environmental due diligence; a Phase I and/or Phase II Environmental Site Assessments is recommended. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval. The scope of services performed in the execution of this investigation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user. Said user must contact DEC in writing to verify applicability of this report for their use. All work must be conducted under the supervision of our geotechnical engineer. The discovery of any site or subsurface conditions during construction which deviate from the information obtained from our subsoil investigation is always likely and should be reported to us for our evaluation. All work shall be conducted in compliance with the Florida Building Code FBC and OSHA workers protection rules and all applicable Federal, State, County and City rules and regulations.

It has been a pleasure working with you and look forward to do so in the near future.

Sincerely yours,



Wissam Naamani, P.E.  
DYNATECH ENGINEERING CORP.  
Florida Reg. No. 39584  
Special Inspector No. 757  
Certificate of Authorization No.: CA 5491



In



# DYNATECH ENGINEERING CORP.

WWW.DYNATECHENGINEERING.COM

**PERCOLATION TEST ACCORDING TO S.F.W.M.D.**  
**D.O.T. STANDARD TEST**

DATE : 01-08-16  
 CLIENT : DANIA SQUARE INVESTMENT GROUP  
 PROJECT : The Palms at Dania Beach @  
 PROJECT LOCATION : 1301 S. Federal Highway, Dania Beach, FL 33004  
 LOCATION OF TEST : SAS  
 DIAMETER OF HOLE : 7"  
 TEST NO. : P-1

TEST DEPTH (feet) 0-10'  
 AVERAGE FLOW (GPM) 6.2  
 AVERAGE K (CFS/Sq. Ft-Ft Head) 2.10 x 10<sup>-4</sup>

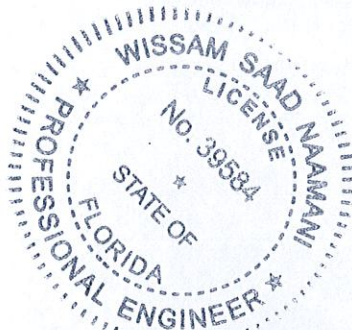
\* The above hydraulic conductivity represents an ultimate value. The designer should decide on the required safety factor. This value is based on the existing soils at the location of the test.

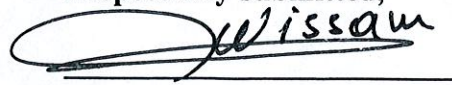
Water Table 7' Below existing ground surface.

**SUBSURFACE INVESTIGATION**

<u>Depth Below Ground Surface</u>	<u>Soil Description</u>
0'-0" to 0'-6"	Top soil and grass
0'-6" to 1'-0"	Brownish medium sand
1'-0" to 2'-0"	Gray medium sand
2'-0" to 4'-6"	Light tan medium sand
4'-6" to 6'-6"	Brown medium sand
6'-6" to 9'-0"	Tan medium sand slightly silty
9'-0" to 15'-0"	Tan sandy limerock

Field Tech: AS



Respectfully submitted,  


Wissam Naamani, P.E.  
 DYNATECH ENGINEERING CORP.  
 Florida Reg. No. 39584  
 Certificate of Authorization No.: CA 5491

\* As a mutual protection to the clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statement conclusions or extracts from or regarding our reports is reserved pending on our written approval.

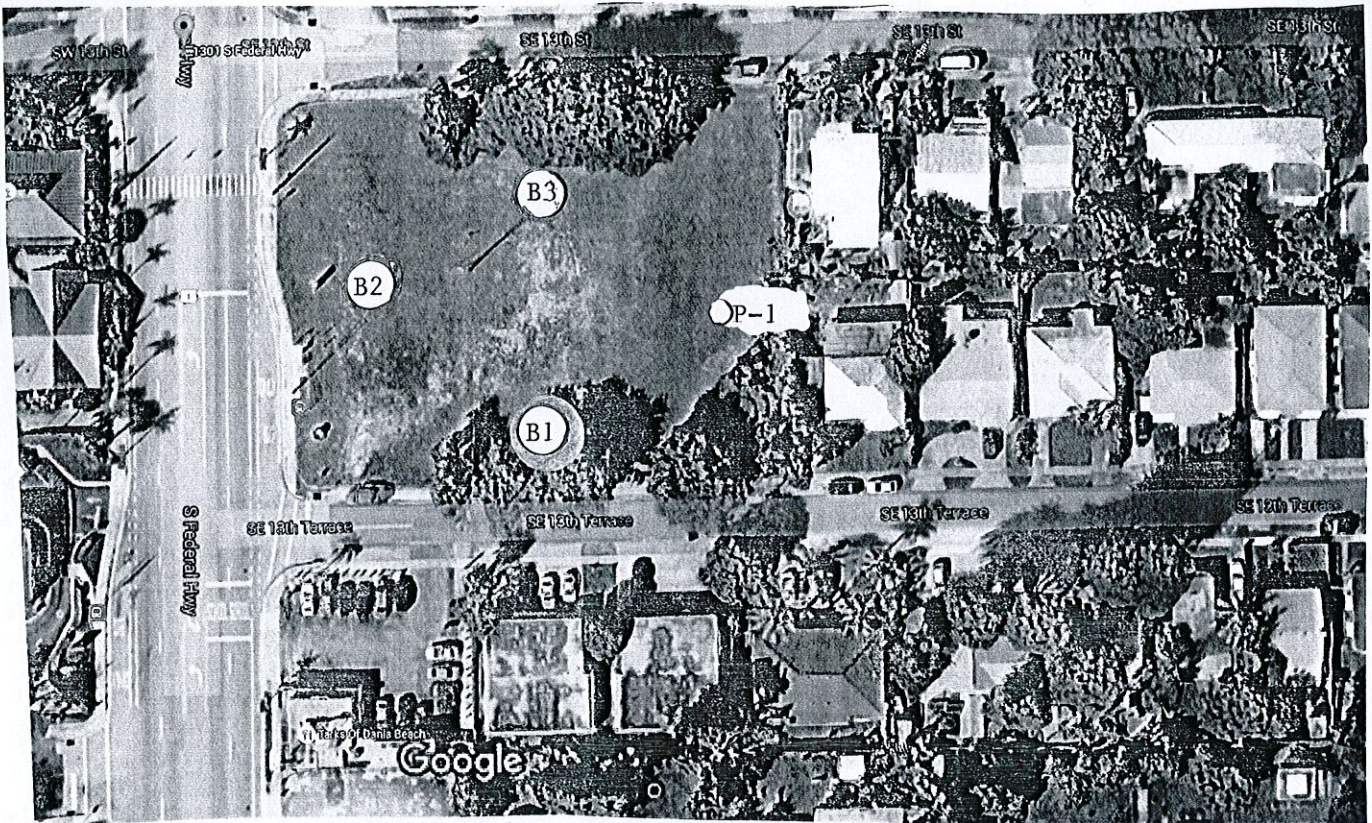


SITE PLAN

⊙ B# : Boring Test Location

○ P-# : Percolation Test Location

N



## DYNATECH ENGINEERING CORP.

Client: Dania Square Investment Group, LLC.

Scale: N.T.S.

Project: 1301 South Federal Highway, Dania Beach, FL 33004

Date: January 08, 2016



## GENERAL NOTES

Soil borings on unmarked vacant property should be considered preliminary with further boring(s) to be drilled after building pad(s) are staked out.

Soil borings on existing structures that are to be demolished should be considered preliminary and additional borings would need to be performed after the structure(s) has been demolished and proposed new building staked out.

As a mutual protection to clients, the public and ourselves, all reports are submitted as confidential property of clients, and authorization for publication of statements, conclusions, extracts from or regarding our reports is reserved pending our written approval.

## KEY CLASSIFICATION & SYMBOLS

### Correlation of Penetration Resistance With Relative Density and Consistency

	<u>Cone Penetration Tests (Kg/cm<sup>3</sup>)</u>	<u>Standard Penetration (Blows/ft.)</u>	<u>Relative Density</u>
Sands	0-16	0-4	Very Loose
	17-40	5-10	Loose
	41-80	11-20	Firm
	81-120	21-30	Very Firm
	Over 120	31-50	Dense
Silts & Clay	0-3	0-2	Very Loose
	4-9	3-4	Soft
	10-17	5-8	Firm
	18-31	9-15	Stiff
	32-60	16-30	Very Stiff
	Over 60	31-50	Hard

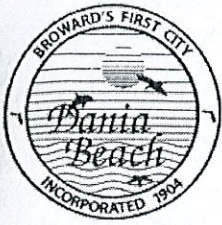
	<u>Particle Size</u>
Boulders	> 12 in.
Cobble	3 in. to 1 in.
Gravel	4.76 mm to 3in.
Sand	0.07 mm to 4.67 mm.
Silt	0.005 mm. to 0.074 mm
Clay	< 0.005 mm

### Modifiers

5% - 10 %	Slightly Silty or Clayey
10% - 30%	Silty or Clayey
30% - 50%	Very Silty or Very Clayey
0% - 5%	Slightly Trace
6% - 10%	Trace
11% - 20%	Little
21% - 35%	Some
> 35% And	

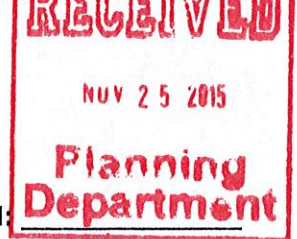
### Rock Hardness Description

Soft	Rock core crumbles when handled
Medium	Can break with your hands.
Moderate Hard	Thin edges or rock core can be broken with fingers
Hard	Thin edges or rock core cannot be broken with fingers
Very Hard	Rock core rings when struck with hammer (cherts)



City of Dania Beach, Florida  
Department of Community Development  
Planning and Zoning Division  
(954) 924-6805 X3643

(954) 922-2687 Fax



### Standard Development Application

- Administrative Variance
- Land Use Amendment
- Plat
- Rezoning
- Site Plan
- Special Exception
- Variance
- Other: \_\_\_\_\_

Date Rec'd: \_\_\_\_\_

Petition No.: SP-127-15

(SEE APPLICATION TYPE SCHEDULE ON PAGES 3 & 4)

**THIS APPLICATION WILL NOT BE ACCEPTED UNTIL IT IS COMPLETE AND SUBMITTED WITH ALL NECESSARY DOCUMENTS.** Refer to the application type at the top of this form and "Required Documentation" checklist to determine the supplemental documents required with each application. For after the fact applications, the responsible contractor of record shall be present at the board hearing. Their failure to attend may impact upon the disposition of your application. As always, the applicant or their authorized legal agent must be present at all meetings. All projects must also obtain a building permit from the City Building Division. For more information please reference the **Dania Beach Land Development Code Part 6, Development Review Procedures and Requirements.**

Location Address: 1301 S. Federal Hwy. DANIA BEACH, FL. 33004

Lot(s): \_\_\_\_\_ Block: \_\_\_\_\_ Subdivision: \_\_\_\_\_

Recorded Plat Name: ID # 514203290060, 514203240061, 514203240070, 514203240050

Folio Number(s): \_\_\_\_\_ Legal Description: \_\_\_\_\_

Applicant/Consultant/Legal Representative (circle one) ENRIQUE BARTON

Address of Applicant: 1000 BRICKELL AVE. SUITE 102, MIAMI, FL. 33131

Business Telephone: 3053581441 Home: \_\_\_\_\_ Fax: 3053581442

E-mail address: info@met21.com

Name of Property Owner: DANIA SQUARE INVESTMENT GROUP, LLC

Address of Property Owner: 1000 BRICKELL AVE. STE 102, MIAMI, FL. 33131

Business Telephone: 3053581441 Home: \_\_\_\_\_ Fax: 3053581442

**Explanation of Request:** \_\_\_\_\_  
For **Plats** please provide proposed **Plat Name** for **Variations** please attach **Criteria Statement** as per **Section 625.40 of the Land Development Code.**

Prop. Net Acreage: \_\_\_\_\_ Gross Acreage: \_\_\_\_\_ Prop. Square Footage: \_\_\_\_\_

Existing Use: \_\_\_\_\_ Proposed Use: \_\_\_\_\_

Is property owned individually, by a corporation, association, or a joint venture? \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE**

I/we are fully aware of the request being made to the City of Dania Beach. If I/We are unable to be present, I/we hereby authorize \_\_\_\_\_ (individual/firm) to represent me/us in all matters related to this application. I/we hereby acknowledge that the applicable fee was established to offset administrative costs and is not refundable.

I/we are fully aware that all approvals automatically expire within 12 months of City of Dania Beach Planning and Zoning Board or City Commission approval, or pursuant to the expiration timeframe listed in Part 6 of the Dania Beach Land Development Code.

STATE OF FLORIDA  
COUNTY OF BROWARD  
The foregoing instrument  
was acknowledged

By: *[Signature]*  
(Owner / Agent signature\*)

BEFORE ME THIS 19 DAY OF November, 2015

By:

*Enerque Omar BARTON*  
(Print name of person acknowledging)

\_\_\_\_\_  
(Joint owner signature if applicable)

Notary *[Signature]*  
(Signature of Notary Public – State of FL)



Personally known  or Produced Identification \_\_\_\_\_

Type of identification produced: *[Signature]* or Drivers License B635214523450

**\*If joint ownership, both parties must sign. If partnership, corporation or association, an authorized officer must sign on behalf of the group. A notarized letter of authorization from the owner of record must accompany the application if an authorized agent signs for the owner(s).**

***NO APPLICATION WILL BE AUTOMATICALLY SCHEDULED FOR A MEETING.***

***ALL APPLICATIONS MUST BE DETERMINED COMPLETE BY STAFF BEFORE PROCESSING OCCURS.***

**VARIANCE EXPLANATIONS / REQUESTS**

Date: 06/10/2016

To: City of Dania Beach Building Department

Re: Submittal for VARIANCES – BUILDING & GENERAL COMMENTS  
Att. Corinne Lajoie  
The Palms at Dania Beach  
1301 South Federal Highway  
Dania Beach, FL 33004

From: Anthony Leon  
3Design, Inc.  
4300 Biscayne Blvd.  
Suite #G-04  
Miami, FL 33137

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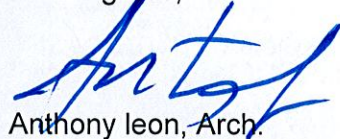
Related to the Project mentioned above, below are the requested variance's written justifications for General Comments made in the prior DRC meetings. The two variances were made by the following reasons below, following the Dania Beach Community Development Department procedure:

**1. Parking requirements - . Section 303-80 requires that parking must be 30' from secondary streets**

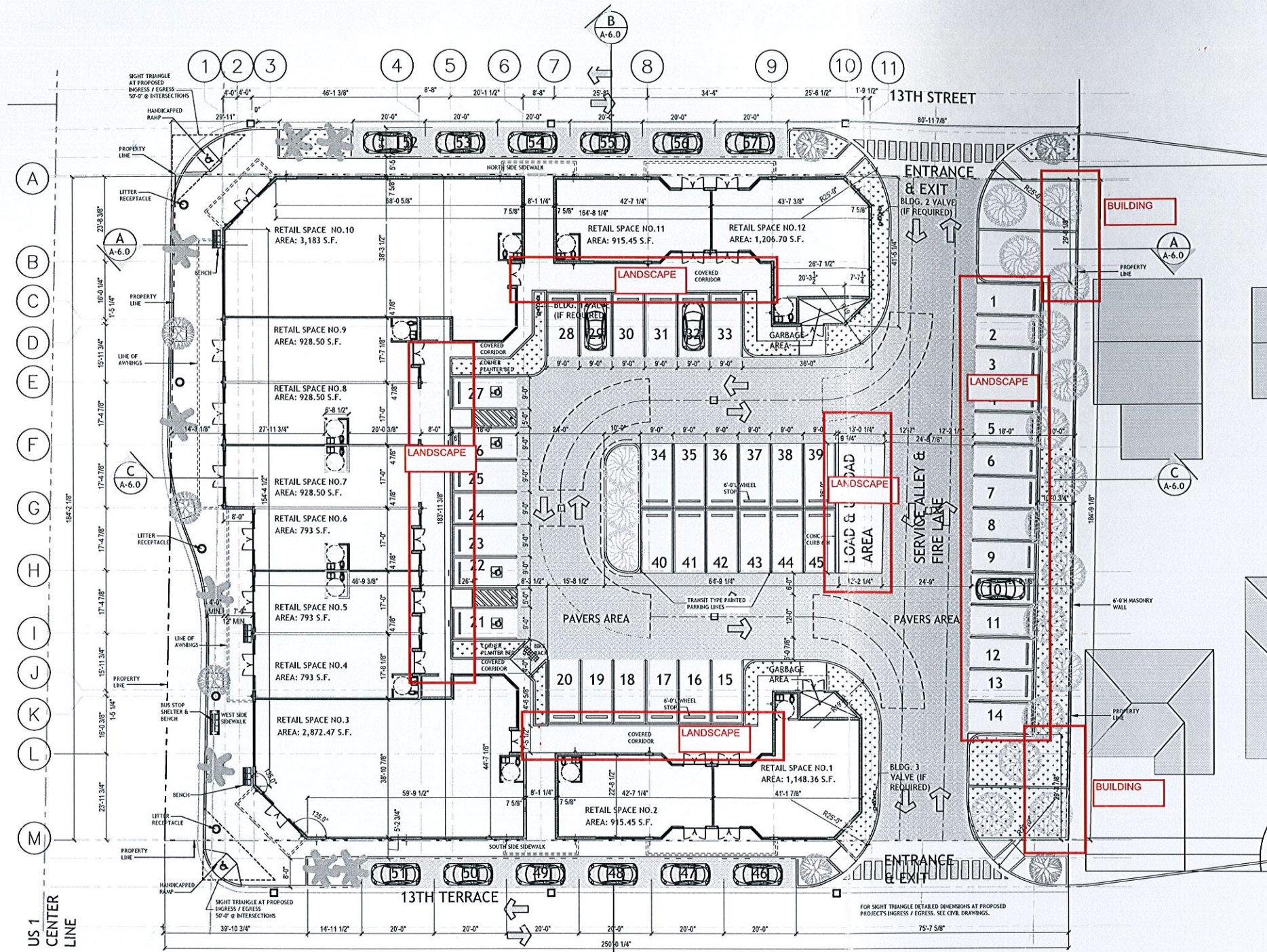
Variance requested: *The proposed distance at project's north side nearest parking corner up to the secondary street is 29'-5 1/4" and the distance at project's south side is 29'-3 7/8". The reason for the requested variance is to comply with the parking spaces required by zoning and to maximize the parking lot.*

If for any reason you need to contact us to discuss the variances requested, please feel free to contact us as your convenience.

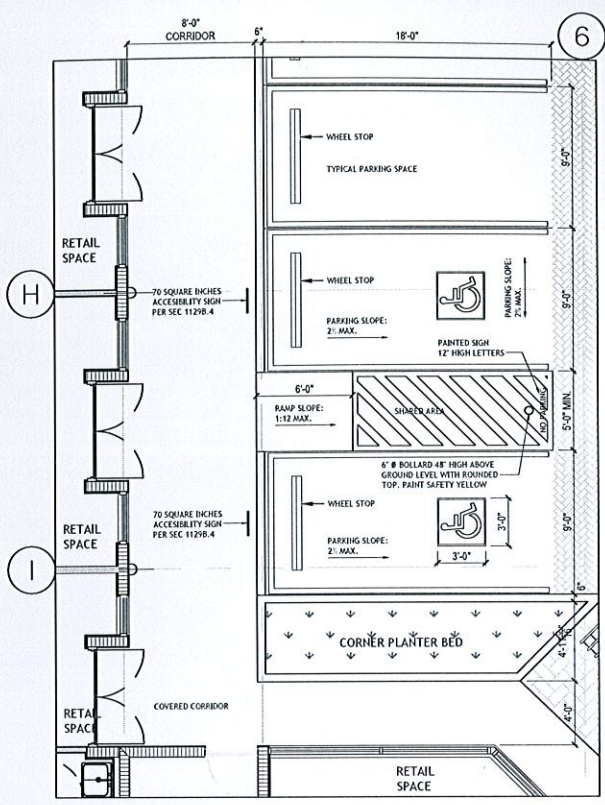
Best regards,

  
Anthony Leon, Arch.

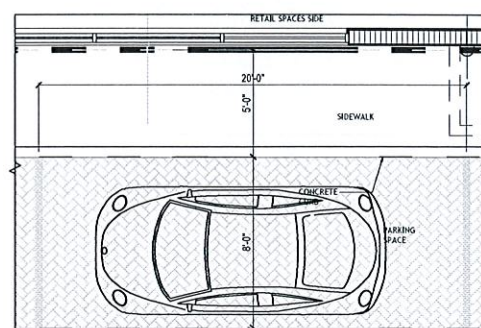




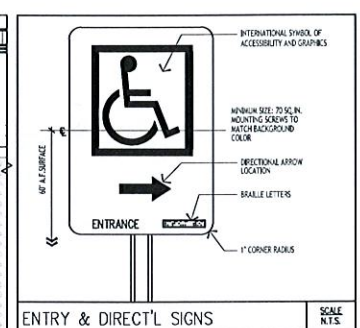
ARCHITECTURAL FLOOR PLAN  
SCALE: 1/16"=1'-0"



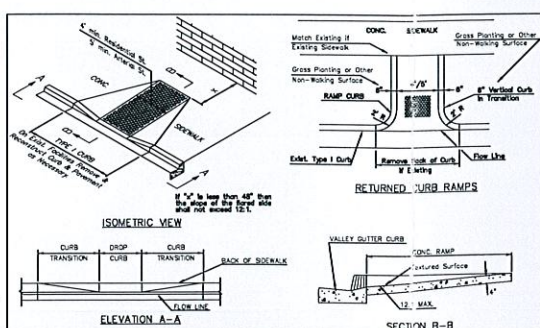
SPACE PARKING FOR THE HANDICAPPED  
SCALE: 5/16"=1'-0"



PARALLEL PARKING DETAIL  
SCALE: 1/4"=1'-0"



ENTRY & DIRECT'L SIGNS  
SCALE N.T.S.



RAMP FOR THE HANDICAPPED  
N.T.S.

NOTES:  
1. Ramps are designed to the Uniform Federal Accessibility Standards to comply with the Americans with Disabilities Act.  
2. Ramps Shall Have a Tactile Surface, Textured to a Depth Not Exceeding 1/8" by use of Tamp or roller in Conformance with Requirements of FDOT Roadway and Traffic Design Standards, Detail 304 Or Most Recent Modifications.

DRAWN BY:  
REVISIONS:

AA0003669  
ANTHONY LEON  
0016752

3 DESIGN  
ARCHITECTURE  
4300 Biscayne Blvd. #G-04, Miami, FL 33137  
P: 305-438-8377 | F: 305-438-8379

SEAL

NEW CONSTRUCTION FOR:  
THE PALMS AT DANIA BEACH  
1301 South Federal Highway  
Dania Beach, FL 33004

THESE PLANS ARE FOR BUILDING DEPARTMENT REVIEW ONLY. THEY ARE NOT TO BE CONSTRUED AS CONSTRUCTION DOCUMENTS UNTIL ALL BUILDING DEPARTMENT APPROVALS ARE OBTAINED.

A-2.0  
ARCHITECTURAL  
SITE PLAN

**VARIANCE EXPLANATIONS / REQUESTS**

Date: 06/10/2016

To: City of Dania Beach Building Department

Re: Submittal for VARIANCES – LANDSCAPE  
Att. Claudia Alzate  
The Palms at Dania Beach  
1301 South Federal Highway  
Dania Beach, FL 33004

From: Anthony Leon  
3Design, Inc.  
4300 Biscayne Blvd.  
Suite #G-04  
Miami, FL 33137

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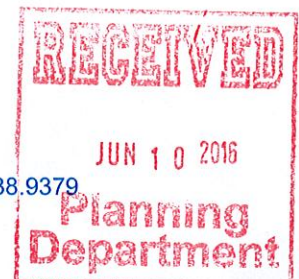
Related to the Project mentioned above, below are the requested variance written justifications for General Comments made in the prior DRC meetings. The (3) three variances were made following the Dania Beach Community Development Department procedure:

**1. Parking requirements - End peninsulas shall be at least 10 feet wide**

*To comply with the parking spaces required by zoning and to maximize the parking lot, we can't provide the requested end peninsula in the parking's central section to fit the loading area.*

**2. Separation between building walls and VUA shall be a landscaped area of 5'-0" wide**

*To provide the maximum parking spaces and a much wider corridor overlooking the parking lot, we are proposing corner planter beds at the connecting corridors that varies in width from 4'-0" to +/- 5'-5". To minimize the effect in the pervious area required, we are using oasis type pavers (pervious) in the parking lot and in the parallel parking spaces.*

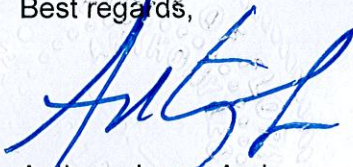


**3. Per section 275-100 (c ), there shall be no more than 12 parking stalls along the same parking aisle without an intermediate landscape peninsula.**

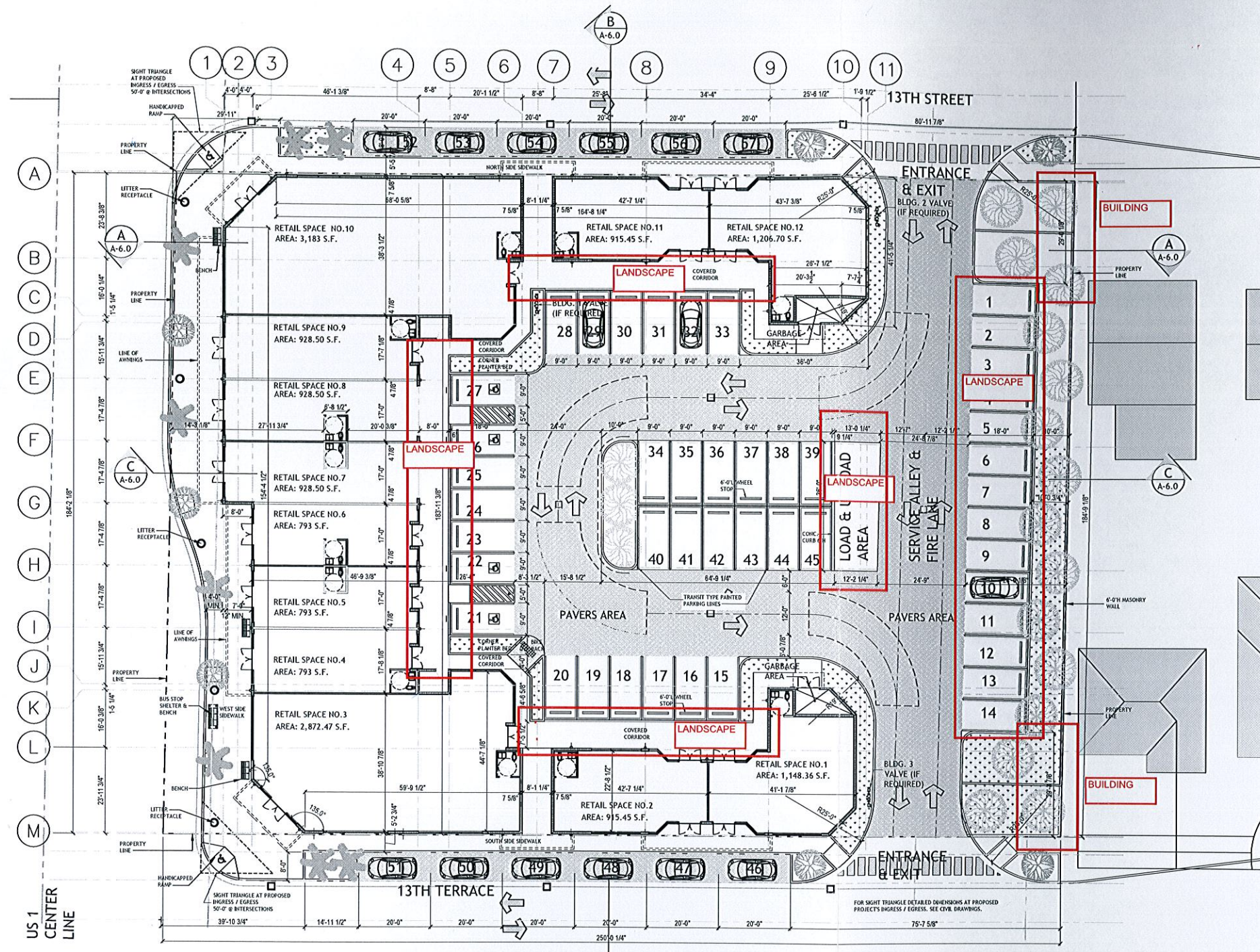
*To comply with the parking spaces required by zoning and to maximize the parking lot, we can't comply with the section referenced above.*

If for any reason you need to contact us to discuss the variances requested, please feel free to contact us as your convenience.

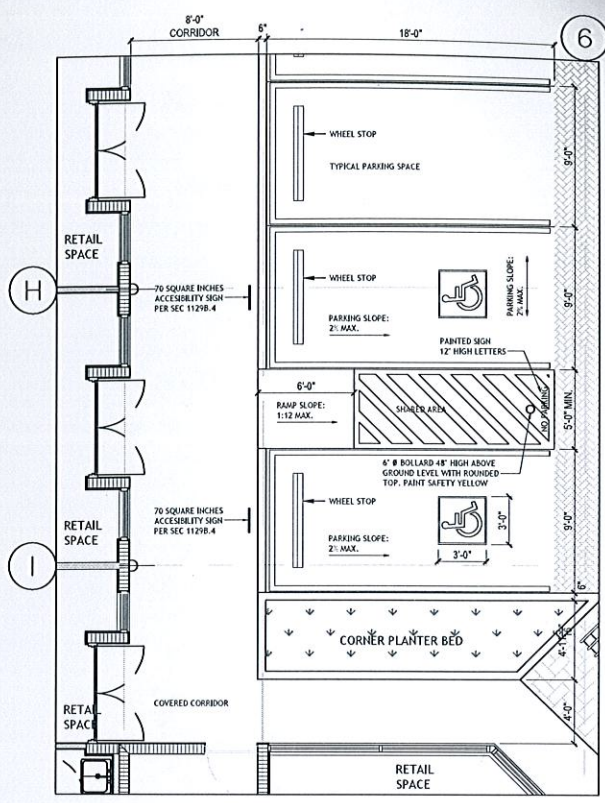
Best regards,



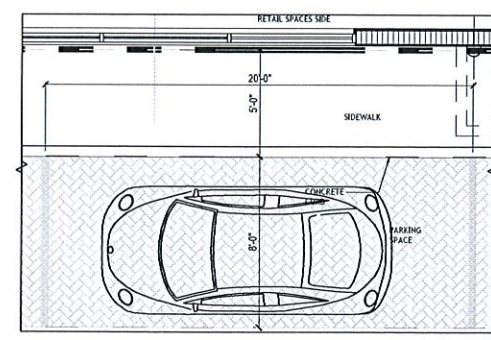
Anthony Leon, Arch.



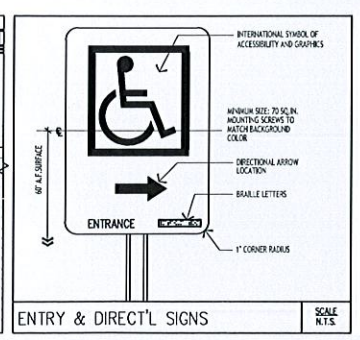
ARCHITECTURAL FLOOR PLAN  
SCALE: 1/16"=1'-0"



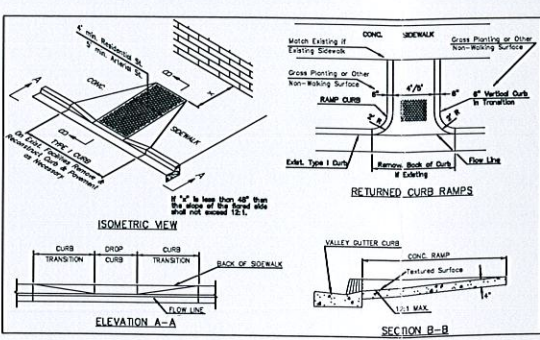
SPACE PARKING FOR THE HANDICAPPED  
SCALE: 3/16"=1'-0"



PARALLEL PARKING DETAIL  
SCALE: 1/4"=1'-0"



ENTRY & DIRECT'L SIGNS  
SCALE N.T.S.



RAMP FOR THE HANDICAPPED  
N.T.S.

NOTES:  
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2. Ramps Shall Have a Tactile Surface, Textured to a Depth Not Exceeding 1/8" by use of Tamp or roller in Conformance with Requirements of FDOT Roadway and Traffic Design Standards, Detail 304 Or Most Recent Modifications.

DRAWN BY:  
REVISIONS:

AA0000569  
ANTHONY LEON  
0016/52

3 DESIGN  
ARCHITECTURE  
4300 Biscayne Blvd. #G-04, Miami, FL 33137  
P: 305-438-9377 | F: 305-438-9379

SEAL

NEW CONSTRUCTION FOR:  
THE PALMS AT DANIA BEACH  
1301 South Federal Highway  
Dania Beach, FL 33004

THESE PLANS ARE FOR BUILDING DEPARTMENT REVIEW ONLY. THEY ARE NOT TO BE CONSTRUED AS CONSTRUCTION DOCUMENTS UNTIL ALL BUILDING DEPARTMENT APPROVALS ARE OBTAINED.

A-2.0  
ARCHITECTURAL SITE PLAN





City of Dania Beach, Florida  
 Department of Community Development  
 Planning and Zoning Division  
 (954) 924-6805 X3643  
 (954) 922-2687 Fax

MAY 24 2016  
 Planning Department

**Standard Development Application**

- Administrative Variance
- Land Use Amendment
- Plat
- Rezoning
- Site Plan
- Special Exception
- Variance
- Other: \_\_\_\_\_

Date Rec'd: \_\_\_\_\_

Petition No.: VA-55-14

(SEE APPLICATION TYPE SCHEDULE ON PAGES 3 & 4)

**THIS APPLICATION WILL NOT BE ACCEPTED UNTIL IT IS COMPLETE AND SUBMITTED WITH ALL NECESSARY DOCUMENTS.** Refer to the application type at the top of this form and "Required Documentation" checklist to determine the supplemental documents required with each application. For after the fact applications, the responsible contractor of record shall be present at the board hearing. Their failure to attend may impact upon the disposition of your application. As always, the applicant or their authorized legal agent must be present at all meetings. All projects must also obtain a building permit from the City Building Division. For more information please reference the **Dania Beach Land Development Code Part 6, Development Review Procedures and Requirements.**

Location Address: 1301 SOUTH FEDERAL HIGHWAY, DANIA BEACH, FL.

Lot(s): 1-13, 18-23 Block: 3 Subdivision: \_\_\_\_\_

Recorded Plat Name: \_\_\_\_\_

Folio Number(s): 514203240060 Legal Description: \_\_\_\_\_

Applicant/Consultant/Legal Representative (circle one) ANTHONY LEON, 3 DESIGN INC.

Address of Applicant: 4300 BISCAYNE BLVD #6-04, MIAMI, 33137

Business Telephone: 305.438.9377 Home: - Fax: 305.438.9379

E-mail address: 3dtony@bellsouth.net; 3dRob@bellsouth.net

Name of Property Owner: DANIA SQUARE INVESTMENT GROUP, LLC.

Address of Property Owner: 1000 BRICKELL AVE. STE. 102

Business Telephone: 305.358.1440 Home: - Fax: 305.358.1441

Explanation of Request: SEE APPENDUM

For **Plats** please provide proposed **Plat Name** for **Variations** please attach **Criteria Statement** as per **Section 625.40 of the Land Development Code.**

Prop. Net Acreage: \_\_\_\_\_ Gross Acreage: \_\_\_\_\_ Prop. Square Footage: \_\_\_\_\_

Existing Use: EXISTING VACANT LOT. Proposed Use: STRIP MALL

Is property owned individually, by a corporation, association, or a joint venture? \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE**

I/we are fully aware of the request being made to the City of Dania Beach. If I/We are unable to be present, I/we hereby authorize \_\_\_\_\_ (individual/firm) to represent me/us in all matters related to this application. I/we hereby acknowledge that the applicable fee was established to offset administrative costs and is not refundable.

I/we are fully aware that all approvals automatically expire within 12 months of City of Dania Beach Planning and Zoning Board or City Commission approval, or pursuant to the expiration timeframe listed in Part 6 of the Dania Beach Land Development Code.

STATE OF FLORIDA  
COUNTY OF BROWARD  
The foregoing instrument  
was acknowledged

By: [Signature]  
(Owner / Agent signature\*)

BEFORE ME THIS 23<sup>rd</sup> DAY OF May, 2016

By: [Signature]  
(Print name of person acknowledging)

\_\_\_\_\_  
(Joint owner signature if applicable)

Notary [Signature]  
(Signature of Notary Public – State of FLORIDA)



Personally known \_\_\_\_\_ or Produced Identification ✓

Type of identification produced: \_\_\_\_\_ or Drivers License B635214523450

**\*If joint ownership, both parties must sign. If partnership, corporation or association, an authorized officer must sign on behalf of the group. A notarized letter of authorization from the owner of record must accompany the application if an authorized agent signs for the owner(s).**

**NO APPLICATION WILL BE AUTOMATICALLY SCHEDULED FOR A MEETING.**

**ALL APPLICATIONS MUST BE DETERMINED COMPLETE BY STAFF BEFORE PROCESSING OCCURS.**



City of Dania Beach, Florida  
 Department of Community Development  
 Planning and Zoning Division  
 (954) 924-6805 X3648  
 (954) 922-2687 Fax

**RECEIVED**  
 MAY 24 2016  
**Planning Department**

**Standard Development Application**

- Administrative Variance
- Land Use Amendment
- Plat
- Rezoning
- Site Plan
- Special Exception
- Variance
- Other: \_\_\_\_\_

Date Rec'd: \_\_\_\_\_

Petition No.: VA-50-10

(SEE APPLICATION TYPE SCHEDULE ON PAGES 3 & 4)

**THIS APPLICATION WILL NOT BE ACCEPTED UNTIL IT IS COMPLETE AND SUBMITTED WITH ALL NECESSARY DOCUMENTS.** Refer to the application type at the top of this form and "Required Documentation" checklist to determine the supplemental documents required with each application. For after the fact applications, the responsible contractor of record shall be present at the board hearing. Their failure to attend may impact upon the disposition of your application. As always, the applicant or their authorized legal agent must be present at all meetings. All projects must also obtain a building permit from the City Building Division. For more information please reference the **Dania Beach Land Development Code Part 6, Development Review Procedures and Requirements.**

Location Address: 1301 SOUTH FEDERAL HIGHWAY, DANIA BEACH

Lot(s): 1-13, 18-23 Block: 3 Subdivision: \_\_\_\_\_

Recorded Plat Name: \_\_\_\_\_

Folio Number(s): 514203240060 Legal Description: \_\_\_\_\_

Applicant/Consultant/Legal Representative (circle one) ANTHONY LEON, 3DESIGN INC.

Address of Applicant: 4300 BISCAYNE BLVD. # G-04, MIAMI 33137

Business Telephone: (305) 438-9377 Home: — Fax: (305) 438-9379

E-mail address: 3dtony@bellsouth.net, 3drob@bellsouth.net

Name of Property Owner: DANIA SQUARE INVESTMENT GROUP LLC

Address of Property Owner: 1000 BRICKELL AVE. STE 102

Business Telephone: 305.358.1440 Home: — Fax: 305.358.1441

Explanation of Request: SEE ADDENDUM

For **Plats** please provide proposed **Plat Name** for **Variations** please attach **Criteria Statement** as per **Section 625.40 of the Land Development Code.**

Prop. Net Acreage: \_\_\_\_\_ Gross Acreage: \_\_\_\_\_ Prop. Square Footage: 44,115.50

Existing Use: EXISTING VACANT LOT Proposed Use: STRIP MALL

Is property owned individually, by a corporation, association, or a joint venture? \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE**

I/we are fully aware of the request being made to the City of Dania Beach. If I/We are unable to be present, I/we hereby authorize \_\_\_\_\_ (individual/firm) to represent me/us in all matters related to this application. I/we hereby acknowledge that the applicable fee was established to offset administrative costs and is not refundable.

I/we are fully aware that all approvals automatically expire within 12 months of City of Dania Beach Planning and Zoning Board or City Commission approval, or pursuant to the expiration timeframe listed in Part 6 of the Dania Beach Land Development Code.

STATE OF FLORIDA  
COUNTY OF BROWARD  
The foregoing instrument  
was acknowledged

By: [Signature]  
(Owner / Agent signature\*)

BEFORE ME THIS 23<sup>rd</sup> DAY OF MAY, 2016

By:

[Signature]  
(Print name of person acknowledging)

\_\_\_\_\_  
(Joint owner signature if applicable)

Notary [Signature]  
(Signature of Notary Public – State of FLORIDA)



Personally known \_\_\_\_\_ or Produced Identification DLic B635214523450

Type of identification produced: \_\_\_\_\_ or Drivers License B635214523450

\*If joint ownership, both parties must sign. If partnership, corporation or association, an authorized officer must sign on behalf of the group. A notarized letter of authorization from the owner of record must accompany the application if an authorized agent signs for the owner(s).

**NO APPLICATION WILL BE AUTOMATICALLY SCHEDULED FOR A MEETING.**

**ALL APPLICATIONS MUST BE DETERMINED COMPLETE BY STAFF  
BEFORE PROCESSING OCCURS.**