EXHIBIT 8

Beachwalk
2600 Hallandale Beach Blvd.

Traffic Impact Report

Prepared by:

Prepared For:

PRH-2600 HALLANDALE BEACH LLC

August 2011

PROFESSIONAL ENGINEER CERTIFICATE

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Calvin, Giordano & Associates, a corporation authorized to operate as an engineering business, EB 00006500, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice hereby for:

PROJECT: Beachwalk – 2600 Hallandale Beach Boulevard
LOCATION: Hallandale Beach, Florida
CLIENT: PRH-2600 Hallandale Beach LLC

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

NAME: James E. Spinks III, PE, PTOE
P.E. NO.: 66775
DATE: August 5, 2011

SIGNATURE: _____

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EXECUTIVE SUMMARY

CGA was commissioned by PRH-2600 Hallandale Beach LLC to provide a Traffic Impact Study for the development of "Beachwalk", located at 2600 Hallandale Beach Boulevard (State Road 858) within the City of Hallandale Beach. The proposed development is a multi-story building that will consist of hotel and residential units. The project will be developed in one (1) distinct phase, with opening year anticipated to occur in year 2015, as follows:

1. Hotel: 216 Two (2) bedroom suites and 216 standard rooms as well as a 1,225 square foot accessory hotel restaurant
2. High-Rise Condominium: 84 dwelling units

An assessment of the proposed development traffic for both the AM and PM peak period during typical weekday conditions was performed. The existing roadway segment analysis shows that all of the roadway segments within the study area currently operate at or above level of service (LOS) "D" during the AM and PM peak period, with the exception of Hallandale Beach Boulevard from NE 10th Avenue to NE 14th Avenue which operates below LOS "D" during the PM peak period. The existing intersection analysis shows that all intersections within the study area currently operate at or above LOS "D" during the AM peak hour, with the exception of E. Hallandale Beach Boulevard at US 1. During the PM peak hour, the existing intersection analysis shows that all intersections currently operate at or above LOS "D", with the exception of Hallandale Beach Boulevard at NE 14th Avenue and Hallandale Beach Boulevard at US 1.

Committed development information was obtained from the *Wal-mart Expansion Traffic Impact Study, August 2010,* provided by City staff, which included data from several of the most up-to-date committed development studies for the city. The studies provided trip generation for the PM peak period, however, no available AM peak period committed development data was available. Therefore, since the developments listed in Table 4-1 would likely yield a higher number of project trips in the PM peak hour, to be conservative, the reciprocal movements of the PM peak hour committed trips were calculated and utilized for the AM peak hour committed development trips.

The future traffic growth rate was developed using a trend analysis based on historical traffic data from the FDOT Traffic DVD database. Historical trend analyses for traffic count stations within the study area indicate that the average annual growth rate is approximately 0.5 percent (%). This conservative annual growth rate was utilized to calculate expected background traffic growth from the existing 2011 traffic volumes for the traffic impact area.

An analysis of Year 2015 traffic shows that each of the studied intersections operates at or above LOS "D" with or without project-generated traffic, with the exception of the following intersections which operate below LOS "D" with or without project-generated traffic:

1. Hallandale Beach Boulevard at Ocean Drive (AM and PM Peak)
2. Hallandale Beach Boulevard at NE 14th Avenue (AM and PM Peak)
3. Hallandale Beach Boulevard at US 1 (AM and PM Peak)
4. Hallandale Beach Boulevard at Golden Isles Drive (PM Peak Only). However, signal timing improvements proposed in this report will allow the intersection to operate at LOS "C" with project-generated traffic included.

In addition, all studied arterial links operate at or above LOS "D" with or without project-generated traffic, with the exception of the following arterial links which operate below LOS "D" with or without project-generated traffic:

1. Hallandale Beach Boulevard from US 1 to NE 10th Avenue (AM Peak)
2. Hallandale Beach Boulevard from US 1 to Layne Boulevard (PM Peak)

An analysis of the future 2015 conditions with project traffic showed that each of the failing roadway segments within the study area will operate below acceptable levels of service regardless of the addition of project traffic. The intersection level of service analysis for future conditions including project traffic showed that each of the intersections performed at the same level of service as the future conditions without project traffic during both the AM and PM peak hour.

For the intersection of Hallandale Beach Boulevard at Golden Isles Drive, optimization of the intersection signal timing resulted in the intersection operating at or above LOS "D" during both the AM and PM peak periods with the addition of project-generated traffic.

In conclusion, the results of this study demonstrate that the traffic generated by the proposed "Beachwalk" development project can be accommodated on the existing roadway network and levels of service expected without the project can be maintained upon the addition of project-generated traffic.

1. Introduction

The purpose of this report is to document the results of the Traffic Impact Study for the development of "Beachwalk", located at 2600 Hallandale Beach Boulevard (State Road 858) within the City of Hallandale Beach. There are currently no existing land uses at the proposed site.

The following sections summarize the results of the traffic study, and provide a list of options to be considered to mitigate any potential impacts of the project.

1.1 Project Description

PRH-2600 Hallandale Beach LLC is proposing the development of "Beachwalk", located at 2600 Hallandale Beach Boulevard (State Road 858) within the City of Hallandale Beach. This development is a multi-story building that will consist of a mix of hotel and residential units. The project will be developed in one (1) distinct phase, with opening year anticipated to occur in year 2015, as follows:

1. Hotel: 216 Two (2) bedroom suites and 216 standard rooms with an accessory hotel restaurant: 1,225 square feet
2. High-Rise Condominium: 84 dwelling units

1.2 Project Location

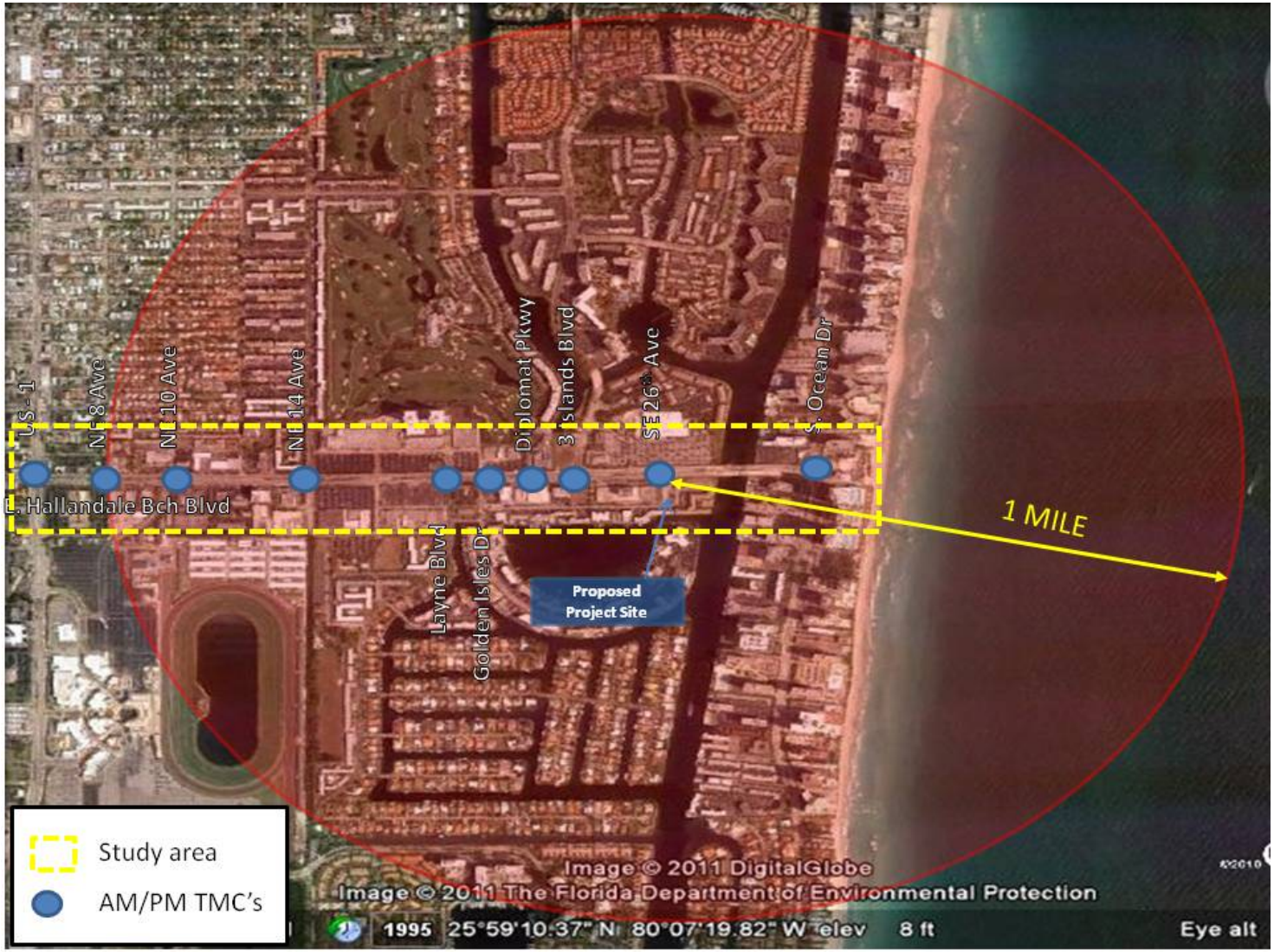
The project site is located just east of NE 26th Avenue, along the south side of Hallandale Beach Boulevard. **Figure 1-1** depicts the general location of the Beachwalk development site and the study area.

1.3 Traffic Impact Study Area

The proposed study impact area for this project includes the region bounded by a one mile radius circle extending out from the proposed project site. More specifically, the study impact area is bounded by US 1 to the west and S. Ocean Drive (A1A to the east), along Hallandale Beach Boulevard.

Since the proposed site is easily accessed via the regional roadway system, the area of influence, where most of the traffic entering and exiting the project will be concentrated, is limited to adjacent roadways and intersections in close proximity to the site.

Figure 1-1 – Project Location Map



2. Data Collection

2.1 Existing Transport Characteristics

The proposed site is surrounded by the following state and/or local roadways: Hallandale Beach Boulevard to the immediate north, SE 26th Ave to the east, Diana Drive to the immediate south, and Golden Isles Drive to the west.

Transit service to the project study area is provided by Broward County Transit lines 1, 4, 5, 28, and the US 1 Breeze.

Transit route maps and service schedules are shown in Appendix A.

2.2 Traffic Count Data

Turning movement counts (TMC's) were collected during the AM and PM peak period on a typical weekday within the determined traffic study area. A seasonal factor obtained from the 2009 FDOT Florida Traffic Information DVD of 1.2 was used to adjust the raw turning movement counts to peak season turning movement counts. Locations for typical weekday turning movement counts are included in Appendix B, and listed below:

1. Hallandale Beach Boulevard at US 1
2. Hallandale Beach Boulevard at NE 8th Avenue
3. Hallandale Beach Boulevard at NE 10th Avenue
4. Hallandale Beach Boulevard at NE 14th Avenue
5. Hallandale Beach Boulevard at 3 Islands Boulevard
6. Hallandale Beach Boulevard at Golden Isles Drive
7. Hallandale Beach Boulevard at Layne Boulevard
8. Hallandale Beach Boulevard at SE 26th Avenue
9. Hallandale Beach Boulevard at Diplomat Parkway
10. Hallandale Beach Boulevard at South Ocean Drive
11. South Ocean Drive NB Ramp to Hallandale Beach Boulevard WB

In addition to the traffic data counts, existing characteristics of the roadway network including intersection geometry, lane geometry and posted speed limits within the traffic study area were verified.

A conservative growth rate factor of 0.5% was applied to all of the existing traffic data counts to forecast future background conditions. Growth rate data is included in Appendix C.

2.3 Additional Traffic Data Collection

2.3.1 Signal Timing Analysis – Existing signal timing and phasing was obtained from Broward County Traffic Engineering, and is included in Appendix D.

2.3.2 Weekly Adjustment Factors - These factors were used to adjust raw counts to reflect average annual traffic for typical weekday conditions. These factors were obtained from the 2009 FDOT Florida Traffic Information DVD.

2.3.3 Peak Hour Factors – A peak hour factor of 0.92 was used for hourly variation of the traffic flow in the peak period, as prescribed by the Florida Department of Transportation (FDOT) within the Quality/Level of Service Handbook.

2.4 Roadway Description

The following sections describe the physical characteristics of the roadways within the traffic impact area.

Hallandale Beach Boulevard – Six-lane divided state road, running in an east-west direction, serving as the northern border of the proposed site. The posted speed limit along Hallandale Beach Boulevard in the vicinity of the project is 35 mph.

US 1 – Four-lane divided US highway north of Hallandale Beach running in a north-south direction, west of the proposed site. Six-lane divided US highway south of Hallandale Beach Boulevard. The posted speed limit along US 1 in the vicinity of the project is 35 mph north of Hallandale Beach Boulevard and 45 mph to the south.

NE 8th Avenue – Two-lane undivided local road, running in a north-south direction, west of the proposed site. The posted speed limit along NE 8th Avenue in the vicinity of the project is 25 mph.

NE 10th Avenue – Two-lane undivided local road, running in a north-south direction, west of the proposed site. The posted speed limit along NE 10th Avenue in the vicinity of the project is 25 mph.

NE 14th Avenue – Two-lane undivided local road, running in a north-south direction, west of the proposed site. The posted speed limit along NE 14th Avenue in the vicinity of the project is 25 mph.

Layne Boulevard – Four-lane divided local road, running in a north-south direction, west of the proposed site. The posted speed limit along Layne Boulevard in the vicinity of the project is 30 mph.

Golden Isles Drive – Two-lane undivided local road, south of the proposed site. The posted speed limit along Golden Isles Drive in the vicinity of the project is 25 mph.

Diana Drive – Two-lane undivided local road, running in an east-west direction, south of the proposed site. The posted speed limit along Diana Drive in the vicinity of the project is 30 mph.

Diplomat Parkway – Two-lane undivided local road, running in a north-south direction, west of the proposed site. The posted speed limit along Diplomat Parkway in the vicinity of the project is 25 mph.

3 Islands Boulevard – Six-lane divided local road, running in a north-south direction, west of the proposed site. The posted speed limit along 3 Islands Boulevard in the vicinity of the project is 35 mph.

South Ocean Drive – Six-lane divided state road, running in a north-south direction, east of the proposed site. The posted speed limit along South Ocean Drive in the vicinity of the project is 35 mph.

2.5 Intersection Descriptions

There are 9 signalized intersections and 3 stop-controlled intersections located within the project study area, as follows:

2.5.1 Signalized Intersections

1. Hallandale Beach Boulevard at US 1
2. Hallandale Beach Boulevard at NE 8th Avenue
3. Hallandale Beach Boulevard at NE 10th Avenue
4. Hallandale Beach Boulevard at NE 14th Avenue
5. Hallandale Beach Boulevard at Layne Boulevard
6. Hallandale Beach Boulevard at Golden Isles Drive

7. Hallandale Beach Boulevard at Diplomat Parkway
8. Hallandale Beach Boulevard at 3 Islands Boulevard
9. Hallandale Beach Boulevard at South Ocean Drive

2.5.2 Stop-Controlled Intersections

1. Hallandale Beach Boulevard at SE 26th Avenue
2. Diana Drive at SE 26th Avenue
3. Diana Drive at Golden Isles Drive

3. Existing Conditions Analysis

Analysis of existing traffic conditions was performed for the AM and PM peak hour conditions on the roadway segments within the study area. The Florida Department of Transportation (FDOT) Generalized Level of Service (LOS) Tables were used to identify the vehicular capacity on the roadway segments. Intersection levels of service were determined for the AM and PM peak period conditions using Synchro (version 7.0) based on the procedures of the Highway Capacity Manual (HCM) at all intersections within the study area, with the exception of E. Hallandale Beach Boulevard at SE 26th Avenue, which was analyzed based on the procedures of the Intersection Capacity Utilization (ICU). The levels of service thresholds used for the analysis are based on the "Generalized" tables for Urbanized Areas within the FDOT Level of Service Handbook for the Broward County adopted threshold, which is Level of Service "D".

Level of Service (LOS) is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Six (6) LOS are defined for each type of facility that have HCM analysis procedures available. Letters designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions and the driver's perception of those conditions. Safety is not included in the measures that establish service levels. Eight (8) LOS are defined for each intersection analyzed using ICU procedures. Letters designate each level, ranging from A to H. Similar to the HCM method, LOS A signifies that an intersection has no congestion and LOS H represents an intersection that is over capacity.

3.1 Roadway Segment Level of Service Summary

The AM and PM peak hour weekday link volumes within the study area were estimated using the adjusted AM and PM peak hour turning movement counts. The resulting link and intersection data are summarized on Figure 3-1.

The link maximum service volumes used in this study are derived from the 2009 FDOT Quality/Level of Service Handbook. Table 3-1 includes facility type, number of travel lanes, existing AM and PM peak hour volumes, AM and PM peak hour maximum service volumes, the adopted level of service standard and AM and PM peak hour level of service.

The analysis shows that all of the roadway segments within the study area currently operate at acceptable levels of service during the AM and PM peak period, with the exception of Hallandale Beach Boulevard from NE 10th Avenue to NE 14th Avenue during the PM peak period.

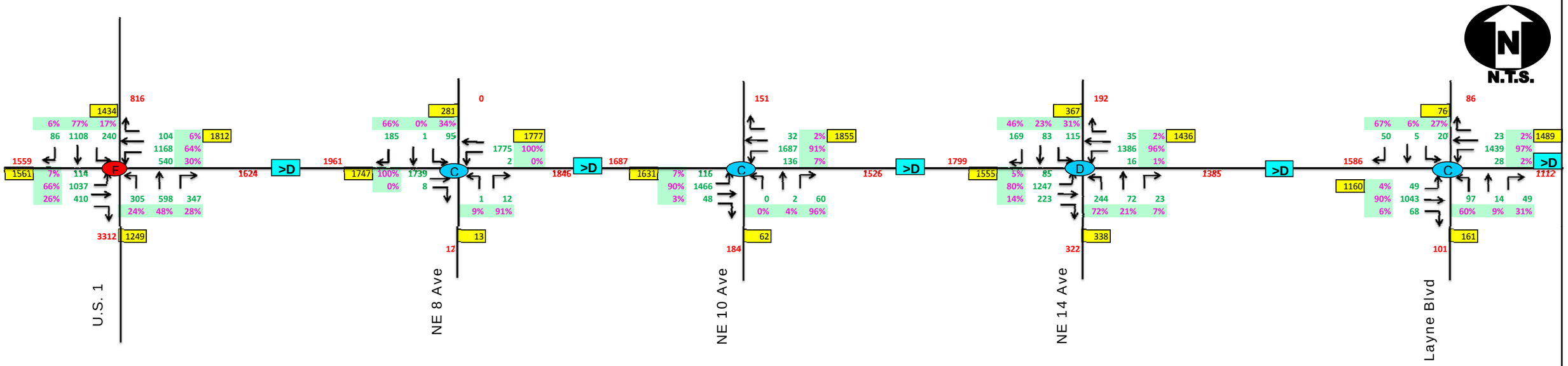
3.2 Intersection Level of Service Summary

The collected turning movement counts were converted to average turning movement volumes by applying a peak season conversion factor (PSCF). The peak season conversion factors were obtained from the 2009 Florida Traffic Information & Highway DVD. These volumes are also summarized on Figure 3-1.

The analysis shows that all intersections within the study area currently operate at acceptable levels of service[1] during the AM peak hour, with the exception of Hallandale Beach Boulevard at US 1. During the PM peak hour, all intersections currently operate at acceptable levels of service, with the exception of Hallandale Beach Boulevard at NE 14th Avenue and Hallandale Beach Boulevard at US 1. The existing intersection levels of service analysis worksheets are summarized on Figure 3-1a, Figure 3-1b and included in Appendix E.

[1] LOS D or better represents the adopted level of service by Broward County.

Beachwalk Development - 2011 Existing AM (1 of 2)



Beachwalk Development

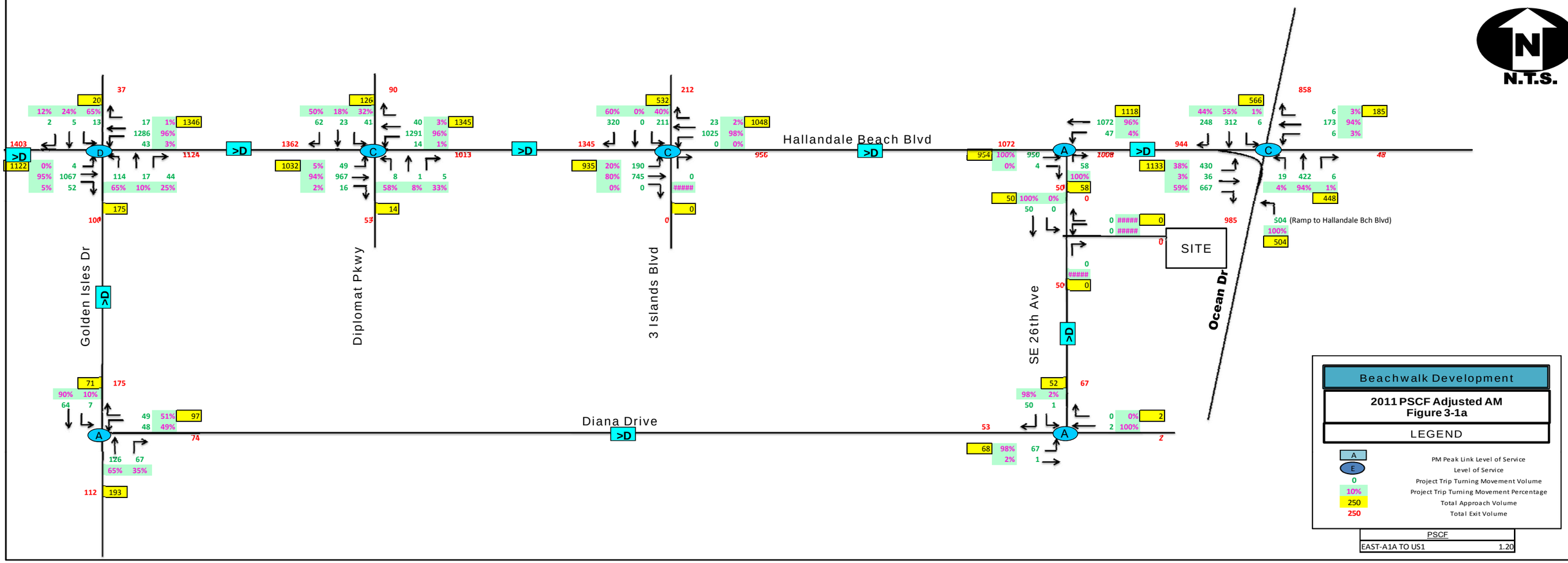
2011 PSCF Adjusted AM
Figure 3-1a

LEGEND

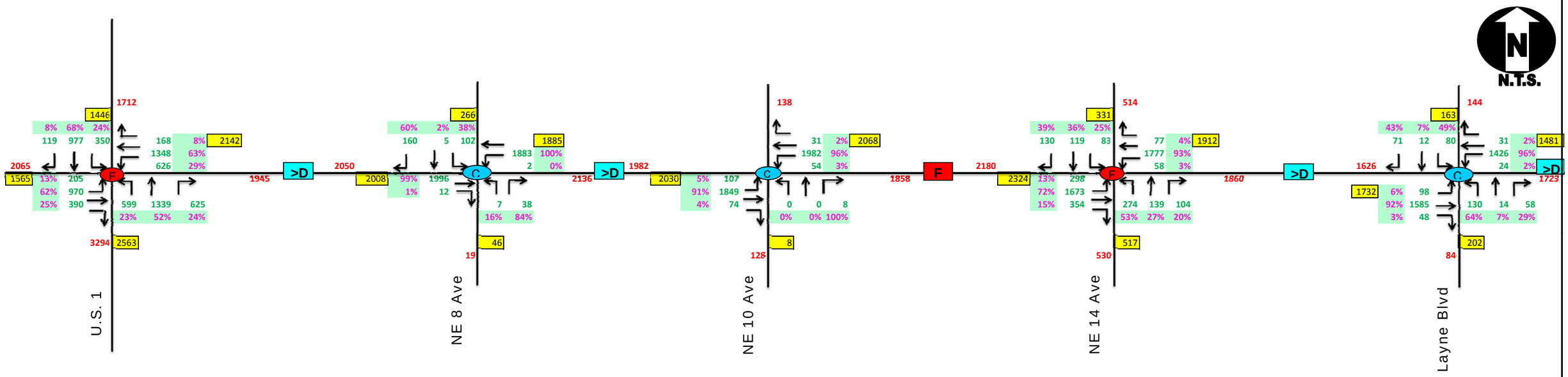
A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

PSCF	
EAST-A1A TO US1	1.20

Beachwalk Development - 2011 Existing AM (2 of 2)



Beachwalk Development - Existing PM Peak (1 of 2)



Beachwalk Development

2011 PSCF Adjusted PM
Figure 3-1b

LEGEND

A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

PSCF	
EAST-A1A TO US1	1.20

Beachwalk Development - Existing PM Peak (2 of 2)

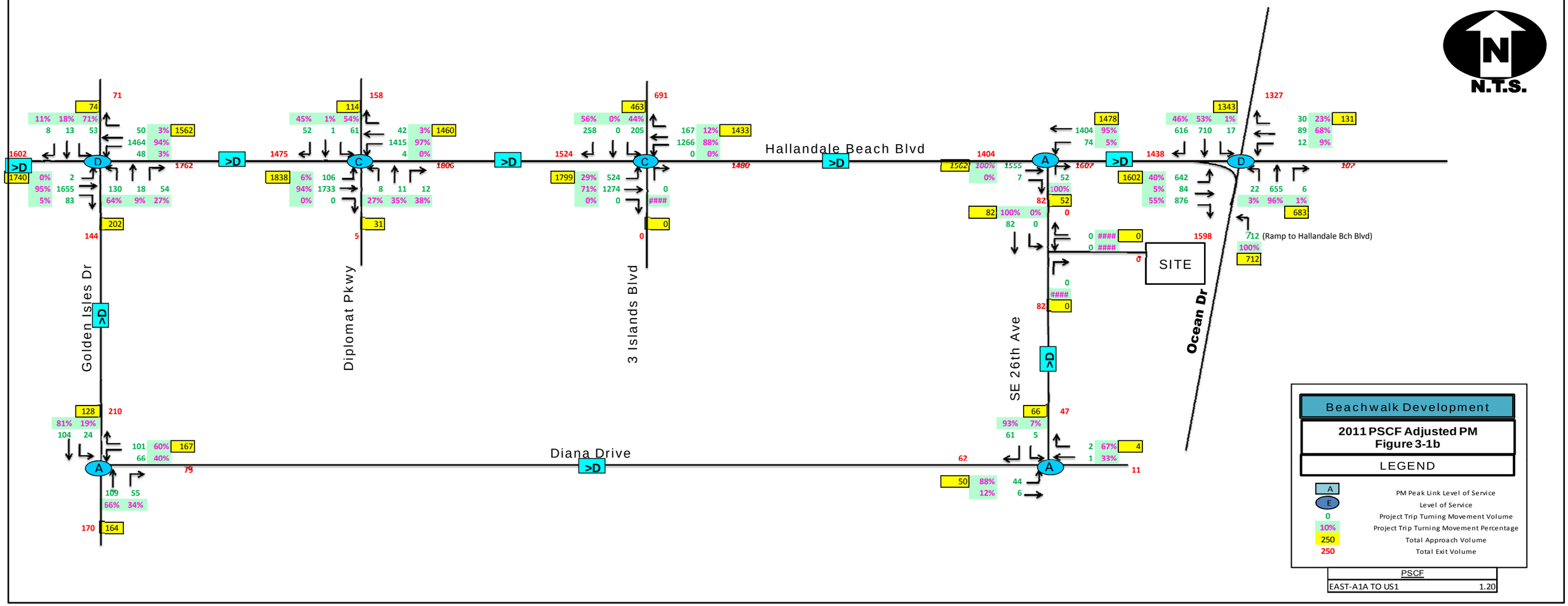


Table 3-1 – Existing Conditions Segment Analysis – AM and PM Peak Hour

Peak Hour Volume Level Of Service Analysis (AM)						
LOCATION	ROADWAY TYPE	PH LOS "D" Volume*	AM Peak Hour		PM Peak Hour	
			Existing Peak Hour (PH) Volume**	Existing Peak Hour LOS	Existing Peak Hour (PH) Volume**	Existing Peak Hour LOS
Hallandale Beach Blvd - From U.S. 1 to NE 8th Ave	6LD	4,240	3,708	D or better	4,150	D or better
Hallandale Beach Blvd - From NE 8th Ave to NE 10th Ave	6LD	4,240	3,623	D or better	4,118	D or better
Hallandale Beach Blvd - From NE 10th Ave to NE 14th Ave	6LD	4,240	3,410	D or better	4,505	F
Hallandale Beach Blvd - From NE 14th Ave to Layne Blvd	6LD	4,240	2,971	D or better	3,772	D or better
Hallandale Beach Blvd - From Layne Blvd to Golden Isles Dr	6LD	4,240	2,611	D or better	3,342	D or better
Hallandale Beach Blvd - From Golden Isles Dr to Diplomat Pkwy	6LD	4,240	2,486	D or better	3,401	D or better
Hallandale Beach Blvd - From Diplomat Pkwy to 3 Islands Blvd	6LD	4,240	2,358	D or better	3,330	D or better
Hallandale Beach Blvd - From 3 Islands Blvd to SE 26th Ave	6LD	4,240	2,028	D or better	2,995	D or better
Hallandale Beach Blvd - From SE 26th Ave to Ocean Dr	6LD	4,240	2,251	D or better	3,085	D or better
SE 26 Avenue - From Hallandale Beach Blvd to Diana Drive	2LU	832	119	D or better	133	D or better
Diana Drive - From SE 26 Avenue to Golden Isles Drive	2LU	832	172	D or better	246	D or better
Golden Isles Drive - From Diana Drive to Hallandalle Beach Blvd	2LU	832	275	D or better	354	D or better

* - From FDOT Generalized LOS Tables (2LU - 1600x.65x.8 = 832)

** - 2011 Collected Data

4. Future Traffic Projections

Analysis of future traffic projections within the study area was performed for two scenarios: a) background traffic plus committed development traffic and b) total traffic which includes background traffic, committed development traffic, plus project traffic. The purpose of the analysis is to isolate the impacts of the traffic associated with the project from traffic due to population growth and construction of new developments.

The following sections describe the process used to determine future roadway improvements planned by the City, County, and state agencies; the methodology used to estimate background traffic; traffic from committed developments; and trips associated with the proposed site.

4.1 Planned and Programmed Roadway Improvements

Programmed (funded and/or committed) transportation improvements within the traffic impact study area were collected using Florida Department of Transportation (FDOT) five year work program, Broward County's Metropolitan Planning Organization (MPO) Transportation Improvement Program (TIP) and the 2035 Long Range Transportation Plan (LRTP). There were no capacity improvement projects funded for construction prior to or on the proposed project site opening year, planned for 2015. Therefore, the existing roadway geometry within the study area was used as the future roadway network in the future analysis.

4.2 Background Traffic

Background traffic was calculated to account for committed traffic and growth in the area. Future background traffic for this study was developed by applying a yearly growth rate to the seasonally adjusted 2011 traffic counts to estimate the background traffic for the year 2015, which is the project's anticipated build out year.

The growth rate utilized was 0.5 percent (%) to represent the expected traffic growth within the entire traffic impact area. This growth rate was then applied to the 2011 traffic counts to estimate the 2015 future background traffic volumes within the traffic impact area.

4.3 Committed Developments

Committed development information was obtained from The City of Hallandale staff from the *Wal-mart Expansion Traffic Impact Study, August 2010,* which included data from several of the most up-to-date committed development studies for the city. Table 4-1 lists the committed development information provided within this study, including their project trips. Each of the committed developments was accounted for, with the exception of the "European Club". At the direction of City of Hallandale Beach Staff, "European Club" was omitted, due to inactivity in the allotted time outlined in the Developer's Agreement. Committed development data is included in Appendix F.

Table 4-1 – Committed Developments

Committed Development	
Development	**Year**
Ocean Marine	2003
Village of Gulfstream	Ongoing
Millenium Hallandale	2005
Regency SPA	2002
Oasis	2006
Park Central	2006
Hallandale Square	2008
Domus Hallandale	n/a
Walmart Expansion	Ongoing

N/A – Not available from City staff

The studies provided trip generation for the PM peak period. However, no available AM peak period committed development data was available. Therefore, since the developments listed in Table 4-1 would likely yield a higher number of project trips in the PM peak hour, to be conservative, the reciprocal movements of the AM peak hour committed trips were calculated for the PM peak hour committed development trips. The number of trips from each development was added to the 2015 background traffic based on the trip assignment included in the traffic report to develop the total background traffic.

An analysis of existing traffic, plus background, plus committed traffic, shows that each of the intersections operates at acceptable levels of service, with the exception of the following:

1. Hallandale Beach Boulevard at Ocean Drive (AM and PM Peak)

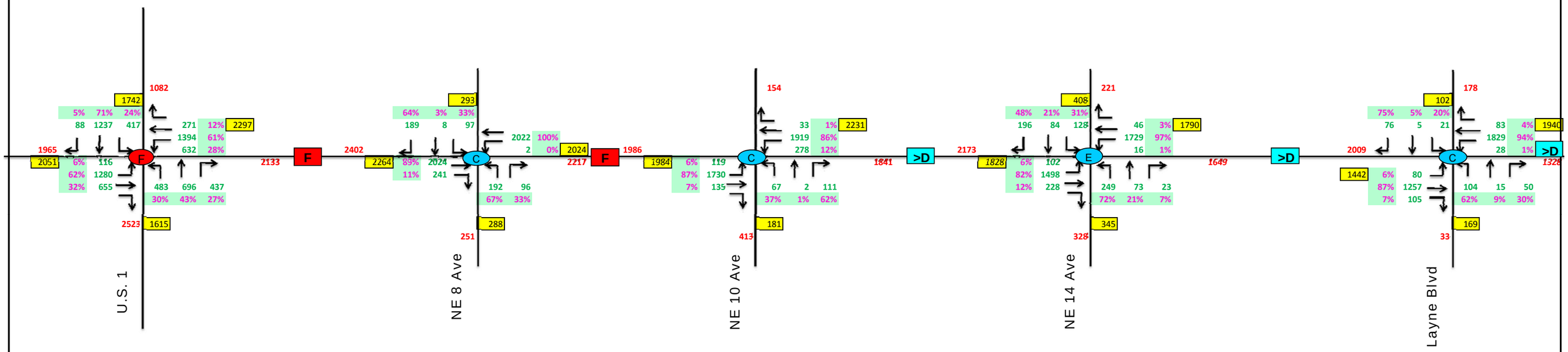
2. Hallandale Beach Boulevard at NE 14th Avenue (AM and PM Peak)
3. Hallandale Beach Boulevard at US 1 (AM and PM Peak)
4. Hallandale Beach Boulevard at Golden Isles Drive (PM Peak Only)

In addition, all the arterial links operate at acceptable levels of service, with the exception of the following:

1. Hallandale Beach Boulevard from US 1 to NE 10th Avenue (AM Peak)
2. Hallandale Beach Boulevard from US 1 to Layne Boulevard (PM Peak)

Figure 4-1 summarizes the total background development traffic within the study area.

Beachwalk Development - Total Background AM (1 of 2)



Beachwalk Development

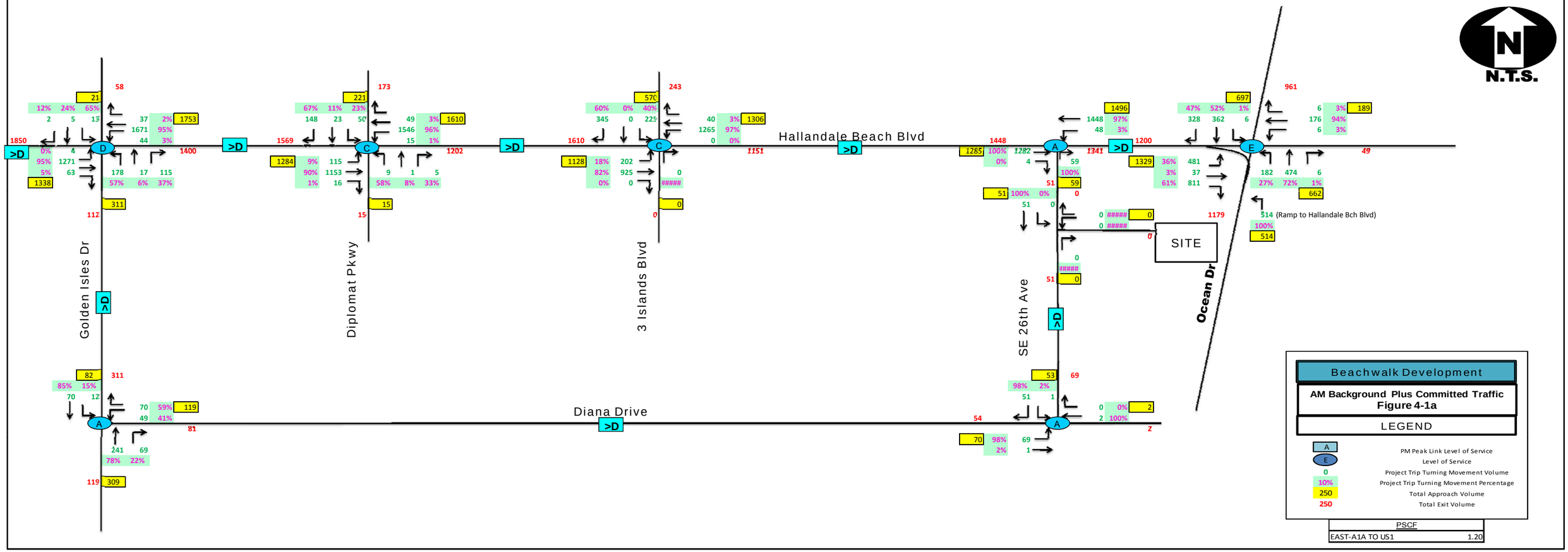
AM Background Plus Committed Traffic
Figure 4-1a

LEGEND

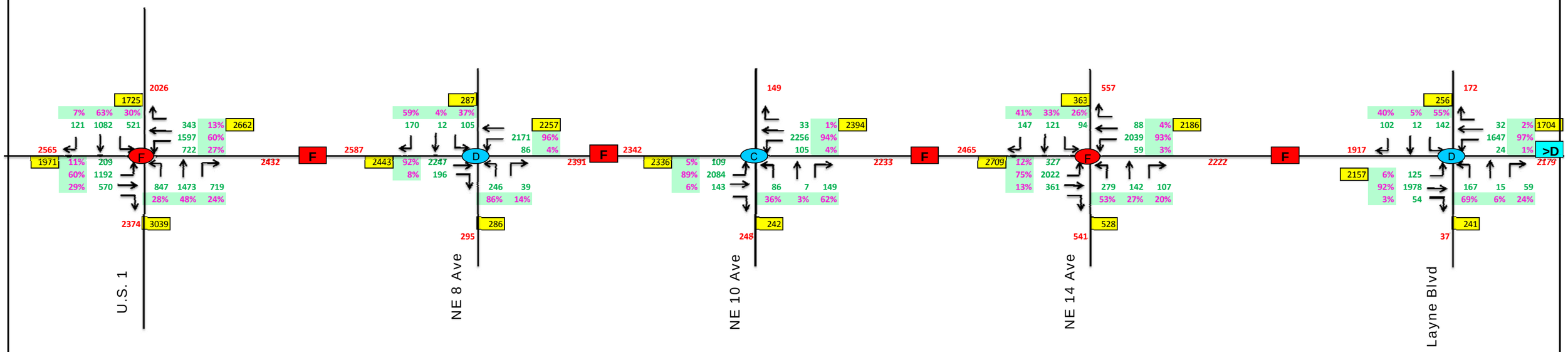
A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

PSCF	
EAST-A1A TO US1	1.20

Beachwalk Development - Total Background AM (2 of 2)



Beachwalk Development - Total Background PM (1 of 2)



Beachwalk Development

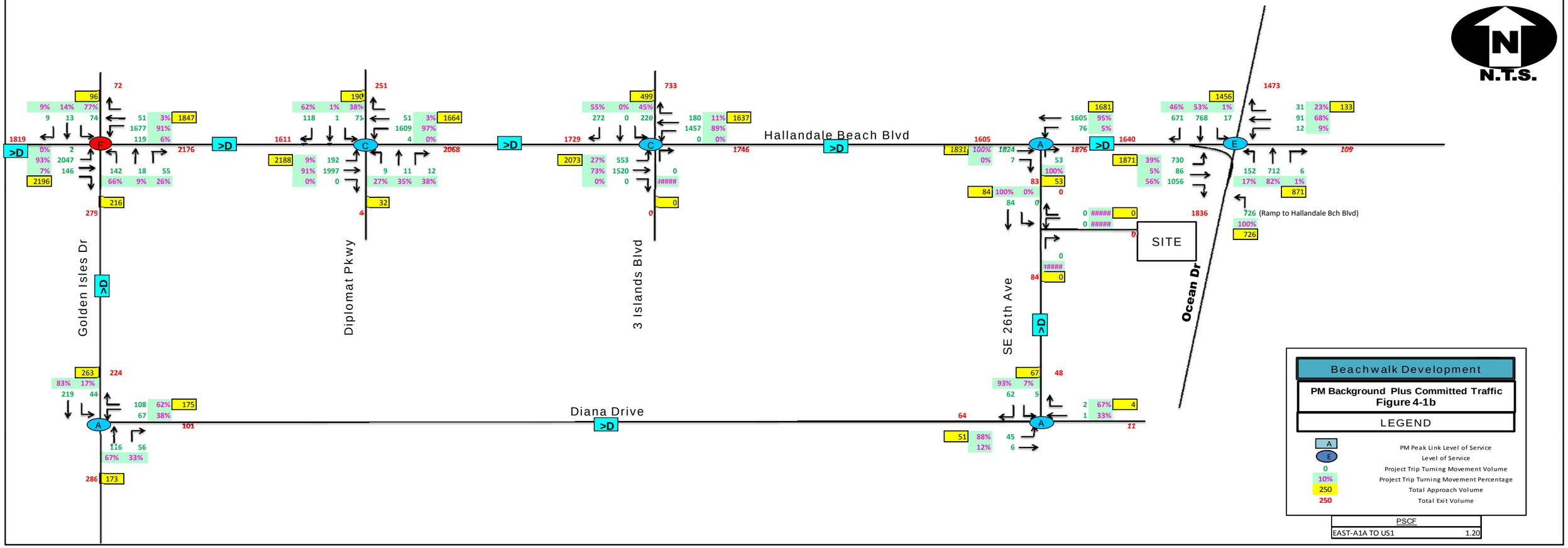
PM Background Plus Committed Traffic
Figure 4-1b

LEGEND

A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

PSCF	
EAST-A1A TO US1	1.20

Beachwalk Development - Total Background PM (2 of 2)



4.4 Project Traffic

Project traffic was developed using trip generation rates from The Trip Generation Manual, 7th Edition, by the Institute of Transportation Engineers (ITE).

4.4.1 Trip Generation

Trip generation is the method by which the amount of traffic, or the number of trips to and from a site, is estimated. The Trip Generation Manual, 7th Edition, by the Institute of Transportation Engineers (ITE), is a common source of trip generation characteristics, providing data on a variety of development types on daily and peak-hour basis.

Based upon the ITE land use codes, the proposed project's trip generation was determined, as follows:

- ITE Land Use Code 311 (All Suites Hotel)
- ITE Land Use Code 310 (Hotel)
- ITE Land Use Code 232 (High-Rise Condominium)

ITE land uses for Hotel as well as All Suites Hotel were applied to the 216 units due to the fact that each unit will have the capability of functioning as two distinct hotel units, one with a kitchen and one without a kitchen.

Internal Capture Volumes

Internal capture trips are trips that occur between various land uses within the development without needing to access the external roadway network. Internal capture is not expected for the project.

Pass-By Capture Volumes

A portion of the trips at the project driveways will be the result of the project's new trips. Pass-by trips are stops on the way from an origin to a primary trip destination without a route diversion and that are existing trips on the roadway network. The pass-by percentage for the various land uses were determined using the rates provided in the *ITE Trip Generation Handbook*.

Net New Project Trips

Net new, external vehicle trips are equal to the gross project trips minus the internal capture trips and the pass-by capture trips. As identified in the 2035 Broward County Long Range Transportation Plan (LRTP), Hallandale Beach Boulevard and SR A1A (Ocean Drive) have been identified as routes for premium rapid bus transit services within the limits of this project study area with a mobility hub planned for implementation in FY 2014-2015 at Hallandale Beach Boulevard and US 1. A community hub is also planned for inclusion at Hallandale Beach Boulevard and A1A, as well as Hallandale Beach Boulevard and NE 14th Avenue.

Table 4-2 shows the project trip generation for the AM, PM and daily periods for the project site.

Table 4-2 – Trip Generation

Trip Generation - AM Peak Hour																	
Land Uses	ITE Land Use Code	Description	Unit	Total Units	Rate/Unit	Trips	Driveway Volumes				Passerby Rate		Total Trips	Directional Distribution			
							Entering		Exiting		%	Trips		Entering		Exiting	
EXISTING																	
Lodging	**311**	All Suites Hotel	Rooms	**216**	**0.38**	82	**55.0%**	45	**45.0%**	37	0%	0	82	**55.0%**	45	**45.0%**	37
Lodging	**310**	Hotel	Rooms	**216**	**0.56**	121	**58.0%**	70	**42.0%**	51	0%	0	121	**55.0%**	67	**45.0%**	54
Lodging	**232**	High-Rise Condominium	Dwelling Units	**84**	**0.34**	29	**19.0%**	5	**81.0%**	23	0%	0	29	**19.0%**	5	**81.0%**	23
Total														**Entering**	**117**	**Exiting**	**115**

Trip Generation - PM Peak Hour																	
Land Uses	ITE Land Use Code	Description	Unit	Total Units	Rate/Unit	Trips	Driveway Volumes				Passerby Rate		Total Trips	Directional Distribution			
							Entering		Exiting		%	Trips		Entering		Exiting	
EXISTING																	
Lodging	**311**	All Suites Hotel	Rooms	**216**	**0.4**	86	**45.0%**	39	**55.0%**	48	0%	0	86	**45.0%**	39	**55.0%**	48
Lodging	**310**	Hotel	Rooms	**216**	**0.59**	127	**49.0%**	62	**51.0%**	65	0%	0	127	**45.0%**	57	**55.0%**	70
Lodging	**232**	High-Rise Condominium	Dwelling Units	**84**	**0.38**	32	**62.0%**	20	**38.0%**	12	0%	0	32	**62.0%**	20	**38.0%**	12
Total														**Entering**	**116**	**Exiting**	**130**

Trip Generation - Daily																	
Land Uses	ITE Land Use Code	Description	Unit	Total Units	Rate/Unit	Trips	Driveway Volumes				Passerby Rate		Total Trips	Directional Distribution			
							Entering		Exiting		%	Trips		Entering		Exiting	
EXISTING																	
Lodging	**311**	All Suites Hotel	Rooms	**216**	**4.9**	1058	**50.0%**	529	**50.0%**	529	0%	0	1058	**50.0%**	529	**50.0%**	529
Lodging	**310**	Hotel	Rooms	**216**	**8.17**	1765	**50.0%**	882	**50.0%**	882	0%	0	1765	**50.0%**	882	**50.0%**	882
Lodging	**232**	High-Rise Condominium	Dwelling Units	**84**	**4.18**	351	**50.0%**	176	**50.0%**	176	0%	0	351	**50.0%**	176	**50.0%**	176
Total														**Entering**	**1587**	**Exiting**	**1587**

4.4.2 Trip Distribution

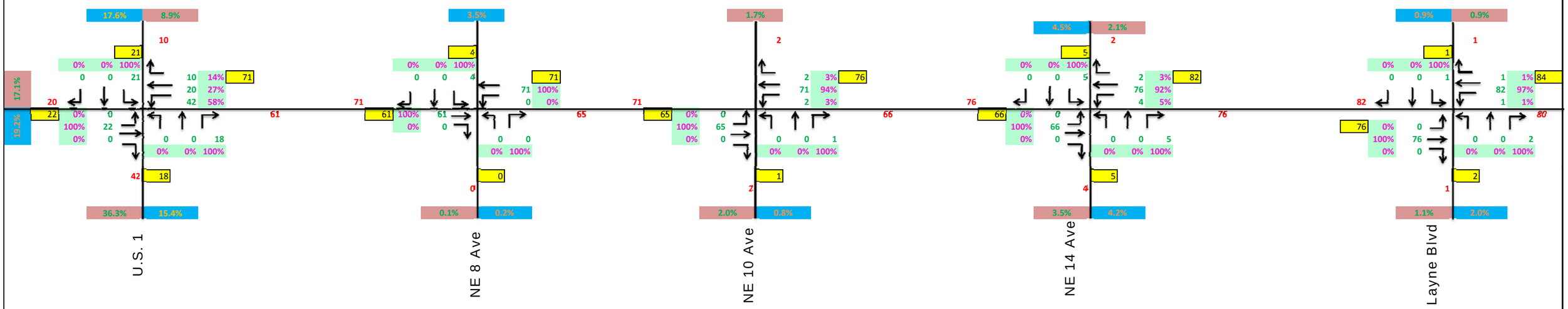
The trip distribution of the project's traffic was estimated based on an analysis of the surrounding roadway network characteristics, review of current entering and exiting traffic volume ratios for the project study area and existing land use patterns. This was primarily done due to the small-scale nature of this project. A FSUTMS model run would not provide the same level of detail as the analysis of current trend analysis. This trip distribution method used the existing turning movement counts to calculate the AM and PM peak hour link volumes entering and exiting the project impact area. Using the total volumes in the traffic impact area, distribution ratios were calculated entering and exiting each link. These ratios were then applied to the AM and PM peak trips.

4.4.3 Trip Assignment

Based upon the trip distribution described in the previous section, the total weekday AM and PM peak project trips were assigned to the roadway network. Figure 4-3 shows the trip distribution and assignment on the roadway network.

Trip generation analysis data is included in Appendix G.

Beachwalk Development - Trip Distribution AM (1 of 2)



Beachwalk Development

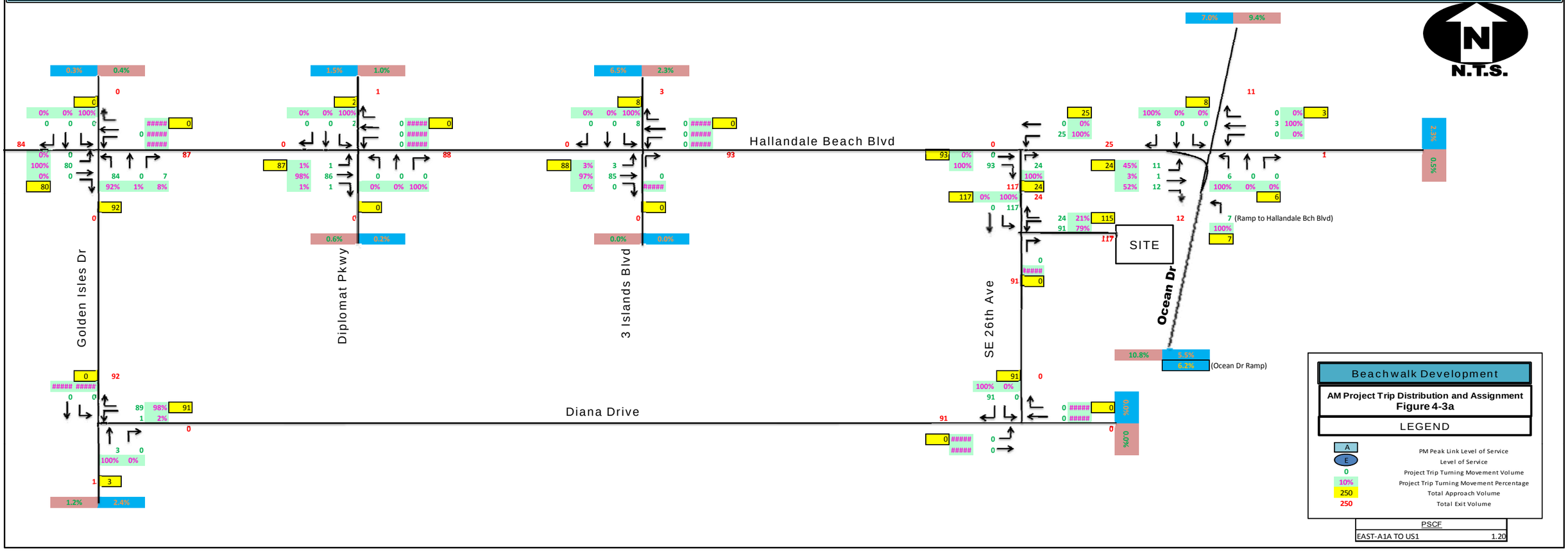
AM Project Trip Distribution and Assignment
Figure 4-3a

LEGEND

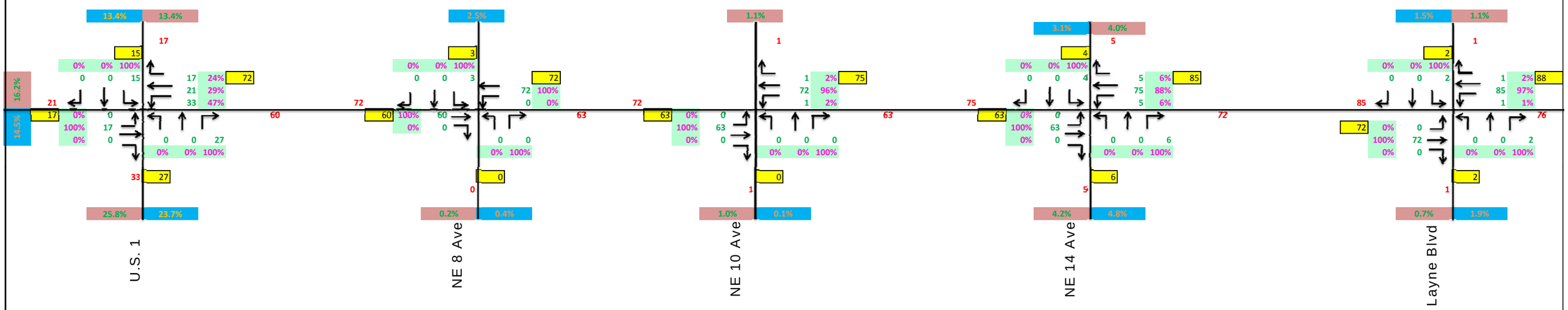
A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

PSCF	
EAST-A1A TO US1	1.20

Beachwalk Development - Trip Distribution AM (2 of 2)



Beachwalk Development - Trip Distribution PM (1 of 2)



Beachwalk Development

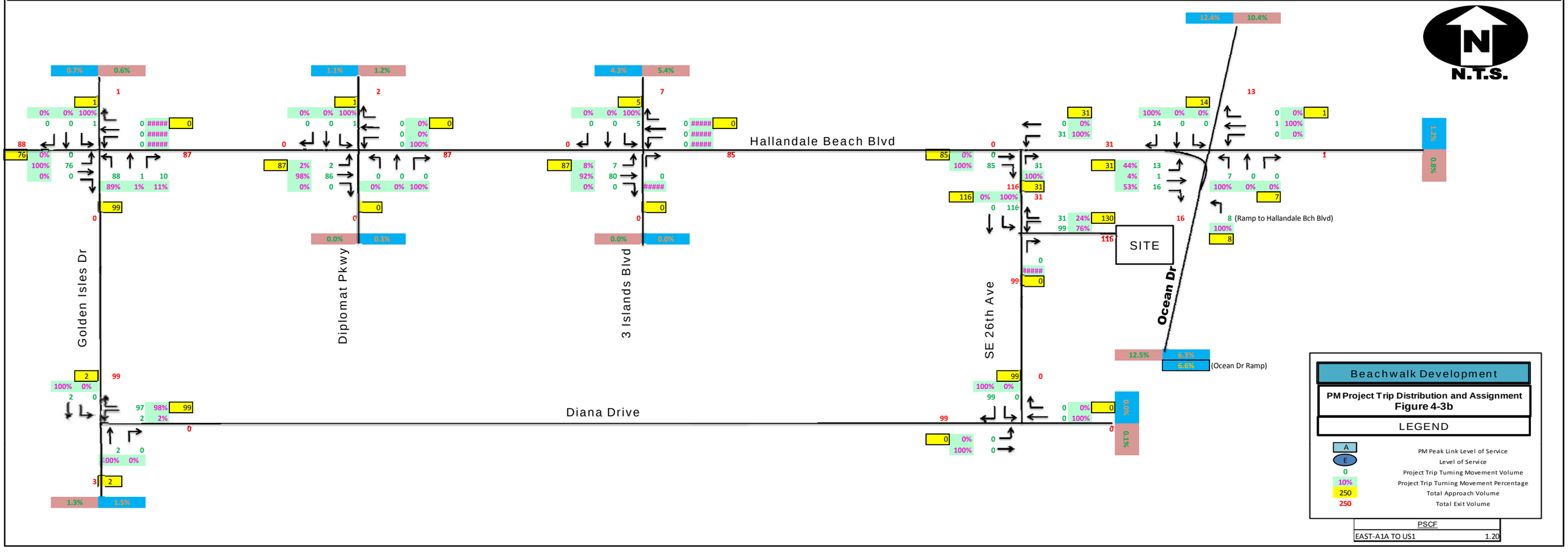
PM Project Trip Distribution and Assignment
Figure 4-3b

LEGEND

A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

PSCF	
EAST-A1A TO US1	1.20

Beachwalk Development - Trip Distribution PM (2 of 2)



5. Future Traffic Analysis

Analysis of future conditions was performed for weekday AM and PM peak hour conditions on the roadway segments within the study area based on the Florida Department of Transportation Generalized Level of Service (LOS) Tables.

Intersection levels of service were determined for the AM and PM peak period conditions using Synchro (version 7.0) based on the procedures of the 2000 Highway Capacity Manual and Intersection Capacity Utilization. Intersection signal timing green splits were optimized for all future traffic analysis with the cycle lengths held consistent with existing conditions, as shown on the Synchro output sheets in Appendix H.

The levels of service thresholds used for the analysis are based on the "Generalized" tables for Urbanized Areas within the FDOT Level of Service Handbook adopted for Broward County which is LOS D. Level of service thresholds are discussed in more detail in Section 3.2 of this document.

Table 5-1 summarizes the arterial analysis of existing, background plus committed, and project traffic vehicular volumes.

Table 5-1a – Future Peak Hour Vehicular Traffic Analysis (2015) – AM Peak Hour

Peak Hour Volume Level Of Service Analysis (AM)

LOCATION	ROADWAY TYPE	Existing Peak Hour (PH) Volume**	PH LOS "D" Volume*	Existing Peak Hour LOS	Future Roadway Type (2015)			Future without project trips		Future with project trips		
					Programmed Improvements	Future Roadway Type	Future PH LOS "D" Volume*	Future PH Volume***	Future Peak Hour LOS	Project Trips***	Future PH Volume***	Future PH LOS
Hallandale Beach Blvd - From U.S. 1 to NE 8th Ave	6LD	3,708	4,240	D or better	NO	6LD	4,240	4,667	F	132	4,799	F
Hallandale Beach Blvd - From NE 8th Ave to NE 10th Ave	6LD	3,623	4,240	D or better	NO	6LD	4,240	4,241	F	137	4,378	F
Hallandale Beach Blvd - From NE 10th Ave to NE 14th Ave	6LD	3,410	4,240	D or better	NO	6LD	4,240	4,072	D or better	142	4,214	D or better
Hallandale Beach Blvd - From NE 14th Ave to Layne Blvd	6LD	2,971	4,240	D or better	NO	6LD	4,240	3,658	D or better	158	3,817	D or better
Hallandale Beach Blvd - From Layne Blvd to Golden Isles Dr	6LD	2,611	4,240	D or better	NO	6LD	4,240	3,278	D or better	164	3,442	D or better
Hallandale Beach Blvd - From Golden Isles Dr to Diplomat Pkwy	6LD	2,486	4,240	D or better	NO	6LD	4,240	3,153	D or better	87	3,240	D or better
Hallandale Beach Blvd - From Diplomat Pkwy to 3 Islands Blvd	6LD	2,358	4,240	D or better	NO	6LD	4,240	2,813	D or better	87	2,900	D or better
Hallandale Beach Blvd - From 3 Islands Blvd to SE 26th Ave	6LD	2,028	4,240	D or better	NO	6LD	4,240	2,599	D or better	93	2,691	D or better
Hallandale Beach Blvd - From SE 26th Ave to Ocean Dr	6LD	2,251	4,240	D or better	NO	6LD	4,240	2,825	D or better	48	2,873	D or better
SE 26 Avenue - From Hallandale Beach Blvd to Diana Drive	2LU	119	832	D or better	NO	2LU	832	121	D or better	141	262	D or better
Diana Drive - From SE 26 Avenue to Golden Isles Drive	2LU	172	832	D or better	NO	2LU	832	200	D or better	91	291	D or better
Golden Isles Drive - From Diana Drive to Hallandalle Beach Blvd	2LU	275	832	D or better	NO	2LU	832	422	D or better	92	514	D or better

* - From FDOT Generalized LOS Tables (2LU - 1600x.65x.8 = 832)

** - 2011 Collected Data

*** - Calculated from 2011 data

Table 5-2b – Future Peak Hour Vehicular Traffic Analysis (2015) – PM Peak Hour

Peak Hour Volume Level Of Service Analysis (PM)

LOCATION	ROADWAY TYPE	Existing Peak Hour (PH) Volume**	PH LOS "D" Volume*	Existing Peak Hour LOS	Future Roadway Type (2015)			Future without project trips		Future with project trips		
					Programmed Improvements	Future Roadway Type	Future PH LOS "D" Volume*	Future PH Volume***	Future Peak Hour LOS	Project Trips***	Future PH Volume***	Future PH LOS
Hallandale Beach Blvd - From U.S. 1 to NE 8th Ave	6LD	4,150	4,240	D or better	NO	6LD	4,240	5,105	F	132	5,237	F
Hallandale Beach Blvd - From NE 8th Ave to NE 10th Ave	6LD	4,118	4,240	D or better	NO	6LD	4,240	4,733	F	135	4,869	F
Hallandale Beach Blvd - From NE 10th Ave to NE 14th Ave	6LD	4,505	4,240	F	NO	6LD	4,240	5,175	F	138	5,312	F
Hallandale Beach Blvd - From NE 14th Ave to Layne Blvd	6LD	3,772	4,240	D or better	NO	6LD	4,240	4,409	F	158	4,566	F
Hallandale Beach Blvd - From Layne Blvd to Golden Isles Dr	6LD	3,342	4,240	D or better	NO	6LD	4,240	4,015	D or better	164	4,179	D or better
Hallandale Beach Blvd - From Golden Isles Dr to Diplomat Pkwy	6LD	3,401	4,240	D or better	NO	6LD	4,240	4,035	D or better	87	4,123	D or better
Hallandale Beach Blvd - From Diplomat Pkwy to 3 Islands Blvd	6LD	3,330	4,240	D or better	NO	6LD	4,240	3,797	D or better	87	3,884	D or better
Hallandale Beach Blvd - From 3 Islands Blvd to SE 26th Ave	6LD	2,995	4,240	D or better	NO	6LD	4,240	3,468	D or better	85	3,553	D or better
Hallandale Beach Blvd - From SE 26th Ave to Ocean Dr	6LD	3,085	4,240	D or better	NO	6LD	4,240	3,557	D or better	62	3,619	D or better
SE 26 Avenue - From Hallandale Beach Blvd to Diana Drive	2LU	133	832	D or better	NO	2LU	832	136	D or better	147	283	D or better
Diana Drive - From SE 26 Avenue to Golden Isles Drive	2LU	246	832	D or better	NO	2LU	832	276	D or better	99	375	D or better
Golden Isles Drive - From Diana Drive to Hallandalle Beach Blvd	2LU	354	832	D or better	NO	2LU	832	503	D or better	101	604	D or better

* - From FDOT Generalized LOS Tables (2LU - 1600x.65x.8 = 832)

** - 2011 Collected Data

*** - Calculated from 2011 data

5.1 Roadway Segment Level of Service Summary

Similar to Figure 4-1, Figure 5-1 shows that all the arterial links operate at acceptable levels of service, with the exception of the following:

1. Hallandale Beach Boulevard from US 1 to NE 10th Avenue (AM Peak)
2. Hallandale Beach Boulevard from US 1 to Layne Boulevard (PM Peak)

Therefore, each of the failing roadway segments within the study area will operate below acceptable levels of service regardless of the addition of project traffic.

5.2 Intersection Level of Service Summary

The intersection level of service analysis performed for future conditions including the project traffic showed that each of the intersections performed at the same level of service as the future conditions without including the project traffic.

An analysis of existing traffic, plus background, plus committed traffic, shows that each of the intersections operates at acceptable levels of service, with the exception of the following:

1. Hallandale Beach Boulevard at Ocean Drive (AM and PM Peak)
2. Hallandale Beach Boulevard at NE 14th Avenue (AM and PM Peak)
3. Hallandale Beach Boulevard at US 1 (AM and PM Peak)
4. Hallandale Beach Boulevard at Golden Isles Drive (PM Peak Only)

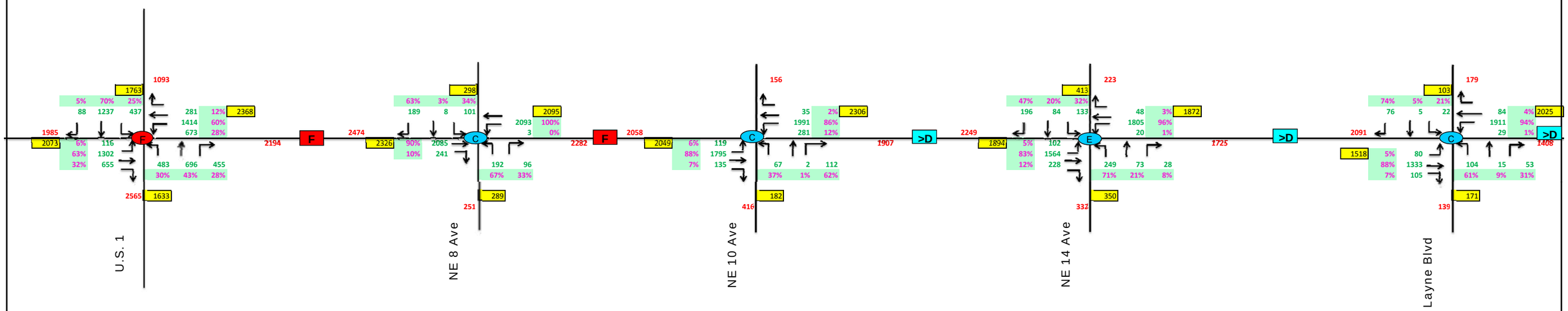
As a secondary measure, operational improvements were examined to improve intersection levels of service. As a first step, signal operations were improved by optimization of the intersection green splits. This operational improvement showed reduced delay time for each of the signalized intersections and even improved several intersections which were operating below acceptable levels of service. Upon completion of this measure, the analysis shows that the following intersections will still operate below an acceptable level of service:

1. Hallandale Beach Boulevard at Ocean Drive (PM Peak Only)
2. Hallandale Beach Boulevard at NE 14th Avenue (PM Peak Only)
3. Hallandale Beach Boulevard at US 1 (AM and PM Peak)

As shown, the addition of the project traffic to the roadway network will not deteriorate the intersection level of service for any studied intersections beyond projected future background conditions.

All Synchro output sheets are included in Appendix H.

Beachwalk Development - Future Total Traffic AM (1 of 2)



Beachwalk Development

Future AM Peak Total Traffic
Figure 5-1a

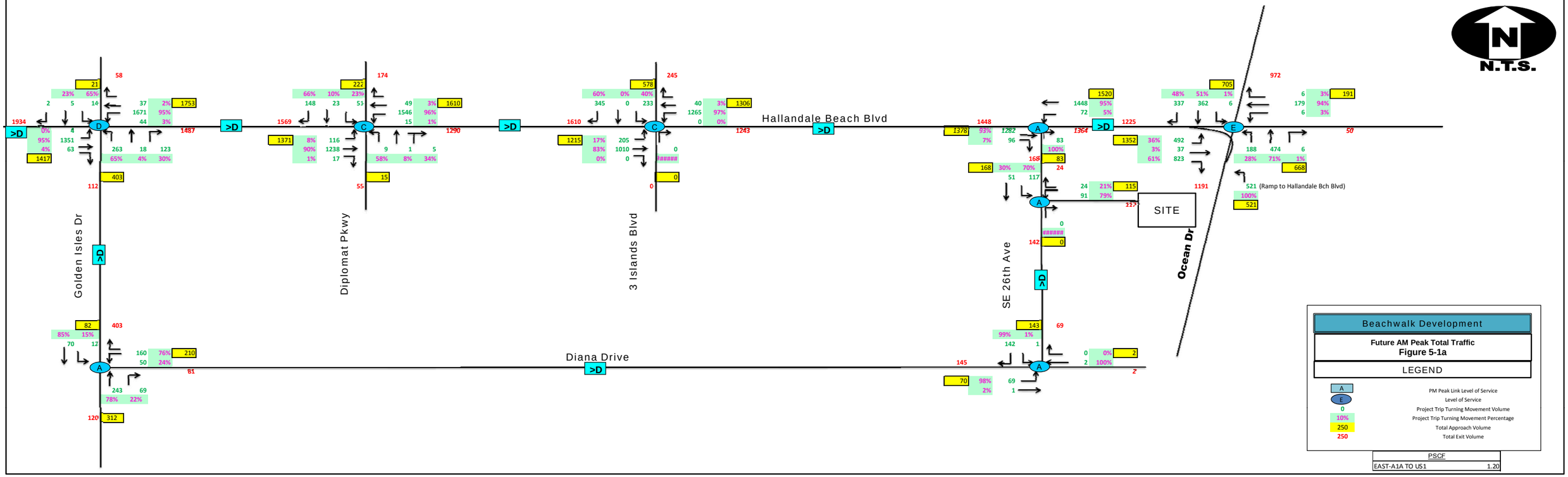
LEGEND

A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

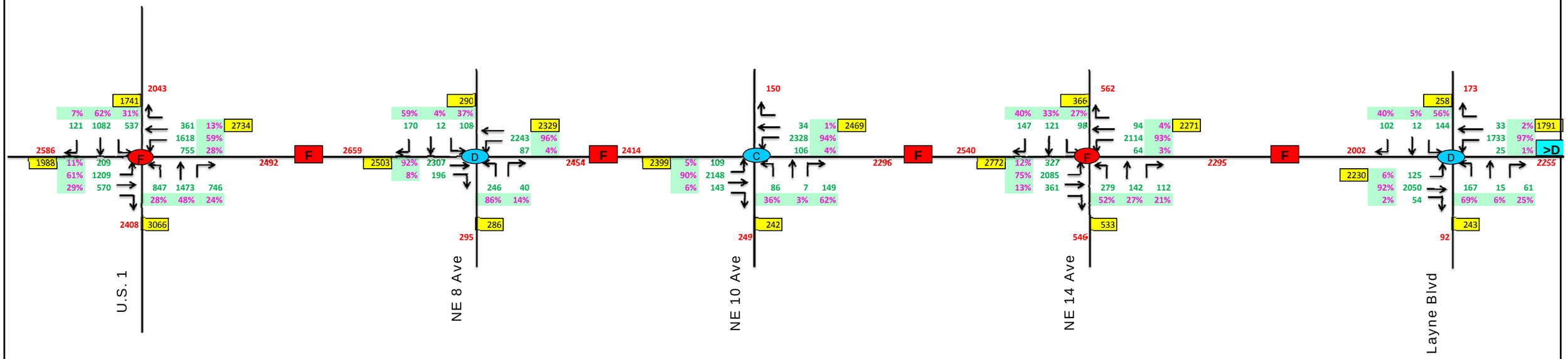
PSCF

EAST-A1A TO US1 1.20

Beachwalk Development - Future Total Traffic AM (2 of 2)



Beachwalk Development - Future Total Traffic PM (1 of 2)

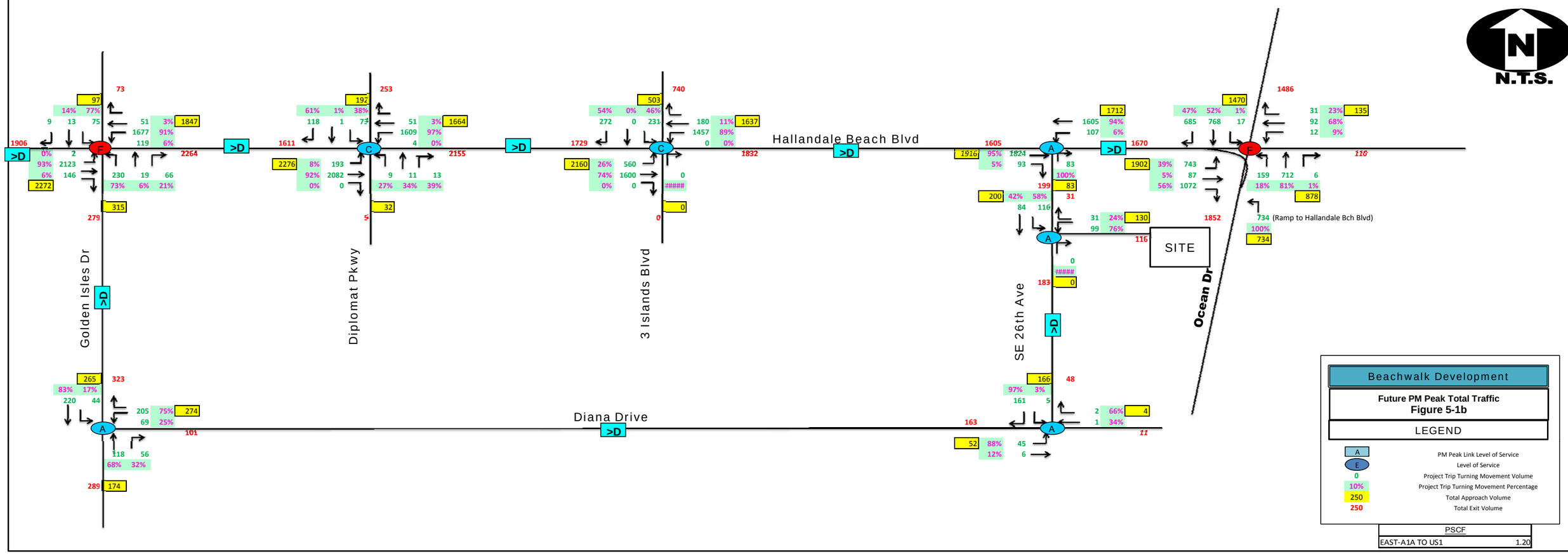


Beachwalk Development
Future PM Peak Total Traffic **Figure 5-1b**
LEGEND

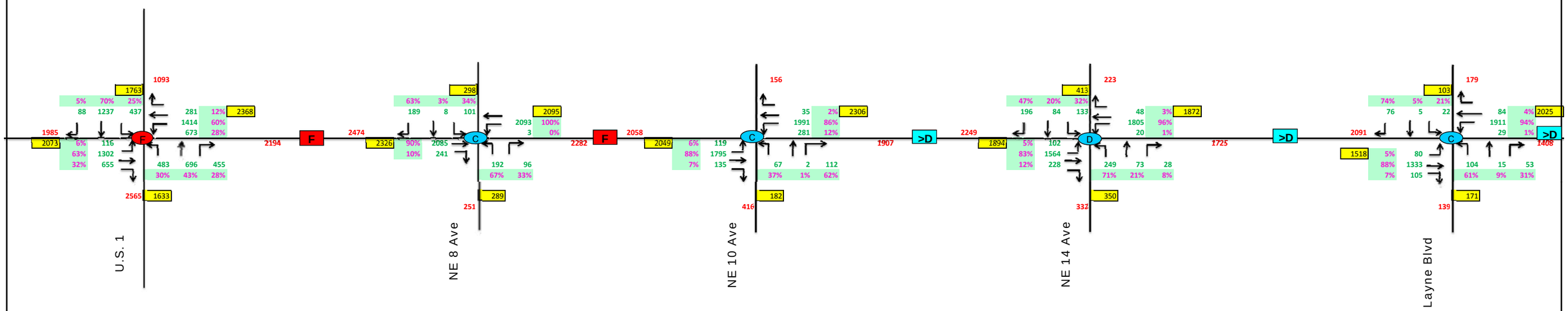
A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

PSCF	
EAST-A1A TO US1	1.20

Beachwalk Development - Future Total Traffic PM (2 of 2)



Beachwalk Development - *Optimized* Future Total Traffic AM (1 of 2)



Beachwalk Development

Future AM Peak Total Traffic - *Optimized*
Figure 5-1c

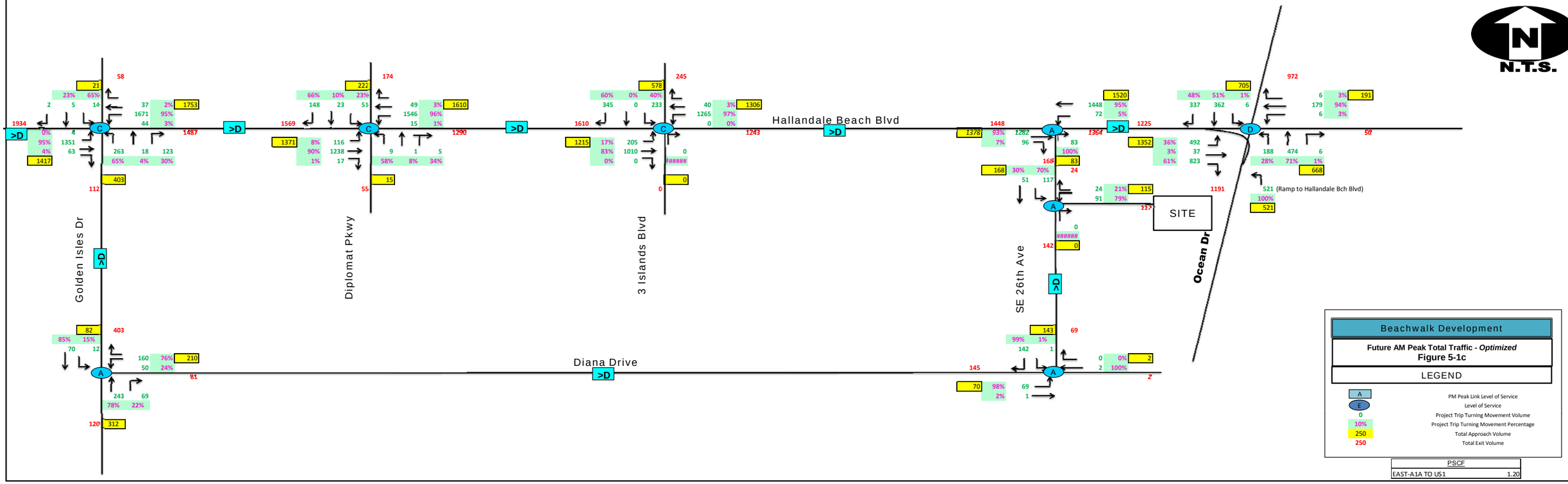
LEGEND

A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

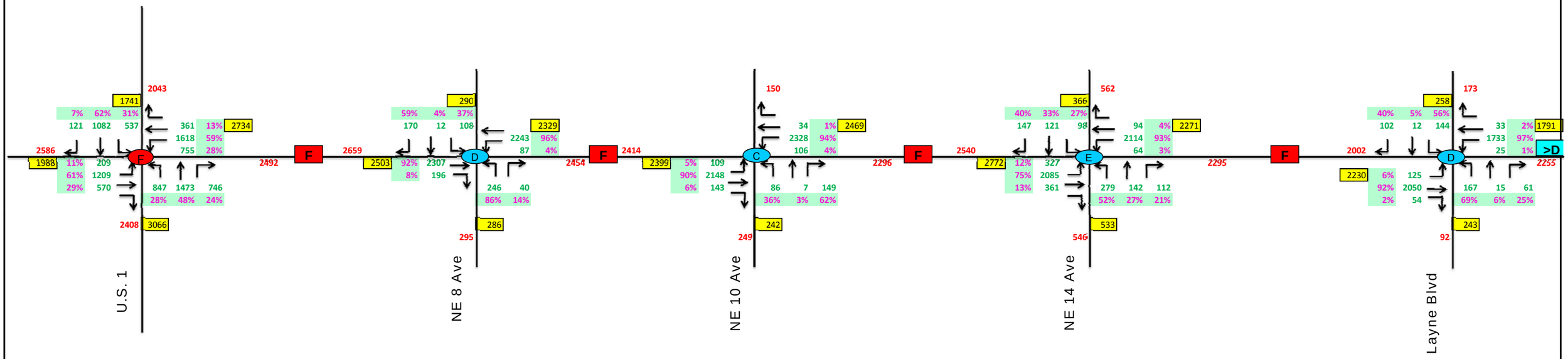
PSCF

EAST-A1A TO US1 1.20

Beachwalk Development - *Optimized* Future Total Traffic AM (2 of 2)



Beachwalk Development - *Optimized* Future Total Traffic PM (1 of 2)



Beachwalk Development

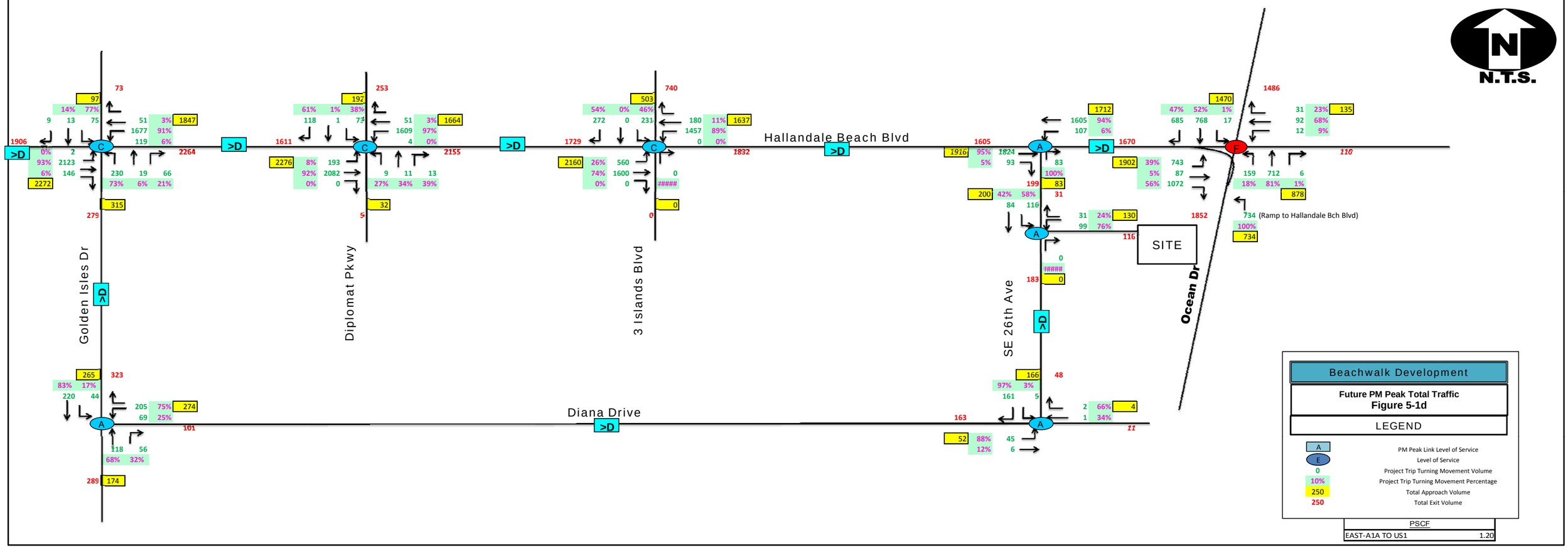
Future PM Peak Total Traffic
Figure 5-1d

LEGEND

A	PM Peak Link Level of Service
E	Level of Service
0	Project Trip Turning Movement Volume
10%	Project Trip Turning Movement Percentage
250	Total Approach Volume
250	Total Exit Volume

PSCF	
EAST-A1A TO US1	1.20

Beachwalk Development - *Optimized* Future Total Traffic PM (2 of 2)



6. Conclusion and Recommendations

CGA was commissioned by PRH-2600 Hallandale Beach LLC to provide a Traffic Impact Study for the development of "Beachwalk", located at 2600 Hallandale Beach Boulevard (State Road 858) within the City of Hallandale Beach. The proposed development is a multi-story building that will consist of hotel and residential units. The project will be developed in one (1) distinct phase, with opening year anticipated to occur in year 2015, as follows:

1. Hotel: 216 Two (2) bedroom suites and 216 standard rooms as well as a 1,225 square foot accessory hotel restaurant
2. High-Rise Condominium: 84 dwelling units

An assessment of the proposed development traffic for both the AM and PM peak period during typical weekday conditions was performed. The existing roadway segment analysis shows that all of the roadway segments within the study area currently operate at or above level of service (LOS) "D" during the AM and PM peak period, with the exception of Hallandale Beach Boulevard from NE 10th Avenue to NE 14th Avenue which operates below LOS "D" during the PM peak period. The existing intersection analysis shows that all intersections within the study area currently operate at or above LOS "D" during the AM peak hour, with the exception of E. Hallandale Beach Boulevard at US 1. During the PM peak hour, the existing intersection analysis shows that all intersections currently operate at or above LOS "D", with the exception of Hallandale Beach Boulevard at NE 14th Avenue and Hallandale Beach Boulevard at US 1.

Committed development information was obtained from the Wal-mart Expansion Traffic Impact Study, August 2010, provided by City staff, which included data from several of the most up-to-date committed development studies for the city. The studies provided trip generation for the PM peak period, however, no available AM peak period committed development data was available. Therefore, since the developments listed in Table 4-1 would likely yield a higher number of project trips in the PM peak hour, to be conservative, the reciprocal movements of the PM peak hour committed trips were calculated and utilized for the AM peak hour committed development trips.

The future traffic growth rate was developed using a trend analysis based on historical traffic data from the FDOT Traffic DVD database. Historical trend analyses for traffic count stations within the study area indicate that the average annual growth rate is approximately 0.5 percent (%). This conservative annual growth rate was utilized to calculate expected background traffic growth from the existing 2011 traffic volumes for the traffic impact area.

An analysis of Year 2015 traffic shows that each of the studied intersections operates at or above LOS "D" with or without project-generated traffic, with the exception of the following intersections which operate below LOS "D" with or without project-generated traffic:

1. Hallandale Beach Boulevard at Ocean Drive (AM and PM Peak)
2. Hallandale Beach Boulevard at NE 14th Avenue (AM and PM Peak)
3. Hallandale Beach Boulevard at US 1 (AM and PM Peak)
4. Hallandale Beach Boulevard at Golden Isles Drive (PM Peak Only). However, signal timing improvements proposed in this report will allow the intersection to operate at LOS "C" with project-generated traffic included.

In addition, all studied arterial links operate at or above LOS "D" with or without project-generated traffic, with the exception of the following arterial links which operate below LOS "D" with or without project-generated traffic:

1. Hallandale Beach Boulevard from US 1 to NE 10th Avenue (AM Peak)
2. Hallandale Beach Boulevard from US 1 to Layne Boulevard (PM Peak)

An analysis of the future 2015 conditions with project traffic showed that each of the failing roadway segments within the study area will operate below acceptable levels of service regardless of the addition of project traffic. The intersection level of service analysis for future conditions including project traffic showed that each of the intersections performed at the same level of service as the future conditions without project traffic during both the AM and PM peak hour.

For the intersection of Hallandale Beach Boulevard at Golden Isles Drive, optimization of the intersection signal timing resulted in the intersection operating at or above LOS "D" during both the AM and PM peak periods with the addition of project-generated traffic.

In conclusion, the results of this study demonstrate that the traffic generated by the proposed "Beachwalk" development project can be accommodated on the existing roadway network and levels of service expected without the project can be maintained upon the addition of project-generated traffic.

APPENDIX – A

Transit Route Information

BROWARD COUNTY Transit

Downtown Fort Lauderdale

Sistrunk Blvd.
NW 6th Ave.
NW 4th St.
Broward Central Terminal
NW 2nd St.
NW 7th Ave.
Andrews Ave.
NE 1st Ave.
NE 2nd Ave.
NE 3rd Ave.
NE 5th St.
NE 4th St.
NE 3rd St.
NE 2nd St.
NE 1st St.
Broward Blvd.
Broward County Government Center
Broward County Main Library
SW 2nd St.
SW 4th Ave.
SE 3rd Ave.
S. Federal Hwy.
SE 2nd St.
Las Olas Blvd.

Broward Central Terminal

BAY D6, BAY D5, BAY D4, BAY D3, BAY D2, BAY D1
BAY C6, BAY C5, BAY C4, BAY C3, BAY C2, BAY C1
BAY B6, BAY B5, BAY B4, BAY B3, BAY B2, BAY B1
BAY A6, BAY A5, BAY A4, BAY A3, BAY A2, BAY A1
WEST 11 81 22 60 1
6 14 31 WEST 40 EAST 11 30 10
50 31 20 9 EAST 40

West Regional Terminal

Pine Island Rd.
Broward Blvd.
NORTH & SOUTH 12 81 88 2
EAST 22 30
WEST 22

Lauderhill Transfer Facility

NW 12 St.
State Road 7
BAY 5 BAY 4 BAY 6 BAY 3 BAY 7 BAY 2 BAY 1
SOUTH 81 NORTH 81
NORTH 18 SOUTH 18
EAST 36 WEST 36
40

Legend

- Highway
- Street
- Interstate
- State Road
- Federal Highway
- Florida's Turnpike
- Bus Route

Commuter Limited Stop Service

- Breeze Stop
- 95 Express Pembroke Pines
- 95 Express Miramar
- Tri-Rail
- Miami Dade Transit
- Palm Tran
- County Line
- Park
- Medical Facility
- Shopping
- Attraction
- College/University
- Transportation

PALM BEACH COUNTY
BROWARD COUNTY
PARKLAND
COCONUT CREEK
CORAL SPRINGS
MARGATE
TAMARAC
COCONUT CREEK
DEERFIELD BEACH
POMPANO BEACH
NORTH LAUDERDALE
LAUDERHILL
LAUDERDALE LAKES
SUNRISE
WESTON
PLANTATION
DAVIE
FORT LAUDERDALE
OAKLAND PARK
WILTON MANORS
SOUTHWEST RANCHES
COOPER CITY
DANIA BEACH
HOLLYWOOD
PEMBROKE PINES
HALLANDALE BEACH
MIRAMAR
BROWARD COUNTY
MIAMI-DADE COUNTY

Deerfield Beach Tri-Rail Station
Pompano Beach Tri-Rail Station
Fort Lauderdale Tri-Rail Station
Hollywood Tri-Rail Station
Miami Tri-Rail Station
Hollywood Young Circle
Pembroke Lakes Mall
Miramar Town Center
Aventura Mall
Sawgrass Mills Mall
Broward Central Terminal (See inset)
West Regional Terminal (See inset)
Lauderhill Transfer Facility (See inset)
Golden Glades Park and Ride/Tri-Rail Station/Greyhound Station
Both 95 Express routes continue to Miami-Dade County Government Center, downtown Miami Bus Terminal and SW 1 St. & S. Miami Ave.

BROWARD COUNTY FLORIDA
BROWARD COUNTY BOARD OF COUNTY COMMISSIONERS
REVISED 1/20/11

TIMETABLE

ROUTE 28

Monday - Friday

Effective 10/31/10

Memorial Hospital Miramar
to Aventura Mall

**via Miramar Parkway/
Hallandale
Beach Boulevard**

BROWARD COUNTY Transit

A service of the
Broward County Commission

Download & Print at
www.broward.org/bct

Wheelchair Accessible
Bike Racks

Customer Service

Monday - Friday ..... 7 am - 8 pm
Saturday, Sunday and Holidays .....8:30 am - 5 pm

Transit Operations Agents help with:

- Trip planning
- Identifying Bus Pass
- Routes, times and sales locations transfer information
- Special event information

Lost and Found: 954-357-6414, Monday - Friday,
8:30 am - 4:30 pm

Holiday Bus Service

Sunday bus service is provided on the following observed holidays:

New Year's Day	Labor Day
Memorial Day	Thanksgiving Day
Independence Day	Christmas Day

Fares

Exact fare, dollar bill or coins required. Operators do not carry change.

Fares are: Regular, Senior/Youth/Disabled/Medicare/Student.* Children (under 40 inches ride FREE)

Fare Deals

All Day Bus Pass offers unlimited rides on all routes. On sale aboard all BCT buses.

NOTE: Other cost saving passes cannot be purchased on BCT buses, but are available at the Central Bus Terminal and at authorized distributors.

10 Ride Pass

10 Rides any time, any day.
Expires after the tenth ride is taken.

7 Day Pass

Unlimited rides for seven consecutive days.
Starts on the first day card is used.
Expires after the seventh day.

31 Day Adult Pass

Unlimited rides for 31 consecutive days. Starts on the first day card is used.

31 Day Reduced Pass

Youth*, Seniors*, Disabled*, Medicare*, College Student*. Unlimited rides for 31 consecutive days.
Starts on the first day card is used.

Bus Passes are not redeemable, refundable or transferrable. Damaged cards are invalid. Lost, stolen or damaged cards will not be replaced.

***NOTICE:** Proof of age is required for Youth fare (18 years or younger) and for Senior fare (65 years or older). For College Student Bus Pass, a college photo ID card is required. For Disabled and Medicare fare, proof of disability (Medicare card) and photo I.D. is required. Eligible Senior fare patrons are encouraged to acquire their BCT Reduced Fare Photo ID cards.

TRANSFER POLICY

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FROM OTHER TRANSIT SYSTEMS:
When transferring to BCT from Miami-Dade Transit (MDT), Palm Tran or Tri-Rail, passengers pay $.50 with a transfer issued by MDT, Palm Tran, or with a Tri-Rail pass.

MONDAY -FRIDAY

EASTBOUND

To Aventura Mall

MEMORIAL HOSPITAL MIRAMAR	MIRAMAR PKY & FLAMINGO RD	MIRAMAR PKY & UNIVERSITY DR	HALLANDALE BEACH BLVD. & HWY. 441	HALLANDALE BEACH BLVD. & U.S. 1	COUNTYLINE RD & A-I-A	AVENTURA MALL
1	2	3	4	5	6	7
		5:10a	5:19a	5:35a	5:46a	5:56a
	5:30a	5:42a	5:51a	6:07a	6:19a	6:29a
5:45a	5:57a	6:10a	6:20a	6:37a	6:49a	6:59a
6:05a	6:18a	6:31a	6:41a	6:58a	7:11a	7:21a
6:25a	6:38a	6:51a	7:01a	7:19a	7:32a	7:42a
6:45a	6:58a	7:12a	7:23a	7:41a	7:54a	8:04a
7:05a	7:19a	7:33a	7:44a	8:02a	8:15a	8:25a
7:25a	7:39a	7:53a	8:04a	8:22a	8:35a	8:45a
7:45a	7:59a	8:13a	8:24a	8:42a	8:55a	9:06a
8:05a	8:19a	8:33a	8:44a	9:02a	9:16a	9:27a
8:25a	8:39a	8:52a	9:02a	9:20a	9:34a	G9:45a
8:45a	8:59a	9:12a	9:22a	9:41a	9:55a	10:06a
9:15a	9:28a	9:41a	9:51a	10:10a	10:24a	10:35a
9:45a	9:58a	10:11a	10:21a	10:40a	10:54a	11:05a
10:15a	10:28a	10:41a	10:51a	11:10a	11:24a	11:35a
10:45a	10:58a	11:11a	11:21a	11:40a	11:54a	12:05p
11:15a	11:28a	11:41a	11:51a	12:10p	12:24p	12:35p
11:45a	11:58a	12:11p	12:21p	12:40p	12:54p	1:05p
12:15p	12:28p	12:41p	12:51p	1:10p	1:24p	1:35p
12:45p	12:58p	1:11p	1:21p	1:40p	1:54p	2:05p
1:15p	1:28p	1:41p	1:51p	2:10p	2:24p	2:35p
1:45p	1:58p	2:11p	2:21p	2:40p	2:54p	3:05p
2:15p	2:28p	2:41p	2:51p	3:10p	3:24p	3:35p
	2:43p	2:56p	3:06p	3:25p	3:39p	3:50p
2:45p	2:58p	3:11p	3:21p	3:40p	3:54p	4:05p
3:05p	3:18p	3:31p	3:41p	4:00p	4:13p	4:23p
3:25p	3:38p	3:51p	4:01p	4:19p	4:32p	4:42p
3:45p	3:58p	4:12p	4:23p	4:41p	4:54p	5:04p
4:05p	4:19p	4:33p	4:44p	5:02p	5:15p	5:25p
4:25p	4:39p	4:53p	5:04p	5:22p	5:35p	5:45p
4:45p	4:59p	5:13p	5:24p	5:42p	5:55p	6:05p
5:05p	5:19p	5:33p	5:44p	6:02p	6:15p	6:25p
5:25p	5:39p	5:53p	6:04p	6:22p	6:35p	G6:45p
5:45p	5:59p	6:12p	6:22p	6:39p	6:51p	7:01p
6:05p	6:18p	6:31p	6:41p	6:58p	7:10p	G7:20p
6:25p	6:38p	6:51p	7:01p	7:18p	7:30p	7:40p
6:45p	6:58p	7:11p	7:21p	7:38p	7:50p	8:00p
7:15p	7:28p	7:41p	7:51p	8:08p	8:20p	8:30p
7:45p	7:58p	8:11p	8:21p	8:38p	8:50p	9:00p
8:15p	8:28p	8:41p	8:51p	9:08p	9:20p	G9:30p
8:45p	8:57p	9:09p	9:18p	9:34p	9:45p	9:55p
9:15p	9:27p	9:39p	9:48p	10:04p	10:15p	10:25p
10:00p	10:12p	10:24p	10:33p	10:50p		
10:45p	10:57p	11:09p	11:18p	G11:35p		

MONDAY -FRIDAY

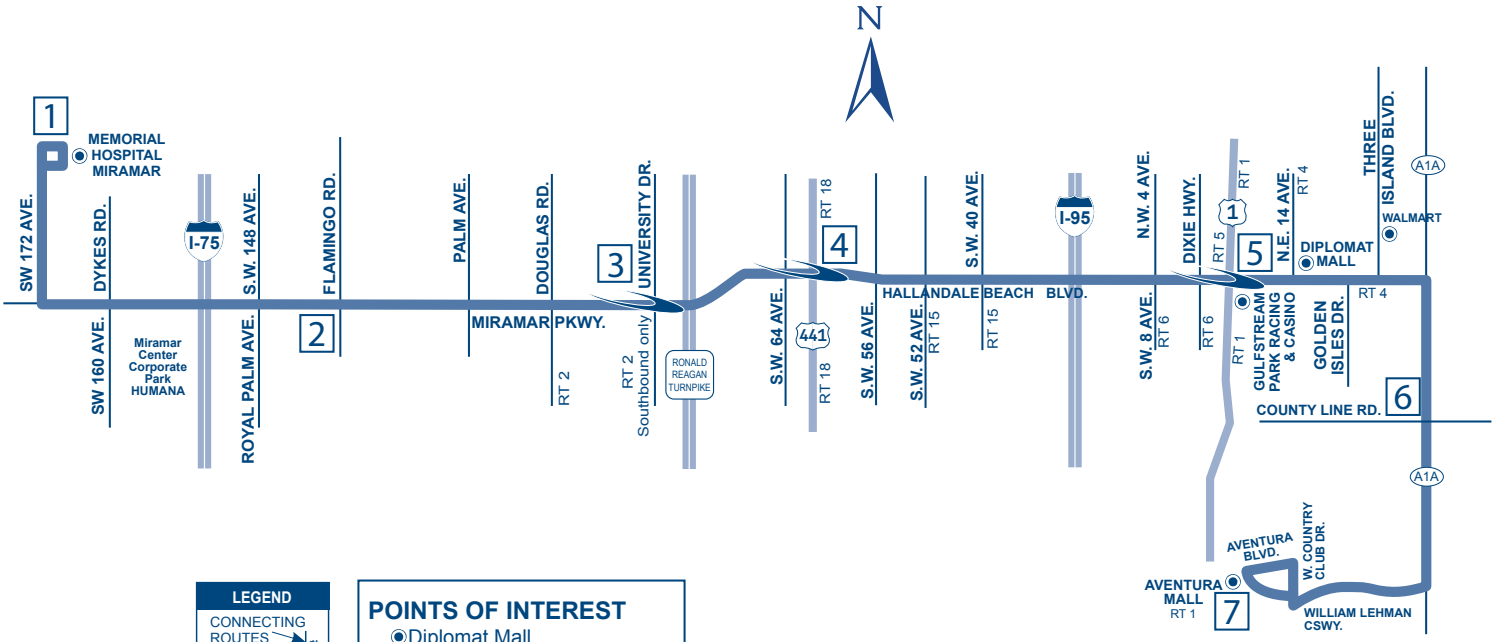
WESTBOUND

To Memorial Hospital Miramar

AVENTURA MALL 7	COUNTYLINE RD & A-I-A 6	HALLANDALE BEACH BLVD. & US 1 5	HALLANDALE BEACH BLVD. & HWY. 441 4	MIRAMAR PKY & UNIVERSITY DR. 3	MIRAMAR PKY & FLAMINGO RD 2	MEMORIAL HOSPITAL MIRAMAR 1
		5:30a	5:46a	5:55a	6:08a	6:20a
		6:00a	6:17a	6:27a	6:40a	6:53a
6:05a	6:15a	6:27a	6:45a	6:55a	7:09a	7:23a
			7:00a	7:11a	7:25a	7:39a
6:35a	6:45a	6:57a	7:15a	7:26a	7:40a	7:54a
6:55a	7:05a	7:18a	7:36a	7:47a	8:01a	8:15a
7:15a	7:25a	7:38a	7:56a	8:07a	8:21a	8:35a
7:35a	7:45a	7:58a	8:16a	8:27a	8:41a	8:55a
7:55a	8:05a	8:18a	8:36a	8:47a	9:01a	G9:15a
8:15a	8:25a	8:38a	8:56a	9:06a	9:19a	9:32a
8:35a	8:46a	9:00a	9:19a	9:29a	9:42a	9:55a
8:55a	9:06a	9:20a	9:39a	9:49a	10:02a	G10:15a
9:15a	9:26a	9:40a	9:59a	10:09a	10:22a	10:35a
9:45a	9:56a	10:10a	10:29a	10:39a	10:52a	11:05a
10:15a	10:26a	10:40a	10:59a	11:09a	11:22a	11:35a
10:45a	10:56a	11:10a	11:29a	11:39a	11:52a	12:05p
11:15a	11:26a	11:40a	11:59a	12:09p	12:22p	12:35p
11:45a	11:56a	12:10p	12:29p	12:39p	12:52p	1:05p
12:15p	12:26p	12:40p	12:59p	1:09p	1:22p	1:35p
12:45p	12:56p	1:10p	1:29p	1:39p	1:52p	2:05p
1:15p	1:26p	1:40p	1:59p	2:09p	2:22p	2:35p
1:45p	1:56p	2:10p	2:29p	2:39p	2:52p	3:05p
2:15p	2:26p	2:40p	2:59p	3:09p	3:22p	3:35p
2:45p	2:56p	3:10p	3:29p	3:39p	3:52p	4:05p
3:15p	3:26p	3:40p	3:59p	4:10p	4:24p	4:38p
3:35p	3:46p	4:00p	4:18p	4:29p	4:43p	4:57p
3:55p	4:05p	4:18p	4:36p	4:47p	5:01p	5:15p
4:15p	4:25p	4:38p	4:56p	5:07p	5:21p	5:35p
4:35p	4:45p	4:58p	5:16p	5:27p	5:41p	5:55p
4:55p	5:05p	5:18p	5:36p	5:47p	6:01p	6:14p
5:15p	5:25p	5:38p	5:56p	6:06p	6:19p	6:32p
5:35p	5:45p	5:57p	6:14p	6:24p	6:37p	G6:50p
5:55p	6:05p	6:17p	6:34p	6:44p	6:57p	7:10p
6:15p	6:25p	6:37p	6:54p	7:04p	7:17p	7:30p
6:45p	6:55p	7:07p	7:24p	7:34p	7:47p	8:00p
7:15p	7:25p	7:37p	7:54p	8:04p	8:17p	8:30p
7:45p	7:55p	8:07p	8:24p	8:34p	8:47p	9:00p
8:15p	8:25p	8:37p	8:54p	9:04p	9:17p	G9:30p
8:45p	8:55p	9:06p	9:22p	9:31p	9:42p	9:55p
9:15p	9:25p	9:36p	9:52p	10:01p	10:13p	10:25p
10:00p	10:10p	10:21p	10:36p	10:44p	G10:55p	
10:45p	10:55p	11:06p	11:21p	11:29p	G11:40p	

ROUTE 28

Memorial Hospital - Miramar to Aventura Mall
via Miramar Parkway/Hallandale Beach Boulevard



LEGEND

CONNECTING ROUTES → RT #

0 MAIN ROUTE

TIMEPOINTS

The Breeze stop location

POINTS OF INTEREST

- Diplomat Mall
- Memorial Hospital Miramar
- Gulfstream Park
- Racing & Casino
- Aventura Mall
- Wal-Mart

For more details on our fares please visit our web site at broward.org/bct/faresandpasses.htm or call customer service: 954.357.8400.

Reading A Timetable - It's Easy

1. The map shows the exact bus route.
2. Major route intersections are called time points. Time points are shown with the symbol ☐ .
3. The timetable lists major time points for bus route. Listed under time points are scheduled departure times.
4. Reading from left to right, indicates the time for each bus trip.
5. The bus picks up and drops off riders at all BCT bus stop signs along the route where there is a Broward County bus stop sign.
6. Arrive at the bus stop five minutes early. Buses operate as close to published timetables as traffic conditions allow.

Information: 954.357.8400

Hearing-speech impaired/TTY: 954.357.8302

This publication can be made available in large print, tape cassette, or Braille, by request.

This symbol is used on bus stop signs to indicate accessible bus stops.

BROWARD COUNTY FLORIDA

BROWARD COUNTY
BOARD OF COUNTY COMMISSIONERS

An equal opportunity employer and provider of services.

This public document was promulgated at a cost of $1,062 or $.028 per copy, to inform the public about the Transportation Division's schedule and route information. 09/08

printed on recycled paper

PROTECTIONS OF TITLE VI OF THE CIVIL RIGHTS ACT OF 1964 AS AMENDED

Any person(s) or group(s) who believes that they have been subjected to discrimination because of race, color, or national origin, under any transit program or activity provided by Broward County Transit (BCT), may call 954-357-8481 to file a Title VI discrimination complaint or write to Broward County Transportation Depratment, Compliance Manager, 3201 West Copans Road, Bldg. 1, Pompano Beach, Florida 33069.

TRANSIT WATCH

WHEN IT COMES TO OUR SAFETY, WE CAN ALWAYS USE AN EXTRA PAIR OF EYES AND EARS. BE ALERT. CALL 954-357-LOOK (5665). TELL US.

TIMETABLE

ROUTE 5

Monday - Sunday

Effective 1/9/11

Pembroke Lakes Mall to
Hallandale Beach City Hall

via Pembroke Road

BROWARD COUNTY Transit

A service of the
Broward County Commission

facebook

YouTube

Download & Print at broward.org/bct

Wheelchair Accessible

Bike Racks

Customer Service

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Saturday, Sunday and Holidays .....8:30 am - 5 pm

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Route 5

MONDAY-FRIDAY

There are additional bus stops in between those listed.

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP
Times with the letter "G" before them indicate bus returns to garage.

EASTBOUND

To Hallandale Beach City Hall

1 PEMBROKE LAKES MALL	2 MIRAMAR TOWN CENTER	3 PEMBROKE RD. & UNIVERSITY DR.	4 PEMBROKE RD. & HWY. 441	5 PEMBROKE RD. & S. 26 AVE.	6 SE 3 ST & US 1
6:00a	6:15a	6:27a	6:36a	6:46a	7:00a
6:30a	6:45a	6:57a	7:07a	7:18a	7:33a
7:00a	7:16a	7:29a	7:39a	7:50a	8:05a
7:30a	7:46a	7:59a	8:09a	8:20a	8:35a
8:00a	8:16a	8:29a	8:39a	8:50a	9:05a
8:30a	8:46a	8:59a	9:09a	9:20a	9:35aG
9:00a	9:15a	9:27a	9:36a	9:46a	10:00a
9:45a	10:00a	10:12a	10:21a	10:31a	10:45a
10:30a	10:45a	10:57a	11:06a	11:16a	11:30a
11:15a	11:30a	11:42a	11:51a	12:01p	12:15p
12:00p	12:15p	12:27p	12:36p	12:46p	1:00p
12:45p	1:00p	1:12p	1:21p	1:31p	1:45p
1:30p	1:45p	1:57p	2:06p	2:16p	2:30p
2:15p	2:30p	2:42p	2:51p	3:01p	3:15p
3:00p	3:15p	3:27p	3:36p	3:46p	4:00p
3:30p	3:45p	3:57p	4:06p	4:16p	4:30p
4:00p	4:15p	4:27p	4:36p	4:46p	5:00p
4:30p	4:45p	4:57p	5:06p	5:16p	5:30p
5:00p	5:15p	5:27p	5:36p	5:46p	6:00p
5:30p	5:45p	5:57p	6:06p	6:16p	6:30pG
6:00p	6:15p	6:27p	6:36p	6:46p	7:00p
6:45p	7:00p	7:12p	7:21p	7:31p	7:45p
7:30p	7:45p	7:57p	8:05p	8:14p	8:27p
8:15p	8:29p	8:40p	8:48p	8:57p	9:10p
9:00p	9:14p	9:25p	9:33p	9:42p	9:55pG

Route 5

MONDAY-FRIDAY

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP
Times with the letter "G" before them indicate bus returns to garage.

WESTBOUND

To Pembroke Lakes Mall

SE 3 ST & US 1	PEMBROKE RD. & S. 26 AVE.	PEMBROKE RD. & HWY. 441	PEMBROKE RD. & UNIVERSITY DR.	MIRAMAR TOWN CENTER	PEMBROKE LAKES MALL
6	5	4	3	2	1
6:15a	6:28a	6:38a	6:47a	7:01a	7:15a
6:45a	6:58a	7:08a	7:17a	7:31a	7:45a
7:15a	7:28a	7:38a	7:47a	8:01a	8:15a
7:45a	7:58a	8:08a	8:17a	8:31a	8:45a
8:15a	8:28a	8:38a	8:47a	9:01a	9:15aG
8:45a	8:58a	9:08a	9:17a	9:31a	9:45a
9:25a	9:38a	9:48a	9:57a	10:11a	10:25a
10:10a	10:23a	10:33a	10:42a	10:56a	11:10a
10:55a	11:08a	11:18a	11:27a	11:41a	11:55a
11:40a	11:53a	12:03p	12:12p	12:26p	12:40p
12:25p	12:38p	12:48p	12:57p	1:11p	1:25p
1:10p	1:23p	1:33p	1:42p	1:56p	2:10p
1:55p	2:08p	2:18p	2:27p	2:41p	2:55p
2:40p	2:53p	3:03p	3:12p	3:26p	3:40p
3:15p	3:28p	3:38p	3:47p	4:01p	4:16p
3:45p	3:58p	4:09p	4:19p	4:34p	4:49p
4:15p	4:29p	4:40p	4:50p	5:05p	5:20p
4:45p	4:59p	5:10p	5:20p	5:35p	5:50p
5:15p	5:29p	5:40p	5:50p	6:05p	6:19p
5:45p	5:58p	6:08p	6:17p	6:32p	6:45pG
6:20p	6:33p	6:43p	6:52p	7:06p	7:20p
7:05p	7:18p	7:28p	7:37p	7:51p	8:05p
7:50p	8:03p	8:12p	8:20p	8:33p	8:46p
8:35p	8:47p	8:56p	9:04p	9:17p	9:30pG
9:20p	9:32p	9:41p	9:49p	10:02p	10:15pG

Route 5

SATURDAY

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP

Times with the letter "G" before them indicate bus returns to garage.

EASTBOUND

To Hallandale Beach City Hall

PEMBROKE LAKES MALL 1	PEMBROKE RD. & HIATUS RD. 2	PEMBROKE RD. & UNIVERSITY DR. 3	PEMBROKE RD. & HWY. 441 4	PEMBROKE RD. & S. 26 AVE. 5	SE 3 ST & US 1 6
7:00a	7:11a	7:20a	7:28a	7:37a	7:50a
8:00a	8:11a	8:20a	8:28a	8:37a	8:50a
9:00a	9:12a	9:22a	9:31a	9:41a	9:55a
10:00a	10:12a	10:22a	10:31a	10:41a	10:55a
11:00a	11:12a	11:22a	11:31a	11:41a	11:55a
12:00p	12:12p	12:22p	12:31p	12:41p	12:55p
1:00p	1:12p	1:22p	1:31p	1:41p	1:55p
2:00p	2:12p	2:22p	2:31p	2:41p	2:55p
3:00p	3:12p	3:22p	3:31p	3:41p	3:55p
4:00p	4:12p	4:22p	4:31p	4:41p	4:55p
5:00p	5:12p	5:22p	5:31p	5:41p	5:55p
6:00p	6:11p	6:20p	6:28p	6:37p	6:50p
7:00p	7:11p	7:20p	7:28p	7:37p	7:50p
8:00p	8:11p	8:20p	8:28p	8:37p	8:50p
9:00p	9:11p	9:20p	9:28p	9:37p	9:50pG

Route 5

SATURDAY

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP
Times with the letter "G" before them indicate bus returns to garage.

WESTBOUND

To Pembroke Lakes Mall

SE 3 ST & US 1	PEMBROKE RD. & S. 26 AVE.	PEMBROKE RD. & HWY. 441	PEMBROKE RD. & UNIVERSITY DR.	PEMBROKE RD. & HIATUS RD.	PEMBROKE LAKES MALL
6	5	4	3	2	1
7:00a	7:12a	7:21a	7:29a	7:38a	7:50a
8:00a	8:12a	8:21a	8:29a	8:38a	8:50a
9:00a	9:13a	9:23a	9:32a	9:42a	9:55a
10:00a	10:13a	10:23a	10:32a	10:42a	10:55a
11:00a	11:13a	11:23a	11:32a	11:42a	11:55a
12:00p	12:13p	12:23p	12:32p	12:42p	12:55p
1:00p	1:13p	1:23p	1:32p	1:42p	1:55p
2:00p	2:13p	2:23p	2:32p	2:42p	2:55p
3:00p	3:13p	3:23p	3:32p	3:42p	3:55p
4:00p	4:13p	4:23p	4:32p	4:42p	4:55p
5:00p	5:13p	5:23p	5:32p	5:42p	5:55p
6:00p	6:12p	6:21p	6:29p	6:38p	6:50p
7:00p	7:12p	7:21p	7:29p	7:38p	7:50p
8:00p	8:12p	8:21p	8:29p	8:38p	8:50p
9:00p	9:12p	9:21p	9:29p	9:38p	9:50pG

Route 5

SUNDAY

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP
Times with the letter "G" before them indicate bus returns to garage.

EASTBOUND

To Hallandale Beach City Hall

1 PEMBROKE LAKES MALL	2 PEMBROKE RD & HIATUS RD	3 PEMBROKE RD. & UNIVERSITY DR.	4 PEMBROKE RD. & HWY. 441	5 PEMBROKE RD. & S. 26 AVE.	6 SE 3 ST & US 1
8:00a	8:11a	8:20a	8:28a	8:37a	8:50a
9:00a	9:11a	9:20a	9:28a	9:37a	9:50a
10:00a	10:11a	10:20a	10:28a	10:37a	10:50a
11:00a	11:11a	11:20a	11:28a	11:37a	11:50a
12:00p	12:11p	12:20p	12:28p	12:37p	12:50p
1:00p	1:11p	1:20p	1:28p	1:37p	1:50p
2:00p	2:11p	2:20p	2:28p	2:37p	2:50p
3:00p	3:11p	3:20p	3:28p	3:37p	3:50p
4:00p	4:11p	4:20p	4:28p	4:37p	4:50p
5:00p	5:11p	5:20p	5:28p	5:37p	5:50p
6:00p	6:11p	6:20p	6:28p	6:37p	6:50p
7:00p	7:11p	7:20p	7:28p	7:37p	7:50p
8:00p	8:11p	8:20p	8:28p	8:37p	8:50p G
8:00p	8:11p	8:20p	8:28p	8:37p	8:50p G

Route 5

SUNDAY

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP

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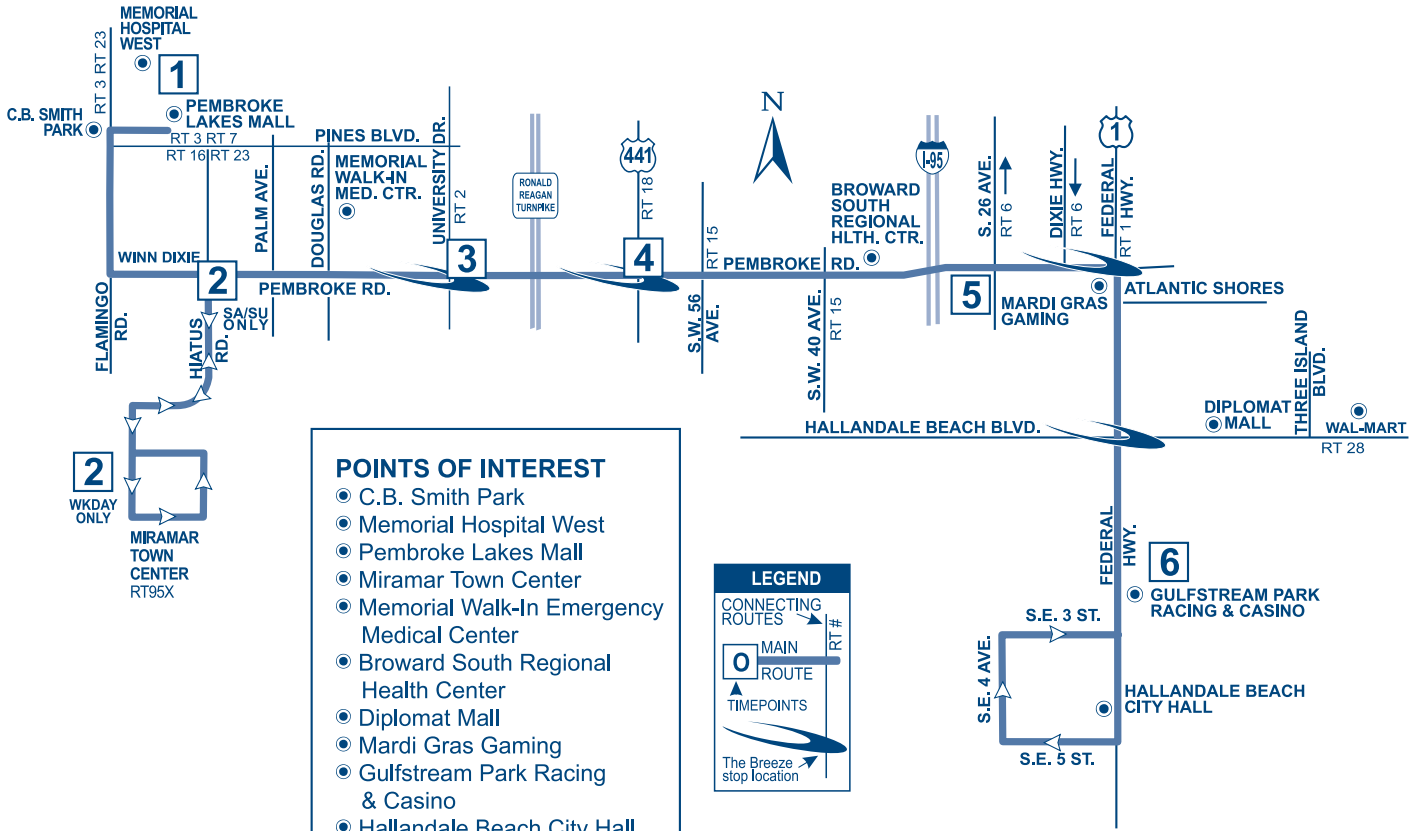
WESTBOUND

To Pembroke Lakes Mall

SE 3 ST & US 1	PEMBROKE RD. & S. 26 AVE.	PEMBROKE RD. & HWY. 441	PEMBROKE RD. & UNIVERSITY DR.	PEMBROKE RD & HIATUS RD	PEMBROKE LAKES MALL
6	5	4	3	2	1
8:00a	8:12a	8:21a	8:29a	8:38a	8:50a
9:00a	9:12a	9:21a	9:29a	9:38a	9:50a
10:00a	10:12a	10:21a	10:29a	10:38a	10:50a
11:00a	11:12a	11:21a	11:29a	11:38a	11:50a
12:00p	12:12p	12:21p	12:29p	12:38p	12:50p
1:00p	1:12p	1:21p	1:29p	1:38p	1:50p
2:00p	2:12p	2:21p	2:29p	2:38p	2:50p
3:00p	3:12p	3:21p	3:29p	3:38p	3:50p
4:00p	4:12p	4:21p	4:29p	4:38p	4:50p
5:00p	5:12p	5:21p	5:29p	5:38p	5:50p
6:00p	6:12p	6:21p	6:29p	6:38p	6:50p
7:00p	7:12p	7:21p	7:29p	7:38p	7:50p
8:00p	8:12p	8:21p	8:29p	8:38p	8:50pG

ROUTE 5

Pembroke Lakes Mall to
Hallandale Beach City Hall
via Pembroke Road



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TIMETABLE

ROUTE 4

Monday - Sunday
Effective 10/31/10

Hallandale Beach Blvd. to Fort Lauderdale/Hollywood Airport Tri-Rail Station

via A1A

BROWARD COUNTY Transit
A service of the Broward County Commission

Download & Print at www.broward.org/bct

Wheelchair Accessible
Bike Racks

Customer Service

Monday - Friday ..... 7 am - 8 pm
Saturday, Sunday and Holidays .....8:30 am - 5 pm

Transit Operations Agents help with:

- Trip planning
- Identifying Bus Pass
- Routes, times and sales locations transfer information
- Special event information

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Fares

Exact fare, dollar bill or coins required. Operators do not carry change.

Fares are: Regular, Senior/Youth/Disabled/Medicare/Student.* Children (under 40 inches ride FREE)

Fare Deals

All Day Bus Pass offers unlimited rides on all routes. On sale aboard all BCT buses.

NOTE: Other cost saving passes cannot be purchased on BCT buses, but are available at the Central Bus Terminal and at authorized distributors.

10 Ride Pass

10 Rides any time, any day.
Expires after the tenth ride is taken.

7 Day Pass

Unlimited rides for seven consecutive days.
Starts on the first day card is used.
Expires after the seventh day.

31 Day Adult Pass

Unlimited rides for 31 consecutive days. Starts on the first day card is used.

31 Day Reduced Pass

Youth*, Seniors*, Disabled*, Medicare*, College Student*. Unlimited rides for 31 consecutive days.
Starts on the first day card is used.

Bus Passes are not redeemable, refundable or transferrable. Damaged cards are invalid. Lost, stolen or damaged cards will not be replaced.

***NOTICE:** Proof of age is required for Youth fare (18 years or younger) and for Senior fare (65 years or older). For College Student Bus Pass, a college photo ID card is required. For Disabled and Medicare fare, proof of disability (Medicare card) and photo I.D. is required. Eligible Senior fare patrons are encouraged to acquire their BCT Reduced Fare Photo ID cards.

TRANSFER POLICY

NO TRANSFERS ARE ISSUED BETWEEN BCT BUSES.

TO OTHER TRANSIT SYSTEMS:
When transferring from BCT to Miami-Dade Transit (MDT), Palm-Tran or Tri-Rail you get a free transfer and must pay the appropriate fare on the other transit system.

FROM OTHER TRANSIT SYSTEMS:
When transferring to BCT from Miami-Dade Transit (MDT), Palm Tran or Tri-Rail, passengers pay $.50 with a transfer issued by MDT, Palm Tran, or with a Tri-Rail pass.

MONDAY-FRIDAY

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP
Times with the letter "G" before them indicate bus returns to garage.

NORTHBOUND

To Fort Lauderdale Airport Tri-Rail

HALLANDALE BCH. BLVD. & NE 14 AVE.	HALLANDALE BCH. BLVD. & SR A1A	YOUNG CIRCLE & GREYHOUND STATION	DANIA BEACH	DANIA BCH. BLVD. & US 1	FORT LAUDERDALE AIRPORT TRI-RAIL STATION
1	2	3	4	5	6
5:35a	5:47a	6:00a	6:20a	6:25a	6:35a
6:20a	6:32a	6:45a	7:05a	7:11a	7:22a
7:00a	7:13a	7:27a	7:48a	7:54a	8:05a
7:50a	8:03a	8:17a	8:38a	8:44a	8:55a
8:35a	8:48a	9:02a	9:22a	9:27a	9:37a
9:20a	9:32a	9:45a	10:05a	10:10a	10:20a
10:05a	10:17a	10:30a	10:50a	10:55a	11:05a
10:50a	11:02a	11:15a	11:35a	11:40a	11:50a
11:35a	11:47a	12:00p	12:20p	12:25p	12:35p
12:20p	12:32p	12:45p	1:05p	1:10p	1:20p
1:05p	1:17p	1:30p	1:50p	1:55p	2:05p
1:50p	2:02p	2:15p	2:35p	2:40p	2:50p
2:35p	2:47p	3:00p	3:20p	3:25p	3:35p
3:20p	3:32p	3:45p	4:05p	4:11p	4:22p
4:05p	4:18p	4:32p	4:53p	4:59p	5:10p
4:50p	5:03p	5:17p	5:38p	5:44p	5:55p
5:35p	5:48p	6:02p	6:22p	6:27p	6:37p
6:20p	6:32p	6:45p	7:05p	7:10p	7:20p
7:05p	7:17p	7:30p	7:50p	7:55p	8:05p
7:50p	8:02p	8:15p	8:35p	8:40p	8:50p
8:35p	8:47p	9:00p	9:20p	9:25p	9:35p
9:20p	9:32p	9:45p	10:05p	10:10p	10:20p

SOUTHBOUND

Hallandale Beach Blvd.

FORT LAUDERDALE AIRPORT TRI-RAIL STATION	DANIA BCH. BLVD. & US 1	DANIA BEACH	YOUNG CIRCLE & GREYHOUND STATION	HALLANDALE BCH. BLVD. & SR A1A	HALLANDALE BCH. BLVD. & NE 14 AVE.
6	5	4	3	2	1
5:15a	5:25a	5:30a	5:50a	6:05a	6:10a
6:00a	6:10a	6:15a	6:35a	6:50a	6:55a
6:45a	6:55a	7:00a	7:21a	7:37a	7:43a
7:30a	7:41a	7:47a	8:08a	8:24a	8:30a
8:15a	8:26a	8:32a	8:53a	9:08a	9:13a
9:00a	9:10a	9:15a	9:35a	9:50a	9:55a
9:45a	9:55a	10:00a	10:20a	10:35a	10:40a
10:30a	10:40a	10:45a	11:05a	11:20a	11:25a
11:15a	11:25a	11:30a	11:50a	12:05p	12:10p
12:00p	12:10p	12:15p	12:35p	12:50p	12:55p
12:45p	12:55p	1:00p	1:20p	1:35p	1:40p
1:30p	1:40p	1:45p	2:05p	2:20p	2:25p
2:15p	2:25p	2:30p	2:50p	3:05p	3:10p
3:00p	3:10p	3:15p	3:35p	3:50p	3:55p
3:45p	3:55p	4:00p	4:21p	4:37p	4:43p
4:30p	4:41p	4:47p	5:08p	5:24p	5:30p
5:15p	5:26p	5:32p	5:53p	6:08p	6:13p
6:00p	6:10p	6:15p	6:35p	6:50p	6:55p
6:45p	6:55p	7:00p	7:20p	7:35p	7:40p
7:30p	7:40p	7:45p	8:05p	8:20p	8:25p
8:15p	8:25p	8:30p	8:50p	9:05p	9:10p
9:00p	9:10p	9:15p	9:35p	9:50p	9:55p

SATURDAY

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP
Times with the letter "G" before them indicate bus returns to garage.

NORTHBOUND

To Fort Lauderdale Airport Tri-Rail

HALLANDALE BLVD. & NE 14 AVE. 1	HALLANDALE BLVD. & SR A1A 2	YOUNG CIRCLE & GREYHOUND STATION 3	DANIA BEACH 4	DANIA BCH. BLVD. & US 1 5	FORT LAUDERDALE AIRPORT TRI-RAIL STATION 6
		6:00a	6:20a	6:25a	6:35a
6:20a	6:32a	6:45a	7:05a	7:10a	7:20a
7:05a	7:17a	7:30a	7:50a	7:55a	8:05a
7:50a	8:02a	8:15a	8:35a	8:40a	8:50a
8:35a	8:47a	9:00a	9:20a	9:25a	9:35a
9:20a	9:32a	9:45a	10:05a	10:10a	10:20a
10:05a	10:17a	10:30a	10:50a	10:55a	11:05a
10:50a	11:02a	11:15a	11:35a	11:40a	11:50a
11:35a	11:47a	12:00p	12:20p	12:25p	12:35p
12:20p	12:32p	12:45p	1:05p	1:10p	1:20p
1:05p	1:17p	1:30p	1:50p	1:55p	2:05p
1:50p	2:02p	2:15p	2:35p	2:40p	2:50p
2:35p	2:47p	3:00p	3:20p	3:25p	3:35p
3:20p	3:32p	3:45p	4:05p	4:10p	4:20p
4:05p	4:17p	4:30p	4:50p	4:55p	5:05p
4:50p	5:02p	5:15p	5:35p	5:40p	5:50p
5:35p	5:47p	6:00p	6:20p	6:25p	6:35p
6:20p	6:32p	6:45p	7:05p	7:10p	7:20p
7:05p	7:17p	7:30p	7:50p	7:55p	8:05p
7:50p	8:02p	8:15p	8:35p	8:40p	G8:50p
8:35p	8:47p	9:00p	9:20p	9:25p	G9:35p

SOUTHBOUND

Hallandale Beach Blvd.

FORT LAUDERDALE AIRPORT TRI-RAIL STATION 6	DANIA BCH. BLVD. & US 1 5	DANIA BEACH 4	YOUNG CIRCLE & GREYHOUND STATION 3	HALLANDALE BLVD. & SR A1A 2	HALLANDALE BLVD. & NE 14 AVE. 1
6:00a	6:10a	6:15a	6:35a	6:50a	6:55a
6:45a	6:55a	7:00a	7:20a	7:35a	7:40a
7:30a	7:40a	7:45a	8:05a	8:20a	8:25a
8:15a	8:25a	8:30a	8:50a	9:05a	9:10a
9:00a	9:10a	9:15a	9:35a	9:50a	9:55a
9:45a	9:55a	10:00a	10:20a	10:35a	10:40a
10:30a	10:40a	10:45a	11:05a	11:20a	11:25a
11:15a	11:25a	11:30a	11:50a	12:05p	12:10p
12:00p	12:10p	12:15p	12:35p	12:50p	12:55p
12:45p	12:55p	1:00p	1:20p	1:35p	1:40p
1:30p	1:40p	1:45p	2:05p	2:20p	2:25p
2:15p	2:25p	2:30p	2:50p	3:05p	3:10p
3:00p	3:10p	3:15p	3:35p	3:50p	3:55p
3:45p	3:55p	4:00p	4:20p	4:35p	4:40p
4:30p	4:40p	4:45p	5:05p	5:20p	5:25p
5:15p	5:25p	5:30p	5:50p	6:05p	6:10p
6:00p	6:10p	6:15p	6:35p	6:50p	6:55p
6:45p	6:55p	7:00p	7:20p	7:35p	7:40p
7:30p	7:40p	7:45p	8:05p	8:20p	8:25p
8:15p	8:25p	8:30p	8:50p	9:05p	G9:10p

SUNDAY

8:35a	8:47a	9:00a	9:20a	9:25a	9:35a
9:20a	9:32a	9:45a	10:05a	10:10a	10:20a
10:05a	10:17a	10:30a	10:50a	10:55a	11:05a
10:50a	11:02a	11:15a	11:35a	11:40a	11:50a
11:35a	11:47a	12:00p	12:20p	12:25p	12:35p
12:20p	12:32p	12:45p	1:05p	1:10p	1:20p
1:05p	1:17p	1:30p	1:50p	1:55p	2:05p
1:50p	2:02p	2:15p	2:35p	2:40p	2:50p
2:35p	2:47p	3:00p	3:20p	3:25p	3:35p
3:20p	3:32p	3:45p	4:05p	4:10p	4:20p
4:05p	4:17p	4:30p	4:50p	4:55p	5:05p
4:50p	5:02p	5:15p	5:35p	5:40p	5:50p
5:35p	5:47p	6:00p	6:20p	6:25p	6:35p
6:20p	6:32p	6:45p	7:05p	7:10p	7:20p
7:05p	7:17p	7:30p	7:50p	7:55p	G8:05p
7:50p	8:02p	8:15p	8:35p	8:40p	G8:50p

8:15a	8:25a	8:30a	8:50a	9:05a	9:10a
9:00a	9:10a	9:15a	9:35a	9:50a	9:55a
9:45a	9:55a	10:00a	10:20a	10:35a	10:40a
10:30a	10:40a	10:45a	11:05a	11:20a	11:25a
11:15a	11:25a	11:30a	11:50a	12:05p	12:10p
12:00p	12:10p	12:15p	12:35p	12:50p	12:55p
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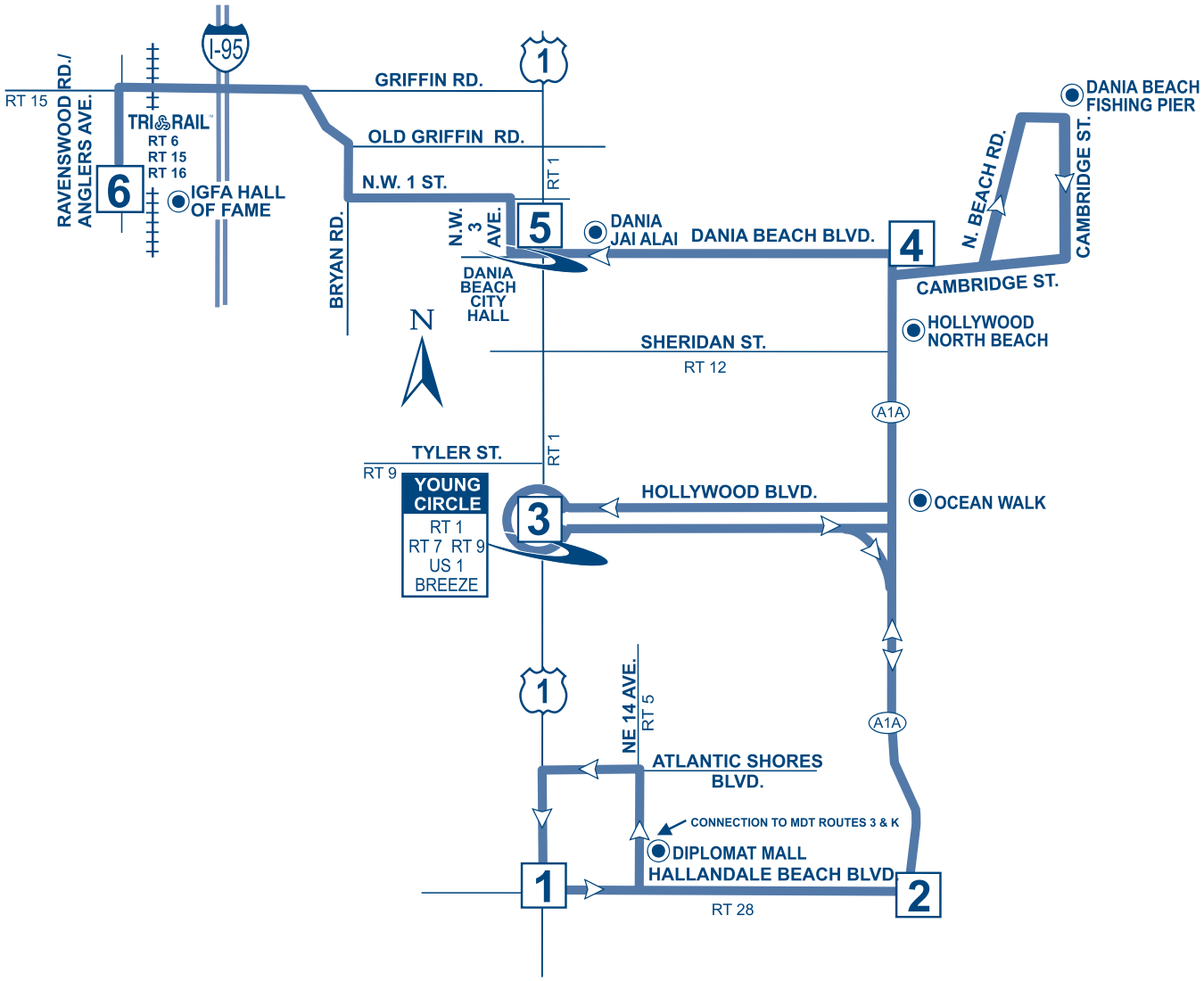
3:45p	3:55p	4:00p	4:20p	4:35p	4:40p
4:30p	4:40p	4:45p	5:05p	5:20p	5:25p
5:15p	5:25p	5:30p	5:50p	6:05p	6:10p
6:00p	6:10p	6:15p	6:35p	6:50p	6:55p
6:45p	6:55p	7:00p	7:20p	7:35p	7:40p
7:30p	7:40p	7:45p	8:05p	8:20p	G8:25p

ROUTE 4

Hallandale Beach Blvd. to
Fort Lauderdale-Hollywood Airport
Tri-Rail Station
via A1A



LEGEND

CONNECTING ROUTES → RT #

0 MAIN ROUTE

▲ TIMEPOINTS

The Breeze stop location

POINTS OF INTEREST

- Diplomat Mall
- Hollywood North Beach
- Dania Jai Alai
- Dania Beach Fishing Pier
- IGFA Fishing Hall of Fame
- Ocean Walk

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TIMETABLE

ROUTE 1

Monday - Friday

Effective 10/31/10

Aventura Mall to
Broward Central Terminal

via Federal Highway/US 1

BROWARD COUNTY Transit
A service of the
Broward County Commission

facebook

YouTube

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Fares

Exact fare, dollar bill or coins required. Operators do not carry change.

Fares are: Regular, Premium Express, Senior/Youth/Disabled/Medicare.* Children (under 40 inches ride FREE)

Fare Deals

All Day Bus Pass offers unlimited rides on all routes. On sale aboard all BCT buses.

NOTE: Other cost saving passes cannot be purchased on BCT buses, but are available at the Central Bus Terminal and at authorized distributors.

10 Ride Pass: 10 Rides any time, any day. Expires after the tenth ride is taken.

7 Day Pass: Unlimited rides for seven consecutive days. Starts on the first day card is used. Expires after the seventh day.

31 Day Adult Pass: Unlimited rides for 31 consecutive days. Starts on the first day card is used.

31 Day Reduced Pass: Youth*, Seniors*, Disabled*, Medicare*, College Student*. Unlimited rides for 31 consecutive days. Starts on the first day card is used.

****Premium Express 10 Ride Pass:** 10 rides any time, any day. Expires after tenth ride is taken.

****Premium Express 31 Day Pass:** Unlimited rides for 31 consecutive days. Starts on the first day card is used.

Bus Passes are not redeemable, refundable or transferrable. Damaged cards are invalid. Lost, stolen or damaged cards will not be replaced.

*NOTICE: Proof of age is required for Youth fare (18 years or younger) and for Senior fare (65 years or older). For College Student Bus Pass, a college photo ID card is required. For Disabled and Medicare fare, proof of disability (Medicare card) and photo I.D. is required. Eligible Senior fare patrons are encouraged to acquire their BCT Reduced Fare Photo ID cards.

** Premium Bus Pass can be purchased online at broward.org/bct and at select Broward County library locations.

MONDAY-FRIDAY

NORTHBOUND

To Broward Central Terminal

AVENTURA MALL 1	HALLANDALE BEACH BLVD. 2	YOUNG CIRCLE/PUBLIX 3	SHERIDAN STREET 4	FORT LAUDERDALE/ HOLLYWOOD AIRPORT 5	S.E. 17 STREET 6	BROWARD CENTRAL TERMINAL 7
		5:05a	5:12a	5:22a	5:31a	5:39a
		5:20a	5:27a	5:37a	5:46a	5:54a
		5:35a	5:42a	5:52a	6:01a	6:10a
5:30a	5:40a	5:53a	6:00a	6:11a	6:21a	6:30a
5:45a	5:55a	6:08a	6:15a	6:26a	6:36a	6:45a
6:00a	6:11a	6:23a	6:30a	6:41a	6:51a	7:00a
6:15a	6:26a	6:38a	6:45a	6:56a	7:07a	7:17a
6:30a	6:41a	6:53a	7:00a	7:12a	7:23a	7:33a
6:45a	6:56a	7:08a	7:16a	7:28a	7:39a	7:49a
7:00a	7:12a	7:24a	7:32a	7:44a	7:55a	8:06a
7:15a	7:27a	7:39a	7:47a	7:59a	8:11a	8:22a
7:30a	7:42a	7:54a	8:02a	8:15a	8:27a	8:38a
7:45a	7:57a	8:09a	8:18a	8:31a	8:43a	8:54a
8:00a	8:13a	8:25a	8:34a	8:47a	8:59a	9:09a
8:15a	8:28a	8:40a	8:49a	9:02a	9:13a	9:23a
8:30a	8:43a	8:55a	9:04a	9:16a	9:27a	9:37a
8:45a	8:58a	9:10a	9:18a	9:30a	9:41a	9:51a
9:00a	9:12a	9:24a	9:32a	9:44a	9:55a	10:05a
9:15a	9:27a	9:39a	9:47a	9:59a	10:10a	10:20a
9:30a	9:42a	9:54a	10:02a	10:14a	10:25a	10:35a
9:45a	9:57a	10:09a	10:17a	10:29a	10:40a	10:50a
10:00a	10:12a	10:24a	10:32a	10:44a	10:55a	11:05a
10:15a	10:27a	10:39a	10:47a	10:59a	11:10a	11:20a
10:30a	10:42a	10:54a	11:02a	11:14a	11:25a	11:35a
10:45a	10:57a	11:09a	11:17a	11:29a	11:40a	11:50a
11:00a	11:12a	11:24a	11:32a	11:44a	11:55a	12:05p
11:15a	11:27a	11:39a	11:47a	11:59a	12:10p	12:20p
11:30a	11:42a	11:54a	12:02p	12:14p	12:25p	12:35p
11:45a	11:57a	12:09p	12:17p	12:29p	12:40p	12:50p
12:00p	12:12p	12:24p	12:32p	12:44p	12:55p	1:05p
12:15p	12:27p	12:39p	12:47p	12:59p	1:10p	1:20p
12:30p	12:42p	12:54p	1:02p	1:14p	1:25p	1:35p
12:45p	12:57p	1:09p	1:17p	1:29p	1:40p	1:50p
1:00p	1:12p	1:24p	1:32p	1:44p	1:55p	2:05p

Continued on next page

SOUTHBOUND

To Aventura Mall

BROWARD CENTRAL TERMINAL 7	S.E. 17 STREET 6	FORT LAUDERDALE/ HOLLYWOOD AIRPORT 5	SHERIDAN STREET 4	YOUNG CIRCLE/PUBLIX 3	HALLANDALE BEACH BLVD. 2	AVENTURA MALL 1
5:15a	5:23a	5:30a	5:42a	5:56a	6:04a	6:15a
5:30a	5:38a	5:45a	5:57a	6:10a	6:19a	6:30a
5:45a	5:53a	6:00a	6:13a	6:25a	6:34a	6:45a
6:00a	6:09a	6:16a	6:29a	6:40a	6:49a	7:00a
6:15a	6:24a	6:31a	6:44a	6:55a	7:04a	7:16a
6:30a	6:39a	6:46a	6:59a	7:10a	7:20a	7:32a
6:45a	6:54a	7:01a	7:15a	7:26a	7:36a	7:48a
7:00a	7:10a	7:18a	7:32a	7:43a	7:53a	8:05a
7:15a	7:25a	7:33a	7:47a	7:58a	8:09a	8:22a
7:30a	7:40a	7:48a	8:02a	8:13a	8:24a	8:37a
7:45a	7:55a	8:03a	8:18a	8:29a	8:40a	8:53a
8:00a	8:11a	8:20a	8:35a	8:46a	8:57a	9:09a
8:15a	8:26a	8:35a	8:50a	9:01a	9:11a	9:23a
8:30a	8:41a	8:50a	9:05a	9:16a	9:26a	9:38a
8:45a	8:56a	9:04a	9:18a	9:29a	9:39a	9:51a
9:00a	9:10a	9:18a	9:32a	9:43a	9:53a	10:05a
9:15a	9:25a	9:33a	9:47a	9:58a	10:08a	10:20a
9:30a	9:40a	9:48a	10:02a	10:13a	10:23a	10:35a
9:45a	9:55a	10:03a	10:17a	10:28a	10:38a	10:50a
10:00a	10:10a	10:18a	10:32a	10:43a	10:53a	11:05a
10:15a	10:25a	10:33a	10:47a	10:58a	11:08a	11:20a
10:30a	10:40a	10:48a	11:02a	11:13a	11:23a	11:35a
10:45a	10:55a	11:03a	11:17a	11:28a	11:38a	11:50a
11:00a	11:10a	11:18a	11:32a	11:43a	11:53a	12:05p
11:15a	11:25a	11:33a	11:47a	11:58a	12:08p	12:20p
11:30a	11:40a	11:48a	12:02p	12:13p	12:23p	12:35p
11:45a	11:55a	12:03p	12:17p	12:28p	12:38p	12:50p
12:00p	12:10p	12:18p	12:32p	12:43p	12:53p	1:05p
12:15p	12:25p	12:33p	12:47p	12:58p	1:08p	1:20p
12:30p	12:40p	12:48p	1:02p	1:13p	1:23p	1:35p
12:45p	12:55p	1:03p	1:17p	1:28p	1:38p	1:50p
1:00p	1:10p	1:18p	1:32p	1:43p	1:53p	2:05p
1:15p	1:25p	1:33p	1:47p	1:58p	2:08p	2:20p
1:30p	1:40p	1:48p	2:02p	2:13p	2:23p	2:35p
1:45p	1:55p	2:03p	2:17p	2:28p	2:38p	2:50p
2:00p	2:10p	2:18p	2:32p	2:43p	2:53p	3:05p
2:15p	2:25p	2:33p	2:47p	2:58p	3:08p	3:20p

Continued on next page

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP
Times with the letter "G" before them indicate bus returns to garage.

MONDAY-FRIDAY

NORTHBOUND

To Broward Central Terminal

AVENTURA MALL 1	HALLANDALE BEACH BLVD. 2	YOUNG CIRCLE/PUBLIX 3	SHERIDAN STREET 4	FORT LAUDERDALE/ HOLLYWOOD AIRPORT 5	S.E. 17 STREET 6	BROWARD CENTRAL TERMINAL 7
1:15p	1:27p	1:39p	1:47p	1:59p	2:10p	2:20p
1:30p	1:42p	1:54p	2:02p	2:14p	2:25p	2:35p
1:45p	1:57p	2:09p	2:17p	2:29p	2:40p	2:50p
2:00p	2:12p	2:24p	2:32p	2:44p	2:55p	3:05p
2:15p	2:27p	2:39p	2:47p	2:59p	3:10p	3:20p
2:30p	2:42p	2:54p	3:02p	3:14p	3:25p	3:35p
2:45p	2:57p	3:09p	3:17p	3:29p	3:40p	3:50p
3:00p	3:12p	3:24p	3:32p	3:44p	3:55p	4:06p
3:15p	3:27p	3:39p	3:47p	3:59p	4:11p	4:22p
3:30p	3:42p	3:54p	4:02p	4:15p	4:27p	4:38p
3:45p	3:57p	4:09p	4:18p	4:31p	4:43p	4:54p
4:00p	4:13p	4:25p	4:34p	4:47p	4:59p	5:10p
4:15p	4:28p	4:40p	4:49p	5:02p	5:14p	5:25p
4:30p	4:43p	4:55p	5:04p	5:17p	5:29p	5:40p
4:45p	4:58p	5:10p	5:19p	5:32p	5:44p	5:55p
5:00p	5:13p	5:25p	5:34p	5:47p	5:59p	6:10p
5:30p	5:43p	5:55p	6:04p	6:16p	6:27p	6:37p
5:15p	5:28p	5:40p	5:49p	6:02p	6:14p	G6:25p
5:45p	5:58p	6:10p	6:18p	6:30p	6:40p	G6:50p
6:00p	6:12p	6:24p	6:32p	6:44p	6:55p	7:05p
6:30p	6:42p	6:54p	7:02p	7:14p	7:25p	7:35p
7:00p	7:12p	7:24p	7:32p	7:44p	7:55p	8:05p
7:30p	7:42p	7:54p	8:02p	8:13p	8:23p	8:32p
8:00p	8:11p	8:23p	8:30p	8:41p	8:51p	9:00p
8:30p	8:41p	8:53p	9:00p	9:11p	9:21p	9:30p
9:00p	9:11p	9:23p	9:30p	9:41p	9:51p	10:00p
9:30p	9:41p	9:53p	10:00p	10:10p	10:19p	10:27p
10:00p	10:10p	10:21p	10:28p	10:38p	10:47p	10:55p
10:30p	10:40p	10:51p	10:58p	11:08p	11:17p	G11:25p
11:00p	11:10p	11:21p	11:28p	11:38p	11:47p	G11:55p

SOUTHBOUND

To Aventura Mall

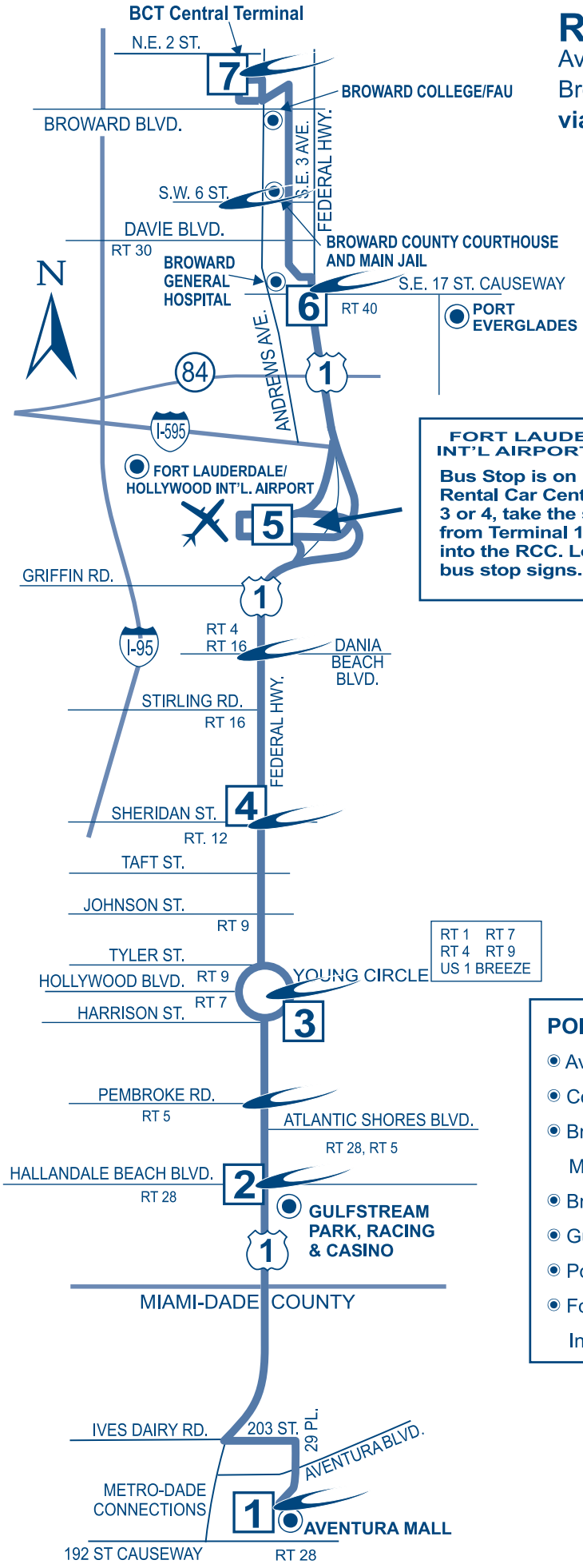
BROWARD CENTRAL TERMINAL 7	S.E. 17 STREET 6	FORT LAUDERDALE/ HOLLYWOOD AIRPORT 5	SHERIDAN STREET 4	YOUNG CIRCLE/PUBLIX 3	HALLANDALE BEACH BLVD. 2	AVENTURA MALL 1
2:30p	2:40p	2:48p	3:02p	3:13p	3:23p	3:35p
2:45p	2:55p	3:03p	3:17p	3:28p	3:38p	3:50p
3:00p	3:10p	3:18p	3:32p	3:43p	3:53p	4:05p
3:15p	3:25p	3:33p	3:47p	3:58p	4:09p	4:22p
3:30p	3:40p	3:48p	4:02p	4:13p	4:24p	4:37p
3:45p	3:55p	4:03p	4:18p	4:29p	4:40p	4:53p
4:00p	4:11p	4:20p	4:35p	4:46p	4:57p	5:10p
4:15p	4:26p	4:35p	4:50p	5:01p	5:12p	5:25p
4:30p	4:41p	4:50p	5:05p	5:16p	5:27p	5:40p
4:45p	4:56p	5:05p	5:20p	5:31p	5:42p	5:55p
5:00p	5:11p	5:20p	5:35p	5:46p	5:57p	G6:10p
5:15p	5:26p	5:35p	5:50p	6:01p	6:12p	6:25p
5:30p	5:41p	5:50p	6:05p	6:16p	6:27p	G6:40p
5:45p	5:56p	6:04p	6:18p	6:29p	6:39p	6:51p
6:00p	6:10p	6:18p	6:32p	6:43p	6:53p	G7:05p
6:15p	6:25p	6:33p	6:47p	6:58p	7:08p	7:20p
6:45p	6:55p	7:03p	7:17p	7:28p	7:38p	7:50p
7:15p	7:25p	7:33p	7:47p	7:58p	8:07p	8:18p
7:45p	7:55p	8:03p	8:16p	8:27p	8:36p	8:47p
8:15p	8:24p	8:31p	8:44p	8:55p	9:04p	9:15p
8:45p	8:54p	9:01p	9:14p	9:25p	9:34p	9:45p
9:15p	9:24p	9:31p	9:44p	9:55p	10:04p	10:14p
9:45p	9:54p	10:01p	10:13p	10:23p	10:31p	10:41p
10:15p	10:23p	10:30p	10:42p	10:52p	11:00p	G11:10p
10:45p	10:53p	11:00p	11:12p	11:22p	G11:30p	
11:15p	11:23p	11:30p	11:42p	11:52p	G12:00a	

TRANSIT WATCH

**WHEN IT COMES TO OUR SAFETY,
WE CAN ALWAYS USE AN EXTRA PAIR OF
EYES AND EARS.
BE ALERT.
CALL 954-357-LOOK (5665).
TELL US.**

ROUTE 1

Aventura Mall to
Broward Central Terminal
via Federal Highway/US 1



BROWARD CENTRAL TERMINAL			
RT 1	RT 11	RT 30	RT 60
RT 6	RT 14	RT 31	RT 81
RT 9	RT 20	RT 40	
RT 10	RT 22	RT 50	
U.S. 1 BREEZE			

FORT LAUDERDALE/HOLLYWOOD INT'L AIRPORT TERMINAL COMPLEX

Bus Stop is on upper departure level at the Rental Car Center (RCC). From Terminal 2, 3 or 4, take the shuttle bus to the RCC; from Terminal 1, access moving sidewalk into the RCC. Look for BCT and Stop 7 bus stop signs.

LEGEND

CONNECTING ROUTES
RT #
MAIN ROUTE
TIMEPOINTS
The Breeze stop location

RT 1	RT 7
RT 4	RT 9
US 1 BREEZE	

POINTS OF INTEREST

- Aventura Mall
- Courthouse/Jail
- Broward General Medical Center
- Broward College/FAU
- Gulfstream Park, Racing Casino
- Port Everglades
- Fort Lauderdale/Hollywood International Airport

For more details on our fares please visit our web site at broward.org/bct or call customer service: 954.357.8400.

Reading A Timetable - It's Easy

1. The map shows the exact bus route.
2. Major route intersections are called time points. Time points are shown with the symbol ☐.
3. The timetable lists major time points for bus route. Listed under time points are scheduled departure times.
4. Reading from left to right, indicates the time for each bus trip.
5. The bus picks up and drops off riders at all BCT bus stop signs along the route where there is a Broward County bus stop sign.
6. Arrive at the bus stop five minutes early. Buses operate as close to published timetables as traffic conditions allow.

Not paying your fare is a crime per Florida Statute 812.015. Violation constitutes a misdemeanor, punishable by jail time and/or a fine.

Information: 954.357.8400

Hearing-speech impaired/TTY: 954.357.8302

This publication can be made available in large print, tape cassette, or Braille, by request.

This symbol is used on bus stop signs to indicate accessible bus stops.

BROWARD COUNTY FLORIDA

BROWARD COUNTY
BOARD OF COUNTY COMMISSIONERS
An equal opportunity employer and provider of services.

PROTECTIONS OF TITLE VI OF THE CIVIL RIGHTS ACT OF 1964 AS AMENDED

Any person(s) or group(s) who believes that they have been subjected to discrimination because of race, color, or national origin, under any transit program or activity provided by Broward County Transit (BCT), may call 954-357-8481 to file a Title VI discrimination complaint or write to Broward County Transit Division, Compliance Manager, 3201 West Copans Road, Pompano Beach, Florida 33069.

TRANSFER POLICY 7/10/11

TRANSFERS BETWEEN REGULAR BUS ROUTE SERVICE AND PREMIUM 95 EXPRESS BUS SERVICE

A BCT 31-Day Premium 95 Express Bus Pass is acceptable on all BCT regular bus service. Passengers transferring from regular route bus service to express bus service with an All Day, 7-Day or 31-Day bus pass, must pay a premium upgrade fee of $1.00. Passengers with a regular 10-Ride bus pass or paying by cash on regular service will not be able to transfer between bus services and must pay the full premium fare when boarding the 95 Express bus.

TRANSFERS FROM BCT TO OTHER SOUTH FLORIDA TRANSIT SYSTEMS

When boarding a BCT bus, passenger pays the appropriate BCT fare and may request a transfer from the bus operator if transferring to Miami-Dade Transit (MDT), Palm Tran or Tri-Rail.

TRANSFERS TO BCT FROM OTHER SOUTH FLORIDA TRANSIT SYSTEMS

When transferring from MDT, Palm Tran and Tri-Rail to BCT regular fixed-route bus service, passenger pays $.50 with a transfer issued by MDT or Palm Tran and proof of fare payment such as Easy Card and receipt issued by Tri-Rail. Tri-Rail passengers boarding BCT at any locations other than at a Tri-Rail station will be required to pay the full fare.

TRANSFERS BETWEEN OTHER SOUTH FLORIDA TRANSIT SYSTEMS AND PREMIUM 95 EXPRESS BUS SERVICE

Transfers to MDT or Tri-Rail from 95 Express, a transfer is issued and passenger must pay appropriate MDT or Tri-Rail fare.

Transfer from MDT or Tri-Rail to 95 Express, a $ .50 transfer fee is required with the appropriate transfer from MDT or Tri-Rail.

The 95 Express does not connect with Palm Tran.

The Easy Card issued by MDT and Tri-Rail is not accepted as payment on any BCT bus.

TIMETABLE

ROUTE U.S. 1 Breeze

Monday - Friday
Limited Service

Aventura Mall to Sample Road and U.S. 1

via U.S. 1

Effective 10/07/07

BROWARD COUNTY Transit

A service of the Broward County Commission

facebook

YouTube

Download & Print at broward.org/bct

Wheelchair Accessible

Bike Racks

Customer Service

Monday - Friday.....7 am - 8 pm
Saturday, Sunday and Holidays.....8:30 am - 5 pm

Transit Operations Agents help with:

- Trip planning
- Routes, times and transfer information
- Identifying Bus Pass sales locations
- Special event information

Lost and Found: 954-357-6414, Monday - Friday, 8:30 am - 4:30 pm

Holiday Bus Service

Sunday bus service is provided on the following observed holidays:

New Year's Day	Labor Day	Memorial Day
Independence Day	Thanksgiving Day	Christmas Day

Fares

Exact fare, dollar bill or coins required. Operators do not carry change.

Fares are: Regular, Premium Express, Senior/Youth/Disabled/Medicare.* Children (under 40 inches ride FREE)

Fare Deals

All Day Bus Pass offers unlimited rides on all routes. On sale aboard all BCT buses.

NOTE: Other cost saving passes cannot be purchased on BCT buses, but are available at the Central Bus Terminal and at authorized distributors.

10 Ride Pass: 10 Rides any time, any day. Expires after the tenth ride is taken.

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31 Day Adult Pass: Unlimited rides for 31 consecutive days. Starts on the first day card is used.

31 Day Reduced Pass: Youth*, Seniors*, Disabled*, Medicare*, College Student*. Unlimited rides for 31 consecutive days. Starts on the first day card is used.

****Premium Express 10 Ride Pass:** 10 rides any time, any day. Expires after tenth ride is taken.

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*NOTICE: Proof of age is required for Youth fare (18 years or younger) and for Senior fare (65 years or older). For College Student Bus Pass, a college photo ID card is required. For Disabled and Medicare fare, proof of disability (Medicare card) and photo I.D. is required. Eligible Senior fare patrons are encouraged to acquire their BCT Reduced Fare Photo ID cards.

** Premium Bus Pass can be purchased online at broward.org/bct and at select Broward County library locations.

NORTHBOUND

To Broward Central Terminal / Sample Road

NUMBERS IN BOXES REFER TO TIME POINTS ON MAP
Times with the letter "G" before them indicate bus returns to garage.

MORNING SERVICE

AVENTURA MALL	HALLANDALE BCH. BLVD.	PEMBROKE RD.	YOUNG CIRCLE	SHERIDAN ST.	DANIA BEACH BLVD.	S.E. 17 ST. & S.E. 3 AVE.	S.E. 6 ST. & ANDREWS AVE.	BROWARD CENTRAL TERMINAL **ARRIVE**	BROWARD CENTRAL TERMINAL **DEPART**	SUNRISE BLVD. & N.E. 15 AVE.	OAKLAND PARK BLVD.	COMMERCIAL BLVD.	N.E. 62 ST.	ATLANTIC BLVD.	COPANS RD	SAMPLE RD.
									6:20a	6:27a	6:34a	6:39a	6:42a	6:46a	6:50a	6:55a
6:00a	6:08a	6:11a	6:15a	6:20a	6:24a	6:33a	6:37a	6:42a	6:50a	6:57a	7:04a	7:09a	7:12a	7:16a	7:20a	7:25a
6:30a	6:38a	6:41a	6:45a	6:50a	6:54a	7:04a	7:08a	7:13a	7:20a	7:28a	7:35a	7:41a	7:45a	7:50a	7:55a	8:01a
7:00a	7:08a	7:11a	7:15a	7:20a	7:24a	7:34a	7:39a	7:45a	7:49a	7:57a	8:05a	8:11a	8:15a	8:20a	8:25a	8:31a
7:25a	7:33a	7:37a	7:42a	7:48a	7:53a	8:04a	8:09a	8:15a	8:19a	8:27a	8:34a	8:39a	8:42a	8:46a	8:50a	8:55a
7:55a	8:04a	8:08a	8:13a	8:19a	8:24a	8:35a	8:39a	8:44a	8:51a	8:58a	9:05a	9:10a	9:13a	9:17a	9:21a	9:26a
8:30a	8:38a	8:41a	8:45a	8:50a	8:54a	9:04a	9:08a	9:13a								

AFTERNOON SERVICE

									4:20p	4:27p	4:37p	4:43p	4:47p	4:52p	4:57p	5:04p
3:55p	4:04p	4:07p	4:11p	4:16p	4:20p	4:29p	4:34p	4:40p	4:50p	4:58p	5:08p	5:14p	5:18p	5:23p	5:28p	5:35p
4:25p	4:34p	4:38p	4:43p	4:49p	4:54p	5:04p	5:09p	5:15p	5:20p	5:29p	5:38p	5:41p	5:44p	5:48p	5:52p	5:58p
4:50p	5:00p	5:04p	5:09p	5:15p	5:20p	5:30p	5:34p	5:39p	5:46p	5:53p	6:02p	6:07p	6:10p	6:14p	6:18p	6:24p
5:25p	5:35p	5:38p	5:42p	5:47p	5:51p	6:00p	6:04p	6:09p	6:16p	6:23p	6:32p	6:37p	6:40p	6:44p	6:48p	6:54p
5:55p	6:04p	6:07p	6:11p	6:16p	6:20p	6:29p	6:33p	6:38p	6:45p	6:52p	7:01p	7:06p	7:09p	7:13p	7:17p	7:23p
6:30p	6:39p	6:42p	6:46p	6:51p	6:55p	7:04p	7:08p	7:13p								

SOUTHBOUND

To Broward Central Terminal/Aventura Mall

SAMPLE RD.	COPANS RD.	ATLANTIC BLVD.	N.E. 62 ST.	COMMERCIAL BLVD.	OAKLAND PARK BLVD.	SUNRISE BLVD. & N.E. 15 AVE.	BROWARD CENTRAL TERMINAL **ARRIVE**	BROWARD CENTRAL TERMINAL **DEPART**	S.E. 6 ST. & ANDREWS AVE.	S.E. 17 ST. & S.E. 3 AVE.	DANIA BEACH BLVD.	SHERIDAN ST.	YOUNG CIRCLE	PEMBROKE RD.	HALLANDALE BCH. BLVD.	AVENTURA MALL
								6:05a	6:09a	6:13a	6:22a	6:26a	6:31a	6:36a	6:39a	6:47a
								6:30a	6:34a	6:38a	6:47a	6:51a	6:56a	7:01a	7:04a	7:12a
6:15a	6:18a	6:22a	6:26a	6:30a	6:35a	6:42a	6:48a	6:55a	6:59a	7:03a	7:12a	7:16a	7:21a	7:26a	7:29a	7:38a
6:45a	6:48a	6:52a	6:56a	7:00a	7:05a	7:12a	7:18a	7:25a	7:29a	7:34a	7:44a	7:49a	7:55a	8:01a	8:05a	8:14a
7:10a	7:13a	7:17a	7:21a	7:25a	7:30a	7:38a	7:45a	7:50a	7:55a	8:00a	8:10a	8:15a	8:21a	8:27a	8:31a	G8:39a
7:35a	7:39a	7:44a	7:49a	7:54a	8:00a	8:08a	8:15a	8:20a	8:25a	8:30a	8:39a	8:43a	8:48a	8:53a	8:56a	G9:04a
8:10a	8:14a	8:19a	8:24a	8:29a	8:34a	8:41a	G8:47a									

AFTERNOON SERVICE

								3:50p	3:54p	3:58p	4:08p	4:12p	4:17p	4:22p	4:25p	4:34p
								4:20p	4:24p	4:28p	4:39p	4:44p	4:50p	4:56p	5:00p	5:10p
4:10p	4:13p	4:17p	4:21p	4:25p	4:30p	4:39p	4:47p	4:50p	4:55p	5:00p	5:11p	5:16p	5:22p	5:28p	5:32p	5:41p
4:40p	4:44p	4:49p	4:54p	4:59p	5:05p	5:14p	5:22p	5:25p	5:30p	5:34p	5:44p	5:48p	5:53p	5:58p	6:01p	6:10p
5:10p	5:14p	5:19p	5:24p	5:29p	5:34p	5:42p	5:49p	5:55p	5:59p	6:03p	6:13p	6:17p	6:22p	6:27p	6:30p	G6:39p
5:45p	5:48p	5:52p	5:56p	6:00p	6:05p	6:13p	6:20p	6:25p	6:29p	6:33p	6:43p	6:47p	6:52p	6:57p	7:00p	G7:09p
6:10p	6:13p	6:17p	6:21p	6:25p	6:30p	6:38p	G6:45p									

ROUTE US 1 *Breeze*

Monday - Friday Limited Service

Aventura Mall to Sample Road

via US 1

Route U.S. 1 Breeze

Weekday Limited Service

BROWARD COUNTY TRANSIT

www.broward.org/bct

- AVENTURA MALL
- HALLANDALE BEACH BLVD.
- PEMBROKE RD.
- YOUNG CIRCLE
- SHERIDAN ST.
- DANIA BEACH BLVD.
- S.E. 17 ST./S.E. 3 AVE.
- S.E. 6 ST./ANDREWS AVE.
- BROWARD CENTRAL TERMINAL
- SUNRISE BLVD./N.E. 15 AVE.
- OAKLAND PARK BLVD.
- COMMERCIAL BLVD.
- N.E. 62 ST.
- ATLANTIC BLVD.
- COPANS RD.
- SAMPLE RD.

POINTS OF INTEREST

- Aventura Mall
- Coral Ridge Mall
- Pompano Citi Centre
- Shoppers Haven
- Broward General Medical Center
- BC/FAU/FIU
- Coconut Creek Casino
- Gulfstream Race Track

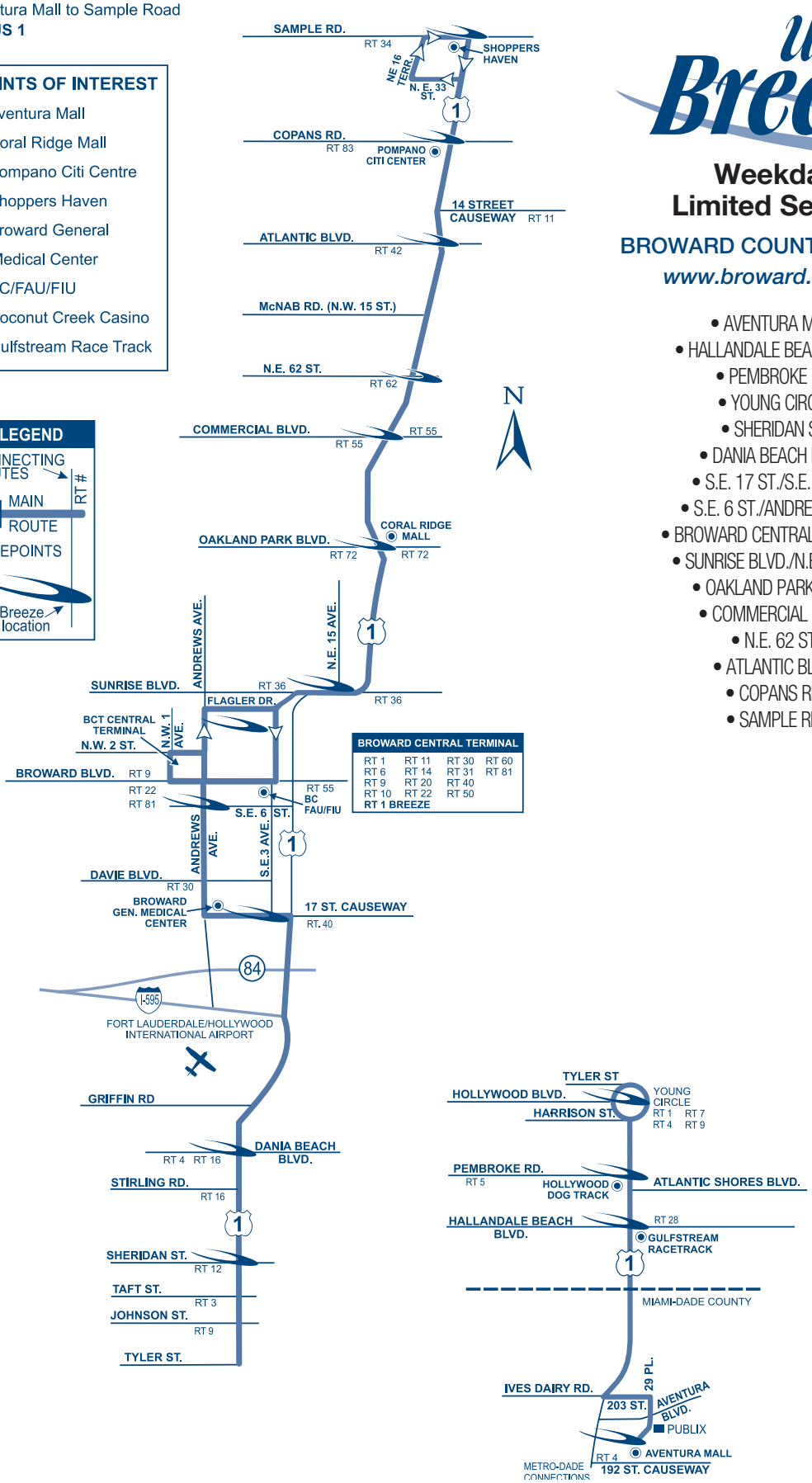
LEGEND

CONNECTING ROUTES — RT #

MAIN ROUTE

TIMEPOINTS

The Breeze stop location



BROWARD CENTRAL TERMINAL

RT 1	RT 11	RT 30	RT 60
RT 6	RT 14	RT 31	RT 81
RT 9	RT 20	RT 40	
RT 10	RT 22	RT 50	

RT 1 BREEZE

For more details on our fares please visit our web site at
broward.org/bct/faresandpasses
or call customer service: 954.357.8400.

Information: 954.357.8400

Hearing-speech impaired/TTY: 954.357.8302

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This symbol is used on bus stop signs to indicate accessible bus stops.

BROWARD COUNTY
BOARD OF COUNTY COMMISSIONERS
An equal opportunity employer and provider of services.

printed on recycled paper

PROTECTIONS OF TITLE VI OF THE CIVIL RIGHTS ACT OF 1964 AS AMENDED

Any person(s) or group(s) who believes that they have been subjected to discrimination because of race, color, or national origin, under any transit program or activity provided by Broward County Transit (BCT), may call 954-357-8481 to file a Title VI discrimination complaint or write to Broward County Office of Transportation, Compliance Manager, 3201 West Copans Road, Bldg. 1, Pompano Beach, Florida 33069.

APPENDIX - B

Traffic Data

Turning Movement Counts (AM Peak Hour)													
		EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBT	SBR	NBL	NBT	NBR
Hallandale Beach Blvd & U.S. 1	Raw Counts	95	864	342	450	973	87	200	923	72	254	498	289
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	114	1037	410	540	1168	104	240	1108	86	305	598	347
	Committed Development	0	218	236	76	199	159	167	107	0	172	86	78
	Walmart Committed Development	0	4	0	5	4	5	5	0	0	0	0	5
	Total Committed Development	0	222	236	81	203	164	172	107	0	172	86	83
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	116	1058	419	551	1191	107	245	1130	88	311	610	354
	2015 Background with Committed	116	1280	655	632	1394	271	417	1237	88	483	696	437
	Project Trips	0	22	0	42	20	10	21	0	0	0	0	18
	2015 Future Total	116	1302	655	674	1414	281	438	1237	88	483	696	455
Hallandale Beach Blvd & NE 8 Ave	Raw Counts	0	1449	7	2	1479	0	79	1	154	1	0	10
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	0	1739	8	2	1775	0	95	1	185	1	0	12
	Committed Development	0	236	232	0	197	0	0	7	0	184	7	84
	Walmart Committed Development	0	14	0	0	14	0	0	0	0	0	0	0
	Total Committed Development	0	250	232	0	211	0	0	7	0	191	0	84
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	0	1774	9	2	1811	0	97	1	189	1	0	12
	2015 Background with Committed	0	2024	241	2	2022	0	97	8	189	192	0	96
	Project Trips	0	61	0	0	71	0	4	0	0	0	0	0

Hallandale Beach Blvd & NE 10 Ave	Raw Counts	97	1222	40	113	1406	27	0	0	0	0	2	50
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	116	1466	48	136	1687	32	0	0	0	0	2	60
	Committed Development	0	220	86	140	183	0	0	0	0	67	0	50
	Walmart Committed Development	0	14	0	0	15	0	0	0	0	0	0	0
	Total Committed Development	0	234	86	140	198	0	0	0	0	67	0	50
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	119	1496	49	138	1721	33	0	0	0	0	2	61
	2015 Background with Committed	119	1730	135	278	1919	33	0	0	0	67	2	111
	Project Trips	0	65	0	2	71	2	0	0	0	0	0	1
	2015 Future Total	119	1795	135	280	1990	35	0	0	0	67	2	112
Hallandale Beach Blvd & NE 14 Ave	Raw Counts	71	1039	186	13	1155	29	96	69	141	203	60	19
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	85	1247	223	16	1386	35	115	83	169	244	72	23
	Committed Development	15	211	0	0	300	8	8	0	23	0	0	0
	Walmart Committed Development	0	15	0	0	15	2	2	0	0	0	0	0
	Total Committed Development	15	226	0	0	315	10	10	0	23	0	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	87	1272	228	16	1414	36	118	84	173	249	73	23
	2015 Background with Committed	102	1498	228	16	1729	46	128	84	196	249	73	23
	Project Trips	0	66	0	4	76	2	5	0	0	0	0	5
	2015 Future Total	102	1564	228	20	1805	48	133	84	196	249	73	28
	Raw Counts	158	621	0	0	854	19	176	0	267	0	0	0

Hallandale Beach Blvd & 3 Islands Blvd	Adjusted Existing Volumes	190	745	0	0	1025	23	211	0	320	0	0	0
	Committed Development	0	156	0	0	220	8	8	0	0	0	0	0
	Walmart Committed Development	9	9	0	0	0	9	2	0	18	0	0	0
	Total Committed Development	9	165	0	0	220	17	10	0	18	0	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	193	760	0	0	1045	23	215	0	327	0	0	0
	2015 Background with Committed	202	925	0	0	1265	40	225	0	345	0	0	0
	Project Trips	3	85	0	0	0	0	8	0	0	0	0	0
	2015 Future Total	205	1010	0	0	1265	40	233	0	345	0	0	0
Hallandale Beach Blvd & Golden Isles Dr*	Raw Counts	3	889	43	36	1072	14	11	4	2	95	14	37
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	4	1067	52	43	1286	17	13	5	2	114	17	44
	Committed Development	0	166	10	0	342	20	0	0	0	62	0	70
	Walmart Committed Development	0	17	0	0	17	0	0	0	0	0	0	0
	Total Committed Development	0	183	10	0	359	20	0	0	0	62	0	70
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	4	1088	53	44	1312	17	13	5	2	116	17	45
	2015 Background with Committed	4	1271	63	44	1671	37	13	5	2	178	17	115
	Project Trips	0	80	0	0	0	0	0	0	0	84	0	7
	2015 Future Total	4	1351	63	44	1671	37	13	5	2	262	17	122
	Raw Counts	41	869	57	23	1199	19	17	4	42	81	12	41
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	49	1043	68	28	1439	23	20	5	50	97	14	49

Hallandale Beach Blvd & Lay	Walmart Committed Development	0	17	0	0	17	0	0	0	0	0	0	0
	Total Committed Development	30	193	35	0	361	60	0	0	25	5	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	50	1064	70	28	1468	23	21	5	51	99	15	50
	2015 Background with Committed	80	1257	105	28	1829	83	21	5	76	104	15	50
	Project Trips	0	76	0	1	82	1	1	0	0	0	0	2
	2015 Future Total	80	1333	105	29	1911	84	22	5	76	104	15	52
Hallandale Beach Blvd & SE 26 Ave*	Raw Counts	0	792	3	39	893	0	0	0	0	0	0	48
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	0	950	4	47	1072	0	0	0	0	0	0	58
	Committed Development	0	303	0	0	346	0	0	0	0	0	0	0
	Walmart Committed Development	0	9	0	0	9	0	0	0	0	0	0	0
	Total Committed Development	0	312	0	0	355	0	0	0	0	0	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	0	970	4	48	1093	0	0	0	0	0	0	59
	2015 Background with Committed	0	1282	4	48	1448	0	0	0	0	0	0	59
	Project Trips	0	0	93	25	0	0	0	0	0	0	0	24
	2015 Future Total	0	1282	97	73	1448	0	0	0	0	0	0	83
Diplomat Pkwy	Raw Counts	41	806	13	12	1076	33	34	19	52	7	1	4
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	49	967	16	14	1291	40	41	23	62	8	1	5
	Committed Development	65	149	0	0	212	8	7	0	84	0	0	0
	Walmart Committed Development	0	17	0	0	17	1	1	0	0	0	0	0

Hallandale Beach	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	50	987	16	15	1317	40	42	23	64	9	1	5
	2015 Background with Committed	115	1153	16	15	1546	49	50	23	148	9	1	5
	Project Trips	1	86	1	0	0	0	2	0	0	0	0	0
	2015 Future Total	116	1239	17	15	1546	49	52	23	148	9	1	5
Hallandale Beach Blvd & S. Ocean Dr	Raw Counts	358	30	556	5	144	5	5	260	207	16	352	5
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	430	36	667	6	173	6	6	312	248	19	422	6
	Committed Development	38	0	126	0	0	0	0	44	70	158	43	0
	Walmart Committed Development	5	0	4	0	0	0	0	0	5	4	0	0
	Total Committed Development	43	0	130	0	0	0	0	44	75	162	43	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	438	37	681	6	176	6	6	318	253	20	431	6
	2015 Background with Committed	481	37	811	6	176	6	6	362	328	182	474	6
	Project Trips	11	1	12	0	3	0	0	0	8	6	0	0
	2015 Future Total	492	38	823	6	179	6	6	362	336	188	474	6
NB Ramp to Hallandale WB	Raw Counts	-	-	-	-	-	-	-	-	-	-	420	-
	Seasonal Factor	-	-	-	-	-	-	-	-	-	-	1.20	-
	Adjusted Existing Volumes	-	-	-	-	-	-	-	-	-	-	504	-
	Committed Development	-	-	-	-	-	-	-	-	-	-	0	-
	Walmart Committed Development	-	-	-	-	-	-	-	-	-	-	0	-
	Total Committed Development	-	-	-	-	-	-	-	-	-	-	0	-
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%

S. C	2015 Background with Committed	-	-	-	-	-	-	-	-	-	-	514	-
	Project Trips	-	-	-	-	-	-	-	-	-	-	7	-
	2015 Future Total	-	-	-	-	-	-	-	-	-	-	521	-
SE 26 Ave & Diana Drive**	Raw Counts	56	1	0	0	2	0	1	0	42	0	0	0
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	67	1	0	0	2	0	1	0	50	0	0	0
	Committed Development	0	0	0	0	0	0	0	0	0	0	0	0
	Walmart Committed Development	0	0	0	0	0	0	0	0	0	0	0	0
	Total Committed Development	0	0	0	0	0	0	0	0	0	0	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	69	1	0	0	2	0	1	0	51	0	0	0
	2015 Background with Committed	69	1	0	0	2	0	1	0	51	0	0	0
	Project Trips	0	0	0	0	0	0	0	0	91	0	0	0
	2015 Future Total	69	1	0	0	2	0	1	0	142	0	0	0
Golden Isles Drive & Diana Drive**	Raw Counts	0	0	0	40	0	41	6	53	0	0	105	56
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	0	0	0	48	0	49	7	64	0	0	126	67
	Committed Development	0	0	0	0	0	0	0	0	0	0	0	0
	Walmart Committed Development	0	0	0	0	0	20	5	5	0	0	112	0
	Total Committed Development	0	0	0	0	0	20	5	5	0	0	112	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	0	0	0	49	0	50	7	65	0	0	129	69
	2015 Background with Committed	0	0	0	49	0	70	12	70	0	0	241	69

Turning Movement Counts (PM Peak Hour)													
		EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBT	SBR	NBL	NBT	NBR
Hallandale Beach Blvd & U.S. 1	Raw Counts	171	808	325	522	1123	140	292	814	99	499	1116	521
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	205	970	390	626	1348	168	350	977	119	599	1339	625
	Committed Development	0	199	172	78	218	167	159	86	0	236	107	76
	Walmart Committed Development	0	4	0	5	4	5	5	0	0	0	0	5
	Total Committed Development	0	203	172	83	222	172	164	86	0	236	107	81
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	209	989	398	639	1375	171	357	996	121	611	1366	638
	2015 Background with Committed	209	1192	570	722	1597	343	521	1082	121	847	1473	719
	Project Trips	0	17	0	33	21	17	15	0	0	0	0	27
	2015 Future Total	209	1209	570	755	1618	360	536	1082	121	847	1473	746
Hallandale Beach Blvd & NE 8 Ave	Raw Counts	0	1663	10	2	1569	0	85	4	133	6	0	32
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	0	1996	12	2	1883	0	102	5	160	7	0	38
	Committed Development	0	197	184	84	236	0	0	7	7	232	7	0
	Walmart Committed Development	0	14	0	0	14	0	1	0	0	0	0	0
	Total Committed Development	0	211	184	84	250	0	1	7	7	239	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	0	2036	12	2	1921	0	104	5	163	7	0	39
	2015 Background with Committed	0	2247	196	86	2171	0	105	12	170	246	0	39
	Project Trips	0	60	0	0	73	0	3	0	0	0	0	0

	2015 Future Total	0	2307	196	86	2243	0	108	12	170	246	0	39
Hallandale Beach Blvd & NE 10 Ave	Raw Counts	89	1541	62	45	1652	26	0	0	0	0	0	7
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	107	1849	74	54	1982	31	0	0	0	0	0	8
	Committed Development	0	183	67	50	220	0	0	0	0	86	7	140
	Walmart Committed Development	0	15	0	0	14	1	0	0	0	0	0	0
	Total Committed Development	0	198	67	50	234	1	0	0	0	86	7	140
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	109	1886	76	55	2022	32	0	0	0	0	0	9
	2015 Background with Committed	109	2084	143	105	2256	33	0	0	0	86	7	149
	Project Trips	0	63	0	1	72	1	0	0	0	0	0	0
	2015 Future Total	109	2147	143	106	2328	34	0	0	0	86	7	149
Hallandale Beach Blvd & NE 14 Ave	Raw Counts	248	1394	295	48	1481	64	69	99	108	228	116	87
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	298	1673	354	58	1777	77	83	119	130	274	139	104
	Committed Development	23	300	0	0	211	8	8	0	15	0	0	0
	Walmart Committed Development	0	15	0	0	15	2	2	0	0	0	0	0
	Total Committed Development	23	315	0	0	226	10	10	0	15	0	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	304	1707	361	59	1813	78	84	121	132	279	142	107
	2015 Background with Committed	327	2022	361	59	2039	88	94	121	147	279	142	107
	Project Trips	0	63	0	5	75	5	4	0	0	0	0	6

Hallandale Beach Blvd & 3 Islands Blvd	Raw Counts	437	1062	0	0	1055	139	171	0	215	0	0	0
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	524	1274	0	0	1266	167	205	0	258	0	0	0
	Committed Development	0	220	0	0	156	8	8	0	0	0	0	0
	Walmart Committed Development	18	0	0	0	9	2	9	0	9	0	0	0
	Total Committed Development	18	220	0	0	165	10	17	0	9	0	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	535	1300	0	0	1292	170	209	0	263	0	0	0
	2015 Background with Committed	553	1520	0	0	1457	180	226	0	272	0	0	0
	Project Trips	7	80	0	0	0	0	5	0	0	0	0	0
	2015 Future Total	560	1600	0	0	1457	180	231	0	272	0	0	0
Hallandale Beach Blvd & Golden Isles Dr*	Raw Counts	2	1379	69	40	1220	42	44	11	7	108	15	45
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	2	1655	83	48	1464	50	53	13	8	130	18	54
	Committed Development	0	342	62	70	166	0	20	0	0	10	0	0
	Walmart Committed Development	0	17	0	0	17	0	0	0	0	0	0	0
	Total Committed Development	0	359	62	70	183	0	20	0	0	10	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	2	1688	84	49	1494	51	54	13	9	132	18	55
	2015 Background with Committed	2	2047	146	119	1677	51	74	13	9	142	18	55
	Project Trips	0	76	0	0	0	0	1	0	0	88	1	10
	2015 Future Total	2	2123	146	119	1677	51	75	13	9	230	19	65

Hallandale Beach Blvd & Layne Blvd*	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	98	1585	48	24	1426	31	80	12	71	130	14	58
	Committed Development	25	344	5	0	176	0	60	0	30	35	0	0
	Walmart Committed Development	0	17	0	0	17	0	0	0	0	0	0	0
	Total Committed Development	25	361	5	0	193	0	60	0	30	35	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	100	1617	49	24	1454	32	82	12	72	132	15	59
	2015 Background with Committed	125	1978	54	24	1647	32	142	12	102	167	15	59
	Project Trips	0	72	0	1	85	1	2	0	0	0	0	2
	2015 Future Total	125	2050	54	25	1732	33	144	12	102	167	15	61
Hallandale Beach Blvd & SE 26 Ave*	Raw Counts	0	1296	6	62	1170	0	0	0	0	0	0	43
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	0	1555	7	74	1404	0	0	0	0	0	0	52
	Committed Development	0	228	0	0	164	0	0	0	0	0	0	0
	Walmart Committed Development	0	9	0	0	9	0	0	0	0	0	0	0
	Total Committed Development	0	237	0	0	173	0	0	0	0	0	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	0	1587	7	76	1432	0	0	0	0	0	0	53
	2015 Background with Committed	0	1824	7	76	1605	0	0	0	0	0	0	53
	Project Trips	0	0	85	31	0	0	0	0	0	0	0	31
	2015 Future Total	0	1824	92	107	1605	0	0	0	0	0	0	84
	Raw Counts	88	1444	0	3	1179	35	51	1	43	7	9	10

Hallandale Beach Blvd & Diplomat Pkwy	Adjusted Existing Volumes	106	1733	0	4	1415	42	61	1	52	8	11	12
	Committed Development	84	212	0	0	149	7	8	0	65	0	0	0
	Walmart Committed Development	0	17	0	0	17	1	1	0	0	0	0	0
	Total Committed Development	84	229	0	0	166	8	9	0	65	0	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	108	1768	0	4	1443	43	62	1	53	9	11	12
	2015 Background with Committed	192	1997	0	4	1609	51	71	1	118	9	11	12
	Project Trips	2	86	0	0	0	0	1	0	0	0	0	0
	2015 Future Total	194	2083	0	4	1609	51	72	1	118	9	11	12
Hallandale Beach Blvd & S. Ocean Dr	Raw Counts	535	70	730	10	74	25	14	592	513	18	546	5
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	642	84	876	12	89	30	17	710	616	22	655	6
	Committed Development	70	0	158	0	0	0	0	43	38	126	44	0
	Walmart Committed Development	5	0	4	0	0	0	0	0	5	4	0	0
	Total Committed Development	75	0	162	0	0	0	0	43	43	130	44	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	655	86	894	12	91	31	17	725	628	22	668	6
	2015 Background with Committed	730	86	1056	12	91	31	17	768	671	152	712	6
	Project Trips	13	1	16	0	1	0	0	0	14	7	0	0
	2015 Future Total	743	87	1072	12	92	31	17	768	685	159	712	6
	Raw Counts	-	-	-	-	-	-	-	-	-	-	593	-
	Seasonal Factor	-	-	-	-	-	-	-	-	-	-	1.20	-

S. Ocean Dr NB Ramp to Hallandale	Committed Development	-	-	-	-	-	-	-	-	-	-	0	-
	Walmart Committed Development	-	-	-	-	-	-	-	-	-	-	0	-
	Total Committed Development	-	-	-	-	-	-	-	-	-	-	0	-
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	-	-	-	-	-	-	-	-	-	-	726	-
	2015 Background with Committed	-	-	-	-	-	-	-	-	-	-	726	-
	Project Trips	-	-	-	-	-	-	-	-	-	-	8	-
	2015 Future Total	-	-	-	-	-	-	-	-	-	-	734	-
SE 26 Ave & Diana Drive***	Raw Counts	37	5	0	0	1	2	4	0	51	0	0	0
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	44	6	0	0	1	2	5	0	61	0	0	0
	Committed Development	0	0	0	0	0	0	0	0	0	0	0	0
	Walmart Committed Development	0	0	0	0	0	0	0	0	0	0	0	0
	Total Committed Development	0	0	0	0	0	0	0	0	0	0	0	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	45	6	0	0	1	2	5	0	62	0	0	0
	2015 Background with Committed	45	6	0	0	1	2	5	0	62	0	0	0
	Project Trips	0	0	0	0	0	0	0	0	99	0	0	0
	2015 Future Total	45	6	0	0	1	2	5	0	161	0	0	0
:*	Raw Counts	0	0	0	55	0	84	20	87	0	0	91	46
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	0	0	0	66	0	101	24	104	0	0	109	55

Golden Isles Drive & Diana D	Walmart Committed Development	0	0	0	0	0	5	20	112	0	0	5	0
	Total Committed Development	0	0	0	0	0	5	20	112	0	0	5	0
	Growth Rate	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	2015 Total Background w/o Committed	0	0	0	67	0	103	24	107	0	0	111	56
	2015 Background with Committed	0	0	0	67	0	108	44	219	0	0	116	56
	Project Trips	0	0	0	2	0	97	0	2	0	0	2	0
	2015 Future Total	0	0	0	69	0	205	44	221	0	0	118	56

* - Committed development determined from existing traffic studies.

** - Raw data collected manually from 5PM to 6PM on 7/28/11, committted development determined from existing traffic studies.

** - See note **. There is a one-way westbound driveway, just north of Diana Drive between Golden Isles and 26 Avenue. To be conservative , right turns from this driveway were included included with the rigtht turns on Diana Drive.

Note: Due to rounding and/or redistribution of committed volumes, volumes shown on table and Figures 3-1, 4-1, 4-3 and 5-1 may not match exactly.

	2015 Future Total	0	0	0	50	0	159	12	70	0	0	244	69

* - Committed development determined from existing traffic studies.

** - Raw data collected manually from 5PM to 6PM on 7/28/11, committted development determined from existing traffic studies.

** - See note **. There is a one-way westbound driveway, just north of Diana Drive between Golden Isles and 26 Avenue. To be conservative , right turns from this driveway were included included with the rigtht turns on Diana Drive.

Note: Due to rounding and/or redistribution of committed volumes, volumes shown on table and Figures 3-1, 4-1, 4-3 and 5-1 may not match exactly.

2009 Peak Season Factor Category Report - Report Type: ALL
Category: 8600 EAST-A1A TO US1

MOCF: 0.90

Week	Dates	SF	PSCF
1	01/01/2009 - 01/03/2009	0.97	1.08
2	01/04/2009 - 01/10/2009	0.95	1.06
3	01/11/2009 - 01/17/2009	0.93	1.04
* 4	01/18/2009 - 01/24/2009	0.92	1.02
* 5	01/25/2009 - 01/31/2009	0.91	1.01
* 6	02/01/2009 - 02/07/2009	0.90	1.00
* 7	02/08/2009 - 02/14/2009	0.89	0.99
* 8	02/15/2009 - 02/21/2009	0.88	0.98
* 9	02/22/2009 - 02/28/2009	0.88	0.98
*10	03/01/2009 - 03/07/2009	0.88	0.98
*11	03/08/2009 - 03/14/2009	0.89	0.99
*12	03/15/2009 - 03/21/2009	0.89	0.99
*13	03/22/2009 - 03/28/2009	0.90	1.00
*14	03/29/2009 - 04/04/2009	0.90	1.00
*15	04/05/2009 - 04/11/2009	0.91	1.01
*16	04/12/2009 - 04/18/2009	0.92	1.02
17	04/19/2009 - 04/25/2009	0.95	1.06
18	04/26/2009 - 05/02/2009	0.99	1.10
19	05/03/2009 - 05/09/2009	1.02	1.14
20	05/10/2009 - 05/16/2009	1.05	1.17
21	05/17/2009 - 05/23/2009	1.06	1.18
22	05/24/2009 - 05/30/2009	1.06	1.18
23	05/31/2009 - 06/06/2009	1.07	1.19
24	06/07/2009 - 06/13/2009	1.08	1.20
25	06/14/2009 - 06/20/2009	1.09	1.21
26	06/21/2009 - 06/27/2009	1.08	1.20
27	06/28/2009 - 07/04/2009	1.08	1.20
28	07/05/2009 - 07/11/2009	1.08	1.20
29	07/12/2009 - 07/18/2009	1.08	1.20
30	07/19/2009 - 07/25/2009	1.08	1.20
31	07/26/2009 - 08/01/2009	1.08	1.20
32	08/02/2009 - 08/08/2009	1.08	1.20
33	08/09/2009 - 08/15/2009	1.09	1.21
34	08/16/2009 - 08/22/2009	1.10	1.23
35	08/23/2009 - 08/29/2009	1.11	1.24
36	08/30/2009 - 09/05/2009	1.12	1.25
37	09/06/2009 - 09/12/2009	1.13	1.26
38	09/13/2009 - 09/19/2009	1.14	1.27
39	09/20/2009 - 09/26/2009	1.13	1.26
40	09/27/2009 - 10/03/2009	1.11	1.24
41	10/04/2009 - 10/10/2009	1.09	1.21
42	10/11/2009 - 10/17/2009	1.07	1.19
43	10/18/2009 - 10/24/2009	1.06	1.18
44	10/25/2009 - 10/31/2009	1.05	1.17
45	11/01/2009 - 11/07/2009	1.03	1.15
46	11/08/2009 - 11/14/2009	1.02	1.14
47	11/15/2009 - 11/21/2009	1.01	1.13
48	11/22/2009 - 11/28/2009	1.00	1.11
49	11/29/2009 - 12/05/2009	0.99	1.10
50	12/06/2009 - 12/12/2009	0.98	1.09
51	12/13/2009 - 12/19/2009	0.97	1.08
52	12/20/2009 - 12/26/2009	0.95	1.06
53	12/27/2009 - 12/31/2009	0.93	1.04

* Peak Season

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2009 Peak Season Factor Category Report - Report Type: ALL
Category: 8601 CEN.-W OF US1 TO SR7

MOCF: 0.96

Week	Dates	SF	PSCF
1	01/01/2009 - 01/03/2009	0.99	1.03
2	01/04/2009 - 01/10/2009	0.99	1.03
3	01/11/2009 - 01/17/2009	0.98	1.02

TABLE 4

Generalized **Peak Hour Two-Way** Volumes for Florida's **Urbanized Areas**[1]

9/4/09

STATE SIGNALIZED ARTERIALS

Class I (>0.00 to 1.99 signalized intersections per mile)

Lanes	Median	B	C	D	E
2	Undivided	930	1,500	1,600	***
4	Divided	2,840	3,440	3,560	***
6	Divided	4,370	5,200	5,360	***
8	Divided	5,900	6,970	7,160	***

Class II (2.00 to 4.50 signalized intersections per mile)

Lanes	Median	B	C	D	E
2	Undivided	**	1,020	1,480	1,570
4	Divided	**	2,420	3,220	3,400
6	Divided	**	3,790	4,880	5,150
8	Divided	**	5,150	6,530	6,880

Class III/IV (more than 4.50 signalized intersections per mile)

Lanes	Median	B	C	D	E
2	Undivided	**	500	1,150	1,440
4	Divided	**	1,220	2,730	3,100
6	Divided	**	1,910	4,240	4,680
8	Divided	**	2,620	5,770	6,280

FREEWAYS

Lanes	B	C	D	E
4	4,000	5,500	6,770	7,300
6	6,000	8,320	10,150	11,290
8	8,000	11,050	13,480	15,270
10	10,000	13,960	16,930	19,250
12	13,730	18,600	21,950	23,230

Freeway Adjustments

Auxiliary Lanes	Ramp Metering	Oversaturated Conditions*
+ 1,800	+ 5%	-10% of E

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	730	1,460	2,080	2,620
4	Divided	3,220	4,660	6,040	6,840
6	Divided	4,840	6,990	9,060	10,280

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Major City/County Roadways	- 10%
Other Signalized Roadways	- 35%

State & Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Divided/Undivided & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 15%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6.

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/ Bicycle Lane Coverage	B	C	D	E
0-49%	**	310	1,180	>1,180
50-84%	240	360	>360	***
85-100%	620	>620	***	***

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	**	**	480	1,390
50-84%	**	**	1,100	1,820
85-100%	**	1,100	1,820	>1,820

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	>5	≥4	≥3	≥2
85-100%	>4	≥3	≥2	≥1

[1] Values shown are presented as hourly two-way volumes for levels of service and are for the automobile/truck modes unless specifically stated. Although presented as peak hour two-way volumes, they actually represent peak hour peak direction conditions with an applicable D factor applied. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model, Pedestrian LOS Model and Transit Capacity and Quality of Service Manual, respectively for the automobile/truck, bicycle, pedestrian and bus modes.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* For oversaturated conditions during peak hour, subtract 10% from the LOS E (capacity volumes). This number becomes the new maximum service volume for LOS D, and LOS E cannot be achieved.

** Cannot be achieved using table input value defaults.

*** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450

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Turning Movement - All Traffic
Hallandale Beach Blvd & US-1
Hallandale Beach, FL
Location counted: July 19, 2011

File Name : hal-us1
Site Code : CGA11505
Start Date : 7/19/2011
Page No : 1

Groups Printed- All Traffic

	US-1 SB			Hallandale Beach Blvd WB			US-1 NB			Hallandale Beach Blvd EB			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	7	70	24	14	185	47	38	76	24	35	88	5	613
07:15 AM	13	109	33	18	189	91	48	61	38	24	108	20	752
07:30 AM	12	144	33	27	209	65	85	72	32	57	164	15	915
07:45 AM	7	193	30	15	173	81	68	116	61	59	177	26	1006
Total	39	516	120	74	756	284	239	325	155	175	537	66	3286
08:00 AM	14	223	39	21	194	76	68	107	65	106	227	22	1162
08:15 AM	26	201	34	20	304	137	64	127	68	74	179	30	1264
08:30 AM	13	287	64	19	205	125	76	122	69	64	204	24	1272
08:45 AM	19	212	63	27	270	112	81	142	52	98	254	19	1349
Total	72	923	200	87	973	450	289	498	254	342	864	95	5047
*** BREAK ***													
04:00 PM	48	193	104	39	273	146	114	250	99	72	212	25	1575
04:15 PM	14	183	69	33	248	118	140	262	125	66	199	27	1484
04:30 PM	27	206	80	45	285	127	123	231	107	63	226	42	1562
04:45 PM	23	194	84	48	229	128	126	215	85	82	196	83	1493
Total	112	776	337	165	1035	519	503	958	416	283	833	177	6114
05:00 PM	32	202	62	40	353	134	141	320	141	63	174	65	1727
05:15 PM	26	224	63	28	305	139	103	238	136	82	183	45	1572
05:30 PM	25	166	80	29	234	132	144	290	98	94	238	33	1563
05:45 PM	16	222	87	43	231	117	133	268	124	86	213	28	1568
Total	99	814	292	140	1123	522	521	1116	499	325	808	171	6430
Grand Total	322	3029	949	466	3887	1775	1552	2897	1324	1125	3042	509	20877
Apprch %	7.5	70.4	22.1	7.6	63.4	29	26.9	50.2	22.9	24.1	65.1	10.9	
Total %	1.5	14.5	4.5	2.2	18.6	8.5	7.4	13.9	6.3	5.4	14.6	2.4	

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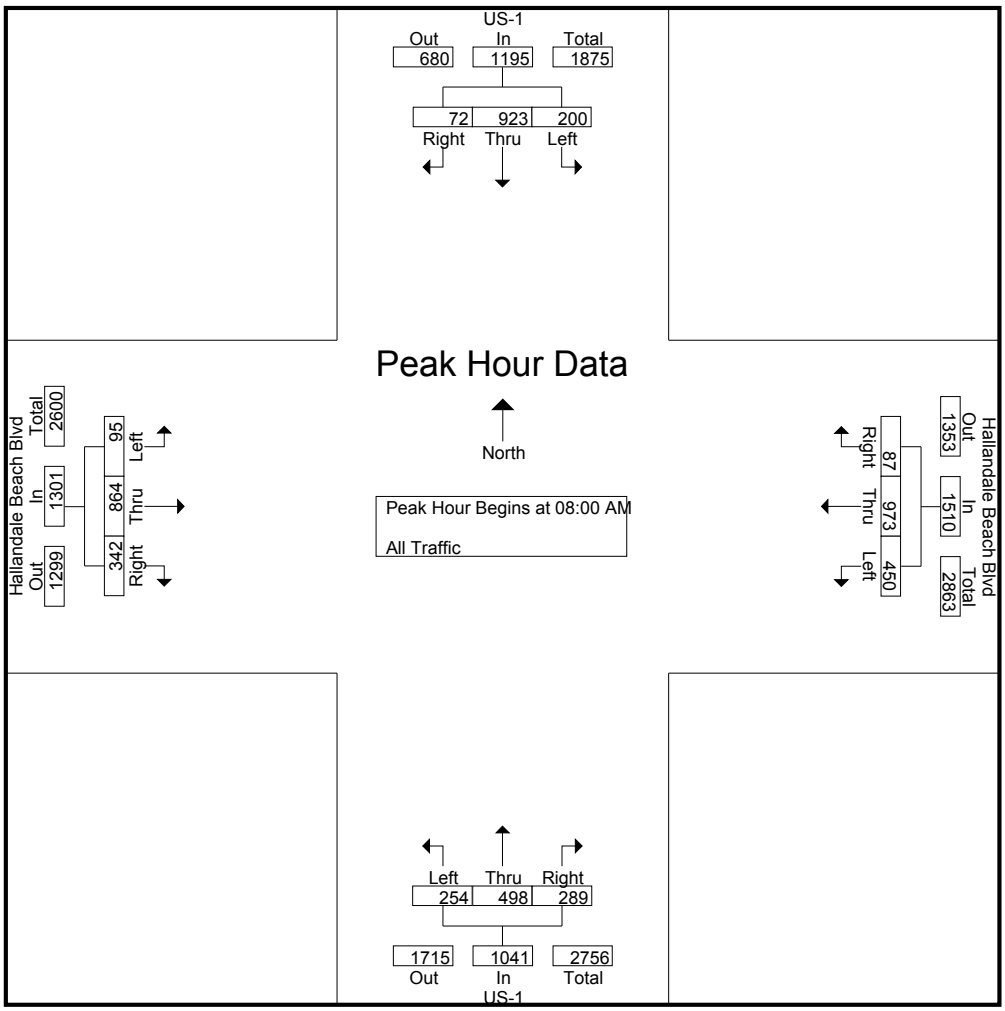
Turning Movement - All Traffic
Hallandale Beach Blvd & US-1
Hallandale Beach, FL
Location counted: July 19, 2011

File Name : hal-us1
Site Code : CGA11505
Start Date : 7/19/2011
Page No : 2

	US-1 SB				Hallandale Beach Blvd WB				US-1 NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	14	223	39	276	21	194	76	291	68	107	65	240	106	227	22	355	1162
08:15 AM	26	201	34	261	20	304	137	461	64	127	68	259	74	179	30	283	1264
08:30 AM	13	287	64	364	19	205	125	349	76	122	69	267	64	204	24	292	1272
08:45 AM	19	212	63	294	27	270	112	409	81	142	52	275	98	254	19	371	1349
Total Volume	72	923	200	1195	87	973	450	1510	289	498	254	1041	342	864	95	1301	5047
% App. Total	6	77.2	16.7		5.8	64.4	29.8		27.8	47.8	24.4		26.3	66.4	7.3		
PHF	.692	.804	.781	.821	.806	.800	.821	.819	.892	.877	.920	.946	.807	.850	.792	.877	.935



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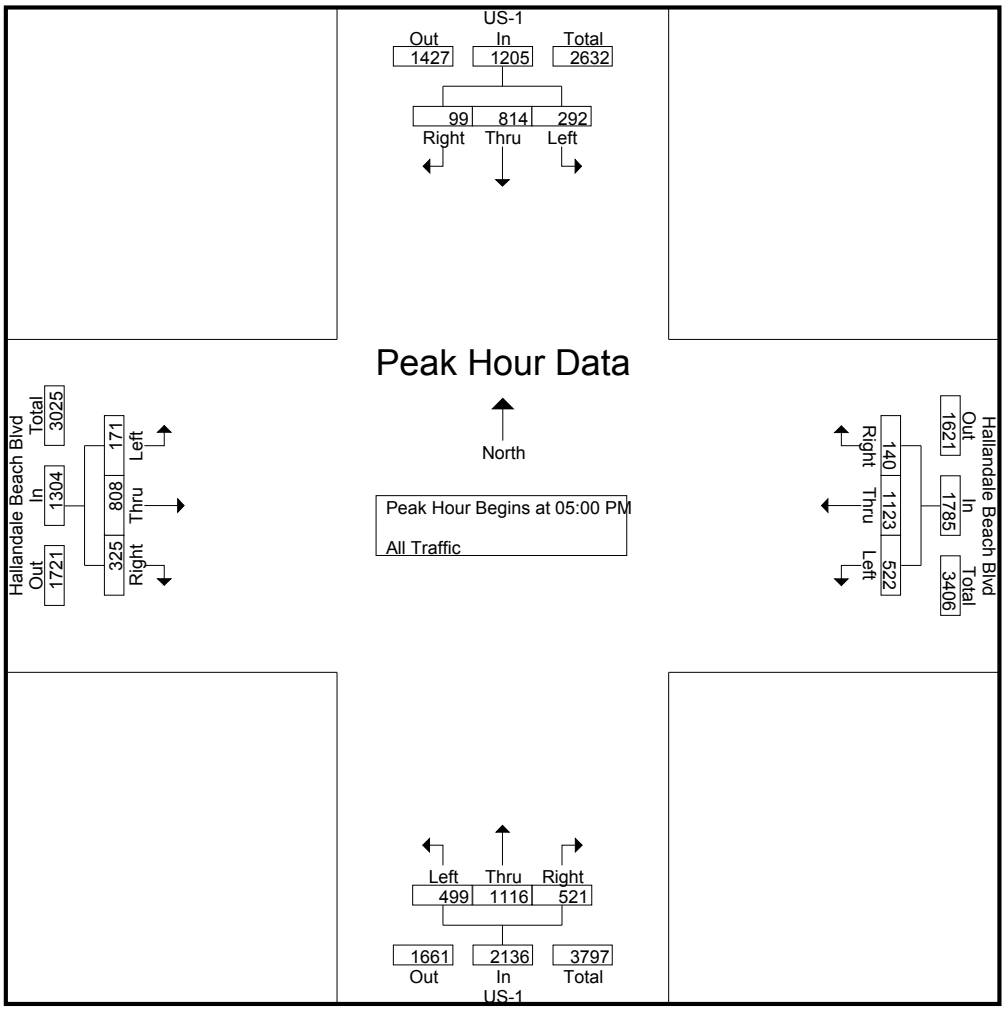
Turning Movement - All Traffic
Hallandale Beach Blvd & US-1
Hallandale Beach, FL
Location counted: July 19, 2011

File Name : hal-us1
Site Code : CGA11505
Start Date : 7/19/2011
Page No : 3

	US-1 SB				Hallandale Beach Blvd WB				US-1 NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	32	202	62	296	40	353	134	527	141	320	141	602	63	174	65	302	1727
05:15 PM	26	224	63	313	28	305	139	472	103	238	136	477	82	183	45	310	1572
05:30 PM	25	166	80	271	29	234	132	395	144	290	98	532	94	238	33	365	1563
05:45 PM	16	222	87	325	43	231	117	391	133	268	124	525	86	213	28	327	1568
Total Volume	99	814	292	1205	140	1123	522	1785	521	1116	499	2136	325	808	171	1304	6430
% App. Total	8.2	67.6	24.2		7.8	62.9	29.2		24.4	52.2	23.4		24.9	62	13.1		
PHF	.773	.908	.839	.927	.814	.795	.939	.847	.905	.872	.885	.887	.864	.849	.658	.893	.931



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Turning Movement - All Traffic
Hallandale Beach Blvd & S Ocean Dr
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-OCE
Site Code : CGA11505
Start Date : 7/14/2011
Page No : 1

Groups Printed- All Traffic

	S Ocean Dr SB			Hallandale Beach Blvd WB			S Ocean Dr NB			Hallandale Beach Blvd EB			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	67	38	4	2	54	2	1	41	5	39	14	56	323
07:15 AM	66	46	3	1	28	1	0	58	1	65	18	48	335
07:30 AM	76	56	1	1	33	3	1	76	0	103	20	79	449
07:45 AM	84	69	1	2	32	2	0	84	4	112	10	105	505
Total	293	209	9	6	147	8	2	259	10	319	62	288	1612
08:00 AM	87	116	1	1	34	1	1	89	3	112	8	72	525
08:15 AM	84	105	4	1	33	2	1	89	3	110	10	100	542
08:30 AM	36	39	0	2	36	1	0	87	2	160	4	79	446
08:45 AM	0	0	0	1	41	1	3	87	8	174	8	107	430
Total	207	260	5	5	144	5	5	352	16	556	30	358	1943
*** BREAK ***													
04:00 PM	91	91	0	5	21	5	0	123	5	194	26	113	674
04:15 PM	83	92	1	2	15	4	0	132	4	180	12	146	671
04:30 PM	79	109	1	8	16	8	0	152	11	157	21	153	715
04:45 PM	84	101	2	6	18	3	0	137	11	185	14	123	684
Total	337	393	4	21	70	20	0	544	31	716	73	535	2744
05:00 PM	100	128	1	11	17	4	1	136	5	179	16	124	722
05:15 PM	136	150	4	4	19	3	2	147	1	206	15	126	813
05:30 PM	142	181	4	4	17	1	1	148	7	157	20	142	824
05:45 PM	135	133	5	6	21	2	1	115	5	188	19	143	773
Total	513	592	14	25	74	10	5	546	18	730	70	535	3132
Grand Total	1350	1454	32	57	435	43	12	1701	75	2321	235	1716	9431
Apprch %	47.6	51.3	1.1	10.7	81.3	8	0.7	95.1	4.2	54.3	5.5	40.2	
Total %	14.3	15.4	0.3	0.6	4.6	0.5	0.1	18	0.8	24.6	2.5	18.2	

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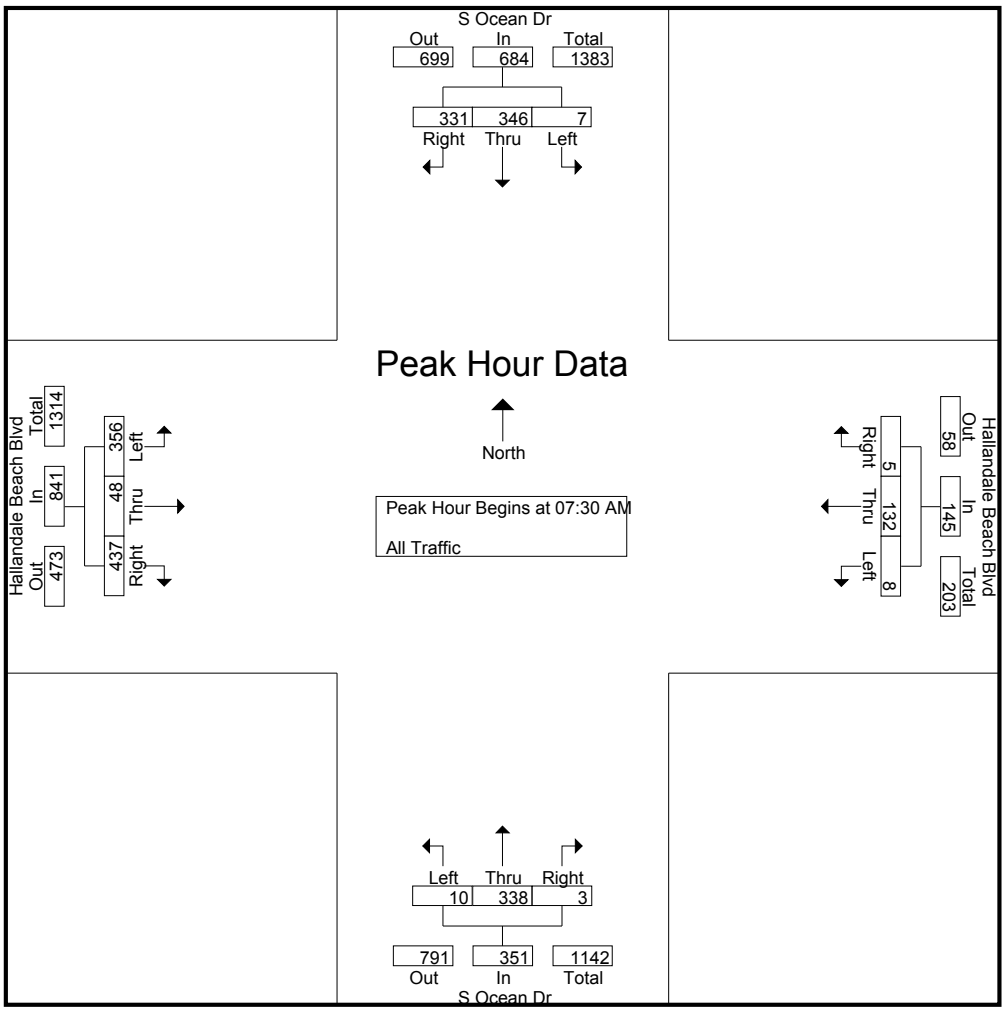
Turning Movement - All Traffic
Hallandale Beach Blvd & S Ocean Dr
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-OCE
Site Code : CGA11505
Start Date : 7/14/2011
Page No : 2

	S Ocean Dr SB				Hallandale Beach Blvd WB				S Ocean Dr NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	76	56	1	133	1	33	3	37	1	76	0	77	103	20	79	202	449
07:45 AM	84	69	1	154	2	32	2	36	0	84	4	88	112	10	105	227	505
08:00 AM	87	116	1	204	1	34	1	36	1	89	3	93	112	8	72	192	525
08:15 AM	84	105	4	193	1	33	2	36	1	89	3	93	110	10	100	220	542
Total Volume	331	346	7	684	5	132	8	145	3	338	10	351	437	48	356	841	2021
% App. Total	48.4	50.6	1		3.4	91	5.5		0.9	96.3	2.8		52	5.7	42.3		
PHF	.951	.746	.438	.838	.625	.971	.667	.980	.750	.949	.625	.944	.975	.600	.848	.926	.932



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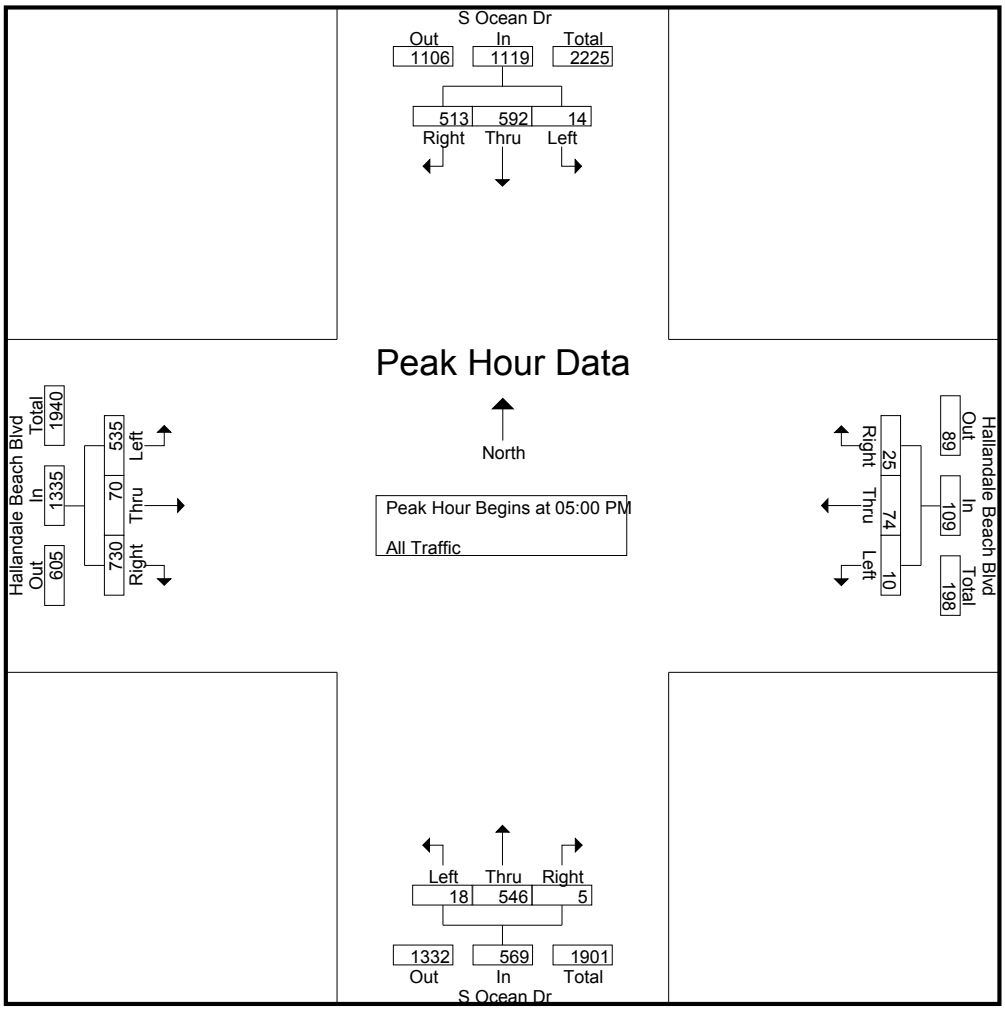
Turning Movement - All Traffic
Hallandale Beach Blvd & S Ocean Dr
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-OCE
Site Code : CGA11505
Start Date : 7/14/2011
Page No : 3

	S Ocean Dr SB				Hallandale Beach Blvd WB				S Ocean Dr NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	100	128	1	229	11	17	4	32	1	136	5	142	179	16	124	319	722
05:15 PM	136	150	4	290	4	19	3	26	2	147	1	150	206	15	126	347	813
05:30 PM	142	181	4	327	4	17	1	22	1	148	7	156	157	20	142	319	824
05:45 PM	135	133	5	273	6	21	2	29	1	115	5	121	188	19	143	350	773
Total Volume	513	592	14	1119	25	74	10	109	5	546	18	569	730	70	535	1335	3132
% App. Total	45.8	52.9	1.3		22.9	67.9	9.2		0.9	96	3.2		54.7	5.2	40.1		
PHF	.903	.818	.700	.856	.568	.881	.625	.852	.625	.922	.643	.912	.886	.875	.935	.954	.950



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Turning Movement - All Traffic
Hallandale Beach Blvd & Layne Blvd
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-LAY
Site Code : CGA11505
Start Date : 7/14/2011
Page No : 1

Groups Printed- All Traffic

	Layne Blvd SB			Hallandale Beach Bvd WB			Layne Blvd NB			Hallandale Beach Bvd EB			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	1	0	2	2	209	0	6	1	7	5	136	2	371
07:15 AM	4	0	0	1	231	2	5	0	4	8	181	4	440
07:30 AM	8	1	5	4	225	2	3	0	12	10	201	9	480
07:45 AM	8	0	3	2	239	7	5	2	19	11	213	2	511
Total	21	1	10	9	904	11	19	3	42	34	731	17	1802
08:00 AM	12	1	3	4	300	5	5	2	14	19	177	6	548
08:15 AM	9	0	2	3	284	3	14	3	22	12	175	5	532
08:30 AM	12	1	6	5	323	6	11	1	18	10	253	15	661
08:45 AM	9	2	6	7	292	9	11	6	27	16	264	15	664
Total	42	4	17	19	1199	23	41	12	81	57	869	41	2405
*** BREAK ***													
04:00 PM	10	2	14	5	297	11	6	2	35	10	254	20	666
04:15 PM	15	3	19	3	264	6	10	2	29	5	359	22	737
04:30 PM	12	0	16	6	331	11	13	6	25	3	344	23	790
04:45 PM	18	1	13	5	292	1	12	4	25	3	262	14	650
Total	55	6	62	19	1184	29	41	14	114	21	1219	79	2843
05:00 PM	23	4	21	5	321	6	13	2	36	8	307	14	760
05:15 PM	8	2	14	7	292	5	13	5	30	14	293	30	713
05:30 PM	15	4	18	7	305	5	8	2	21	8	345	19	757
05:45 PM	13	0	14	7	270	4	14	3	21	10	376	19	751
Total	59	10	67	26	1188	20	48	12	108	40	1321	82	2981
Grand Total	177	21	156	73	4475	83	149	41	345	152	4140	219	10031
Apprch %	50	5.9	44.1	1.6	96.6	1.8	27.9	7.7	64.5	3.4	91.8	4.9	
Total %	1.8	0.2	1.6	0.7	44.6	0.8	1.5	0.4	3.4	1.5	41.3	2.2	

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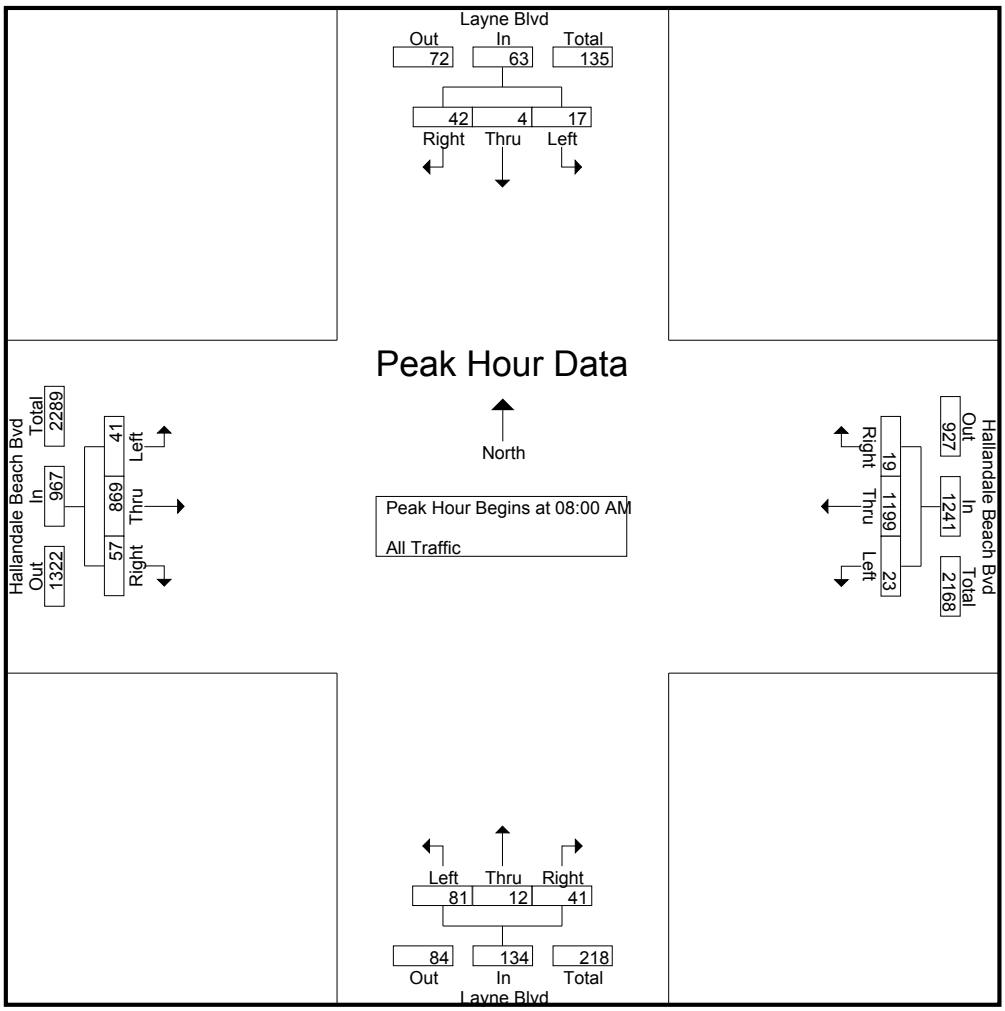
Turning Movement - All Traffic
Hallandale Beach Blvd & Layne Blvd
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-LAY
Site Code : CGA11505
Start Date : 7/14/2011
Page No : 2

	Layne Blvd SB				Hallandale Beach Bvd WB				Layne Blvd NB				Hallandale Beach Bvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	12	1	3	16	4	300	5	309	5	2	14	21	19	177	6	202	548
08:15 AM	9	0	2	11	3	284	3	290	14	3	22	39	12	175	5	192	532
08:30 AM	12	1	6	19	5	323	6	334	11	1	18	30	10	253	15	278	661
08:45 AM	9	2	6	17	7	292	9	308	11	6	27	44	16	264	15	295	664
Total Volume	42	4	17	63	19	1199	23	1241	41	12	81	134	57	869	41	967	2405
% App. Total	66.7	6.3	27		1.5	96.6	1.9		30.6	9	60.4		5.9	89.9	4.2		
PHF	.875	.500	.708	.829	.679	.928	.639	.929	.732	.500	.750	.761	.750	.823	.683	.819	.905



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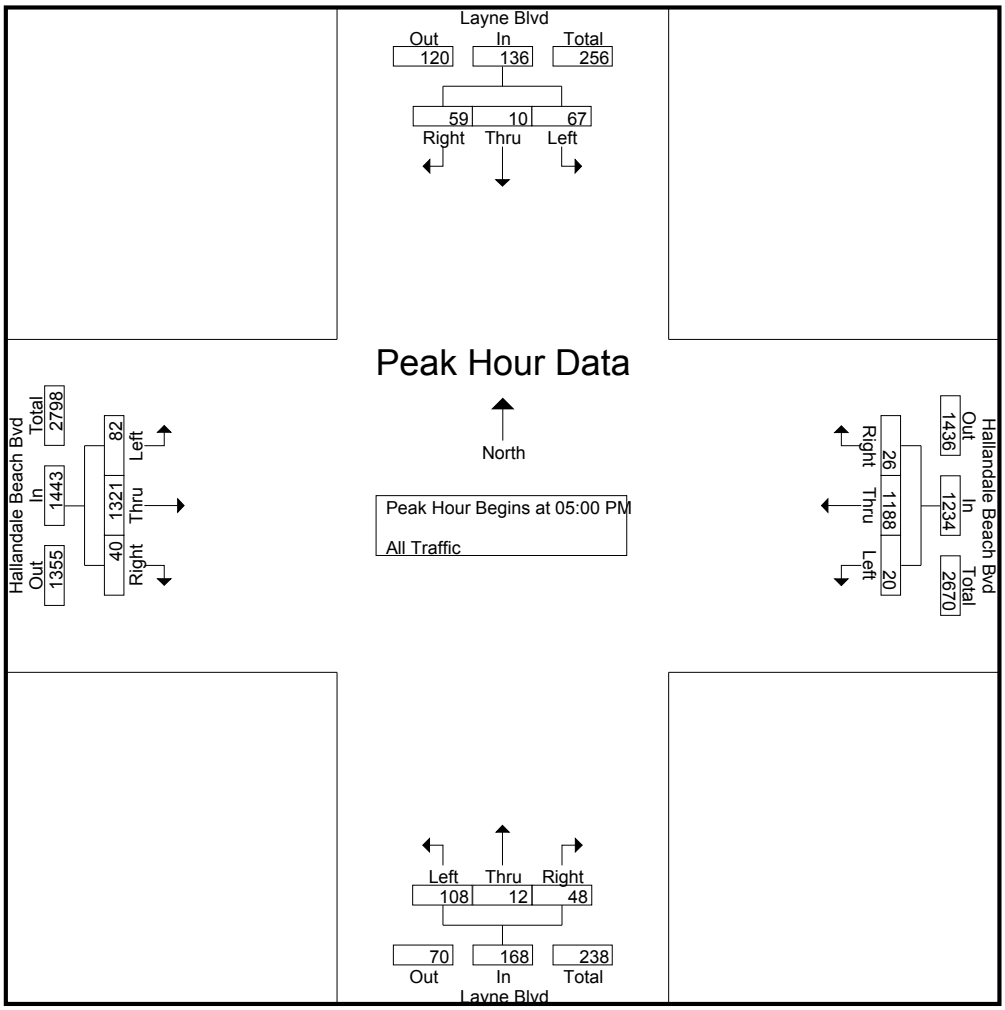
Turning Movement - All Traffic
Hallandale Beach Blvd & Layne Blvd
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-LAY
Site Code : CGA11505
Start Date : 7/14/2011
Page No : 3

	Layne Blvd SB				Hallandale Beach Bvd WB				Layne Blvd NB				Hallandale Beach Bvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	23	4	21	48	5	321	6	332	13	2	36	51	8	307	14	329	760
05:15 PM	8	2	14	24	7	292	5	304	13	5	30	48	14	293	30	337	713
05:30 PM	15	4	18	37	7	305	5	317	8	2	21	31	8	345	19	372	757
05:45 PM	13	0	14	27	7	270	4	281	14	3	21	38	10	376	19	405	751
Total Volume	59	10	67	136	26	1188	20	1234	48	12	108	168	40	1321	82	1443	2981
% App. Total	43.4	7.4	49.3		2.1	96.3	1.6		28.6	7.1	64.3		2.8	91.5	5.7		
PHF	.641	.625	.798	.708	.929	.925	.833	.929	.857	.600	.750	.824	.714	.878	.683	.891	.981



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Manual Turning Movement - All Traffic
Hallandale Beach Blvd & Golden Isles Dr
Hallandale Beach, FL
Locatin counted: July 13, 2011

File Name : HAL-GOLD
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 1

Groups Printed- All Traffic

	Golden Isles Dr SB			Hallandale Beach Blvd WB			Golden Isles Dr NB			Hallandale Beach Blvd EB			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	4	0	0	5	212	1	4	2	13	1	113	0	355
07:15 AM	1	0	3	6	180	0	4	0	19	10	162	0	385
07:30 AM	6	0	2	2	239	4	6	4	20	4	204	0	491
07:45 AM	3	0	2	4	228	5	9	2	16	7	183	0	459
Total	14	0	7	17	859	10	23	8	68	22	662	0	1690
08:00 AM	0	1	4	2	266	5	13	2	26	10	189	0	518
08:15 AM	2	0	1	4	278	6	4	6	23	7	224	0	555
08:30 AM	0	2	1	6	245	9	7	2	27	10	190	0	499
08:45 AM	0	1	5	2	283	16	13	4	19	16	286	3	648
Total	2	4	11	14	1072	36	37	14	95	43	889	3	2220
*** BREAK ***													
04:00 PM	0	2	14	11	361	12	11	3	39	21	336	0	810
04:15 PM	2	4	9	7	350	16	9	7	31	21	317	1	774
04:30 PM	4	5	11	2	276	12	12	5	45	8	262	0	642
04:45 PM	3	2	9	11	293	22	14	3	36	23	326	0	742
Total	9	13	43	31	1280	62	46	18	151	73	1241	1	2968
05:00 PM	2	3	9	7	277	9	14	6	44	3	305	1	680
05:15 PM	1	1	12	12	366	13	8	3	21	22	341	0	800
05:30 PM	3	4	5	11	318	7	15	1	26	13	375	1	779
05:45 PM	1	3	18	12	259	11	8	5	17	31	358	0	723
Total	7	11	44	42	1220	40	45	15	108	69	1379	2	2982
Grand Total	32	28	105	104	4431	148	151	55	422	207	4171	6	9860
Apprch %	19.4	17	63.6	2.2	94.6	3.2	24	8.8	67.2	4.7	95.1	0.1	
Total %	0.3	0.3	1.1	1.1	44.9	1.5	1.5	0.6	4.3	2.1	42.3	0.1	

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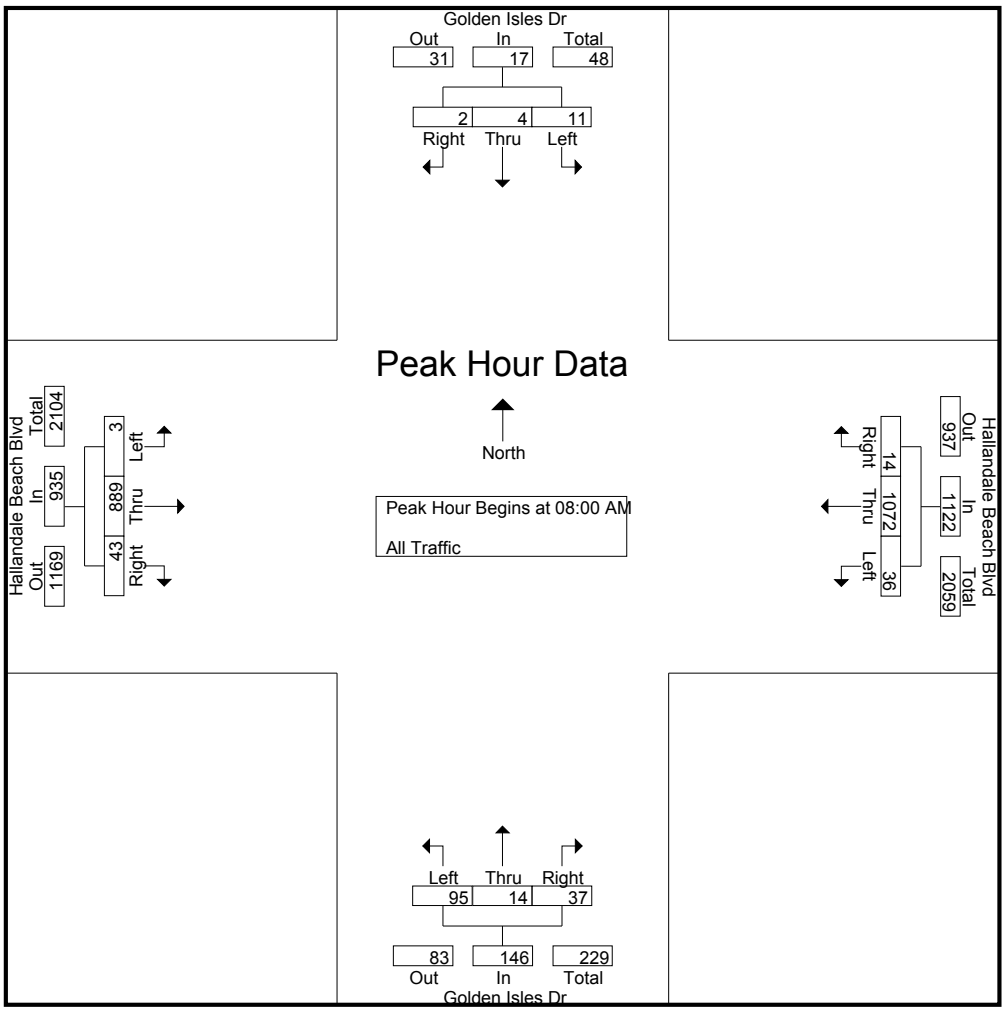
Manual Turning Movement - All Traffic
Hallandale Beach Blvd & Golden Isles Dr
Hallandale Beach, FL
Locatin counted: July 13, 2011

File Name : HAL-GOLD
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 2

	Golden Isles Dr SB				Hallandale Beach Blvd WB				Golden Isles Dr NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	1	4	5	2	266	5	273	13	2	26	41	10	189	0	199	518
08:15 AM	2	0	1	3	4	278	6	288	4	6	23	33	7	224	0	231	555
08:30 AM	0	2	1	3	6	245	9	260	7	2	27	36	10	190	0	200	499
08:45 AM	0	1	5	6	2	283	16	301	13	4	19	36	16	286	3	305	648
Total Volume	2	4	11	17	14	1072	36	1122	37	14	95	146	43	889	3	935	2220
% App. Total	11.8	23.5	64.7		1.2	95.5	3.2		25.3	9.6	65.1		4.6	95.1	0.3		
PHF	.250	.500	.550	.708	.583	.947	.563	.932	.712	.583	.880	.890	.672	.777	.250	.766	.856



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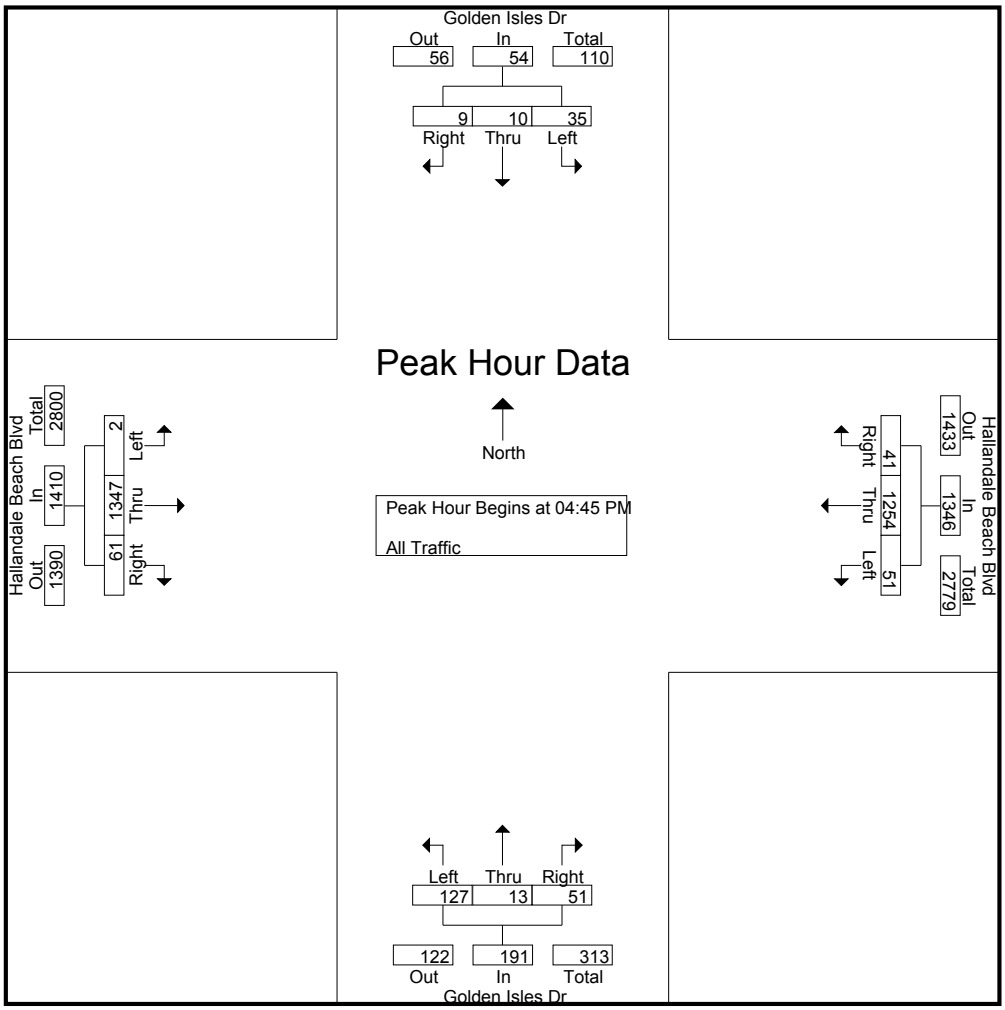
Manual Turning Movement - All Traffic
Hallandale Beach Blvd & Golden Isles Dr
Hallandale Beach, FL
Locatin counted: July 13, 2011

File Name : HAL-GOLD
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 3

	Golden Isles Dr SB				Hallandale Beach Blvd WB				Golden Isles Dr NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	3	2	9	14	11	293	22	326	14	3	36	53	23	326	0	349	742
05:00 PM	2	3	9	14	7	277	9	293	14	6	44	64	3	305	1	309	680
05:15 PM	1	1	12	14	12	366	13	391	8	3	21	32	22	341	0	363	800
05:30 PM	3	4	5	12	11	318	7	336	15	1	26	42	13	375	1	389	779
Total Volume	9	10	35	54	41	1254	51	1346	51	13	127	191	61	1347	2	1410	3001
% App. Total	16.7	18.5	64.8		3	93.2	3.8		26.7	6.8	66.5		4.3	95.5	0.1		
PHF	.750	.625	.729	.964	.854	.857	.580	.861	.850	.542	.722	.746	.663	.898	.500	.906	.938



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Turning Movement - All Traffic
Hallandale Beach Blvd & Diplomat Pkwy
Hallandale Beach, FL
Location counted: July 13, 2011

File Name : HAL-DIP
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 1

Groups Printed- All Traffic

	Diplomat Pkwy SB			Hallandale Beach Blvd WB			Drivewy NB			Hallandale Beach Blvd EB			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	6	2	1	8	190	0	1	0	1	0	115	4	328
07:15 AM	6	0	4	1	172	0	0	0	0	0	144	4	331
07:30 AM	9	2	8	6	235	2	0	1	4	1	198	12	478
07:45 AM	8	0	6	6	239	3	1	0	0	3	199	9	474
Total	29	4	19	21	836	5	2	1	5	4	656	29	1611
08:00 AM	22	4	4	5	264	1	1	0	0	4	171	2	478
08:15 AM	10	2	9	13	259	1	0	1	1	2	199	9	506
08:30 AM	9	6	9	4	289	3	1	0	4	3	177	14	519
08:45 AM	11	7	12	11	264	7	2	0	2	4	259	16	595
Total	52	19	34	33	1076	12	4	1	7	13	806	41	2098
*** BREAK ***													
04:00 PM	11	0	11	9	318	7	5	1	7	1	299	21	690
04:15 PM	18	1	7	5	283	0	3	2	11	0	318	19	667
04:30 PM	9	0	16	13	275	0	2	4	7	1	282	34	643
04:45 PM	22	0	10	5	256	1	3	2	1	0	310	15	625
Total	60	1	44	32	1132	8	13	9	26	2	1209	89	2625
05:00 PM	8	0	8	14	273	0	2	5	2	0	364	17	693
05:15 PM	12	1	22	9	326	1	4	1	1	0	356	34	767
05:30 PM	9	0	11	5	313	1	2	3	2	0	388	22	756
05:45 PM	14	0	10	7	267	1	2	0	2	0	336	15	654
Total	43	1	51	35	1179	3	10	9	7	0	1444	88	2870
Grand Total	184	25	148	121	4223	28	29	20	45	19	4115	247	9204
Apprch %	51.5	7	41.5	2.8	96.6	0.6	30.9	21.3	47.9	0.4	93.9	5.6	
Total %	2	0.3	1.6	1.3	45.9	0.3	0.3	0.2	0.5	0.2	44.7	2.7	

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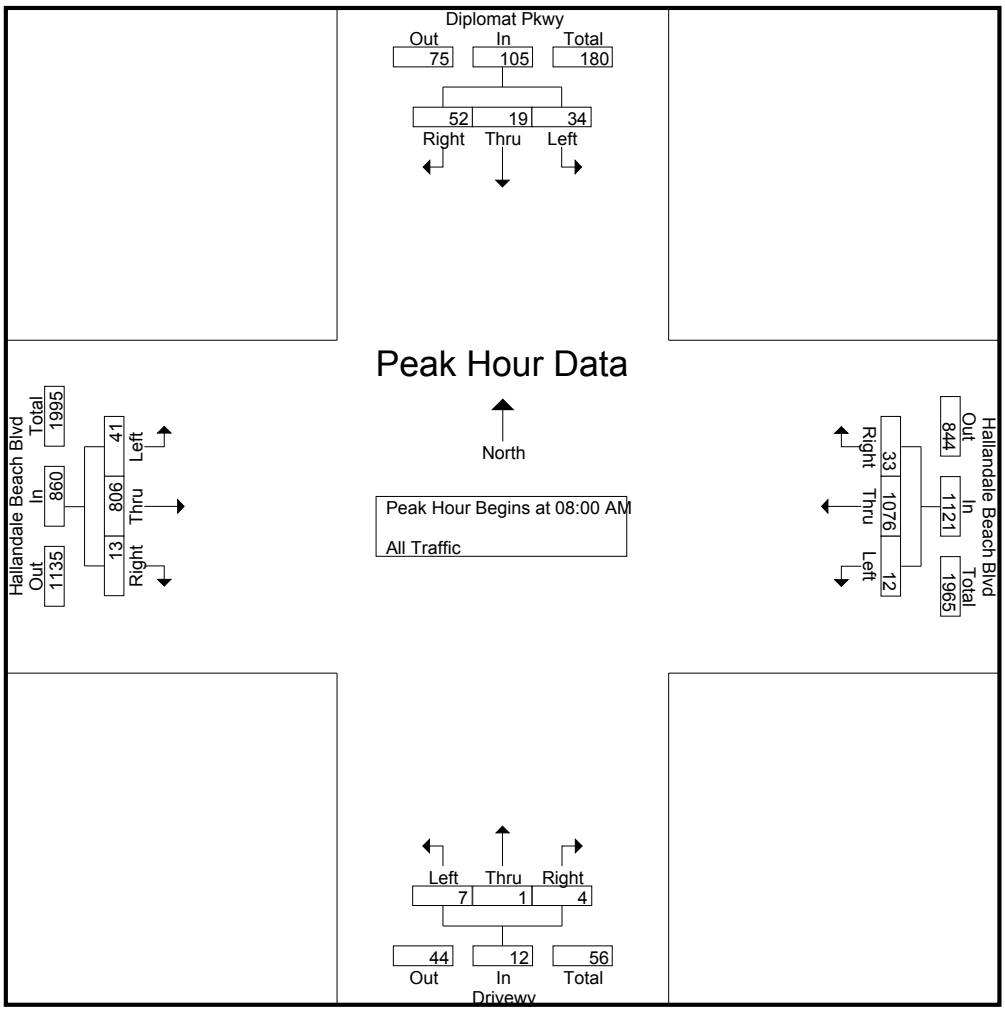
Turning Movement - All Traffic
Hallandale Beach Blvd & Diplomat Pkwy
Hallandale Beach, FL
Location counted: July 13, 2011

File Name : HAL-DIP
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 2

	Diplomat Pkwy SB				Hallandale Beach Blvd WB				Drivewy NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	22	4	4	30	5	264	1	270	1	0	0	1	4	171	2	177	478
08:15 AM	10	2	9	21	13	259	1	273	0	1	1	2	2	199	9	210	506
08:30 AM	9	6	9	24	4	289	3	296	1	0	4	5	3	177	14	194	519
08:45 AM	11	7	12	30	11	264	7	282	2	0	2	4	4	259	16	279	595
Total Volume	52	19	34	105	33	1076	12	1121	4	1	7	12	13	806	41	860	2098
% App. Total	49.5	18.1	32.4		2.9	96	1.1		33.3	8.3	58.3		1.5	93.7	4.8		
PHF	.591	.679	.708	.875	.635	.931	.429	.947	.500	.250	.438	.600	.813	.778	.641	.771	.882



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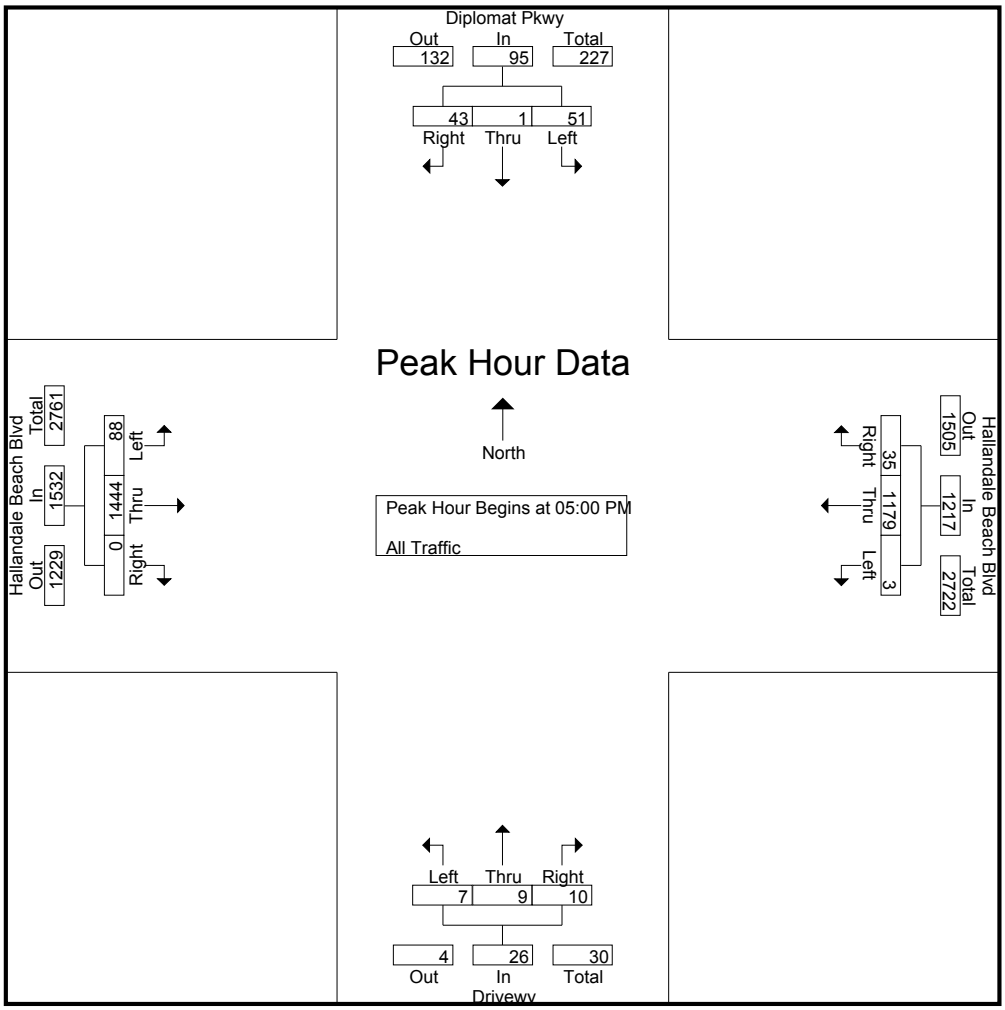
Turning Movement - All Traffic
Hallandale Beach Blvd & Diplomat Pkwy
Hallandale Beach, FL
Location counted: July 13, 2011

File Name : HAL-DIP
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 3

	Diplomat Pkwy SB				Hallandale Beach Blvd WB				Drivewy NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	8	0	8	16	14	273	0	287	2	5	2	9	0	364	17	381	693
05:15 PM	12	1	22	35	9	326	1	336	4	1	1	6	0	356	34	390	767
05:30 PM	9	0	11	20	5	313	1	319	2	3	2	7	0	388	22	410	756
05:45 PM	14	0	10	24	7	267	1	275	2	0	2	4	0	336	15	351	654
Total Volume	43	1	51	95	35	1179	3	1217	10	9	7	26	0	1444	88	1532	2870
% App. Total	45.3	1.1	53.7		2.9	96.9	0.2		38.5	34.6	26.9		0	94.3	5.7		
PHF	.768	.250	.580	.679	.625	.904	.750	.906	.625	.450	.875	.722	.000	.930	.647	.934	.935



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Turning Movement - All Traffic
Hallandale Beach Blvd & SE 26 Ave
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-26
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 1

Groups Printed- All Traffic

	Hallandale Beach Blvd WB		SE 26 Ave NB	Hallandale Beach Blvd EB		
Start Time	Thru	Left	Right	Right	Thru	Int. Total
07:00 AM	163	5	6	2	97	273
07:15 AM	132	5	8	1	144	290
07:30 AM	179	7	10	1	185	382
07:45 AM	190	6	10	0	175	381
Total	664	23	34	4	601	1326
08:00 AM	215	8	13	0	188	424
08:15 AM	198	9	13	1	179	400
08:30 AM	233	9	12	1	182	437
08:45 AM	247	13	10	1	243	514
Total	893	39	48	3	792	1775
*** BREAK ***						
04:00 PM	313	13	3	1	277	607
04:15 PM	283	12	8	1	256	560
04:30 PM	325	10	6	0	270	611
04:45 PM	225	14	7	4	285	535
Total	1146	49	24	6	1088	2313
05:00 PM	288	13	11	2	301	615
05:15 PM	333	14	13	0	317	677
05:30 PM	298	21	6	3	358	686
05:45 PM	251	14	13	1	320	599
Total	1170	62	43	6	1296	2577
Grand Total	3873	173	149	19	3777	7991
Apprch %	95.7	4.3	100	0.5	99.5	
Total %	48.5	2.2	1.9	0.2	47.3	

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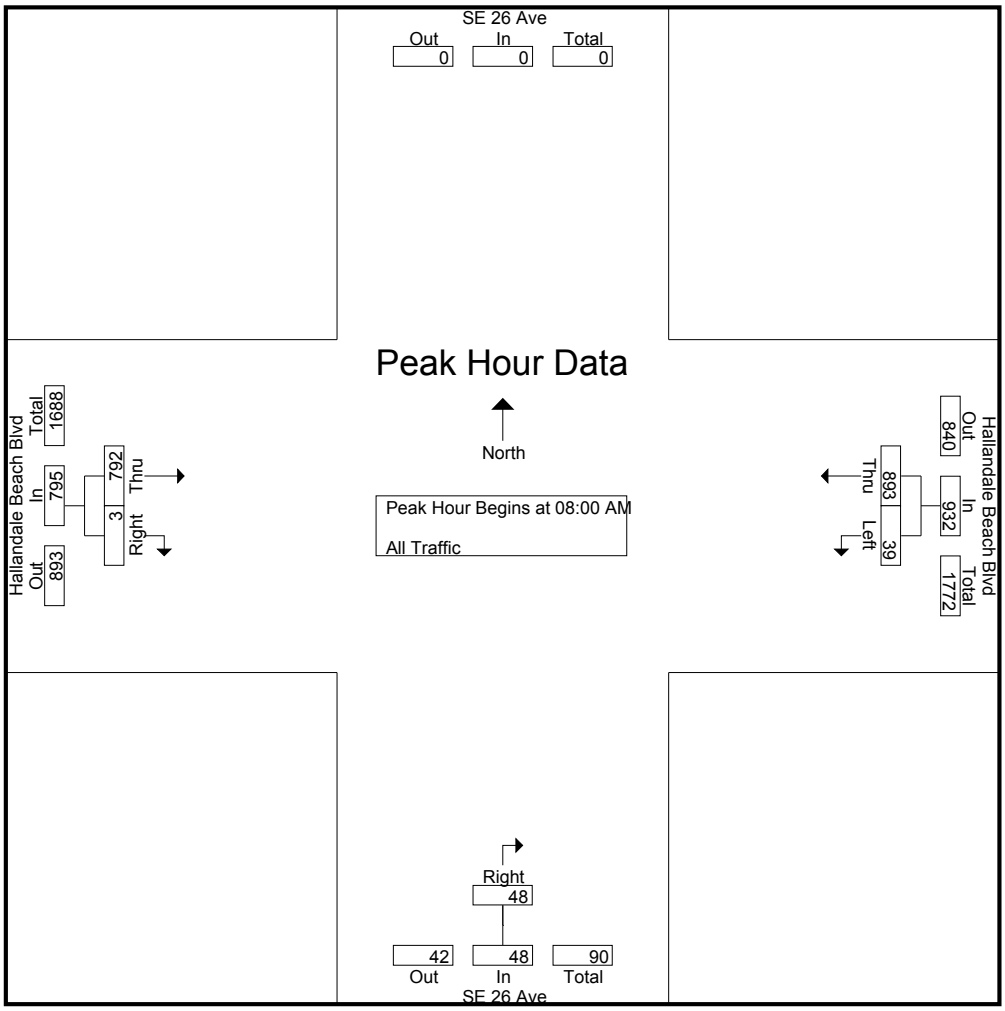
Turning Movement - All Traffic
Hallandale Beach Blvd & SE 26 Ave
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-26
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 2

	Hallandale Beach Blvd WB			SE 26 Ave NB		Hallandale Beach Blvd EB			
Start Time	Thru	Left	App. Total	Right	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 08:00 AM									
08:00 AM	215	8	223	13	13	0	188	188	424
08:15 AM	198	9	207	13	13	1	179	180	400
08:30 AM	233	9	242	12	12	1	182	183	437
08:45 AM	247	13	260	10	10	1	243	244	514
Total Volume	893	39	932	48	48	3	792	795	1775
% App. Total	95.8	4.2		100		0.4	99.6		
PHF	.904	.750	.896	.923	.923	.750	.815	.815	.863



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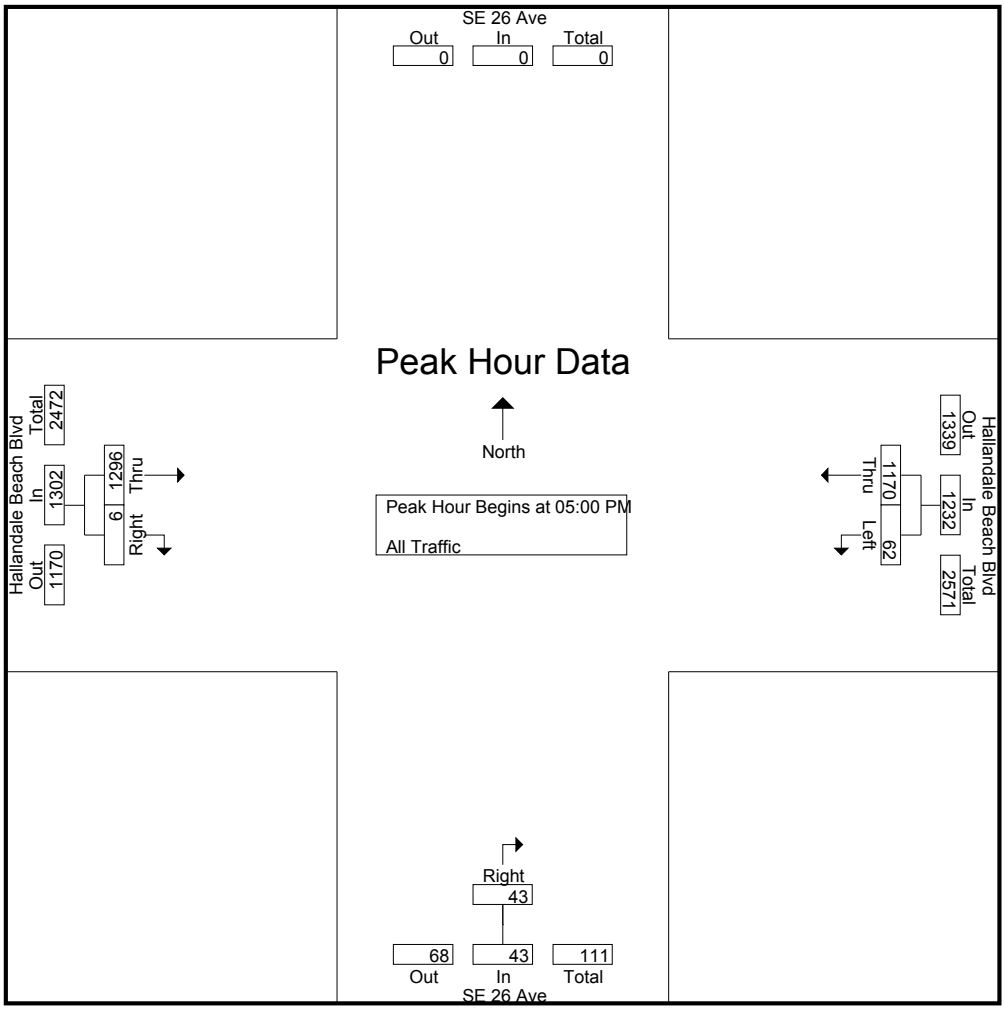
Turning Movement - All Traffic
Hallandale Beach Blvd & SE 26 Ave
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-26
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 3

	Hallandale Beach Blvd WB			SE 26 Ave NB		Hallandale Beach Blvd EB			
Start Time	Thru	Left	App. Total	Right	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 05:00 PM									
05:00 PM	288	13	301	11	11	2	301	303	615
05:15 PM	333	14	347	13	13	0	317	317	677
05:30 PM	298	21	319	6	6	3	358	361	686
05:45 PM	251	14	265	13	13	1	320	321	599
Total Volume	1170	62	1232	43	43	6	1296	1302	2577
% App. Total	95	5		100		0.5	99.5		
PHF	.878	.738	.888	.827	.827	.500	.905	.902	.939



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Turning Movement - All Traffic
Hallandale Beach Blvd & NE 14 Ave
Hallandale Beach, FL
Location counted: July 14,2011

File Name : HAL-14
Site Code : CGA11505
Start Date : 7/14/2011
Page No : 1

Groups Printed- All Traffic

	NE 14 Ave SB			Hallandale Beach Blvd WB			NE 14 Ave NB			Hallandale Beach Blvd EB			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	17	4	4	3	191	1	2	2	30	22	126	3	405
07:15 AM	25	6	4	1	185	3	3	5	25	21	156	7	441
07:30 AM	22	12	13	6	235	1	0	19	37	24	179	13	561
07:45 AM	20	8	17	3	255	2	4	3	32	37	240	10	631
Total	84	30	38	13	866	7	9	29	124	104	701	33	2038
08:00 AM	28	16	26	4	265	0	3	8	38	54	213	12	667
08:15 AM	36	19	20	11	290	3	5	11	61	49	282	15	802
08:30 AM	38	17	27	7	269	2	7	17	39	31	206	22	682
08:45 AM	39	17	23	7	331	8	4	24	65	52	338	22	930
Total	141	69	96	29	1155	13	19	60	203	186	1039	71	3081
*** BREAK ***													
04:00 PM	41	27	17	17	349	15	22	38	69	64	345	38	1042
04:15 PM	25	21	21	10	290	10	16	29	67	71	382	48	990
04:30 PM	35	12	28	13	401	12	16	20	54	72	304	44	1011
04:45 PM	24	21	24	14	364	16	22	29	68	79	299	35	995
Total	125	81	90	54	1404	53	76	116	258	286	1330	165	4038
05:00 PM	30	24	16	15	441	11	9	22	63	82	354	65	1132
05:15 PM	24	21	16	16	334	13	31	33	54	59	319	78	998
05:30 PM	31	33	24	19	396	8	26	28	60	87	382	52	1146
05:45 PM	23	21	13	14	310	16	21	33	51	67	339	53	961
Total	108	99	69	64	1481	48	87	116	228	295	1394	248	4237
Grand Total	458	279	293	160	4906	121	191	321	813	871	4464	517	13394
Apprch %	44.5	27.1	28.4	3.1	94.6	2.3	14.4	24.2	61.4	14.9	76.3	8.8	
Total %	3.4	2.1	2.2	1.2	36.6	0.9	1.4	2.4	6.1	6.5	33.3	3.9	

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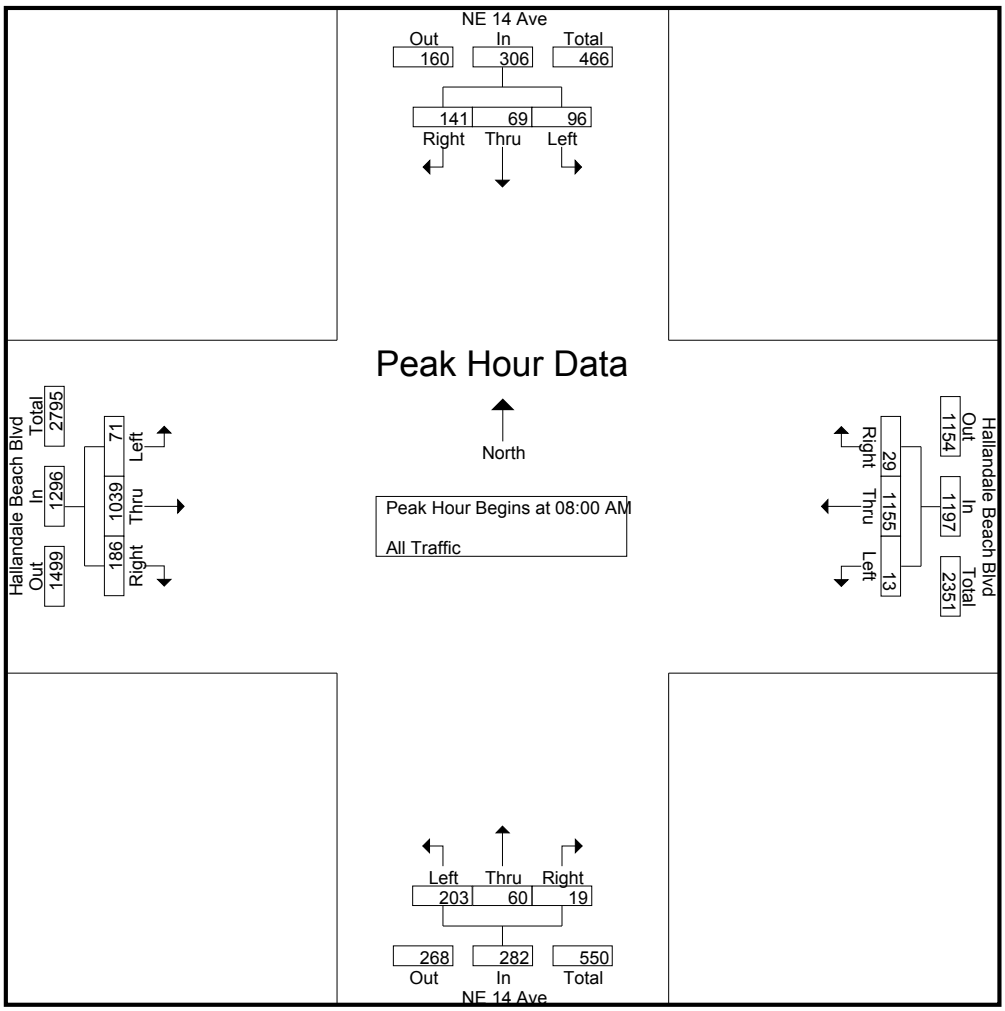
Turning Movement - All Traffic
Hallandale Beach Blvd & NE 14 Ave
Hallandale Beach, FL
Location counted: July 14,2011

File Name : HAL-14
Site Code : CGA11505
Start Date : 7/14/2011
Page No : 2

	NE 14 Ave SB				Hallandale Beach Blvd WB				NE 14 Ave NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	28	16	26	70	4	265	0	269	3	8	38	49	54	213	12	279	667
08:15 AM	36	19	20	75	11	290	3	304	5	11	61	77	49	282	15	346	802
08:30 AM	38	17	27	82	7	269	2	278	7	17	39	63	31	206	22	259	682
08:45 AM	39	17	23	79	7	331	8	346	4	24	65	93	52	338	22	412	930
Total Volume	141	69	96	306	29	1155	13	1197	19	60	203	282	186	1039	71	1296	3081
% App. Total	46.1	22.5	31.4		2.4	96.5	1.1		6.7	21.3	72		14.4	80.2	5.5		
PHF	.904	.908	.889	.933	.659	.872	.406	.865	.679	.625	.781	.758	.861	.768	.807	.786	.828



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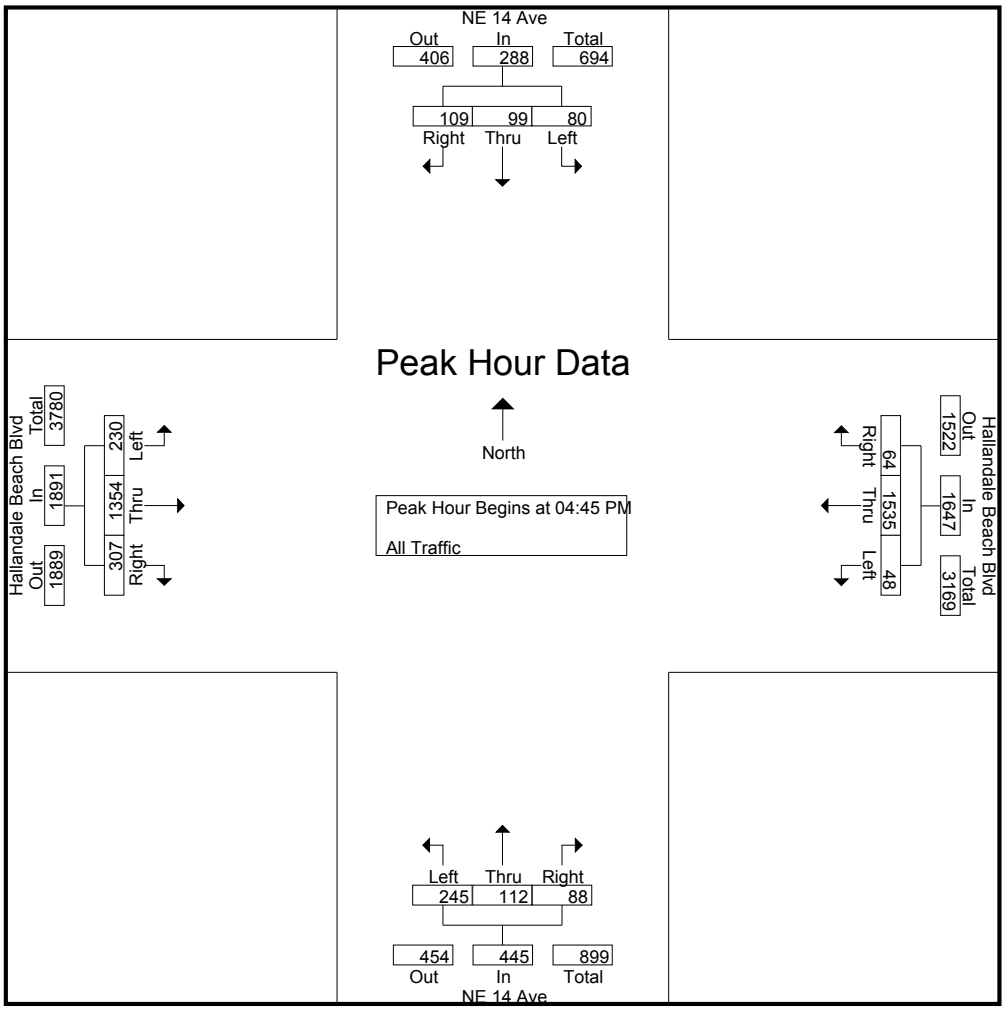
Turning Movement - All Traffic
Hallandale Beach Blvd & NE 14 Ave
Hallandale Beach, FL
Location counted: July 14,2011

File Name : HAL-14
Site Code : CGA11505
Start Date : 7/14/2011
Page No : 3

	NE 14 Ave SB				Hallandale Beach Blvd WB				NE 14 Ave NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	24	21	24	69	14	364	16	394	22	29	68	119	79	299	35	413	995
05:00 PM	30	24	16	70	15	441	11	467	9	22	63	94	82	354	65	501	1132
05:15 PM	24	21	16	61	16	334	13	363	31	33	54	118	59	319	78	456	998
05:30 PM	31	33	24	88	19	396	8	423	26	28	60	114	87	382	52	521	1146
Total Volume	109	99	80	288	64	1535	48	1647	88	112	245	445	307	1354	230	1891	4271
% App. Total	37.8	34.4	27.8		3.9	93.2	2.9		19.8	25.2	55.1		16.2	71.6	12.2		
PHF	.879	.750	.833	.818	.842	.870	.750	.882	.710	.848	.901	.935	.882	.886	.737	.907	.932



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Turning Movement - All Traffic
Hallandale Beach Blvd & NE10th Ave
Hallandale Beach, FL
Location counted: July 19, 2011

File Name : HAL-10
Site Code : CGA11505
Start Date : 7/19/2011
Page No : 1

Groups Printed- All Traffic

	Hallandale Beach Blvd From East			NE 10th Ave From South			Hallandale Beach Blvd From West			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	3	259	1	1	0	1	1	171	8	445
07:15 AM	2	279	1	3	0	1	1	229	7	523
07:30 AM	7	318	3	8	0	0	1	253	5	595
07:45 AM	3	283	3	2	0	0	2	283	9	585
Total	15	1139	8	14	0	2	5	936	29	2148
08:00 AM	4	367	2	8	0	0	2	277	8	668
08:15 AM	7	274	70	12	1	0	31	222	18	635
08:30 AM	11	389	16	16	1	0	3	367	23	826
08:45 AM	5	376	25	14	0	0	4	356	48	828
Total	27	1406	113	50	2	0	40	1222	97	2957
*** BREAK ***										
04:00 PM	6	300	5	0	0	0	7	321	13	652
04:15 PM	5	332	5	0	0	0	9	345	21	717
04:30 PM	9	324	20	1	0	0	20	334	31	739
04:45 PM	10	394	22	2	0	0	13	357	32	830
Total	30	1350	52	3	0	0	49	1357	97	2938
05:00 PM	7	436	13	2	0	0	9	444	21	932
05:15 PM	7	420	9	2	0	0	17	359	26	840
05:30 PM	8	395	12	1	0	0	20	343	26	805
05:45 PM	4	401	11	2	0	0	16	395	16	845
Total	26	1652	45	7	0	0	62	1541	89	3422
Grand Total	98	5547	218	74	2	2	156	5056	312	11465
Apprch %	1.7	94.6	3.7	94.9	2.6	2.6	2.8	91.5	5.6	
Total %	0.9	48.4	1.9	0.6	0	0	1.4	44.1	2.7	

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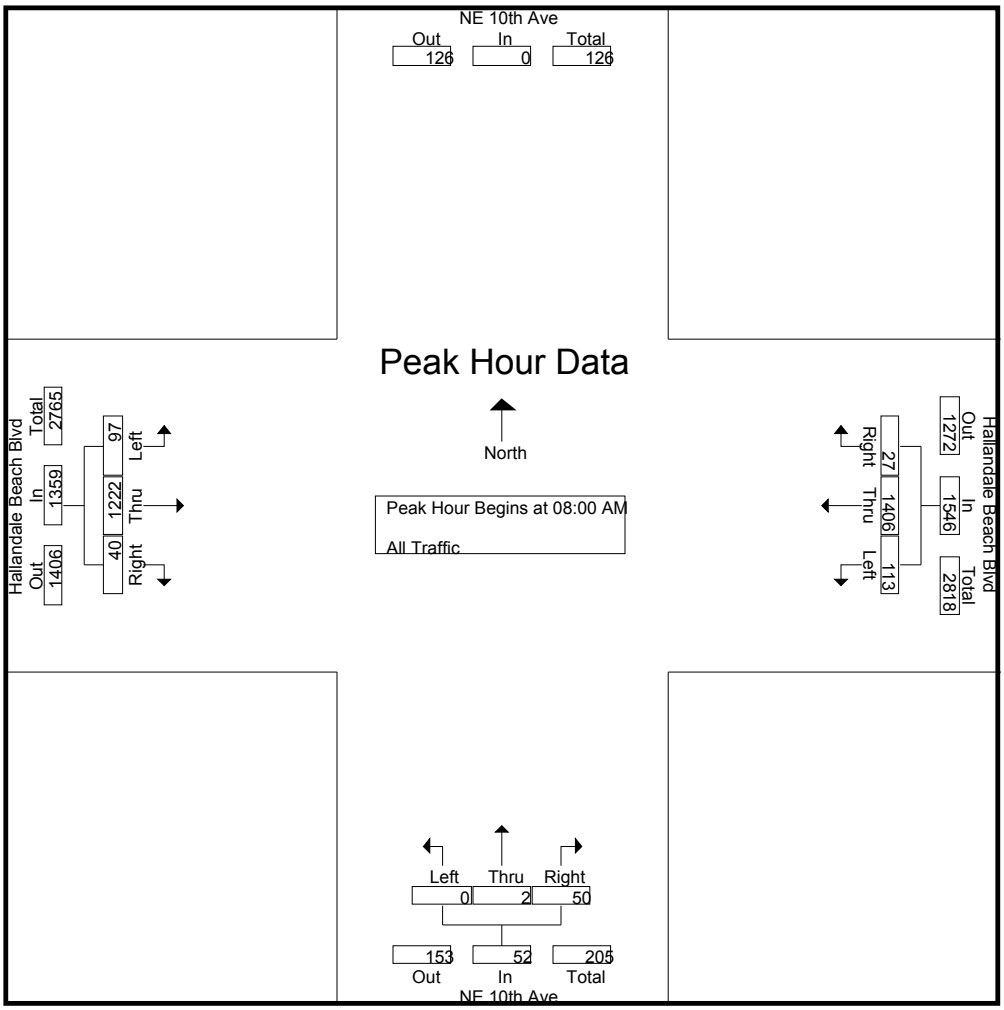
Turning Movement - All Traffic
Hallandale Beach Blvd & NE10th Ave
Hallandale Beach, FL
Location counted: July 19, 2011

File Name : HAL-10
Site Code : CGA11505
Start Date : 7/19/2011
Page No : 2

	Hallandale Beach Blvd From East				NE 10th Ave From South				Hallandale Beach Blvd From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 08:00 AM													
08:00 AM	4	367	2	373	8	0	0	8	2	277	8	287	668
08:15 AM	7	274	70	351	12	1	0	13	31	222	18	271	635
08:30 AM	11	389	16	416	16	1	0	17	3	367	23	393	826
08:45 AM	5	376	25	406	14	0	0	14	4	356	48	408	828
Total Volume	27	1406	113	1546	50	2	0	52	40	1222	97	1359	2957
% App. Total	1.7	90.9	7.3		96.2	3.8	0		2.9	89.9	7.1		
PHF	.614	.904	.404	.929	.781	.500	.000	.765	.323	.832	.505	.833	.893



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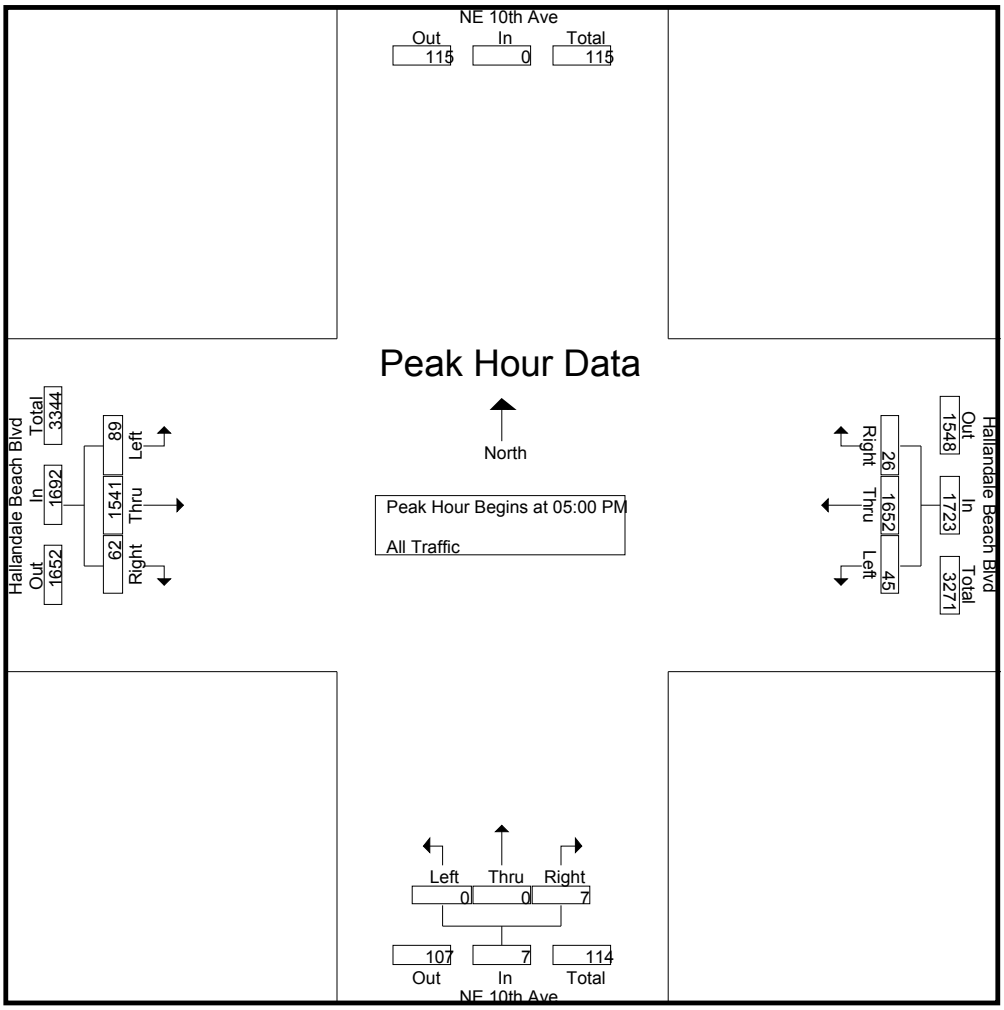
Turning Movement - All Traffic
Hallandale Beach Blvd & NE10th Ave
Hallandale Beach, FL
Location counted: July 19, 2011

File Name : HAL-10
Site Code : CGA11505
Start Date : 7/19/2011
Page No : 3

	Hallandale Beach Blvd From East				NE 10th Ave From South				Hallandale Beach Blvd From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 05:00 PM													
05:00 PM	7	436	13	456	2	0	0	2	9	444	21	474	932
05:15 PM	7	420	9	436	2	0	0	2	17	359	26	402	840
05:30 PM	8	395	12	415	1	0	0	1	20	343	26	389	805
05:45 PM	4	401	11	416	2	0	0	2	16	395	16	427	845
Total Volume	26	1652	45	1723	7	0	0	7	62	1541	89	1692	3422
% App. Total	1.5	95.9	2.6		100	0	0		3.7	91.1	5.3		
PHF	.813	.947	.865	.945	.875	.000	.000	.875	.775	.868	.856	.892	.918



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Turning Movement - All Traffic
Hallandale Beach Blvd & NE 8th Ave
Hallandale Beach, FL
Location counted: July 19, 2011

File Name : HAL-8
Site Code : CGA11505
Start Date : 7/19/2011
Page No : 1

Groups Printed- All Traffic

	NE 8th Ave SB			Hallandale Beach Blvd WB		NE 8th Ave NB		Hallandale Beach Blvd EB		
Start Time	Right	Thru	Left	Thru	Left	Right	Left	Right	Thru	Int. Total
07:00 AM	11	0	5	233	3	2	0	0	157	411
07:15 AM	22	0	5	293	0	1	1	1	201	524
07:30 AM	27	0	6	292	0	2	0	0	269	596
07:45 AM	30	0	9	324	0	0	0	1	282	646
Total	90	0	25	1142	3	5	1	2	909	2177
08:00 AM	34	0	20	313	0	3	0	0	395	765
08:15 AM	38	0	16	401	1	2	0	0	261	719
08:30 AM	42	1	23	365	1	2	0	5	402	841
08:45 AM	40	0	20	400	0	3	1	2	391	857
Total	154	1	79	1479	2	10	1	7	1449	3182
*** BREAK ***										
04:00 PM	34	0	22	425	1	9	2	5	387	885
04:15 PM	33	0	15	364	1	5	0	0	386	804
04:30 PM	27	0	21	400	1	8	2	4	435	898
04:45 PM	18	0	21	417	0	7	0	0	364	827
Total	112	0	79	1606	3	29	4	9	1572	3414
05:00 PM	34	1	28	453	0	8	3	5	394	926
05:15 PM	36	1	10	426	1	5	0	1	391	871
05:30 PM	35	1	22	381	0	7	0	2	427	875
05:45 PM	28	1	25	309	1	12	3	2	451	832
Total	133	4	85	1569	2	32	6	10	1663	3504
Grand Total	489	5	268	5796	10	76	12	28	5593	12277
Apprch %	64.2	0.7	35.2	99.8	0.2	86.4	13.6	0.5	99.5	
Total %	4	0	2.2	47.2	0.1	0.6	0.1	0.2	45.6	

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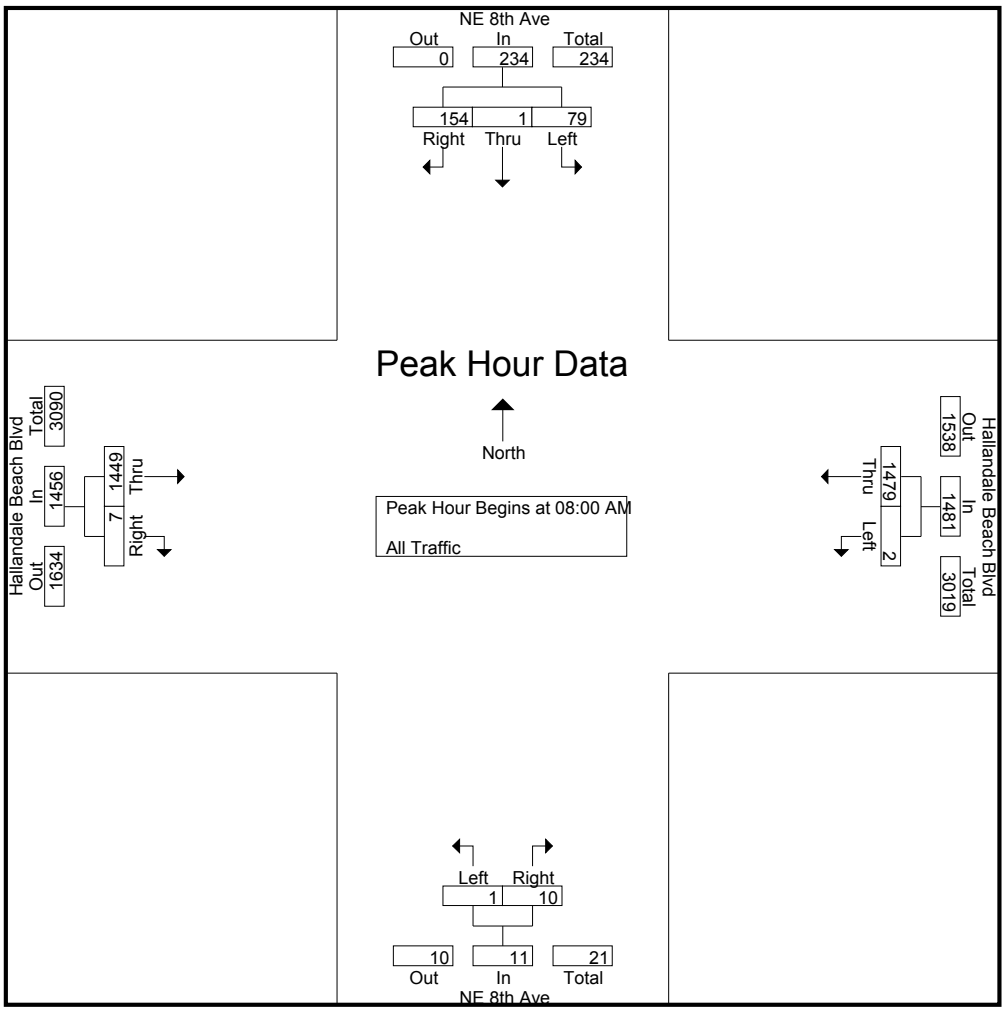
Turning Movement - All Traffic
Hallandale Beach Blvd & NE 8th Ave
Hallandale Beach, FL
Location counted: July 19, 2011

File Name : HAL-8
Site Code : CGA11505
Start Date : 7/19/2011
Page No : 2

	NE 8th Ave SB				Hallandale Beach Blvd WB			NE 8th Ave NB			Hallandale Beach Blvd EB			
Start Time	Right	Thru	Left	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 08:00 AM														
08:00 AM	34	0	20	54	313	0	313	3	0	3	0	395	395	765
08:15 AM	38	0	16	54	401	1	402	2	0	2	0	261	261	719
08:30 AM	42	1	23	66	365	1	366	2	0	2	5	402	407	841
08:45 AM	40	0	20	60	400	0	400	3	1	4	2	391	393	857
Total Volume	154	1	79	234	1479	2	1481	10	1	11	7	1449	1456	3182
% App. Total	65.8	0.4	33.8		99.9	0.1		90.9	9.1		0.5	99.5		
PHF	.917	.250	.859	.886	.922	.500	.921	.833	.250	.688	.350	.901	.894	.928



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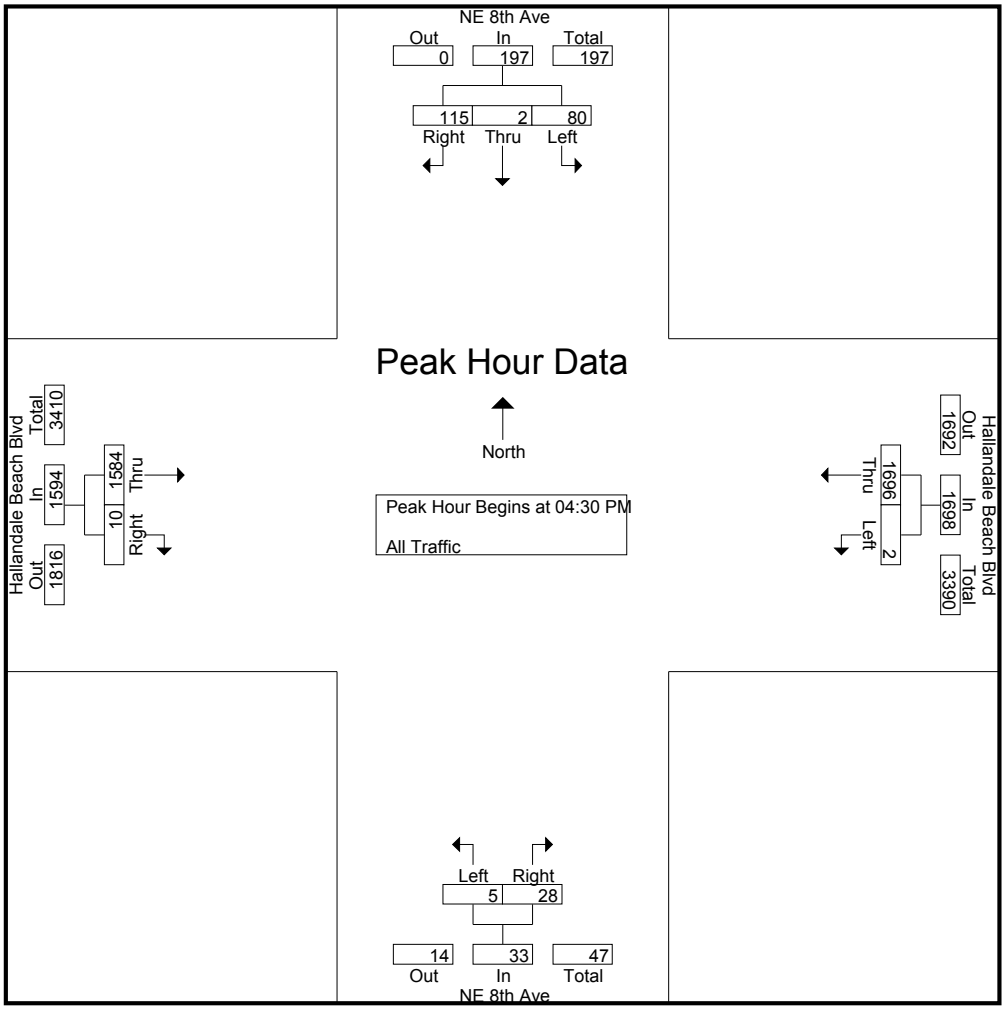
Turning Movement - All Traffic
Hallandale Beach Blvd & NE 8th Ave
Hallandale Beach, FL
Location counted: July 19, 2011

File Name : HAL-8
Site Code : CGA11505
Start Date : 7/19/2011
Page No : 3

	NE 8th Ave SB				Hallandale Beach Blvd WB			NE 8th Ave NB			Hallandale Beach Blvd EB			
Start Time	Right	Thru	Left	App. Total	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 04:30 PM														
04:30 PM	27	0	21	48	400	1	401	8	2	10	4	435	439	898
04:45 PM	18	0	21	39	417	0	417	7	0	7	0	364	364	827
05:00 PM	34	1	28	63	453	0	453	8	3	11	5	394	399	926
05:15 PM	36	1	10	47	426	1	427	5	0	5	1	391	392	871
Total Volume	115	2	80	197	1696	2	1698	28	5	33	10	1584	1594	3522
% App. Total	58.4	1	40.6		99.9	0.1		84.8	15.2		0.6	99.4		
PHF	.799	.500	.714	.782	.936	.500	.937	.875	.417	.750	.500	.910	.908	.951



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Manual Traffic Count
Hallandale Beach Blvd and Three Island
Hallandale City, FL
Location counted: July 13, 2011

File Name : HAL-3IS
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 1

Groups Printed- All Traffic

	Three Island SB		Hallandale Beach Blvd WB		Hallandale Beach Blvd EB		
Start Time	Right	Left	Right	Thru	Thru	Left	Int. Total
07:00 AM	43	15	3	134	101	17	313
07:15 AM	53	17	7	154	123	21	375
07:30 AM	73	25	3	162	134	38	435
07:45 AM	69	25	14	172	143	27	450
Total	238	82	27	622	501	103	1573
08:00 AM	63	33	2	202	163	36	499
08:15 AM	75	52	2	185	132	27	473
08:30 AM	57	35	7	228	156	44	527
08:45 AM	72	56	8	239	170	51	596
Total	267	176	19	854	621	158	2095
*** BREAK ***							
04:00 PM	74	37	32	176	176	95	590
04:15 PM	64	33	23	201	187	91	599
04:30 PM	60	35	21	235	198	78	627
04:45 PM	57	30	21	265	203	78	654
Total	255	135	97	877	764	342	2470
05:00 PM	54	46	26	271	245	131	773
05:15 PM	49	50	37	309	268	82	795
05:30 PM	60	43	45	230	329	107	814
05:45 PM	52	32	31	245	220	117	697
Total	215	171	139	1055	1062	437	3079
Grand Total	975	564	282	3408	2948	1040	9217
Apprch %	63.4	36.6	7.6	92.4	73.9	26.1	
Total %	10.6	6.1	3.1	37	32	11.3	

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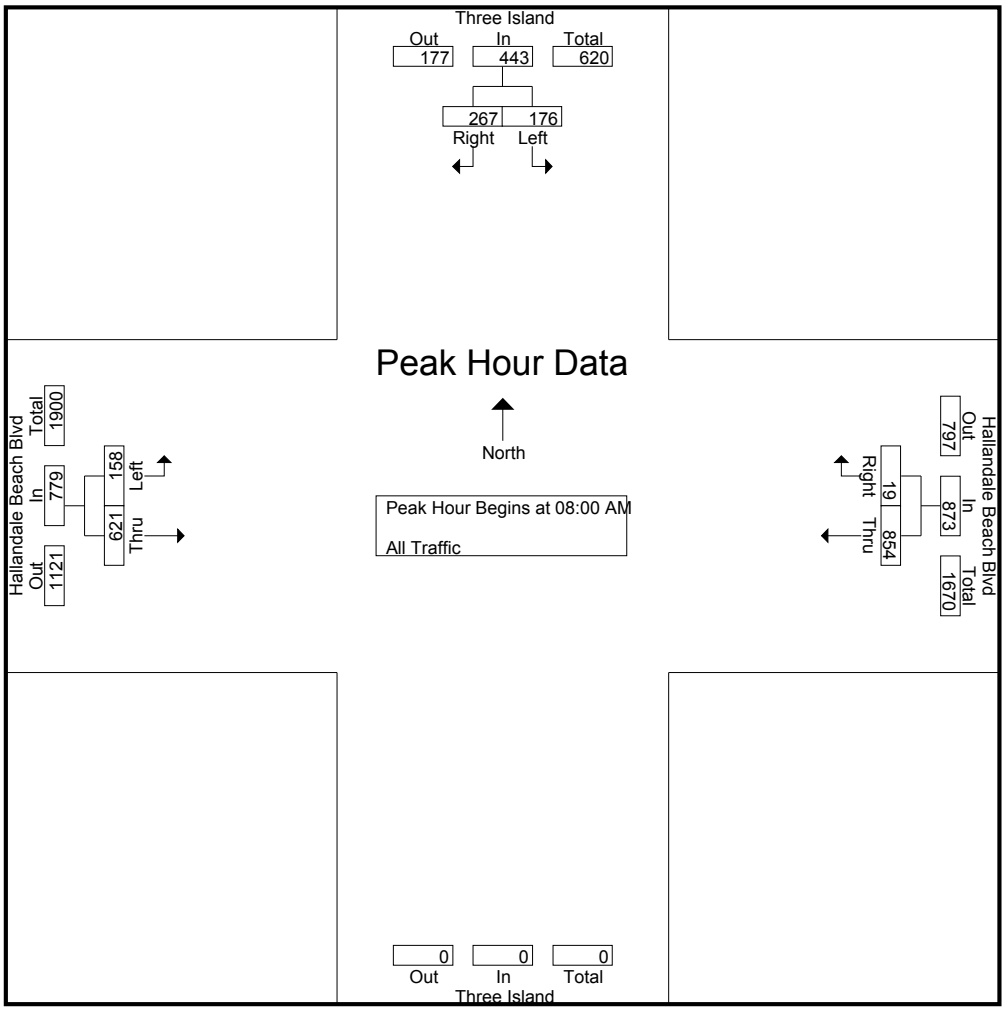
Manual Traffic Count
Hallandale Beach Blvd and Three Island
Hallandale City, FL
Location counted: July 13, 2011

File Name : HAL-3IS
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 2

	Three Island SB			Hallandale Beach Blvd WB			Hallandale Beach Blvd EB			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 08:00 AM										
08:00 AM	63	33	96	2	202	204	163	36	199	499
08:15 AM	75	52	127	2	185	187	132	27	159	473
08:30 AM	57	35	92	7	228	235	156	44	200	527
08:45 AM	72	56	128	8	239	247	170	51	221	596
Total Volume	267	176	443	19	854	873	621	158	779	2095
% App. Total	60.3	39.7		2.2	97.8		79.7	20.3		
PHF	.890	.786	.865	.594	.893	.884	.913	.775	.881	.879



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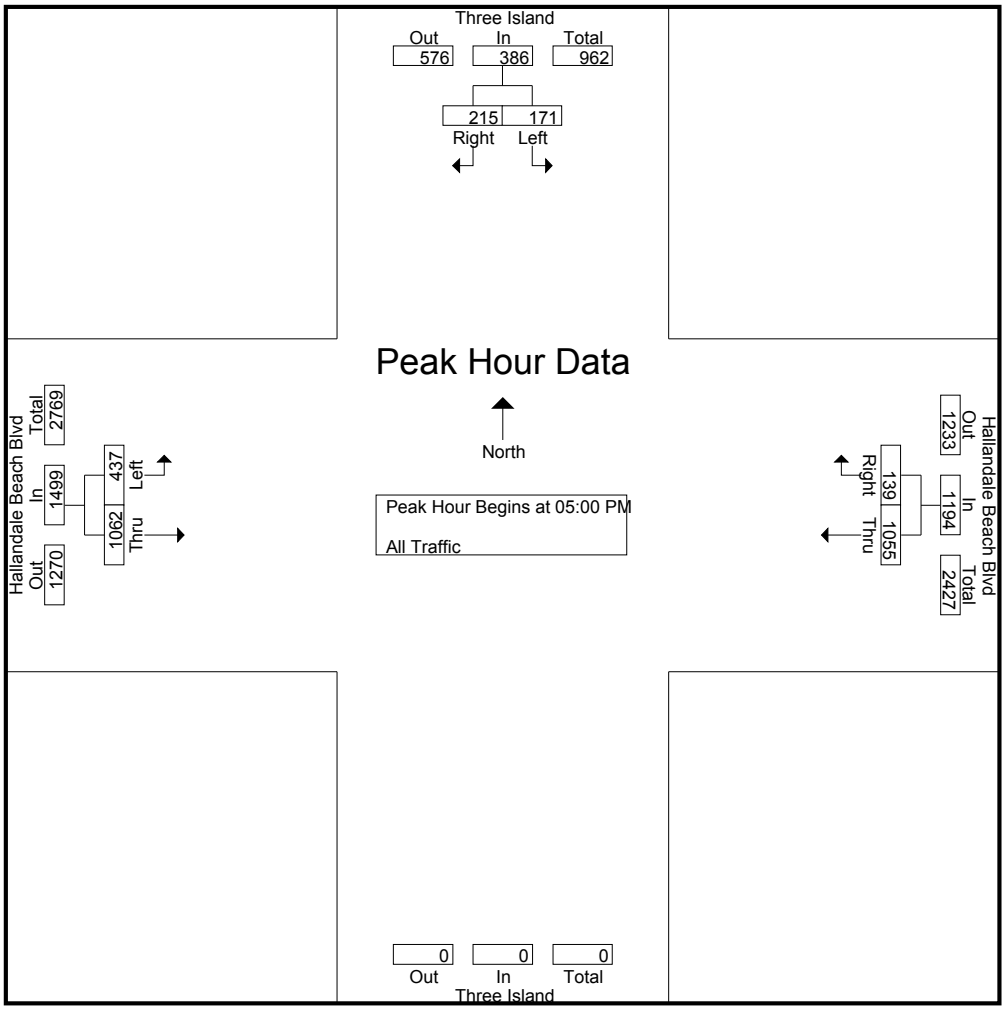
Manual Traffic Count
Hallandale Beach Blvd and Three Island
Hallandale City, FL
Location counted: July 13, 2011

File Name : HAL-3IS
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 3

	Three Island SB			Hallandale Beach Blvd WB			Hallandale Beach Blvd EB			
Start Time	Right	Left	App. Total	Right	Thru	App. Total	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	54	46	100	26	271	297	245	131	376	773
05:15 PM	49	50	99	37	309	346	268	82	350	795
05:30 PM	60	43	103	45	230	275	329	107	436	814
05:45 PM	52	32	84	31	245	276	220	117	337	697
Total Volume	215	171	386	139	1055	1194	1062	437	1499	3079
% App. Total	55.7	44.3		11.6	88.4		70.8	29.2		
PHF	.896	.855	.937	.772	.854	.863	.807	.834	.860	.946



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Manual Count - All Traffic
S Ocean Dr NB Ramp to Hallandale WB
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : OCE-RAMP
Site Code : 00000000
Start Date : 7/14/2011
Page No : 1

Groups Printed- Unshifted

	S Ocean Dr RAMP	
Start Time	Thru	Int. Total
07:00 AM	87	87
07:15 AM	97	97
07:30 AM	111	111
07:45 AM	110	110
Total	405	405
08:00 AM	127	127
08:15 AM	111	111
08:30 AM	90	90
08:45 AM	92	92
Total	420	420
*** BREAK ***		
04:00 PM	101	101
04:15 PM	112	112
04:30 PM	105	105
04:45 PM	123	123
Total	441	441
05:00 PM	152	152
05:15 PM	144	144
05:30 PM	150	150
05:45 PM	147	147
Total	593	593
Grand Total	1859	1859
Apprch %	100	
Total %	100	

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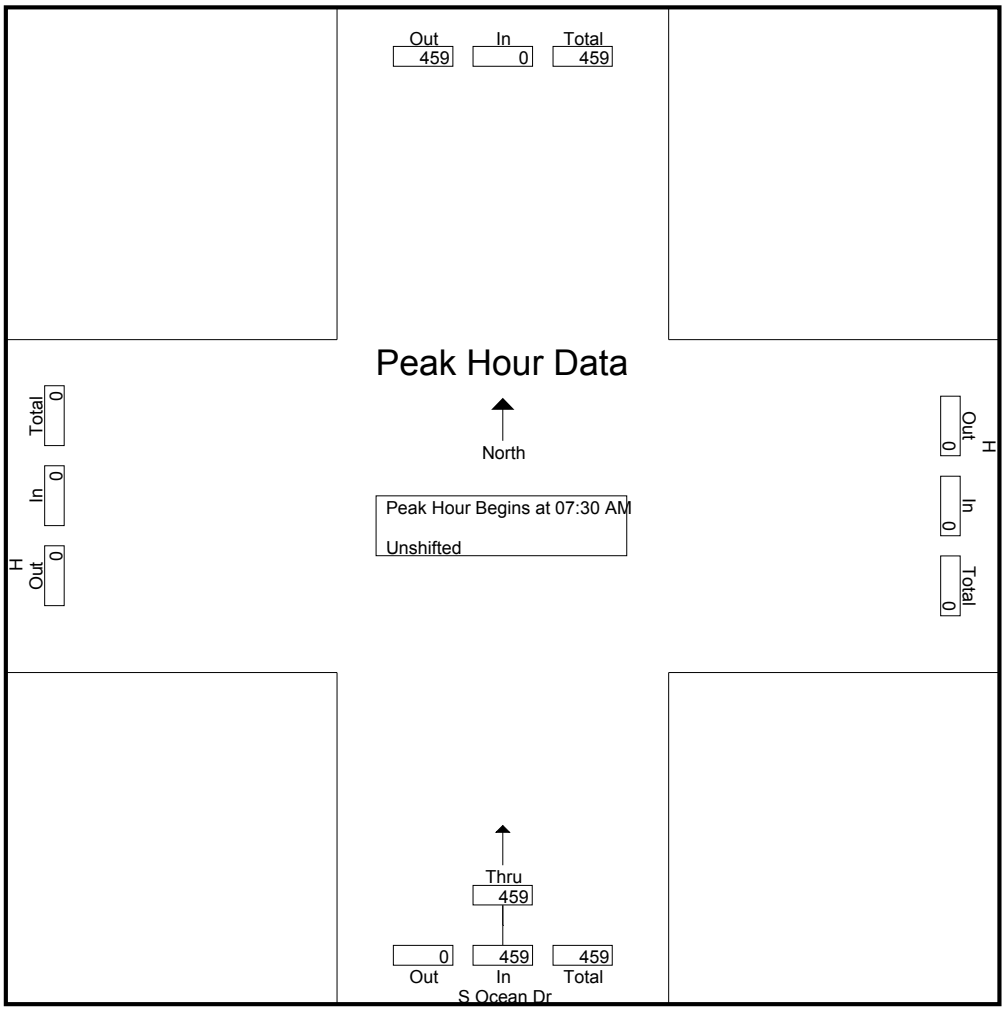
Manual Count - All Traffic
S Ocean Dr NB Ramp to Hallandale WB
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : OCE-RAMP
Site Code : 00000000
Start Date : 7/14/2011
Page No : 2

	S Ocean Dr RAMP		
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 07:30 AM			
07:30 AM	111	111	111
07:45 AM	110	110	110
08:00 AM	127	127	127
08:15 AM	111	111	111
Total Volume	459	459	459
% App. Total	100		
PHF	.904	.904	.904



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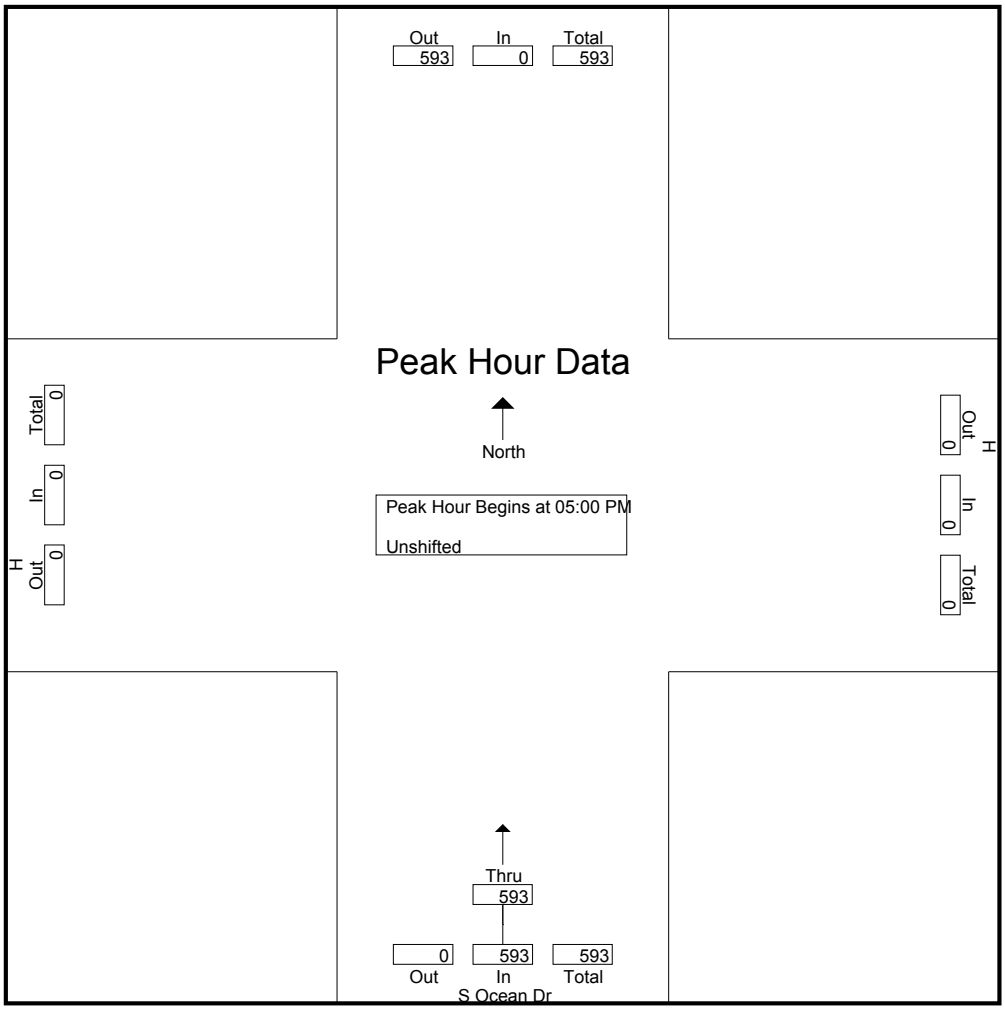
Manual Count - All Traffic
S Ocean Dr NB Ramp to Hallandale WB
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : OCE-RAMP
Site Code : 00000000
Start Date : 7/14/2011
Page No : 3

	S Ocean Dr RAMP		
Start Time	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1			
Peak Hour for Entire Intersection Begins at 05:00 PM			
05:00 PM	152	152	152
05:15 PM	144	144	144
05:30 PM	150	150	150
05:45 PM	147	147	147
Total Volume	593	593	593
% App. Total	100		
PHF	.975	.975	.975



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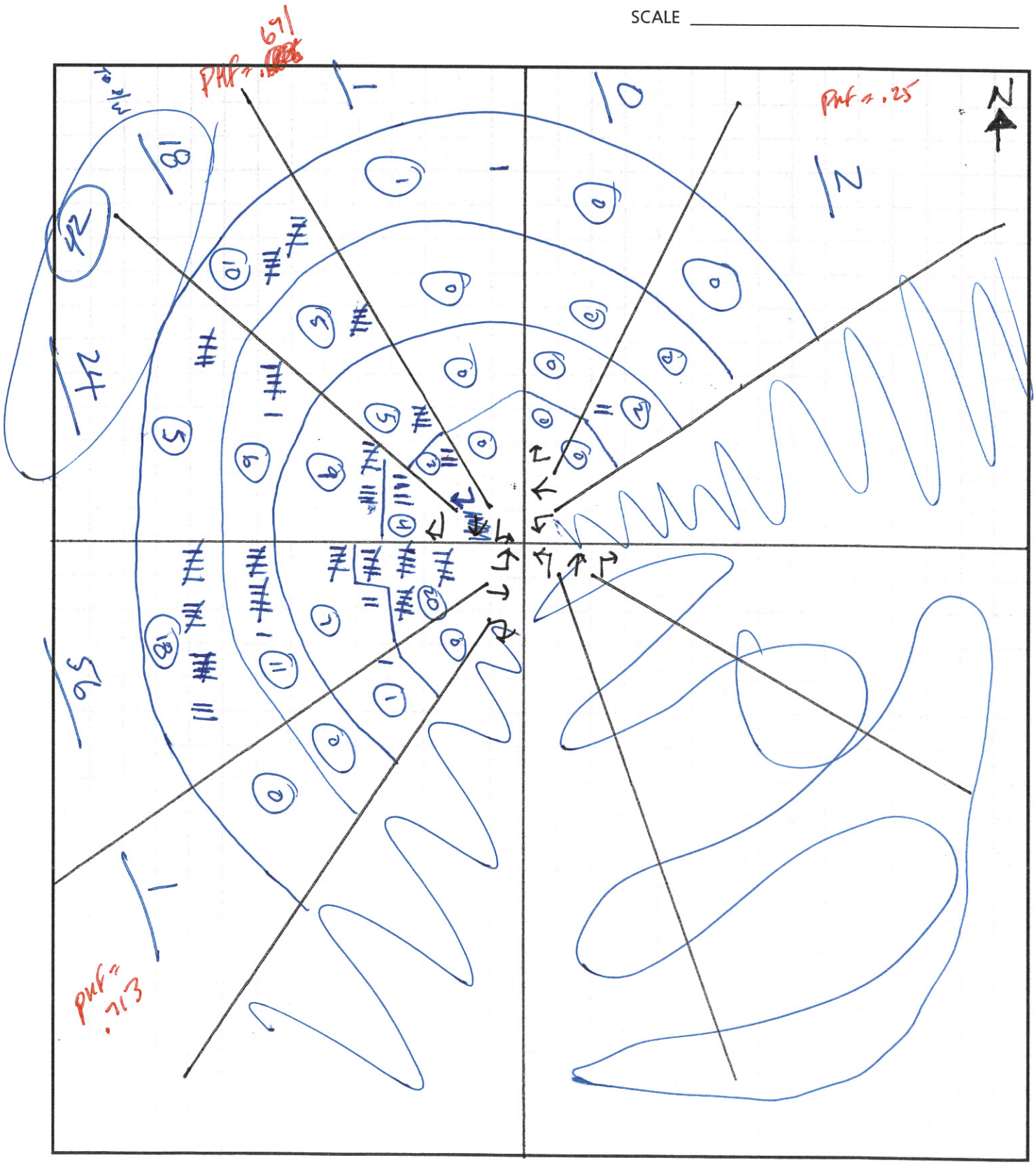
West Palm Beach, Florida 33409
Phone: 561.684.6161
Fax: 561.684.6360

JOB Diana Drive / 26 Ave
SHEET NO. AM Peak OF 7/28/01
CALCULATED BY 8AM - 9PM DATE
CHECKED BY DATE
SCALE



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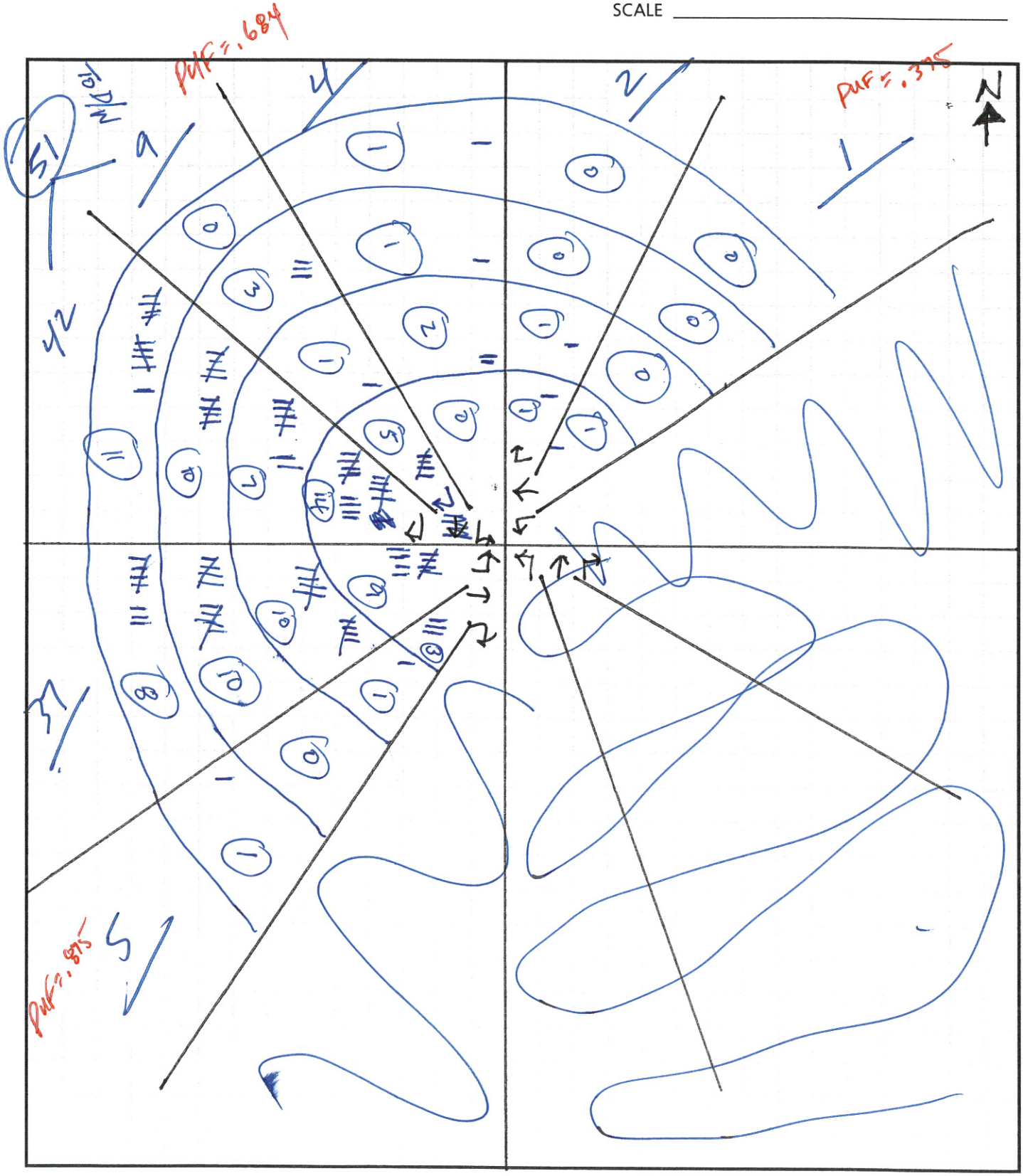
Phone: 561.684.6161
Fax: 561.684.6360

JOB Diana Drive / SE 26 Ave
SHEET NO. PM PEAK OF 5PM-6PM
CALCULATED BY _____ DATE 7/28/11
CHECKED BY _____ DATE _____
SCALE _____



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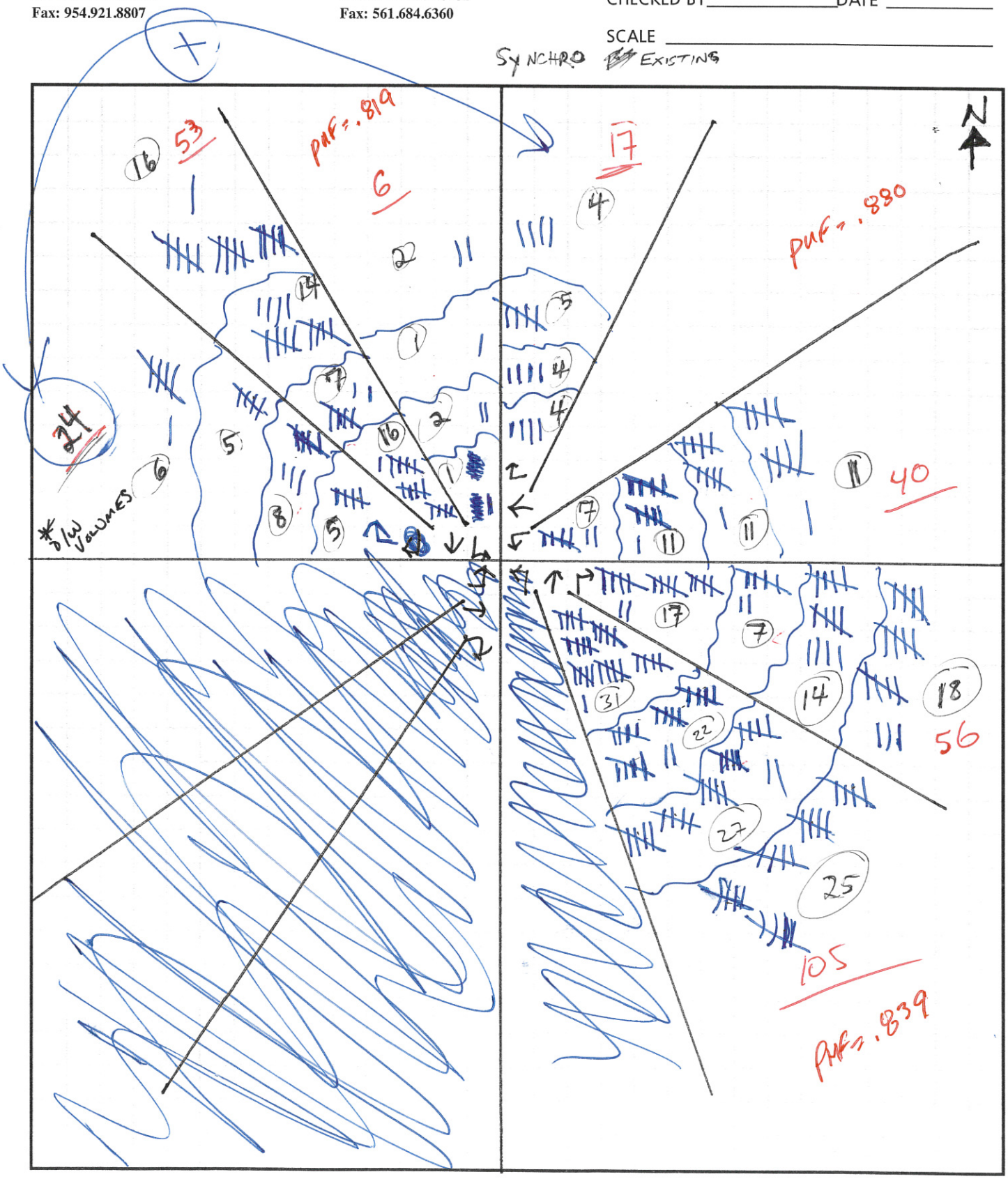
JOB DIANA / GOLDEN ISLES
SHEET NO. AM OF 8AM - 9PM
CALCULATED BY _____ DATE 7/28/11
CHECKED BY _____ DATE _____
SCALE _____

SYNCHRO ☒ EXISTING



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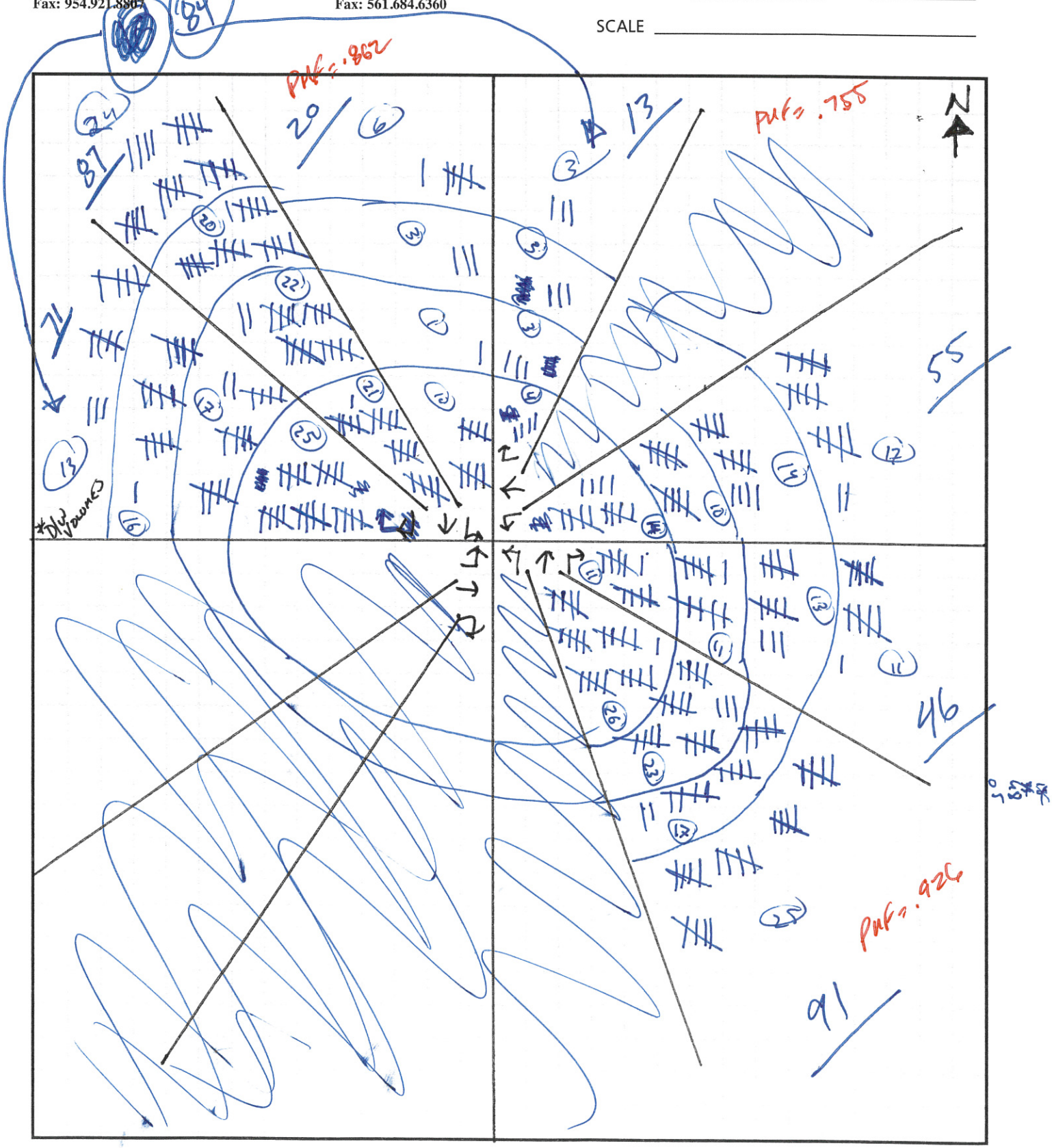
Fax: 561.684.6360

JOB GOLDEN ISLES / DIANA DR.
SHEET NO. PM OF 2
CALCULATED BY 5PM - 6PM DATE 7/28/11
CHECKED BY _____ DATE _____
SCALE _____



APPENDIX - C

Growth Rate Analysis / Historical Traffic Data

Growth Rate			
Roadway Name	**Location**	**Station No.**	**Annual Historic Growth Rate**
S. Ocean Drive	N. of Hallandale Beach Blvd	86-0418	1.20%
S. Ocean Drive	S. of Hallandale Beach Blvd	86-5044	1.95%
Hallandale Beach Blvd	W. of SR 5/US 1	86-0590	-0.11%
Hallandale Beach Blvd	E. of SR 5/US 1	86-5029	0.34%
Hallandale Beach Blvd	W. of ICWW BR	86-0349	-1.03%
S. 14th Ave	N. of Hallandale Beach Blvd	86-7309	1.65%
Diplomat Parkway	N. of Hallandale Beach Blvd	86-9630	-2.68%

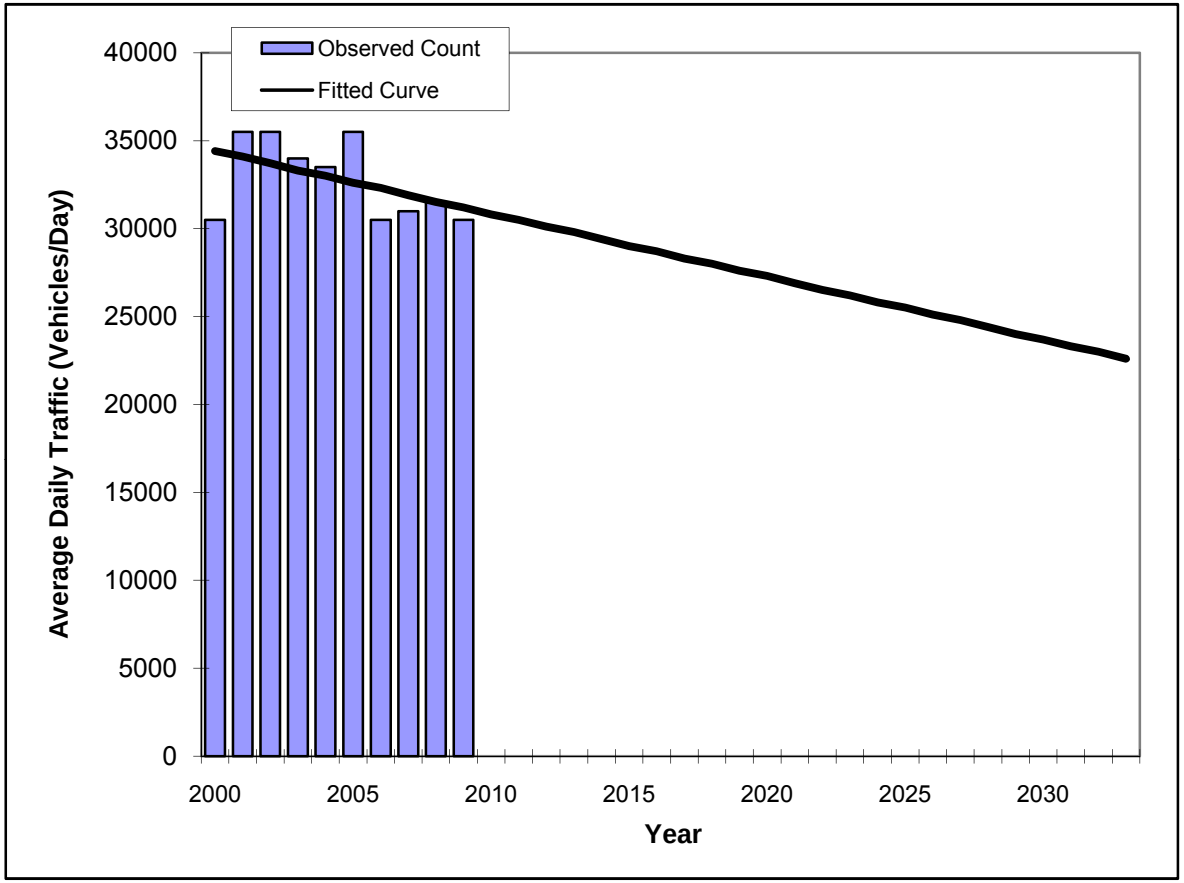
Average Area Growth Rate:	0.189%
Utilized Growth Rate (2011 to 2015):	**0.50%**
Growth Rate Factor (2011 to 2015):	**1.02**

Traffic Trends - V2.0

HALLANDALE BCH BLVD -- W. of ICWW BR

PIN#	973215-1
Location	1

County:	Broward (86)
Station #:	86-0349
Highway:	HALLANDALE BCH BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2000	30500	34400
2001	35500	34100
2002	35500	33700
2003	34000	33300
2004	33500	33000
2005	35500	32600
2006	30500	32300
2007	31000	31900
2008	31500	31500
2009	30500	31200
2013 Opening Year Trend		
2013	N/A	29800
2023 Mid-Year Trend		
2023	N/A	26200
2033 Design Year Trend		
2033	N/A	22600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-358
Trend R-squared:	23.65%
Trend Annual Historic Growth Rate:	-1.03%
Trend Growth Rate (2009 to Design Year):	-1.15%
Printed:	4-Aug-11

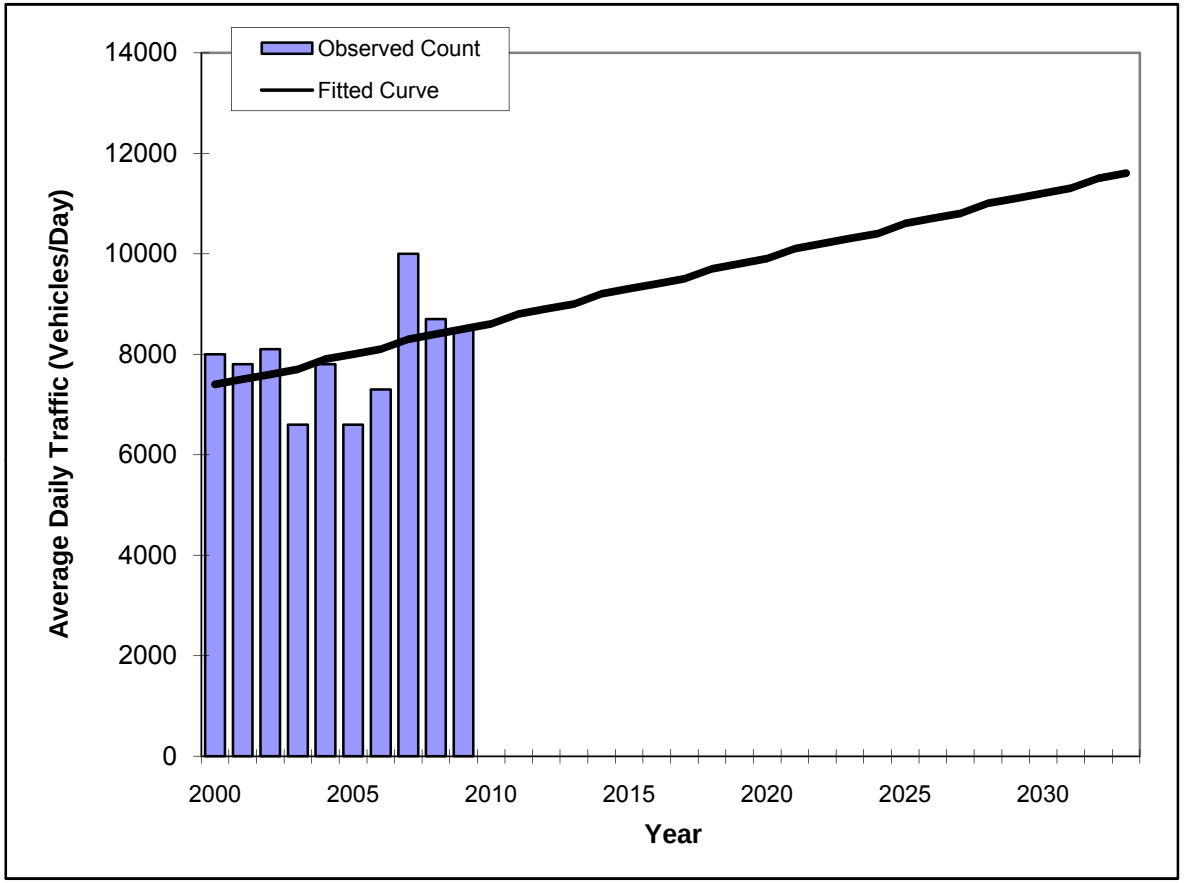
Straight Line Growth Option

Traffic Trends - V2.0

S 14TH AVE -- N. of Hallandale Bch Blvd

PIN#	973215-1
Location	1

County:	Broward (86)
Station #:	86-7309
Highway:	S 14TH AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2000	8000	7400
2001	7800	7500
2002	8100	7600
2003	6600	7700
2004	7800	7900
2005	6600	8000
2006	7300	8100
2007	10000	8300
2008	8700	8400
2009	8500	8500
2013 Opening Year Trend		
2013	N/A	9000
2023 Mid-Year Trend		
2023	N/A	10300
2033 Design Year Trend		
2033	N/A	11600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	128
Trend R-squared:	14.80%
Trend Annual Historic Growth Rate:	1.65%
Trend Growth Rate (2009 to Design Year):	1.52%
Printed:	4-Aug-11

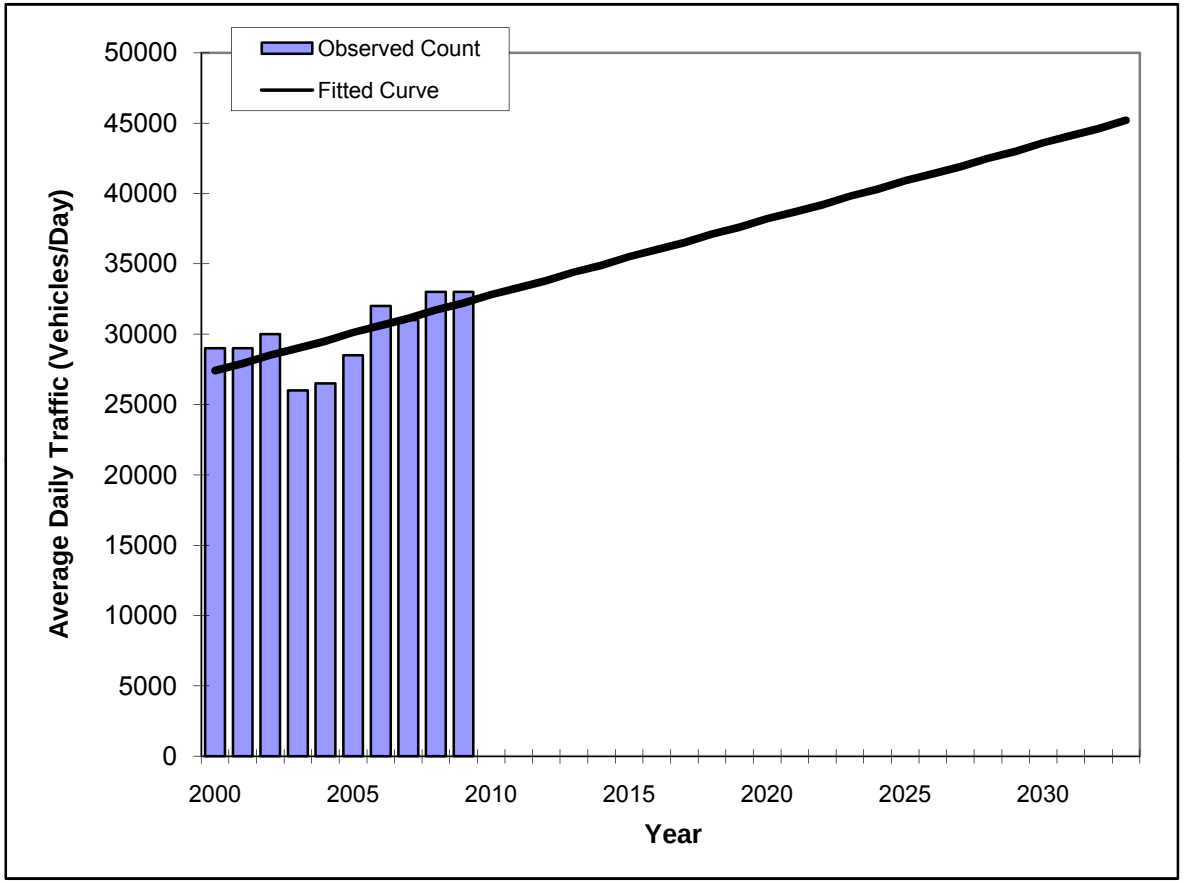
Straight Line Growth Option

Traffic Trends - V2.0

S. OCEAN DR -- S. of Hallandale Bch Blvd

PIN#	973215-1
Location	1

County:	Broward (86)
Station #:	86-5044
Highway:	S. OCEAN DR



Year	Traffic (ADT/AADT) Count*	Trend**
2000	29000	27400
2001	29000	27900
2002	30000	28500
2003	26000	29000
2004	26500	29500
2005	28500	30100
2006	32000	30600
2007	31000	31100
2008	33000	31700
2009	33000	32200
2013 Opening Year Trend		
2013	N/A	34400
2023 Mid-Year Trend		
2023	N/A	39800
2033 Design Year Trend		
2033	N/A	45200
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	539
Trend R-squared:	43.56%
Trend Annual Historic Growth Rate:	1.95%
Trend Growth Rate (2009 to Design Year):	1.68%
Printed:	4-Aug-11

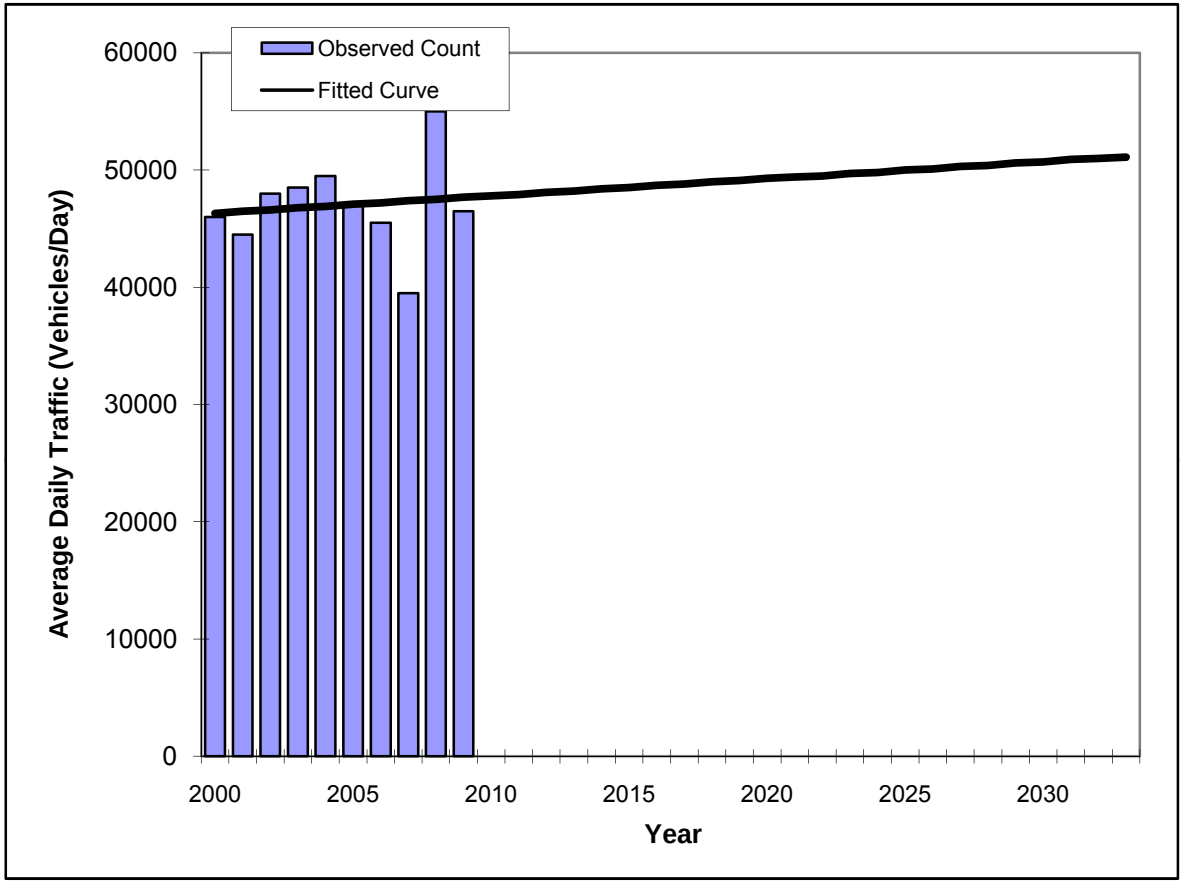
Straight Line Growth Option

Traffic Trends - V2.0

HALLANDALE BCH BLVD -- E. of SR 5/U.S. 1

PIN#	973215-1
Location	1

County:	Broward (86)
Station #:	86-5029
Highway:	HALLANDALE BCH BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2000	46000	46300
2001	44500	46500
2002	48000	46600
2003	48500	46800
2004	49500	46900
2005	47000	47100
2006	45500	47200
2007	39500	47400
2008	55000	47500
2009	46500	47700
2013 Opening Year Trend		
2013	N/A	48200
2023 Mid-Year Trend		
2023	N/A	49700
2033 Design Year Trend		
2033	N/A	51100
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	145
Trend R-squared:	1.25%
Trend Annual Historic Growth Rate:	0.34%
Trend Growth Rate (2009 to Design Year):	0.30%
Printed:	4-Aug-11

Straight Line Growth Option

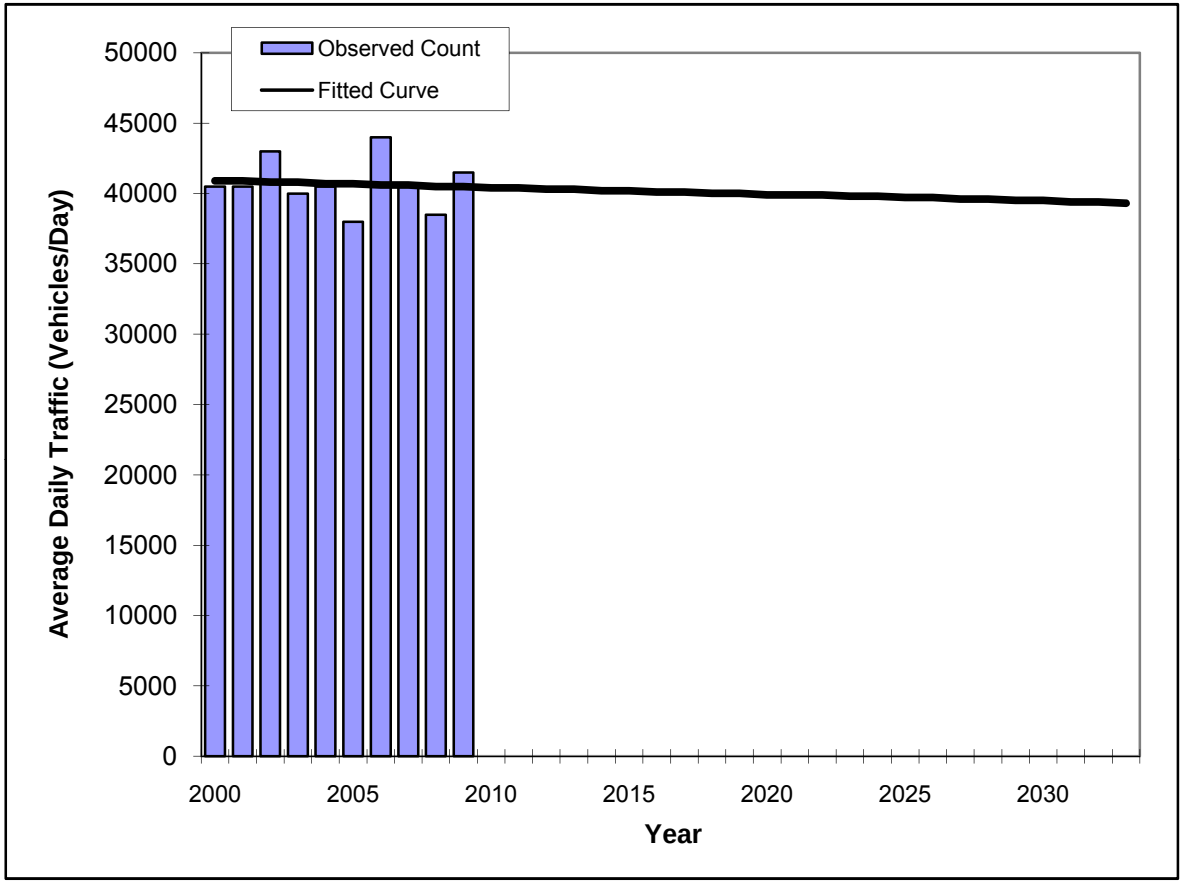
*Axle-Adjusted

Traffic Trends - V2.0

HALLANDALE BCH BLVD -- W. of SR 5/U.S. 1

PIN#	973215-1
Location	1

County:	Broward (86)
Station #:	86-0590
Highway:	HALLANDALE BCH BLVD



Year	Traffic (ADT/AADT) Count*	Trend**
2000	40500	40900
2001	40500	40900
2002	43000	40800
2003	40000	40800
2004	40500	40700
2005	38000	40700
2006	44000	40600
2007	40500	40600
2008	38500	40500
2009	41500	40500
2013 Opening Year Trend		
2013	N/A	40300
2023 Mid-Year Trend		
2023	N/A	39800
2033 Design Year Trend		
2033	N/A	39300
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-48
Trend R-squared:	0.66%
Trend Annual Historic Growth Rate:	-0.11%
Trend Growth Rate (2009 to Design Year):	-0.12%
Printed:	4-Aug-11

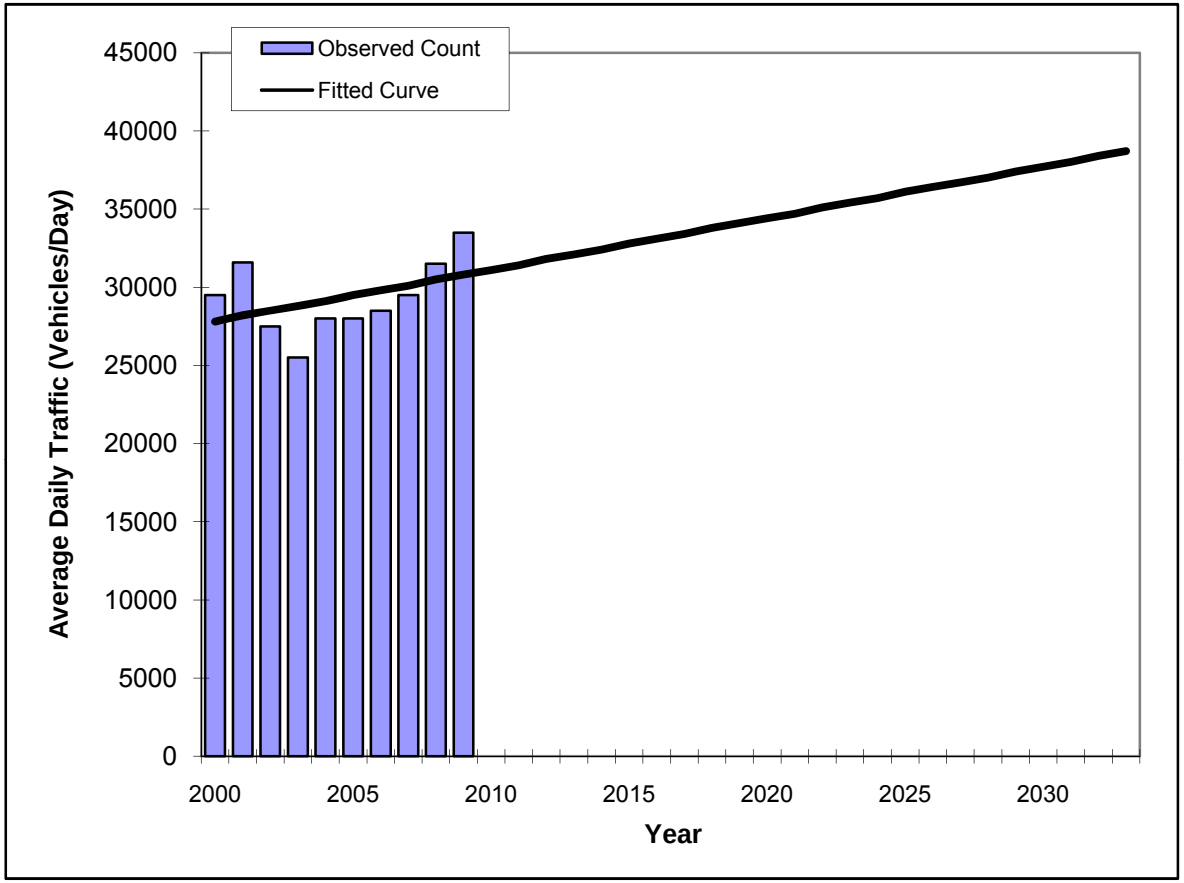
Straight Line Growth Option

Traffic Trends - V2.0

S. OCEAN DR -- N. of Hallandale Bch Blvd

PIN#	973215-1
Location	1

County:	Broward (86)
Station #:	86-0418
Highway:	S. OCEAN DR



Year	Traffic (ADT/AADT) Count*	Trend**
2000	29500	27800
2001	31600	28200
2002	27500	28500
2003	25500	28800
2004	28000	29100
2005	28000	29500
2006	28500	29800
2007	29500	30100
2008	31500	30500
2009	33500	30800
2013 Opening Year Trend		
2013	N/A	32100
2023 Mid-Year Trend		
2023	N/A	35400
2033 Design Year Trend		
2033	N/A	38700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	329
Trend R-squared:	18.03%
Trend Annual Historic Growth Rate:	1.20%
Trend Growth Rate (2009 to Design Year):	1.07%
Printed:	4-Aug-11

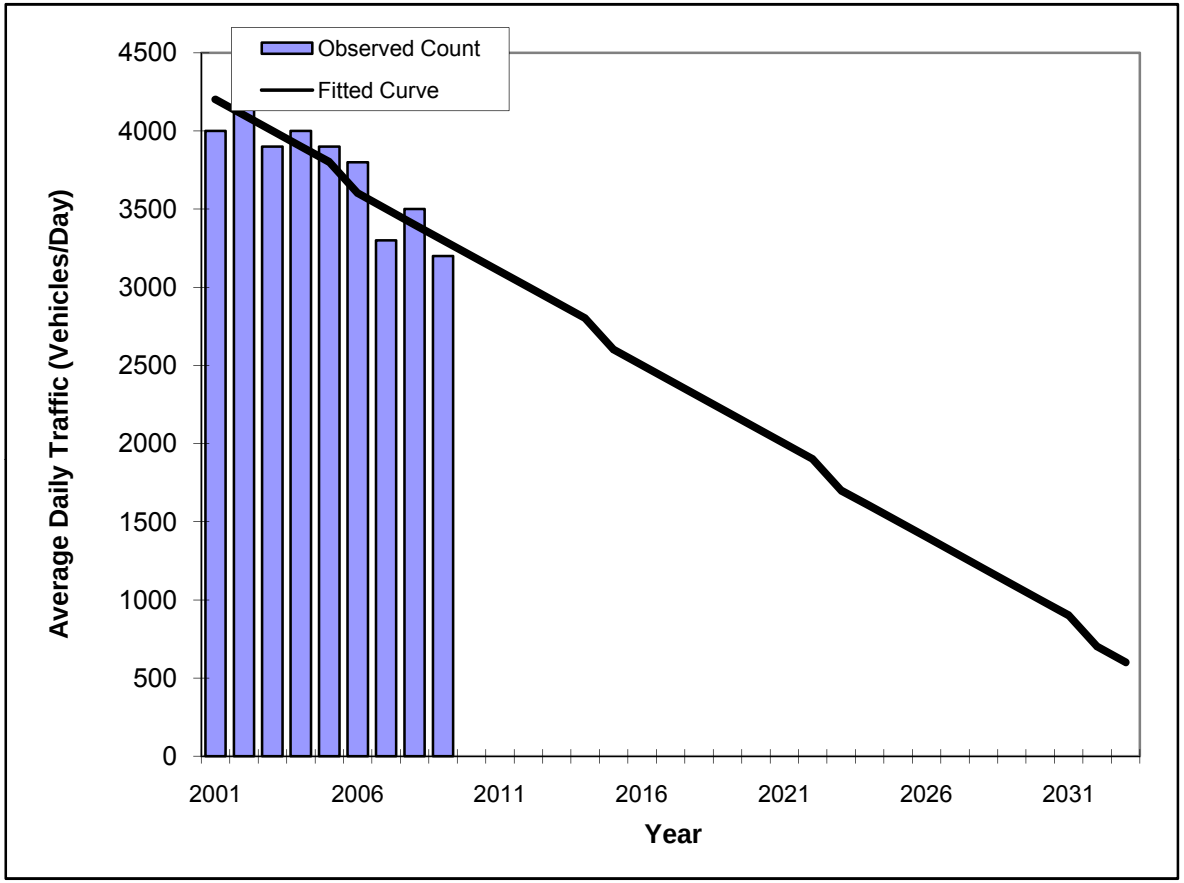
Straight Line Growth Option

Traffic Trends - V2.0

DIPLOMAT PARKWAY -- N. of Hallandale Bch Blvd

PIN#	973215-1
Location	1

County:	Broward (86)
Station #:	86-9630
Highway:	DIPLOMAT PARKWAY



Year	Traffic (ADT/AADT) Count*	Trend**
2001	4000	4200
2002	4200	4100
2003	3900	4000
2004	4000	3900
2005	3900	3800
2006	3800	3600
2007	3300	3500
2008	3500	3400
2009	3200	3300
2013 Opening Year Trend		
2013	N/A	2900
2023 Mid-Year Trend		
2023	N/A	1700
2033 Design Year Trend		
2033	N/A	600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-112
Trend R-squared:	79.40%
Trend Annual Historic Growth Rate:	-2.68%
Trend Growth Rate (2009 to Design Year):	-3.41%
Printed:	4-Aug-11

Straight Line Growth Option

APPENDIX - D

Broward County Signal Timing Data

System Number: 3282

Section Number: 22

Wednesday, July 27, 2011

10:50:02 AM

Pattern Timing Plan Data

Hallandale Beach Blvd & NE 8 Ave

Pattern Number	Offset	Cycle Length	Phase Durations EW	SB	NB	WBL
1	58	110	38	41	18	12
2	124	160	76	41	25	18
3	159	160	72	42	25	20
4	24	160	76	41	25	18
5	72	130	54	41	20	15
12	124	180	87	44	28	21
13	159	160	71	43	26	20
14	73	180	85	48	28	20

Fixed Intervals:

Min Green	10	6	6	4
Flashing Don't Walk	17	0	0	0
Yellow	4	4	4	4
All Red	2	2	2	2
Green Returns	1,2	3	5	8
Command	YIELD	FO 1	FO 1	FO 2

Time Of Day Schedule

Monday - Friday

Pattern 2	Morning Peak Pattern	06:00 - 09:00
Pattern 3	Midday Pattern	09:00 - 15:10
Pattern 4	Evening Peak Patten	15:10 - 20:00
Pattern 3	Midday Pattern	20:00 - 00:00

Saturday

Pattern 3	Midday Pattern	06:30 - 01:00

Sunday

Pattern 3	Midday Pattern	06:30 - 23:00

System Number: 3084

Section Number: 22

Wednesday, July 27, 2011

10:47:14 AM

Pattern Timing Plan Data

Federal Highway & Hallandale Beach Blvd

Pattern Number	Offset	Cycle Length	Phase Durations EW	NSL	SBL	NBL	NS	EWL	EBL	WBL
1	21	110	49	15	0	0	23	23	0	0
2	135	160	50	30	0	0	50	30	0	0
3	1	160	49	29	0	0	48	34	0	0
4	8	160	50	30	0	0	50	30	0	0
5	14	130	49	23	0	0	33	25	0	0
12	135	180	60	35	0	0	50	35	0	0
13	1	160	49	29	0	0	48	34	0	0
14	12	180	54	31	0	0	51	33	0	10

Fixed Intervals:

Min Green	7	5	5	5	6	5	5	5
Flashing Don't Walk	33	0	0	0	0	0	0	0
Yellow	4	4	4	4	4	4	4	4
All Red	2	2	2	2	4	2	2	2
Green Returns	1,2	3,4	3	4	5,6	7,8	8	7
Command	YIELD	FO 1&2	FO 1	FO 2	FO 1&2	FO 1&2	FO 2	FO 1

Time Of Day Schedule

Monday - Friday

Pattern 2	Morning Peak Pattern	06:00 - 09:00
Pattern 3	Midday Pattern	09:00 - 15:10
Pattern 4	Evening Peak Patten	15:10 - 20:00
Pattern 3	Midday Pattern	20:00 - 00:00

Saturday

Pattern 3	Midday Pattern	06:30 - 01:00

Sunday

Pattern 3	Midday Pattern	06:30 - 23:00

System Number: 3083

Section Number: 22

Wednesday, July 27, 2011

10:50:55 AM

Pattern Timing Plan Data

Hallandale Beach Blvd & NE 14 Ave

Pattern Number	Offset	Cycle Length	Phase Durations EW	NSL	SBL	NBL	NS	EWL	WBL	EBL
1	27	110	45	14	0	0	35	15	0	0
2	69	160	63	24	0	0	55	19	0	0
3	91	160	62	27	0	0	48	23	0	0
4	61	160	60	24	0	0	55	21	0	0
5	31	130	40	16	0	0	55	18	0	0
12	69	180	82	28	0	0	48	22	0	0
13	61	160	62	27	0	0	48	23	0	0
14	66	180	80	27	0	0	50	23	0	0

Fixed Intervals:

Min Green	10	5	5	5	6	5	5	5
Flashing Don't Walk	22	0	0	0	0	0	0	0
Yellow	4	4	4	4	4	4	4	4
All Red	2	2	2	2	2	2	2	2
Green Returns	1,2	3,4	3	4	5,6	7,8	8	7
Command	YIELD	FO 1&2	FO 1	FO 2	FO 1&2	FO 1&2	FO 2	FO 1

Time Of Day Schedule

Monday - Friday

Pattern 2	Morning Peak Pattern	06:00 - 09:00
Pattern 3	Midday Pattern	09:00 - 15:10
Pattern 4	Evening Peak Patten	15:10 - 20:00
Pattern 3	Midday Pattern	20:00 - 00:00

Saturday

Pattern 3	Midday Pattern	06:30 - 01:00

Sunday

Pattern 3	Midday Pattern	06:30 - 23:00

System Number: 3082

Section Number: 22

Wednesday, July 27, 2011

10:51:13 AM

Pattern Timing Plan Data

Hallandale Beach Blvd & Layne Blvd

Pattern Number	Offset	Cycle Length	Phase Durations EW	SB	NB	EWL	WBL	EBL
1	8	110	46	25	23	16	0	0
2	49	160	71	28	41	20	0	0
3	97	160	66	30	41	23	0	0
4	63	160	71	28	41	20	0	0
5	6	130	50	33	32	15	0	0
12	39	180	80	33	45	23	0	0
13	67	160	66	30	41	23	0	0
14	53	180	84	31	41	24	0	0

Fixed Intervals:

Min Green	10	6	6	4	5	5
Flashing Don't Walk	28	0	0	0	0	0
Yellow	4	4	4	4	4	4
All Red	2	2	2	2	2	2
Green Returns	1,2	3	5	7,8	8	7
Command	YIELD	FO 1	FO 1	FO 1&2	FO 2	FO 1

Time Of Day Schedule

Monday - Friday

Pattern 2	Morning Peak Pattern	06:00 - 09:00
Pattern 3	Midday Pattern	09:00 - 15:10
Pattern 4	Evening Peak Patten	15:10 - 20:00
Pattern 3	Midday Pattern	20:00 - 00:00

Saturday

Pattern 3	Midday Pattern	06:30 - 01:00

Sunday

Pattern 3	Midday Pattern	06:30 - 23:00

System Number: 3081

Section Number: 22

Wednesday, July 27, 2011

10:52:10 AM

Pattern Timing Plan Data

Hallandale Beach Blvd & Golden Isles Dr

Pattern Number	Offset	Cycle Length	Phase Durations EW	NB	SB	WBL
1	8	110	60	17	17	16
2	42	160	73	43	27	16
3	100	160	63	44	33	20
4	68	160	72	43	27	18
5	22	130	46	43	25	16
12	32	180	86	40	34	20
13	75	160	63	44	33	20
14	53	180	78	43	34	25

Fixed Intervals:

Min Green	10	6	6	5
Flashing Don't Walk	19	0	0	0
Yellow	4	4	4	4
All Red	2	2	2	2
Green Returns	1,2	3	5	8
Command	YIELD	FO 1	FO 1	FO 2

Time Of Day Schedule

Monday - Friday

Pattern 2	Morning Peak Pattern	06:00 - 09:00
Pattern 3	Midday Pattern	09:00 - 15:10
Pattern 4	Evening Peak Patten	15:10 - 20:00
Pattern 3	Midday Pattern	20:00 - 00:00

Saturday

Pattern 3	Midday Pattern	06:30 - 01:00

Sunday

Pattern 3	Midday Pattern	06:30 - 23:00

System Number: 3080

Section Number: 22

Wednesday, July 27, 2011

10:52:29 AM

Pattern Timing Plan Data

Hallandale Beach Blvd & Diplomat Parkway

Pattern Number	Offset	Cycle Length	Phase Durations EW	WBL	NS	EBL
1	20	110	38	16	40	16
2	50	160	68	25	43	25
3	113	160	62	26	45	26
4	76	160	68	25	43	25
5	12	130	52	17	43	17
12	50	180	79	25	49	28
13	83	160	61	26	46	26
14	76	180	76	25	47	32

Fixed Intervals:

Min Green	10	5	6	5
Flashing Don't Walk	18	0	0	0
Yellow	4	4	4	4
All Red	2	2	2	2
Green Returns	1,2	8	5,6	7
Command	YIELD	FO 2	FO 1&2	FO 1

Time Of Day Schedule

Monday - Friday

Pattern 2	Morning Peak Pattern	06:00 - 09:00
Pattern 3	Midday Pattern	09:00 - 15:10
Pattern 4	Evening Peak Patten	15:10 - 20:00
Pattern 3	Midday Pattern	20:00 - 00:00

Saturday

Pattern 3	Midday Pattern	06:30 - 01:00

Sunday

Pattern 3	Midday Pattern	06:30 - 23:00

System Number: 3079

Section Number: 22

Wednesday, July 27, 2011

10:52:46 AM

Pattern Timing Plan Data

Hallandale Beach Blvd & Three Islands Dr

Pattern Number	Offset	Cycle Length	Phase Durations EW	XPED	SB	EWL	WBL	EBL
1	104	110	45	41	12	12	0	0
2	55	160	59	41	30	30	0	0
3	108	160	65	36	27	32	0	0
4	86	160	59	41	30	30	0	0
5	124	130	45	41	22	22	0	0
12	55	180	72	43	34	31	0	0
13	73	160	65	36	27	32	0	0
14	102	180	60	43	33	35	10	0

Fixed Intervals:

Min Green	10	7	6	5	5	5
Flashing Don't Walk	26	0	0	0	0	0
Yellow	4	4	4	4	4	4
All Red	2	0	2	2	2	2
Green Returns	1,2	3	5	7,8	8	7
Command	YIELD	HOL	FO 1	FO 1&2	FO 2	FO 1

Time Of Day Schedule

Monday - Friday

Pattern 2	Morning Peak Pattern	06:00 - 09:00
Pattern 3	Midday Pattern	09:00 - 15:10
Pattern 4	Evening Peak Patten	15:10 - 20:00
Pattern 3	Midday Pattern	20:00 - 00:00

Saturday

Pattern 3	Midday Pattern	06:30 - 01:00

Sunday

Pattern 3	Midday Pattern	06:30 - 23:00

System Number: 3051

Section Number: 18

Wednesday, July 27, 2011

10:53:08 AM

Pattern Timing Plan Data

SR A1A & Hallandale Beach Blvd

Pattern Number	Offset	Cycle Length	Phase Durations NS	WB	EB	NSL	NBL	SBL
1	6	110	45	15	35	15	0	0
2	59	110	45	21	31	13	0	0
3	76	110	45	15	35	15	0	0
4	85	110	45	15	35	15	0	0
5	65	110	45	15	35	15	0	0

Fixed Intervals:

Min Green	7	6	6	5	5	5
Flashing Don't Walk	30	0	0	0	0	0
Yellow	4	4	4	4	4	4
All Red	1	2	2	2	2	2
Green Returns	1,2	3	5	7,8	8	7
Command	YIELD	FO 1	FO 1	FO 1&2	FO 2	FO 1

Time Of Day Schedule

Monday - Friday

Pattern 2	Morning Peak Pattern	06:00 - 09:00
Pattern 3	Midday Pattern	09:00 - 15:10
Pattern 4	Evening Peak Patten	15:10 - 20:00
Pattern 3	Midday Pattern	20:00 - 00:00

Saturday

Pattern 3	Midday Pattern	06:30 - 01:00

Sunday

Pattern 3	Midday Pattern	06:30 - 23:00

System Number: 3283

Section Number: 22

Wednesday, July 27, 2011

10:50:34 AM

Pattern Timing Plan Data

Hallandale Beach Blvd & NE 10 Ave

Pattern Number	Offset	Cycle Length	Phase Durations EW	NB	EWL	WBL	EBL
1	47	110	72	21	17	0	0
2	116	160	88	43	22	0	7
3	157	160	77	43	22	18	0
4	16	160	81	43	22	0	14
5	62	130	71	43	16	0	0
12	125	180	112	43	25	0	0
13	157	160	77	43	22	18	0
14	54	180	89	50	30	0	10

Fixed Intervals:

Min Green	10	6	5	5	5
Flashing Don't Walk	21	0	0	0	0
Yellow	4	4	4	4	4
All Red	2	2	2	2	2
Green Returns	1,2	5	7,8	8	7
Command	YIELD	FO 1	FO 1&2	FO 2	FO 1

Time Of Day Schedule

Monday - Friday

Pattern 2	Morning Peak Pattern	06:00 - 09:00
Pattern 3	Midday Pattern	09:00 - 15:10
Pattern 4	Evening Peak Patten	15:10 - 20:00
Pattern 3	Midday Pattern	20:00 - 00:00

Saturday

Pattern 3	Midday Pattern	06:30 - 01:00

Sunday

Pattern 3	Midday Pattern	06:30 - 23:00

APPENDIX – E

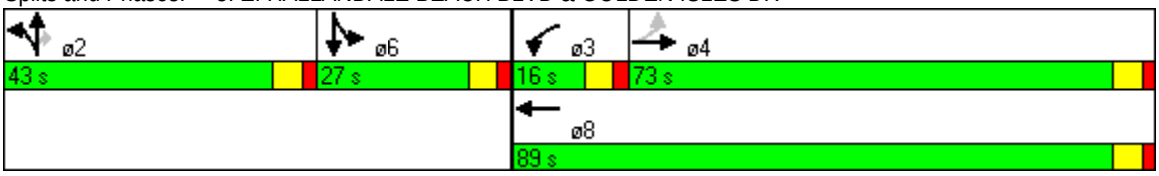
Synchro Output Sheets – Existing

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	4	1067	43	1286	114	17	44	5
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	73.0	73.0	16.0	89.0	43.0	43.0	43.0	27.0
Total Split (%)	45.9%	45.9%	10.1%	56.0%	27.0%	27.0%	27.0%	17.0%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		56.0	8.5	67.6	37.5	37.5	37.5	21.3
Actuated g/C Ratio		0.39	0.06	0.47	0.26	0.26	0.26	0.15
v/c Ratio		0.80	0.44	0.59	0.17	0.17	0.11	0.06
Control Delay		42.9	83.6	28.6	47.2	47.2	12.7	54.0
Queue Delay		19.9	0.0	0.7	0.0	0.0	0.0	0.0
Total Delay		62.7	83.6	29.3	47.2	47.2	12.7	54.0
LOS		E	F	C	D	D	B	D
Approach Delay		62.7		31.1		38.6		54.0
Approach LOS		E		C		D		D

Intersection Summary

Cycle Length: 159
Actuated Cycle Length: 144.6
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 46.5 — Intersection LOS: D
Intersection Capacity Utilization 56.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1067	52	43	1286	17	114	17	44	13	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5049		1770	5075		1681	1706	1583		3374	
Flt Permitted		0.93		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4711		1770	5075		1681	1706	1583		3374	
Peak-hour factor, PHF	0.77	0.77	0.77	0.93	0.93	0.93	0.89	0.89	0.89	0.71	0.71	0.71
Adj. Flow (vph)	5	1386	68	46	1383	18	128	19	49	18	7	3
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	36	0	3	0
Lane Group Flow (vph)	0	1455	0	46	1400	0	73	74	13	0	25	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		56.0		7.0	69.0		37.5	37.5	37.5		21.3	
Effective Green, g (s)		56.0		7.0	69.0		37.5	37.5	37.5		21.3	
Actuated g/C Ratio		0.38		0.05	0.47		0.26	0.26	0.26		0.15	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1809		85	2402		432	439	407		493	
v/s Ratio Prot				0.03	c0.28		c0.04	0.04			c0.01	
v/s Ratio Perm		c0.31							0.01			
v/c Ratio		0.80		0.54	0.58		0.17	0.17	0.03		0.05	
Uniform Delay, d1		40.0		67.8	27.9		42.1	42.0	40.5		53.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		2.7		6.9	0.4		0.8	0.8	0.1		0.2	
Delay (s)		42.7		74.7	28.3		42.9	42.9	40.7		53.8	
Level of Service		D		E	C		D	D	D		D	
Approach Delay (s)		42.7			29.8			42.3			53.8	
Approach LOS		D			C			D			D	

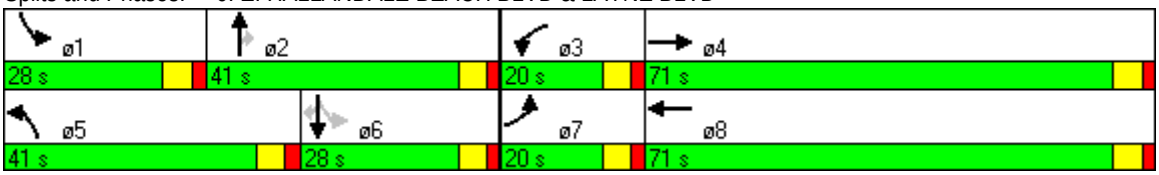
Intersection Summary			
HCM Average Control Delay	36.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	145.8	Sum of lost time (s)	24.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	49	1043	28	1439	97	14	49	20	5	50
Turn Type	Prot		Prot		Prot		Perm	pm+pt		Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	20.0	71.0	20.0	71.0	41.0	41.0	41.0	28.0	28.0	28.0
Total Split (%)	12.5%	44.4%	12.5%	44.4%	25.6%	25.6%	25.6%	17.5%	17.5%	17.5%
Yellow Time (s)	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	9.7	54.0	7.7	49.5	10.9	9.0	40.1		26.6	26.6
Actuated g/C Ratio	0.08	0.47	0.07	0.43	0.10	0.08	0.35		0.23	0.23
v/c Ratio	0.40	0.57	0.25	0.72	0.46	0.55	0.11		0.09	0.14
Control Delay	63.3	23.1	62.7	29.1	63.9	69.8	8.4		46.8	13.1
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.0	0.0		0.0	0.0
Total Delay	63.3	23.1	62.7	29.7	63.9	69.8	8.4		46.8	13.1
LOS	E	C	E	C	E	E	A		D	B
Approach Delay		24.9		30.3		49.0			24.3	
Approach LOS		C		C		D			C	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 114.5
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 29.0 — Intersection LOS: C
Intersection Capacity Utilization 56.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 6: E. HALLANDALE BEACH BLVD & LAYNE BLVD



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	1043	68	28	1439	23	97	14	49	20	5	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	5039		1770	5073		1681	1705	1583		1791	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.80	1.00		0.79	1.00
Satd. Flow (perm)	1770	5039		1770	5073		1681	1419	1583		1468	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.93	0.93	0.93	0.76	0.76	0.76	0.83	0.83	0.83
Adj. Flow (vph)	60	1272	83	30	1547	25	128	18	64	24	6	60
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	41	0	0	47
Lane Group Flow (vph)	60	1351	0	30	1571	0	73	73	23	0	30	13
Turn Type	Prot			Prot			Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2	6		6
Actuated Green, G (s)	7.9	54.0		4.7	50.8		9.0	41.6	41.6		26.6	26.6
Effective Green, g (s)	7.9	54.0		4.7	50.8		9.0	41.6	41.6		26.6	26.6
Actuated g/C Ratio	0.07	0.46		0.04	0.43		0.08	0.35	0.35		0.22	0.22
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	118	2300		70	2178		128	521	557		330	356
v/s Ratio Prot	c0.03	c0.27		0.02	c0.31		c0.04	0.01				
v/s Ratio Perm								c0.04	0.01		0.02	0.01
v/c Ratio	0.51	0.59		0.43	0.72		0.57	0.14	0.04		0.09	0.04
Uniform Delay, d1	53.3	23.9		55.5	27.9		52.8	26.2	25.2		36.3	35.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	3.4	0.4		4.2	1.2		6.0	0.1	0.1		0.1	0.2
Delay (s)	56.7	24.3		59.7	29.1		58.8	26.3	25.4		36.4	36.0
Level of Service	E	C		E	C		E	C	C		D	D
Approach Delay (s)		25.6			29.7			37.3			36.2	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	118.3	Sum of lost time (s)	24.0
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	67	1	2	0	1	50
Peak Hour Factor	0.71	0.71	0.25	0.25	0.67	0.67
Hourly flow rate (vph)	94	1	8	0	1	75

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	96	8	76
Volume Left (vph)	94	0	1
Volume Right (vph)	0	0	75
Hadj (s)	0.23	0.03	-0.55
Departure Headway (s)	4.3	4.2	3.6
Degree Utilization, x	0.11	0.01	0.08
Capacity (veh/h)	821	838	967
Control Delay (s)	7.8	7.2	6.9
Approach Delay (s)	7.8	7.2	6.9
Approach LOS	A	A	A

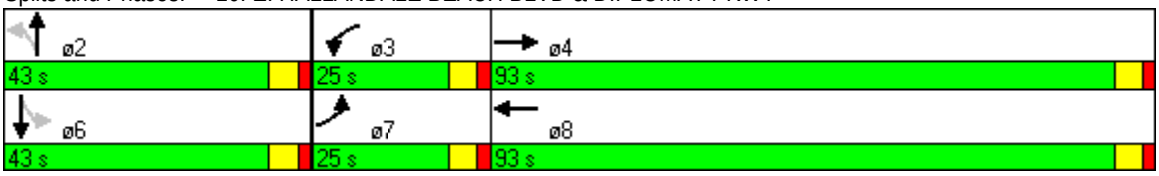
Intersection Summary			
Delay	7.4		
HCM Level of Service	A		
Intersection Capacity Utilization	20.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	49	967	14	1291	8	1	41	23
Turn Type	Prot		Prot		Perm		Perm	
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	25.0	93.0	25.0	93.0	43.0	43.0	43.0	43.0
Total Split (%)	15.5%	57.8%	15.5%	57.8%	26.7%	26.7%	26.7%	26.7%
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	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				
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	9.3	48.5	6.6	41.1		37.9	37.9	37.9
Actuated g/C Ratio	0.09	0.47	0.06	0.40		0.37	0.37	0.37
v/c Ratio	0.40	0.54	0.13	0.70		0.04	0.09	0.15
Control Delay	56.0	20.5	54.1	28.1		20.9	27.9	11.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	56.0	20.5	54.1	28.1		20.9	27.9	11.4
LOS	E	C	D	C		C	C	B
Approach Delay		22.2		28.4		20.9		16.8
Approach LOS		C		C		C		B

Intersection Summary

Cycle Length: 161
Actuated Cycle Length: 103.5
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 24.9 — Intersection LOS: C
Intersection Capacity Utilization 51.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 10: E. HALLANDALE BEACH BLVD & DIPLOMAT PKWY



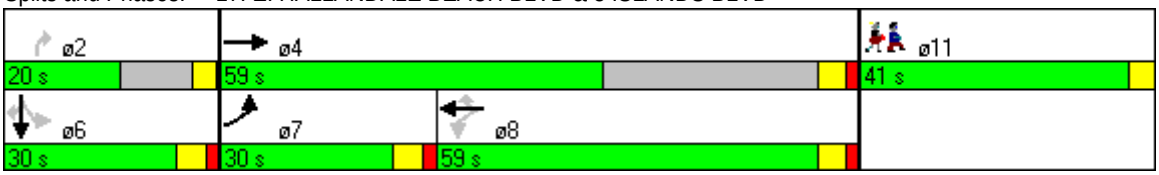
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	49	967	16	14	1291	40	8	1	5	41	23	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.95		1.00	0.89	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1770	5073		1770	5062			1726		1770	1659	
Flt Permitted	0.95	1.00		0.95	1.00			0.88		0.74	1.00	
Satd. Flow (perm)	1770	5073		1770	5062			1558		1383	1659	
Peak-hour factor, PHF	0.77	0.77	0.77	0.95	0.95	0.95	0.60	0.60	0.60	0.88	0.88	0.88
Adj. Flow (vph)	64	1256	21	15	1359	42	13	2	8	47	26	70
RTOR Reduction (vph)	0	1	0	0	2	0	0	5	0	0	45	0
Lane Group Flow (vph)	64	1276	0	15	1399	0	0	18	0	47	51	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.7	48.5		2.7	43.5			37.9		37.9	37.9	
Effective Green, g (s)	7.7	48.5		2.7	43.5			37.9		37.9	37.9	
Actuated g/C Ratio	0.07	0.45		0.03	0.41			0.35		0.35	0.35	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	127	2297		45	2056			551		489	587	
v/s Ratio Prot	c0.04	c0.25		0.01	c0.28						0.03	
v/s Ratio Perm								0.01		c0.03		
v/c Ratio	0.50	0.56		0.33	0.68			0.03		0.10	0.09	
Uniform Delay, d1	47.9	21.4		51.3	26.1			22.6		23.1	23.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	3.1	0.3		4.3	0.9			0.1		0.4	0.3	
Delay (s)	51.0	21.7		55.7	27.0			22.7		23.5	23.4	
Level of Service	D	C		E	C			C		C	C	
Approach Delay (s)		23.1			27.3			22.7			23.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	107.1	Sum of lost time (s)	24.0
Intersection Capacity Utilization	51.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø2	ø11
Lane Configurations									
Volume (vph)	190	745	1025	23	211	0	320		
Turn Type	Prot			Perm	Perm		Perm		
Protected Phases	7	4	8			6		2	11
Permitted Phases				8	6		6		
Detector Phase	7	4	8	8	6	6	6		
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	20.0	10.0
Total Split (s)	30.0	59.0	59.0	59.0	30.0	30.0	30.0	20.0	41.0
Total Split (%)	18.8%	36.9%	36.9%	36.9%	18.8%	18.8%	18.8%	13%	26%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.5	0.0
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	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max	None
Act Effct Green (s)	11.3	44.0	26.7	26.7	24.2	24.2	24.2		
Actuated g/C Ratio	0.14	0.55	0.33	0.33	0.30	0.30	0.30		
v/c Ratio	0.45	0.30	0.69	0.05	0.24	0.24	0.51		
Control Delay	35.5	9.9	25.6	7.6	24.9	24.9	5.7		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	35.5	9.9	25.6	7.6	24.9	24.9	5.7		
LOS	D	A	C	A	C	C	A		
Approach Delay		15.1	25.2			13.3			
Approach LOS		B	C			B			

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 80.3	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 49.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 17: E. HALLANDALE BEACH BLVD & 3 ISLANDS BLVD



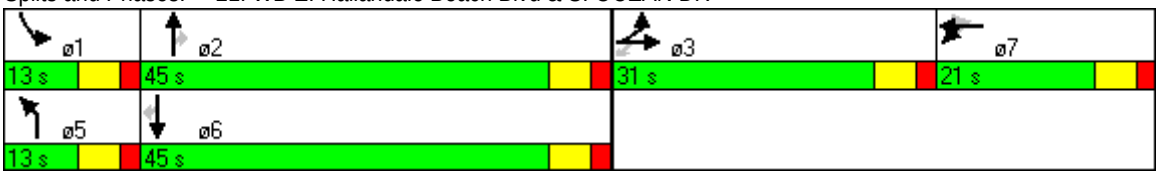
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	745	0	0	1025	23	0	0	0	211	0	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Lane Util. Factor	0.97	0.91			0.91	1.00				0.95	0.95	1.00
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	3433	5085			5085	1583				1681	1681	1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)	3433	5085			5085	1583				1681	1681	1583
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	216	847	0	0	1165	26	0	0	0	245	0	372
RTOR Reduction (vph)	0	0	0	0	0	17	0	0	0	0	0	260
Lane Group Flow (vph)	216	847	0	0	1165	9	0	0	0	122	123	112
Turn Type	Prot			Perm		Perm			custom	Perm		Perm
Protected Phases	7	4			8						6	
Permitted Phases				8		8			2	6		6
Actuated Green, G (s)	11.3	44.1			26.8	26.8				24.2	24.2	24.2
Effective Green, g (s)	11.3	44.1			26.8	26.8				24.2	24.2	24.2
Actuated g/C Ratio	0.14	0.55			0.33	0.33				0.30	0.30	0.30
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	483	2793			1697	528				507	507	477
v/s Ratio Prot	c0.06	0.17			c0.23							
v/s Ratio Perm						0.01				0.07	0.07	0.07
v/c Ratio	0.45	0.30			0.69	0.02				0.24	0.24	0.24
Uniform Delay, d1	31.6	9.8			23.1	17.9				21.1	21.1	21.1
Progression Factor	1.00	1.00			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1			1.2	0.0				1.1	1.1	1.2
Delay (s)	32.3	9.9			24.3	17.9				22.3	22.3	22.2
Level of Service	C	A			C	B				C	C	C
Approach Delay (s)		14.4			24.2			0.0			22.3	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM Average Control Delay	20.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	80.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations											
Volume (vph)	430	36	667	173	6	19	422	6	6	312	248
Turn Type	Split		Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7		5	2		1	6	
Permitted Phases			3		7			2			6
Detector Phase	3	3	3	7	7	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	22.0	22.0	10.0	10.0	10.0
Total Split (s)	31.0	31.0	31.0	21.0	21.0	13.0	45.0	45.0	13.0	45.0	45.0
Total Split (%)	28.2%	28.2%	28.2%	19.1%	19.1%	11.8%	40.9%	40.9%	11.8%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	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	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	25.1	25.1	25.1	13.5	13.5	6.4	39.8	39.8	6.0	37.2	37.2
Actuated g/C Ratio	0.25	0.25	0.25	0.14	0.14	0.06	0.40	0.40	0.06	0.38	0.38
v/c Ratio	0.58	0.58	0.77	0.72	0.03	0.18	0.32	0.01	0.06	0.28	0.49
Control Delay	40.1	40.0	9.0	58.3	39.3	49.7	21.8	12.5	47.8	23.5	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.1	40.0	9.0	58.3	39.3	49.7	21.8	12.5	47.8	23.5	28.9
LOS	D	D	A	E	D	D	C	B	D	C	C
Approach Delay		21.8		57.7			22.9			26.1	
Approach LOS		C		E			C			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 98.8	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 25.8	Intersection LOS: C
Intersection Capacity Utilization 74.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 21: WB E. Hallandale Beach Blvd & S. OCEAN DR



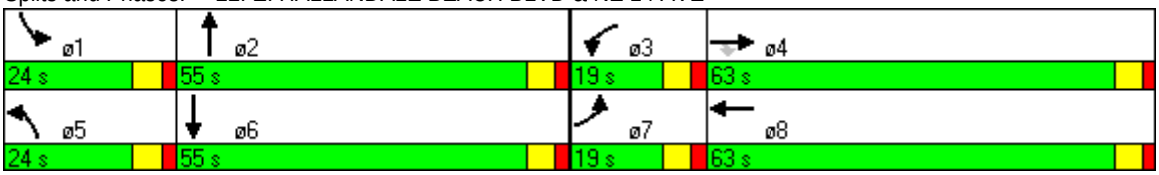
Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	430	36	667	6	173	6	19	422	6	6	312	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1698	1583		1860	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.96	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1698	1583		1860	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.98	0.98	0.98	0.94	0.94	0.94	0.84	0.84	0.84
Adj. Flow (vph)	462	39	717	6	177	6	20	449	6	7	371	295
RTOR Reduction (vph)	0	0	543	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	249	252	174	0	183	6	20	449	2	7	371	295
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7	7		5	2		1	6	
Permitted Phases			3			7			2			6
Actuated Green, G (s)	25.1	25.1	25.1		13.5	13.5	2.6	39.8	39.8	1.3	38.5	38.5
Effective Green, g (s)	25.1	25.1	25.1		13.5	13.5	2.6	39.8	39.8	1.3	38.5	38.5
Actuated g/C Ratio	0.24	0.24	0.24		0.13	0.13	0.03	0.38	0.38	0.01	0.37	0.37
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	407	411	383		242	206	44	1358	608	22	1314	588
v/s Ratio Prot	0.15	c0.15			c0.10		c0.01	0.13		0.00	0.10	
v/s Ratio Perm			0.11			0.00			0.00			c0.19
v/c Ratio	0.61	0.61	0.45		0.76	0.03	0.45	0.33	0.00	0.32	0.28	0.50
Uniform Delay, d1	35.0	35.0	33.5		43.5	39.4	49.9	22.5	19.7	50.8	22.9	25.2
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.7	6.7	3.8		12.6	0.1	7.3	0.7	0.0	8.2	0.1	0.7
Delay (s)	41.7	41.7	37.3		56.1	39.4	57.1	23.2	19.7	58.9	23.0	25.9
Level of Service	D	D	D		E	D	E	C	B	E	C	C
Approach Delay (s)		39.1			55.6			24.6			24.6	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	103.7	Sum of lost time (s)	24.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	85	1247	223	16	1386	244	72	115	83
Turn Type	Prot		Perm	Prot		Prot		Prot	
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0
Total Split (s)	19.0	63.0	63.0	19.0	63.0	24.0	55.0	24.0	55.0
Total Split (%)	11.8%	39.1%	39.1%	11.8%	39.1%	14.9%	34.2%	14.9%	34.2%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	12.4	66.6	66.6	7.3	56.7	17.5	51.2	15.3	49.0
Actuated g/C Ratio	0.08	0.42	0.42	0.05	0.36	0.11	0.32	0.10	0.31
v/c Ratio	0.79	0.74	0.36	0.24	0.92	0.85	0.21	0.73	0.48
Control Delay	107.3	43.0	10.2	80.5	58.3	90.8	38.5	94.1	37.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.3	43.0	10.2	80.5	58.3	90.8	38.5	94.1	37.1
LOS	F	D	B	F	E	F	D	F	D
Approach Delay		41.8			58.5		76.2		55.0
Approach LOS		D			E		E		D

Intersection Summary	
Cycle Length: 161	
Actuated Cycle Length: 159.6	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 52.6	Intersection LOS: D
Intersection Capacity Utilization 74.0%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 22: E. HALLANDALE BEACH BLVD & NE 14 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	1247	223	16	1386	35	244	72	23	115	83	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.96		1.00	0.90	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5066		3433	1796		1770	1675	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5066		3433	1796		1770	1675	
Peak-hour factor, PHF	0.79	0.79	0.79	0.86	0.86	0.86	0.76	0.76	0.76	0.93	0.93	0.93
Adj. Flow (vph)	108	1578	282	19	1612	41	321	95	30	124	89	182
RTOR Reduction (vph)	0	0	125	0	2	0	0	7	0	0	46	0
Lane Group Flow (vph)	108	1578	157	19	1651	0	321	118	0	124	225	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	12.4	66.6	66.6	4.9	59.1		17.5	51.2		15.3	49.0	
Effective Green, g (s)	12.4	66.6	66.6	4.9	59.1		17.5	51.2		15.3	49.0	
Actuated g/C Ratio	0.08	0.41	0.41	0.03	0.36		0.11	0.32		0.09	0.30	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	135	2091	651	54	1848		371	568		167	507	
v/s Ratio Prot	c0.06	c0.31		0.01	c0.33		c0.09	0.07		0.07	c0.13	
v/s Ratio Perm			0.10									
v/c Ratio	0.80	0.75	0.24	0.35	0.89		0.87	0.21		0.74	0.44	
Uniform Delay, d1	73.6	40.7	31.2	77.0	48.5		71.1	40.6		71.4	45.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	27.7	1.6	0.2	3.9	6.0		18.5	0.8		16.2	2.8	
Delay (s)	101.3	42.3	31.4	80.9	54.5		89.6	41.4		87.7	48.3	
Level of Service	F	D	C	F	D		F	D		F	D	
Approach Delay (s)		44.0			54.8			76.1			60.7	
Approach LOS		D			D			E			E	

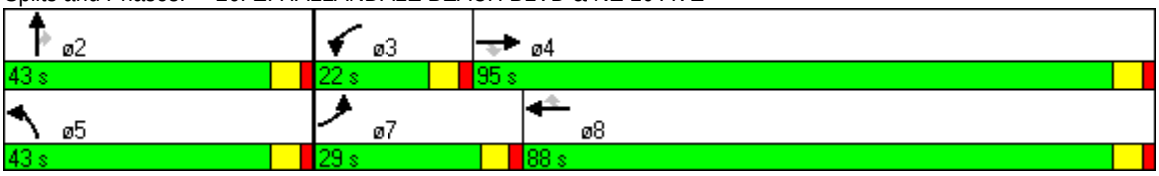
Intersection Summary			
HCM Average Control Delay	52.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	162.0	Sum of lost time (s)	30.0
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBT	NBR	ø5
Lane Configurations									
Volume (vph)	116	1466	48	136	1687	32	2	60	
Turn Type	Prot		Perm	Prot		Perm		Perm	
Protected Phases	7	4		3	8		2		5
Permitted Phases			4			8		2	
Detector Phase	7	4	4	3	8	8	2	2	
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	22.0	22.0	10.0
Total Split (s)	29.0	95.0	95.0	22.0	88.0	88.0	43.0	43.0	43.0
Total Split (%)	18.1%	59.4%	59.4%	13.8%	55.0%	55.0%	26.9%	26.9%	27%
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	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	None	Max	Max	None
Act Effct Green (s)	16.3	72.0	72.0	11.5	67.1	67.1	37.6	37.6	
Actuated g/C Ratio	0.12	0.52	0.52	0.08	0.48	0.48	0.27	0.27	
v/c Ratio	0.68	0.67	0.07	0.52	0.74	0.04	0.01	0.16	
Control Delay	77.6	25.9	12.2	70.5	31.0	10.8	45.5	10.3	
Queue Delay	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	77.6	26.3	12.2	70.5	31.0	10.8	45.5	10.3	
LOS	E	C	B	E	C	B	D	B	
Approach Delay		29.5			33.5		11.6		
Approach LOS		C			C		B		

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 139.3
Natural Cycle: 65
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 31.1 — Intersection LOS: C
Intersection Capacity Utilization 57.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 26: E. HALLANDALE BEACH BLVD & NE 10 AVE



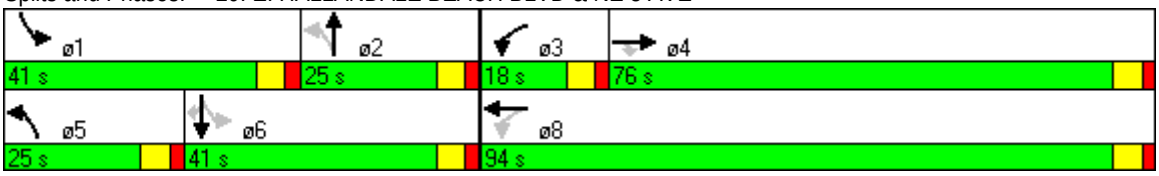
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	1466	48	136	1687	32	0	2	60	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0			
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00		0.95	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583		1770	1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00			
Satd. Flow (perm)	1770	5085	1583	3433	5085	1583		1770	1583			
Peak-hour factor, PHF	0.83	0.83	0.83	0.93	0.93	0.93	0.76	0.76	0.76	0.92	0.92	0.92
Adj. Flow (vph)	140	1766	58	146	1814	34	0	3	79	0	0	0
RTOR Reduction (vph)	0	0	8	0	0	10	0	0	58	0	0	0
Lane Group Flow (vph)	140	1766	50	146	1814	24	0	3	21	0	0	0
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm			
Protected Phases	7	4		3	8		5	2				
Permitted Phases			4			8			2			
Actuated Green, G (s)	16.3	72.0	72.0	11.5	67.2	67.2		37.6	37.6			
Effective Green, g (s)	16.3	72.0	72.0	11.5	67.2	67.2		37.6	37.6			
Actuated g/C Ratio	0.12	0.52	0.52	0.08	0.48	0.48		0.27	0.27			
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0			
Lane Grp Cap (vph)	207	2632	819	284	2457	765		478	428			
v/s Ratio Prot	c0.08	c0.35		0.04	c0.36			0.00				
v/s Ratio Perm			0.03			0.02			c0.01			
v/c Ratio	0.68	0.67	0.06	0.51	0.74	0.03		0.01	0.05			
Uniform Delay, d1	58.9	24.8	16.7	61.1	28.9	18.9		37.1	37.5			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00			
Incremental Delay, d2	8.4	0.7	0.0	1.6	1.2	0.0		0.0	0.2			
Delay (s)	67.3	25.5	16.7	62.7	30.1	18.9		37.1	37.8			
Level of Service	E	C	B	E	C	B		D	D			
Approach Delay (s)		28.2			32.3			37.7			0.0	
Approach LOS		C			C			D			A	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	139.1	Sum of lost time (s)	24.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	1739	8	2	1775	1	0	95	1	185
Turn Type		Perm	pm+pt		pm+pt		pm+pt		Perm
Protected Phases	4		3	8	5	2	1	6	
Permitted Phases		4	8		2		6		6
Detector Phase	4	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0	22.0
Total Split (s)	76.0	76.0	18.0	94.0	25.0	25.0	41.0	41.0	41.0
Total Split (%)	47.5%	47.5%	11.3%	58.8%	15.6%	15.6%	25.6%	25.6%	25.6%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	60.6	60.6	62.6	62.6		24.1	35.7	35.7	35.7
Actuated g/C Ratio	0.55	0.55	0.57	0.57		0.22	0.32	0.32	0.32
v/c Ratio	0.70	0.01	0.01	0.67		0.05	0.13	0.12	0.32
Control Delay	20.0	7.9	9.5	17.6		20.5	31.3	31.2	6.0
Queue Delay	0.4	0.0	0.0	0.1		0.0	0.0	0.0	0.0
Total Delay	20.5	7.9	9.5	17.7		20.5	31.3	31.2	6.0
LOS	C	A	A	B		C	C	C	A
Approach Delay	20.4			17.7		20.5		14.6	
Approach LOS	C			B		C		B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 110.5	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 64.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 29: E. HALLANDALE BEACH BLVD & NE 8 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1739	8	2	1775	0	1	0	12	95	1	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lane Util. Factor		0.91	1.00	1.00	0.91			1.00		0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00			0.87		1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			1.00		0.95	0.95	1.00
Satd. Flow (prot)		5085	1583	1770	5085			1621		1681	1687	1583
Flt Permitted		1.00	1.00	0.06	1.00			0.99		0.67	0.80	1.00
Satd. Flow (perm)		5085	1583	112	5085			1611		1181	1420	1583
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.69	0.69	0.69	0.89	0.89	0.89
Adj. Flow (vph)	0	1954	9	2	1929	0	1	0	17	107	1	208
RTOR Reduction (vph)	0	0	3	0	0	0	0	13	0	0	0	142
Lane Group Flow (vph)	0	1954	6	2	1929	0	0	5	0	53	55	66
Turn Type			Perm	pm+pt			pm+pt			pm+pt		Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases			4	8			2			6		6
Actuated Green, G (s)		60.6	60.6	67.6	67.6			24.1		37.1	37.1	37.1
Effective Green, g (s)		60.6	60.6	67.6	67.6			24.1		37.1	37.1	37.1
Actuated g/C Ratio		0.52	0.52	0.58	0.58			0.21		0.32	0.32	0.32
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		2641	822	79	2946			333		405	467	503
v/s Ratio Prot		c0.38		0.00	c0.38					0.01	0.01	
v/s Ratio Perm			0.00	0.01				0.00		0.03	0.03	c0.04
v/c Ratio		0.74	0.01	0.03	0.65			0.01		0.13	0.12	0.13
Uniform Delay, d1		21.9	13.5	16.3	16.6			36.8		28.2	28.2	28.3
Progression Factor		1.00	1.00	1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.1	0.0	0.1	0.5			0.0		0.1	0.1	0.5
Delay (s)		23.0	13.5	16.4	17.2			36.9		28.3	28.3	28.9
Level of Service		C	B	B	B			D		C	C	C
Approach Delay (s)		23.0			17.2			36.9			28.7	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	20.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	116.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	48	49	126	67	7	64
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	53	137	73	8	70
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	258	173			210	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	258	173			210	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	94			99	
cM capacity (veh/h)	727	870			1361	

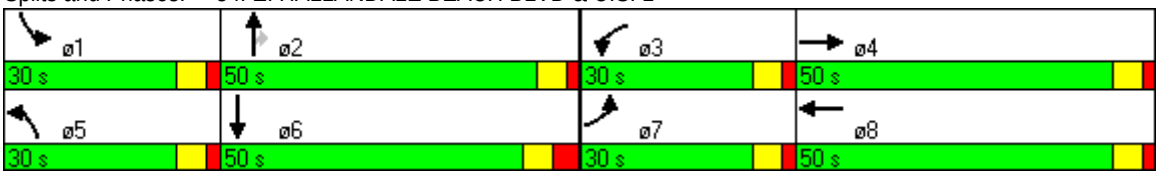
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	105	210	77
Volume Left	52	0	8
Volume Right	53	73	0
cSH	793	1700	1361
Volume to Capacity	0.13	0.12	0.01
Queue Length 95th (ft)	11	0	0
Control Delay (s)	10.2	0.0	0.8
Lane LOS	B		A
Approach Delay (s)	10.2	0.0	0.8
Approach LOS	B		

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	114	1037	540	1168	305	598	347	240	1108
Turn Type	Prot		Prot		Prot		Perm	Prot	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	24.0	12.0	24.0	12.0	24.0	24.0	12.0	24.0
Total Split (s)	30.0	50.0	30.0	50.0	30.0	50.0	50.0	30.0	50.0
Total Split (%)	18.8%	31.3%	18.8%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%
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	4.0
Lost Time Adjust (s)	0.0	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	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	16.7	44.0	24.0	51.4	19.5	45.1	45.1	18.5	42.0
Actuated g/C Ratio	0.11	0.28	0.15	0.33	0.13	0.29	0.29	0.12	0.27
v/c Ratio	0.69	1.16	1.24	0.93	0.74	0.43	0.54	0.72	1.07
Control Delay	85.1	125.6	176.9	60.9	76.8	46.3	11.7	76.4	97.5
Queue Delay	0.0	0.0	0.0	36.6	0.0	0.0	0.0	0.0	0.0
Total Delay	85.1	125.6	176.9	97.5	76.8	46.3	11.7	76.4	97.5
LOS	F	F	F	F	E	D	B	E	F
Approach Delay		122.6		121.2		44.1			94.0
Approach LOS		F		F		D			F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 155.6	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.24	
Intersection Signal Delay: 100.4	Intersection LOS: F
Intersection Capacity Utilization 98.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 34: E. HALLANDALE BEACH BLVD & U.S. 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	1037	410	540	1168	104	305	598	347	240	1108	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4869		3433	5023		3433	5085	1583	3433	5030	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4869		3433	5023		3433	5085	1583	3433	5030	
Peak-hour factor, PHF	0.88	0.88	0.88	0.82	0.82	0.82	0.95	0.95	0.95	0.82	0.82	0.82
Adj. Flow (vph)	130	1178	466	659	1424	127	321	629	365	293	1351	105
RTOR Reduction (vph)	0	44	0	0	6	0	0	0	218	0	5	0
Lane Group Flow (vph)	130	1600	0	659	1545	0	321	629	147	293	1451	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	16.7	44.1		24.0	51.4		19.5	45.1	45.1	18.5	42.1	
Effective Green, g (s)	16.7	44.1		24.0	51.4		19.5	45.1	45.1	18.5	42.1	
Actuated g/C Ratio	0.11	0.28		0.15	0.33		0.13	0.29	0.29	0.12	0.27	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	190	1379		529	1658		430	1473	459	408	1360	
v/s Ratio Prot	0.07	c0.33		c0.19	0.31		c0.09	0.12		0.09	c0.29	
v/s Ratio Perm									0.09			
v/c Ratio	0.68	1.16		1.25	0.93		0.75	0.43	0.32	0.72	1.07	
Uniform Delay, d1	67.0	55.8		65.8	50.5		65.7	44.8	43.3	66.1	56.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.8	80.4		125.8	10.0		6.9	0.9	1.8	5.9	44.4	
Delay (s)	76.7	136.2		191.6	60.4		72.6	45.7	45.1	72.0	101.2	
Level of Service	E	F		F	E		E	D	D	E	F	
Approach Delay (s)		131.9			99.5			52.1			96.3	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM Average Control Delay	98.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	155.7	Sum of lost time (s)	26.0
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	AM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Existing AM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		950	4	47	1072	
Peak-Hour Factor, PHF	1.00	0.82	0.82	0.90	0.90	1.00
Hourly Flow Rate, HFR (veh/h)	0	1158	4	52	1191	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			58			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	63	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		52			63			
C (m) (veh/h)		597			463			
v/c		0.09			0.14			
95% queue length		0.29			0.47			
Control Delay (s/veh)		11.6			14.0			
LOS		B			B			
Approach Delay (s/veh)	--	--	14.0					
Approach LOS	--	--	B					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	950	4	47	1072	0	0	58	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	954	0	47	1072	0	0	58	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	1.00	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5172	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	22.1	0.0	3.1	24.9		0.0	4.3		0.0
Adj Reference Time (s)	26.1	0.0	8.0	28.9		0.0	8.3		0.0
Permitted Option									
Adj Saturation A (vph)	1724		120	1725	0			0	
Reference Time A (s)	22.1		46.9	24.9	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	22.1			46.9					
Adj Reference Time (s)	26.1			50.9					
Split Option									
Ref Time Combined (s)	22.1		3.1	24.9	0.0			0.0	
Ref Time Seperate (s)	22.0		3.1	24.9	0.0			0.0	
Reference Time (s)	22.1		24.9	24.9	0.0			0.0	
Adj Reference Time (s)	26.1		28.9	28.9	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	34.1	NA	NA	
Permitted Option (s)	50.9	Err	Err	
Split Option (s)	55.0	0.0	0.0	
Minimum (s)	34.1	0.0	0.0	34.1

Right Turns	NBR2
Adj Reference Time (s)	8.3
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	26.1
Combined (s)	34.4

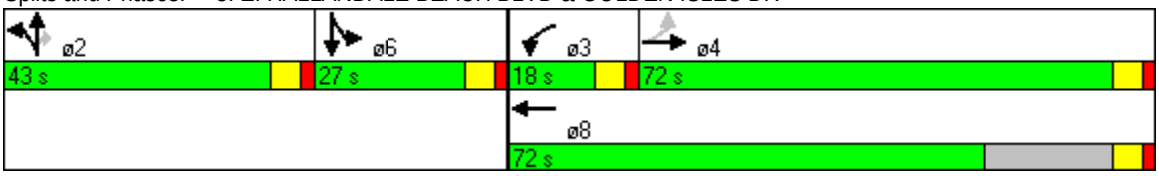
Intersection Summary			
Intersection Capacity Utilization	28.7%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	2	1655	48	1464	130	18	54	13
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	72.0	72.0	18.0	72.0	43.0	43.0	43.0	27.0
Total Split (%)	45.0%	45.0%	11.3%	45.0%	26.9%	26.9%	26.9%	16.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		66.1	9.8	79.3	37.1	37.1	37.1	21.0
Actuated g/C Ratio		0.43	0.06	0.51	0.24	0.24	0.24	0.14
v/c Ratio		0.95	0.50	0.68	0.25	0.24	0.17	0.17
Control Delay		54.2	87.0	29.9	51.3	51.1	10.8	57.2
Queue Delay		221.5	0.0	28.6	0.0	0.0	0.0	0.0
Total Delay		275.6	87.0	58.6	51.3	51.1	10.8	57.2
LOS		F	F	E	D	D	B	E
Approach Delay		275.6		59.4		40.4		57.2
Approach LOS		F		E		D		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 155.4	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 159.6	Intersection LOS: F
Intersection Capacity Utilization 60.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



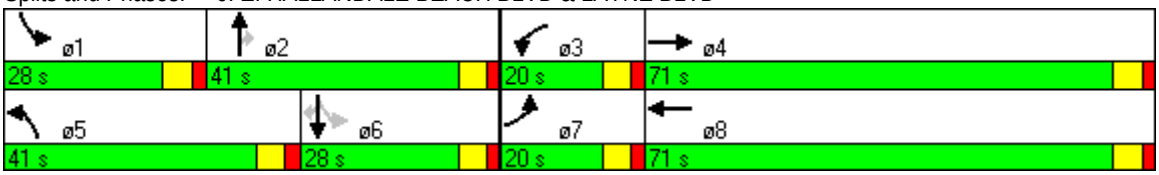
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	1655	83	48	1464	50	130	18	54	53	13	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5049		1770	5060		1681	1705	1583		3364	
Flt Permitted		0.94		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4735		1770	5060		1681	1705	1583		3364	
Peak-hour factor, PHF	0.91	0.91	0.91	0.86	0.86	0.86	0.75	0.75	0.75	0.96	0.96	0.96
Adj. Flow (vph)	2	1819	91	56	1702	58	173	24	72	55	14	8
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	55	0	5	0
Lane Group Flow (vph)	0	1909	0	56	1758	0	99	98	17	0	72	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		66.1		8.4	80.5		37.1	37.1	37.1		21.0	
Effective Green, g (s)		66.1		8.4	80.5		37.1	37.1	37.1		21.0	
Actuated g/C Ratio		0.42		0.05	0.51		0.24	0.24	0.24		0.13	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1999		95	2601		398	404	375		451	
v/s Ratio Prot				0.03	c0.35		c0.06	0.06			c0.02	
v/s Ratio Perm		c0.40							0.01			
v/c Ratio		0.95		0.59	0.68		0.25	0.24	0.05		0.16	
Uniform Delay, d1		43.8		72.4	28.3		48.4	48.4	46.1		60.0	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		11.3		9.0	0.7		1.5	1.4	0.2		0.8	
Delay (s)		55.1		81.4	29.0		49.9	49.8	46.3		60.7	
Level of Service		E		F	C		D	D	D		E	
Approach Delay (s)		55.1			30.7			48.9			60.7	
Approach LOS		E			C			D			E	

Intersection Summary			
HCM Average Control Delay	43.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	156.6	Sum of lost time (s)	24.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	98	1585	24	1426	130	14	58	80	12	71
Turn Type	Prot		Prot		Prot		Perm	pm+pt		Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	20.0	71.0	20.0	71.0	41.0	41.0	41.0	28.0	28.0	28.0
Total Split (%)	12.5%	44.4%	12.5%	44.4%	25.6%	25.6%	25.6%	17.5%	17.5%	17.5%
Yellow Time (s)	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	12.4	63.3	7.5	52.8	12.1	12.1	40.5		22.4	22.4
Actuated g/C Ratio	0.10	0.51	0.06	0.43	0.10	0.10	0.33		0.18	0.18
v/c Ratio	0.62	0.71	0.25	0.72	0.53	0.54	0.13		0.56	0.27
Control Delay	72.6	26.2	66.1	31.7	68.2	68.4	8.0		60.9	11.5
Queue Delay	0.0	0.0	0.0	3.0	0.0	0.0	0.0		0.0	0.0
Total Delay	72.6	26.2	66.1	34.7	68.2	68.4	8.0		60.9	11.5
LOS	E	C	E	C	E	E	A		E	B
Approach Delay		28.9		35.2		51.0			39.4	
Approach LOS		C		D		D			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 124	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 33.3	Intersection LOS: C
Intersection Capacity Utilization 61.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 6: E. HALLANDALE BEACH BLVD & LAYNE BLVD



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	1585	48	24	1426	31	130	14	58	80	12	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	5063		1770	5069		1681	1701	1583		1785	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.58	1.00		0.69	1.00
Satd. Flow (perm)	1770	5063		1770	5069		1681	1027	1583		1283	1583
Peak-hour factor, PHF	0.89	0.89	0.89	0.93	0.93	0.93	0.82	0.82	0.82	0.71	0.71	0.71
Adj. Flow (vph)	110	1781	54	26	1533	33	159	17	71	113	17	100
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	48	0	0	82
Lane Group Flow (vph)	110	1834	0	26	1565	0	87	89	23	0	130	18
Turn Type	Prot			Prot			Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2	6		6
Actuated Green, G (s)	12.4	63.3		4.7	55.6		12.1	40.5	40.5		22.4	22.4
Effective Green, g (s)	12.4	63.3		4.7	55.6		12.1	40.5	40.5		22.4	22.4
Actuated g/C Ratio	0.10	0.50		0.04	0.44		0.10	0.32	0.32		0.18	0.18
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	174	2534		66	2228		161	393	507		227	280
v/s Ratio Prot	c0.06	c0.36		0.01	0.31		c0.05	0.02				
v/s Ratio Perm								0.05	0.01		c0.10	0.01
v/c Ratio	0.63	0.72		0.39	0.70		0.54	0.23	0.04		0.57	0.06
Uniform Delay, d1	54.9	24.7		59.5	28.7		54.5	31.5	29.7		47.7	43.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	7.3	1.0		3.8	1.0		3.7	0.3	0.2		3.5	0.4
Delay (s)	62.1	25.8		63.4	29.8		58.2	31.8	29.8		51.1	43.8
Level of Service	E	C		E	C		E	C	C		D	D
Approach Delay (s)		27.9			30.3			40.5			47.9	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	126.5	Sum of lost time (s)	24.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	44	6	1	2	5	61
Peak Hour Factor	0.88	0.88	0.38	0.38	0.68	0.68
Hourly flow rate (vph)	34	7	3	5	7	90

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	41	8	97
Volume Left (vph)	34	0	7
Volume Right (vph)	0	5	90
Hadj (s)	0.20	-0.37	-0.51
Departure Headway (s)	4.3	3.8	3.5
Degree Utilization, x	0.05	0.01	0.09
Capacity (veh/h)	816	927	1002
Control Delay (s)	7.5	6.8	6.9
Approach Delay (s)	7.5	6.8	6.9
Approach LOS	A	A	A

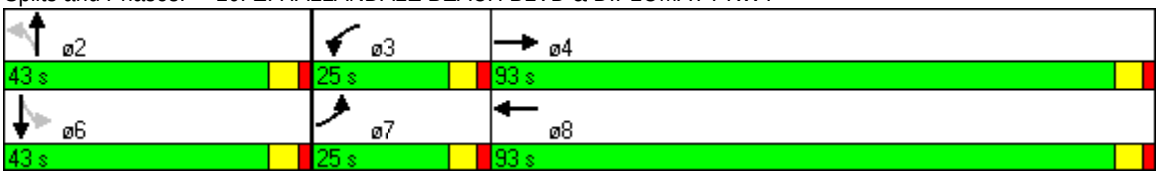
Intersection Summary			
Delay	7.0		
HCM Level of Service	A		
Intersection Capacity Utilization	19.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	106	1733	4	1415	8	11	61	1
Turn Type	Prot		Prot		Perm		Perm	
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	25.0	93.0	25.0	93.0	43.0	43.0	43.0	43.0
Total Split (%)	15.5%	57.8%	15.5%	57.8%	26.7%	26.7%	26.7%	26.7%
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	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				
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	13.2	70.9	6.0	53.8		37.5	37.5	37.5
Actuated g/C Ratio	0.11	0.58	0.05	0.44		0.31	0.31	0.31
v/c Ratio	0.60	0.63	0.05	0.72		0.08	0.22	0.14
Control Delay	68.1	18.4	64.2	30.1		25.6	38.0	9.4
Queue Delay	0.0	0.4	0.0	0.1		0.0	0.0	0.0
Total Delay	68.1	18.8	64.2	30.2		25.6	38.0	9.4
LOS	E	B	E	C		C	D	A
Approach Delay		21.7		30.2		25.6		24.8
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 161
Actuated Cycle Length: 122.8
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 25.5 — Intersection LOS: C
Intersection Capacity Utilization 61.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: E. HALLANDALE BEACH BLVD & DIPLOMAT PKWY



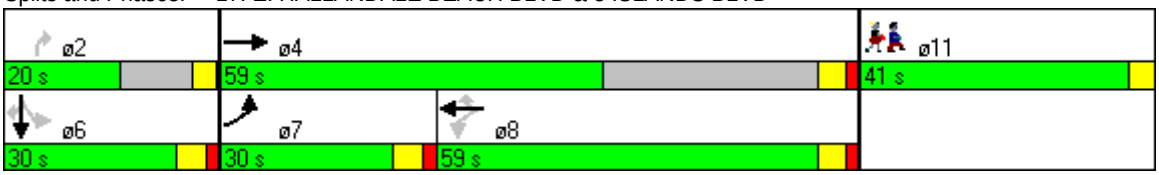
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	1733	0	4	1415	42	8	11	12	61	1	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.95		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	
Satd. Flow (prot)	1770	5085		1770	5063			1741		1770	1587	
Flt Permitted	0.95	1.00		0.95	1.00			0.94		0.73	1.00	
Satd. Flow (perm)	1770	5085		1770	5063			1657		1358	1587	
Peak-hour factor, PHF	0.93	0.93	0.93	0.91	0.91	0.91	0.72	0.72	0.72	0.68	0.68	0.68
Adj. Flow (vph)	114	1863	0	4	1555	46	11	15	17	90	1	76
RTOR Reduction (vph)	0	0	0	0	2	0	0	12	0	0	54	0
Lane Group Flow (vph)	114	1863	0	4	1599	0	0	31	0	90	23	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	13.2	70.9		1.1	58.8			37.6		37.6	37.6	
Effective Green, g (s)	13.2	70.9		1.1	58.8			37.6		37.6	37.6	
Actuated g/C Ratio	0.10	0.56		0.01	0.46			0.29		0.29	0.29	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	183	2825		15	2333			488		400	468	
v/s Ratio Prot	c0.06	c0.37		0.00	0.32						0.01	
v/s Ratio Perm								0.02		c0.07		
v/c Ratio	0.62	0.66		0.27	0.69			0.06		0.22	0.05	
Uniform Delay, d1	54.8	19.9		62.8	27.1			32.3		34.0	32.2	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	6.5	0.6		9.3	0.8			0.3		1.3	0.2	
Delay (s)	61.3	20.4		72.2	28.0			32.6		35.3	32.4	
Level of Service	E	C		E	C			C		D	C	
Approach Delay (s)		22.8			28.1			32.6			34.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	127.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø2	ø11
Lane Configurations									
Volume (vph)	524	1274	1266	167	205	0	258		
Turn Type	Prot			Perm	Perm		Perm		
Protected Phases	7	4	8			6		2	11
Permitted Phases				8	6		6		
Detector Phase	7	4	8	8	6	6	6		
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	20.0	10.0
Total Split (s)	30.0	59.0	59.0	59.0	30.0	30.0	30.0	20.0	41.0
Total Split (%)	18.8%	36.9%	36.9%	36.9%	18.8%	18.8%	18.8%	13%	26%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.5	0.0
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	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max	None
Act Effct Green (s)	24.1	71.6	41.5	41.5	24.1	24.1	24.1		
Actuated g/C Ratio	0.22	0.66	0.39	0.39	0.22	0.22	0.22		
v/c Ratio	0.79	0.44	0.75	0.27	0.29	0.29	0.48		
Control Delay	49.1	8.9	31.2	3.8	39.1	39.1	7.8		
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0	0.0		
Total Delay	49.1	9.1	31.2	3.8	39.1	39.1	7.8		
LOS	D	A	C	A	D	D	A		
Approach Delay		20.8	28.0			21.6			
Approach LOS		C	C			C			

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 107.7	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 60.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: E. HALLANDALE BEACH BLVD & 3 ISLANDS BLVD



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	524	1274	0	0	1266	167	0	0	0	205	0	258
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Lane Util. Factor	0.97	0.91			0.91	1.00				0.95	0.95	1.00
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	3433	5085			5085	1583				1681	1681	1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)	3433	5085			5085	1583				1681	1681	1583
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	609	1481	0	0	1472	194	0	0	0	218	0	274
RTOR Reduction (vph)	0	0	0	0	0	119	0	0	0	0	0	213
Lane Group Flow (vph)	609	1481	0	0	1472	75	0	0	0	109	109	61
Turn Type	Prot			Perm		Perm			custom	Perm		Perm
Protected Phases	7	4			8						6	
Permitted Phases				8		8			2	6		6
Actuated Green, G (s)	24.1	71.6			41.5	41.5				24.1	24.1	24.1
Effective Green, g (s)	24.1	71.6			41.5	41.5				24.1	24.1	24.1
Actuated g/C Ratio	0.22	0.66			0.39	0.39				0.22	0.22	0.22
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	768	3381			1959	610				376	376	354
v/s Ratio Prot	c0.18	0.29			c0.29							
v/s Ratio Perm						0.05				c0.06	0.06	0.04
v/c Ratio	0.79	0.44			0.75	0.12				0.29	0.29	0.17
Uniform Delay, d1	39.4	8.5			28.6	21.4				34.7	34.7	33.8
Progression Factor	1.00	1.00			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	5.6	0.1			1.7	0.1				1.9	1.9	1.1
Delay (s)	45.1	8.6			30.3	21.4				36.6	36.6	34.8
Level of Service	D	A			C	C				D	D	C
Approach Delay (s)		19.3			29.3			0.0			35.6	
Approach LOS		B			C			A			D	

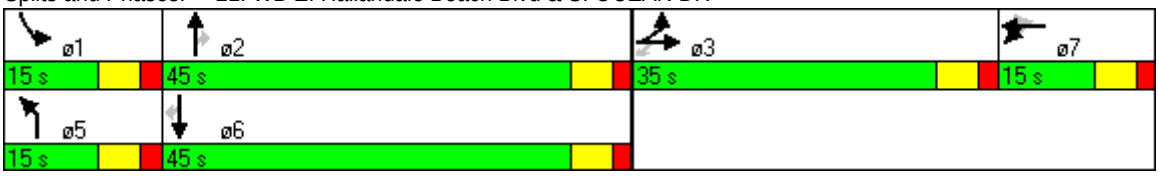
Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	107.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations											
Volume (vph)	642	84	876	89	30	22	655	6	17	710	616
Turn Type	Split		Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7		5	2		1	6	
Permitted Phases			3		7			2			6
Detector Phase	3	3	3	7	7	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	22.0	22.0	10.0	10.0	10.0
Total Split (s)	35.0	35.0	35.0	15.0	15.0	15.0	45.0	45.0	15.0	45.0	45.0
Total Split (%)	31.8%	31.8%	31.8%	13.6%	13.6%	13.6%	40.9%	40.9%	13.6%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	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	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	29.1	29.1	29.1	8.9	8.9	6.9	39.3	39.3	6.7	39.2	39.2
Actuated g/C Ratio	0.29	0.29	0.29	0.09	0.09	0.07	0.39	0.39	0.07	0.39	0.39
v/c Ratio	0.78	0.78	0.83	0.73	0.25	0.20	0.52	0.01	0.17	0.60	1.16
Control Delay	46.7	46.7	10.0	71.8	50.0	50.0	26.1	12.8	49.7	27.7	120.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	46.7	10.0	71.8	50.0	50.0	26.1	12.8	49.7	27.7	120.0
LOS	D	D	A	E	D	D	C	B	D	C	F
Approach Delay		26.6		66.8			26.7			70.3	
Approach LOS		C		E			C			E	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 100.6
Natural Cycle: 100
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.16
Intersection Signal Delay: 44.6 — Intersection LOS: D
Intersection Capacity Utilization 94.2% — ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 21: WB E. Hallandale Beach Blvd & S. OCEAN DR



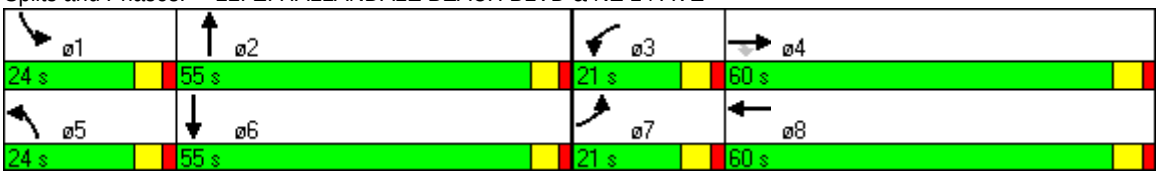
Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	642	84	876	12	89	30	22	655	6	17	710	616
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1704	1583		1852	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.96	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1704	1583		1852	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.85	0.85	0.85	0.91	0.91	0.91	0.86	0.86	0.86
Adj. Flow (vph)	676	88	922	14	105	35	24	720	7	20	826	716
RTOR Reduction (vph)	0	0	665	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	379	385	257	0	119	35	24	720	3	20	826	716
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7	7		5	2		1	6	
Permitted Phases			3			7			2			6
Actuated Green, G (s)	29.1	29.1	29.1		8.9	8.9	3.1	39.3	39.3	3.0	39.2	39.2
Effective Green, g (s)	29.1	29.1	29.1		8.9	8.9	3.1	39.3	39.3	3.0	39.2	39.2
Actuated g/C Ratio	0.28	0.28	0.28		0.09	0.09	0.03	0.38	0.38	0.03	0.38	0.38
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	469	475	442		158	135	53	1333	596	51	1330	595
v/s Ratio Prot	0.23	c0.23			c0.06		c0.01	0.20		0.01	0.23	
v/s Ratio Perm			0.16			0.02			0.00			c0.45
v/c Ratio	0.81	0.81	0.58		0.75	0.26	0.45	0.54	0.00	0.39	0.62	1.20
Uniform Delay, d1	35.0	35.0	32.4		46.6	44.6	49.8	25.4	20.3	49.8	26.5	32.6
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.9	13.9	5.5		18.2	1.0	6.0	1.6	0.0	4.9	0.9	106.8
Delay (s)	48.9	49.0	37.9		64.8	45.6	55.8	27.0	20.3	54.7	27.4	139.4
Level of Service	D	D	D		E	D	E	C	C	D	C	F
Approach Delay (s)		42.9			60.5			27.9			79.1	
Approach LOS		D			E			C			E	

Intersection Summary			
HCM Average Control Delay	54.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	104.3	Sum of lost time (s)	24.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	298	1673	354	58	1777	274	139	83	119
Turn Type	Prot		Perm	Prot		Prot		Prot	
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0
Total Split (s)	21.0	60.0	60.0	21.0	60.0	24.0	55.0	24.0	55.0
Total Split (%)	13.1%	37.5%	37.5%	13.1%	37.5%	15.0%	34.4%	15.0%	34.4%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	15.0	57.9	57.9	11.1	54.0	16.9	52.0	14.0	49.0
Actuated g/C Ratio	0.09	0.36	0.36	0.07	0.34	0.11	0.33	0.09	0.31
v/c Ratio	1.96	0.99	0.53	0.53	1.23	0.80	0.44	0.65	0.55
Control Delay	485.9	69.0	17.1	86.4	150.4	85.7	41.5	88.8	44.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	485.9	69.0	17.1	86.4	150.4	85.7	41.5	88.8	44.6
LOS	F	E	B	F	F	F	D	F	D
Approach Delay		114.4			148.5		64.9		55.6
Approach LOS		F			F		E		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 159	
Natural Cycle: 150	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.96	
Intersection Signal Delay: 118.5	Intersection LOS: F
Intersection Capacity Utilization 94.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 22: E. HALLANDALE BEACH BLVD & NE 14 AVE



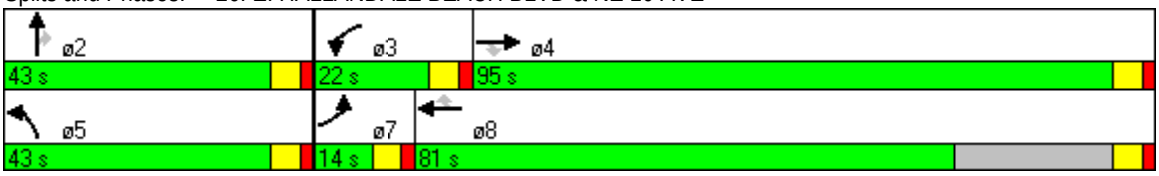
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	298	1673	354	58	1777	77	274	139	104	83	119	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5053		3433	1743		1770	1717	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5053		3433	1743		1770	1717	
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.94	0.94	0.94	0.82	0.82	0.82
Adj. Flow (vph)	327	1838	389	66	2019	88	291	148	111	101	145	159
RTOR Reduction (vph)	0	0	157	0	3	0	0	16	0	0	25	0
Lane Group Flow (vph)	327	1838	232	66	2104	0	291	243	0	101	279	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.0	57.9	57.9	11.1	54.0		16.9	52.0		14.0	49.1	
Effective Green, g (s)	15.0	57.9	57.9	11.1	54.0		16.9	52.0		14.0	49.1	
Actuated g/C Ratio	0.09	0.36	0.36	0.07	0.34		0.11	0.33		0.09	0.31	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1852	576	124	1716		365	570		156	530	
v/s Ratio Prot	c0.18	c0.36		0.04	c0.42		c0.08	c0.14		0.06	c0.16	
v/s Ratio Perm			0.15									
v/c Ratio	1.96	0.99	0.40	0.53	1.23		0.80	0.43		0.65	0.53	
Uniform Delay, d1	72.0	50.3	37.7	71.4	52.5		69.4	41.8		70.1	45.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	452.1	19.0	0.5	4.3	107.2		11.5	2.3		8.9	3.7	
Delay (s)	524.1	69.4	38.1	75.8	159.7		80.9	44.2		79.0	49.1	
Level of Service	F	E	D	E	F		F	D		E	D	
Approach Delay (s)		122.8			157.2			63.6			56.5	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM Average Control Delay	125.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	159.0	Sum of lost time (s)	36.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBR	ø5
Lane Configurations								
Volume (vph)	107	1849	74	54	1982	31	8	
Turn Type	Prot		Perm	Prot		Perm	Perm	
Protected Phases	7	4		3	8			5
Permitted Phases			4			8	2	
Detector Phase	7	4	4	3	8	8	2	
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	22.0	10.0
Total Split (s)	14.0	95.0	95.0	22.0	81.0	81.0	43.0	43.0
Total Split (%)	8.8%	59.4%	59.4%	13.8%	50.6%	50.6%	26.9%	27%
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	Lag	Lead	Lag	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	None	Max	None
Act Effct Green (s)	8.0	83.6	83.6	7.9	80.7	80.7	37.2	
Actuated g/C Ratio	0.06	0.58	0.58	0.05	0.56	0.56	0.26	
v/c Ratio	1.21	0.70	0.09	0.30	0.74	0.04	0.02	
Control Delay	212.7	23.5	10.8	72.2	25.4	7.2	0.1	
Queue Delay	0.0	1.8	0.0	0.0	0.0	0.0	0.0	
Total Delay	212.7	25.3	10.8	72.2	25.4	7.2	0.1	
LOS	F	C	B	E	C	A	A	
Approach Delay		34.6			26.3			
Approach LOS		C			C			

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 144.1	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.21	
Intersection Signal Delay: 30.5	Intersection LOS: C
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 26: E. HALLANDALE BEACH BLVD & NE 10 AVE



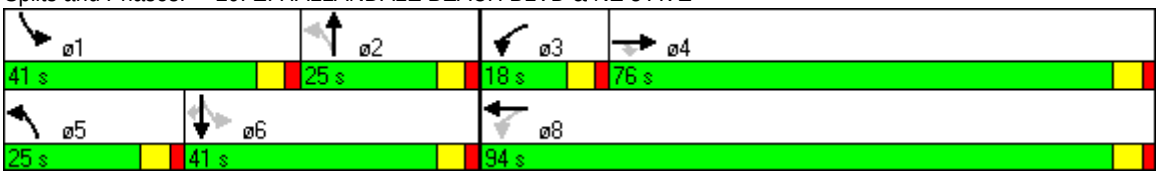
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	1849	74	54	1982	31	0	0	8	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0			6.0			
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00			1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85			0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00			1.00			
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583			1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00			1.00			
Satd. Flow (perm)	1770	5085	1583	3433	5085	1583			1583			
Peak-hour factor, PHF	0.89	0.89	0.89	0.94	0.94	0.94	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	120	2078	83	57	2109	33	0	0	9	0	0	0
RTOR Reduction (vph)	0	0	9	0	0	9	0	0	7	0	0	0
Lane Group Flow (vph)	120	2078	74	57	2109	24	0	0	2	0	0	0
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm			
Protected Phases	7	4		3	8		5	2				
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.0	83.7	83.7	6.5	82.2	82.2			37.2			
Effective Green, g (s)	8.0	83.7	83.7	6.5	82.2	82.2			37.2			
Actuated g/C Ratio	0.06	0.58	0.58	0.04	0.57	0.57			0.26			
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0			6.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0			3.0			
Lane Grp Cap (vph)	97	2927	911	153	2875	895			405			
v/s Ratio Prot	c0.07	0.41		0.02	c0.41							
v/s Ratio Perm			0.05			0.02			c0.00			
v/c Ratio	1.24	0.71	0.08	0.37	0.73	0.03			0.01			
Uniform Delay, d1	68.7	22.1	13.7	67.5	23.5	13.9			40.3			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00			1.00			
Incremental Delay, d2	168.1	0.8	0.0	1.5	1.0	0.0			0.0			
Delay (s)	236.8	22.9	13.8	69.0	24.5	14.0			40.3			
Level of Service	F	C	B	E	C	B			D			
Approach Delay (s)		33.9			25.5			40.3			0.0	
Approach LOS		C			C			D			A	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	145.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	1996	12	2	1883	7	0	102	5	160
Turn Type		Perm	pm+pt		pm+pt		pm+pt		Perm
Protected Phases	4		3	8	5	2	1	6	
Permitted Phases		4	8		2		6		6
Detector Phase	4	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0	22.0
Total Split (s)	76.0	76.0	18.0	94.0	25.0	25.0	41.0	41.0	41.0
Total Split (%)	47.5%	47.5%	11.3%	58.8%	15.6%	15.6%	25.6%	25.6%	25.6%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	71.7	71.7	73.8	73.8		23.1	35.9	35.9	35.9
Actuated g/C Ratio	0.59	0.59	0.61	0.61		0.19	0.29	0.29	0.29
v/c Ratio	0.73	0.01	0.01	0.65		0.18	0.18	0.17	0.34
Control Delay	20.4	7.5	9.5	16.7		18.0	34.8	34.7	6.8
Queue Delay	5.1	0.0	0.0	0.2		0.0	0.0	0.0	0.0
Total Delay	25.5	7.5	9.5	16.9		18.0	34.8	34.7	6.8
LOS	C	A	A	B		B	C	C	A
Approach Delay	25.4			16.9		18.0		18.0	
Approach LOS	C			B		B		B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 121.7	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 64.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 29: E. HALLANDALE BEACH BLVD & NE 8 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1996	12	2	1883	0	7	0	38	102	5	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lane Util. Factor		0.91	1.00	1.00	0.91			1.00		0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00			0.89		1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.99		0.95	0.96	1.00
Satd. Flow (prot)		5085	1583	1770	5085			1637		1681	1692	1583
Flt Permitted		1.00	1.00	0.05	1.00			0.96		0.63	0.71	1.00
Satd. Flow (perm)		5085	1583	96	5085			1581		1107	1253	1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.94	0.94	0.94	0.75	0.75	0.75	0.78	0.78	0.78
Adj. Flow (vph)	0	2193	13	2	2003	0	9	0	51	131	6	205
RTOR Reduction (vph)	0	0	4	0	0	0	0	42	0	0	0	143
Lane Group Flow (vph)	0	2193	9	2	2003	0	0	18	0	68	69	62
Turn Type			Perm	pm+pt			pm+pt			pm+pt		Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases			4	8			2			6		6
Actuated Green, G (s)		71.7	71.7	78.7	78.7			23.1		37.2	37.2	37.2
Effective Green, g (s)		71.7	71.7	78.7	78.7			23.1		37.2	37.2	37.2
Actuated g/C Ratio		0.56	0.56	0.62	0.62			0.18		0.29	0.29	0.29
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		2851	887	72	3129			286		358	392	460
v/s Ratio Prot		c0.43		0.00	c0.39					c0.01	0.01	
v/s Ratio Perm			0.01	0.02				0.01		c0.04	0.04	0.04
v/c Ratio		0.77	0.01	0.03	0.64			0.06		0.19	0.18	0.14
Uniform Delay, d1		21.7	12.4	17.6	15.6			43.4		33.7	33.9	33.5
Progression Factor		1.00	1.00	1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.3	0.0	0.2	0.5			0.1		0.3	0.2	0.6
Delay (s)		23.0	12.4	17.7	16.1			43.5		34.0	34.1	34.1
Level of Service		C	B	B	B			D		C	C	C
Approach Delay (s)		22.9			16.1			43.5			34.1	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	127.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	66	101	109	55	24	104
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.76	0.76	0.92	0.92	0.86	0.86
Hourly flow rate (vph)	87	133	118	60	28	121
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	325	148			178	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	325	148			178	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	85			98	
cM capacity (veh/h)	656	898			1398	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	220	178	149
Volume Left	87	0	28
Volume Right	133	60	0
cSH	784	1700	1398
Volume to Capacity	0.28	0.10	0.02
Queue Length 95th (ft)	29	0	2
Control Delay (s)	11.4	0.0	1.6
Lane LOS	B		A
Approach Delay (s)	11.4	0.0	1.6
Approach LOS	B		

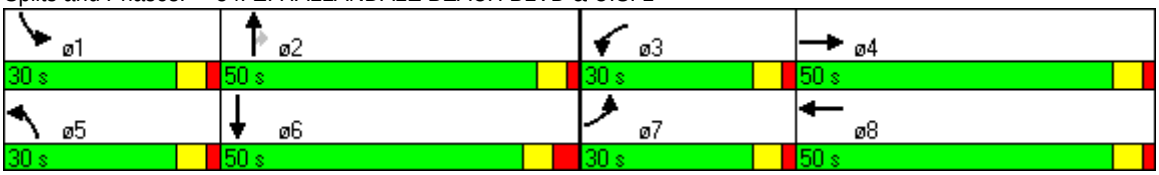
Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	35.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	205	970	626	1348	599	1339	625	350	977
Turn Type	Prot		Prot		Prot		Perm	Prot	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	24.0	12.0	24.0	12.0	24.0	24.0	12.0	24.0
Total Split (s)	30.0	50.0	30.0	50.0	30.0	50.0	50.0	30.0	50.0
Total Split (%)	18.8%	31.3%	18.8%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%
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	4.0
Lost Time Adjust (s)	0.0	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	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	23.1	44.0	24.0	44.9	24.0	46.3	46.3	21.7	42.0
Actuated g/C Ratio	0.14	0.28	0.15	0.28	0.15	0.29	0.29	0.14	0.26
v/c Ratio	0.90	1.10	1.43	1.26	1.31	1.02	1.05	0.81	0.89
Control Delay	101.8	108.6	250.0	169.6	202.2	84.0	79.6	81.0	65.6
Queue Delay	0.0	0.0	0.0	42.5	0.0	0.0	0.0	0.0	0.0
Total Delay	101.8	108.6	250.0	212.1	202.2	84.0	79.6	81.0	65.6
LOS	F	F	F	F	F	F	E	F	E
Approach Delay		107.7		223.2		110.6			69.3
Approach LOS		F		F		F			E

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.43
Intersection Signal Delay: 135.2 — Intersection LOS: F
Intersection Capacity Utilization 105.6% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 34: E. HALLANDALE BEACH BLVD & U.S. 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	205	970	390	626	1348	168	599	1339	625	350	977	119
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.96		1.00	0.98		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4867		3433	5001		3433	5085	1583	3433	5002	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4867		3433	5001		3433	5085	1583	3433	5002	
Peak-hour factor, PHF	0.89	0.89	0.89	0.85	0.85	0.85	0.89	0.89	0.89	0.93	0.93	0.93
Adj. Flow (vph)	230	1090	438	736	1586	198	673	1504	702	376	1051	128
RTOR Reduction (vph)	0	45	0	0	10	0	0	0	210	0	10	0
Lane Group Flow (vph)	230	1483	0	736	1774	0	673	1504	492	376	1169	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	23.1	44.0		24.0	44.9		24.0	46.3	46.3	21.7	42.0	
Effective Green, g (s)	23.1	44.0		24.0	44.9		24.0	46.3	46.3	21.7	42.0	
Actuated g/C Ratio	0.14	0.28		0.15	0.28		0.15	0.29	0.29	0.14	0.26	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	256	1338		515	1403		515	1471	458	466	1313	
v/s Ratio Prot	0.13	0.30		c0.21	c0.35		c0.20	0.30		0.11	0.23	
v/s Ratio Perm									c0.31			
v/c Ratio	0.90	1.11		1.43	1.26		1.31	1.02	1.07	0.81	0.89	
Uniform Delay, d1	67.3	58.0		68.0	57.6		68.0	56.9	56.9	67.1	56.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	30.7	60.0		204.1	124.8		151.6	29.3	63.1	9.9	9.4	
Delay (s)	98.0	118.0		272.1	182.4		219.6	86.2	120.0	77.0	66.2	
Level of Service	F	F		F	F		F	F	F	E	E	
Approach Delay (s)		115.4			208.6			125.6			68.8	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM Average Control Delay	137.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	PM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Existing PM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1555	7	74	1404	
Peak-Hour Factor, PHF	1.00	0.90	0.90	0.89	0.89	1.00
Hourly Flow Rate, HFR (veh/h)	0	1727	7	83	1577	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			52			
Peak-Hour Factor, PHF	1.00	1.00	0.83	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	62	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		83			62			
C (m) (veh/h)		359			301			
v/c		0.23			0.21			
95% queue length		0.90			0.77			
Control Delay (s/veh)		18.0			20.1			
LOS		C			C			
Approach Delay (s/veh)	--	--	20.1					
Approach LOS	--	--	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1555	7	74	1404	0	0	52	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1562	0	74	1404	0	0	52	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	1.00	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5172	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	36.2	0.0	4.9	32.6		0.0	3.9		0.0
Adj Reference Time (s)	40.2	0.0	8.9	36.6		0.0	8.0		0.0
Permitted Option									
Adj Saturation A (vph)	1724		120	1725	0			0	
Reference Time A (s)	36.2		73.8	32.6	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	36.2			73.8					
Adj Reference Time (s)	40.2			77.8					
Split Option									
Ref Time Combined (s)	36.2		4.9	32.6	0.0			0.0	
Ref Time Seperate (s)	36.1		4.9	32.6	0.0			0.0	
Reference Time (s)	36.2		32.6	32.6	0.0			0.0	
Adj Reference Time (s)	40.2		36.6	36.6	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	49.2	NA	NA	
Permitted Option (s)	77.8	Err	Err	
Split Option (s)	76.8	0.0	0.0	
Minimum (s)	49.2	0.0	0.0	49.2

Right Turns	NBR2
Adj Reference Time (s)	8.0
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	40.2
Combined (s)	48.2

Intersection Summary			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

APPENDIX – F

Committed Development Data –

Wal-Mart Expansion TIS

TABLE K-1
TOTAL(2012) PM PEAK-HOUR, PEAK-SEASON TURNING-MOVEMENT VOLUMES
WALMART EXPANSION TRAFFIC IMPACT STUDY

INTERSECTION		EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Hallandale Beach Boulevard at Federal Highway	Collected Count (05/19/08)	148	797	189	658	1,062	193	456	1,131	690	211	749	83
	Peak-Season Conversion Factor (PSCF)[1]	1.06	1.06	1.06	1.15	1.15	1.15	1.11	1.11	1.11	1.11	1.11	1.11
	2008 Peak-Season Count	157	845	200	757	1,221	222	506	1,255	766	234	831	92
	CGR	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	2009 Peak-Season Count	159	853	202	765	1,233	224	511	1,268	774	236	839	93
	Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	Committed Development Trips	0	209	172	85	224	174	236	107	101	184	86	0
	2012 Background Traffic	164	1,088	380	873	1,494	405	762	1,413	898	427	950	96
	Project IN/OUT Movement		IN		OUT	OUT	OUT			IN	IN		
	Project Distribution		10.00%		14.00%	10.00%	15.00%			13.00%	13.00%		
	2012 Project Trips	0	4	0	5	4	5	0	0	5	5	0	0
	2012 Total Traffic	164	1,092	380	878	1,498	410	762	1,413	903	432	950	96
Hallandale Beach Boulevard at NE 8th Avenue	Collected Count (04/14/09)	0	1,029	15	13	1,556	0	2	0	21	75	4	136
	Peak-Season Conversion Factor (PSCF)[1]	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
	2009 Peak-Season Count	0	1,080	16	14	1,634	0	2	0	22	79	4	143
	CGR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2009 Peak-Season Count	0	1,847	16	14	1,634	0	2	0	22	79	4	143
	Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	Committed Development Trips	0	257	184	84	256	0	232	7	0	0	7	7
	2012 Background Traffic	0	2,160	200	98	1,940	0	234	7	23	81	11	154
	Project IN/OUT Movement		IN			OUT					IN		
	Project Distribution		36.00%			39.00%					4.00%		
	2012 Project Trips	0	14	0	0	14	0	0	0	0	1	0	0
	2012 Total Traffic	0	2,174	200	98	1,954	0	234	7	23	82	11	154
Hallandale Beach Boulevard at NE 10th Avenue	Collected Count (04/14/09)	53	1,351	39	33	1,500	67	19	9	60	0	0	0
	Peak-Season Conversion Factor (PSCF)[1]	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
	2009 Peak-Season Count	56	1,419	41	35	1,575	70	20	9	63	0	0	0
	CGR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2009 Peak-Season Count	56	1,419	41	35	1,575	70	20	9	63	0	0	0
	Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	Committed Development Trips	0	243	67	50	240	0	86	7	140	0	0	0
	2012 Background Traffic	58	1,705	109	86	1,863	72	107	16	205	0	0	0
	Project IN/OUT Movement		IN			OUT	OUT						
	Project Distribution		40.00%			39.00%	3.00%						
	2012 Project Trips	0	15	0	0	14	1	0	0	0	0	0	0
	2012 Total Traffic	58	1,720	109	86	1,877	73	107	16	205	0	0	0
Hallandale Beach Boulevard at NE 14th Avenue	Collected Count (09/23/09)	187	1,253	296	47	1,216	77	222	109	71	61	95	106
	Peak-Season Conversion Factor (PSCF)[1]	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
	2009 Peak-Season Count	243	1,629	385	61	1,581	100	289	142	92	79	124	138
	CGR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2009 Peak-Season Count	243	1,629	385	61	1,581	100	289	142	92	79	124	138
	Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	Committed Development Trips	23	360	0	0	231	10	0	0	0	14	0	15
	2012 Background Traffic	273	2,038	397	63	1,860	113	298	146	95	95	128	157
	Project IN/OUT Movement		IN			OUT	OUT				IN		
	Project Distribution		40.00%			42.00%	5.00%				6.00%		
	2012 Project Trips	0	15	0	0	15	2	0	0	0	2	0	0
	2012 Total Traffic	273	2,053	397	63	1,875	115	298	146	95	97	128	157
Hallandale Beach Boulevard at Diplomat Parkway	Collected Count (03/23/10)	79	1,383	8	2	1,133	39	16	18	19	41	3	47
	Peak-Season Conversion Factor (PSCF)[1]	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
	2010 Peak-Season Count	80	1,397	8	2	1,144	39	16	18	19	41	3	47
	CGR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2010 Peak-Season Count	80	1,397	8	2	1,144	39	16	18	19	41	3	47
	Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	Committed Development Trips	85	275	2	0	171	7	0	0	0	9	0	65
	2012 Background Traffic	167	1,700	10	2	1,338	47	16	18	19	51	3	113
	Project IN/OUT Movement		IN			OUT	OUT				IN		
	Project Distribution		46.00%			47.00%	3.00%				4.00%		
	2012 Project Trips	0	17	0	0	17	1	0	0	0	1	0	0
	2012 Total Traffic	167	1,717	10	2	1,355	48	16	18	19	52	3	113

TABLE K-1
TOTAL(2012) PM PEAK-HOUR, PEAK-SEASON TURNING-MOVEMENT VOLUMES
WALMART EXPANSION TRAFFIC IMPACT STUDY

INTERSECTION		EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Hallandale Beach Boulevard at Three Islands Boulevard	Collected Count (04/15/09)	408	914	0	0	971	81	0	0	0	192	0	210
	Peak-Season Conversion Factor (PSCF)[1]	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
	2009 Peak-Season Count	428	960	0	0	1,020	85	0	0	0	202	0	221
	CGR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2009 Peak-Season Count	478	960	0	0	964	85	0	0	0	211	0	221
	Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	Committed Development Trips	23	220	0	0	156	147	0	0	0	126	0	22
	2012 Background Traffic	515	1,209	0	0	1,149	235	0	0	0	343	0	250
	Project IN/OUT Movement	IN				OUT	IN				OUT		OUT
	Project Distribution	50.00%				25.00%	5.00%				25.00%		25.00%
	2012 Project Trips	18	0	0	0	9	2	0	0	0	9	0	9
	2012 Total Traffic	533	1,209	0	0	1,158	237	0	0	0	352	0	259
Hallandale Beach Boulevard at Driveway Connection	Collected Count (04/15/09)	0	829	0	0	1,064	124	0	0	0	0	0	141
	Peak-Season Conversion Factor (PSCF)[1]	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
	2009 Peak-Season Count	0	870	0	0	1,117	130	0	0	0	0	0	148
	CGR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2009 Peak-Season Count	0	870	0	0	901	130	0	0	0	0	0	148
	Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	Committed Development Trips	0	263	0	0	303	0	0	0	0	0	0	0
	2012 Background Traffic	0	1,159	0	0	1,231	134	0	0	0	0	0	152
	Project IN/OUT Movement		OUT			IN	IN						OUT
	Project Distribution		25.00%			5.00%	20.00%						25.00%
	2012 Project Trips	0	9	0	0	2	7	0	0	0	0	0	9
	2012 Total Traffic	0	1,168	0	0	1,233	141	0	0	0	0	0	161
Hallandale Beach Boulevard at South Ocean Drive	Collected Count (02/25/08)	658	96	849	20	63	45	34	726	8	73	693	647
	Peak-Season Conversion Factor (PSCF)[1]	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
	2008 Peak-Season Count	638	93	824	19	61	44	33	704	8	71	672	628
	CGR	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	2009 Peak-Season Count	644	94	832	19	62	44	48	711	8	72	679	921
	Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	Committed Development Trips	88	0	175	0	0	0	195	44	0	0	43	108
	2012 Background Traffic	752	97	1,032	20	64	45	244	777	8	74	743	1,057
	Project IN/OUT Movement	OUT		OUT				IN					IN
	Project Distribution	15.00%		10.00%				10.00%					15.00%
	2012 Project Trips	5	0	4	0	0	0	4	0	0	0	0	5
	2012 Total Traffic	757	97	1,036	20	64	45	248	777	8	74	743	1,062
Three Islands Boulevard at Driveway Connection	Collected Count (04/15/09)	0	0	0	189	0	92	0	361	175	80	223	0
	Peak-Season Conversion Factor (PSCF)[1]	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
	2009 Peak-Season Count	0	0	0	198	0	97	0	379	184	84	234	0
	CGR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	2009 Peak-Season Count	0	0	0	198	0	97	0	379	184	84	234	0
	Growth Rate	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
	Committed Development Trips	0	0	0	2	0	0	2	36	0	0	35	0
	2012 Background Traffic	0	0	0	206	0	100	2	426	190	87	276	0
	Project IN/OUT Movement				OUT		OUT			IN	IN		
	Project Distribution				50.00%		25.00%			55.00%	25.00%		
	2012 Project Trips	0	0	0	18	0	9	0	0	20	9	0	0
	2012 Total Traffic	0	0	0	224	0	109	2	426	210	96	276	0

NOTES:

1. PEAK SEASON CONVERSION FACTOR (PSCF) OBTAINED FROM 2008 FDOT TRANSPORTATION DVD.

BALANCED VOLUMES

COMMITTED DEVELOPMENT
WALMART EXPANSION TRAFFIC STUDY

Intersection: Hallandale Beach Boulevard at US-1

Committed Development	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Ocean Marine Yacht Club	0	15	0	19	15	20	0	0	19	20	0	0
Village at Gulfstream Park	0	39	129	7	50	36	164	71	7	28	56	0
The European Club	0	10	0	7	6	7	0	0	25	25	0	0
Millennium Tower	0	3	0	1	1	2	0	0	4	4	0	0
Regency SPA	0	3	0	4	3	5	0	0	4	4	0	0
Oasis	0	44	0	40	57	16	0	0	32	13	0	0
Park Central	0	1	1	0	1	0	0	4	0	0	6	0
Hallandale Square	0	94	18	0	91	88	36	7	0	90	7	0
Domus Hallandale	0	0	24	7	0	0	36	25	10	0	17	0
Total	0	209	172	85	224	174	236	107	101	184	86	0

COMMITTED DEVELOPMENT
WALMART EXPANSION TRAFFIC STUDY

Intersection: Hallandale Beach Boulevard at NE 8th Avenue

Committed Development	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Ocean Marine Yacht Club	0	54	0	0	54	0	0	0	0	0	0	0
Village at Gulfstream Park	0	74	0	0	93	0	0	0	0	0	0	0
The European Club	0	60	0	0	20	0	0	0	0	0	0	0
Millennium Tower	0	11	0	0	4	0	0	0	0	0	0	0
Regency SPA	0	11	0	0	12	0	0	0	0	0	0	0
Oasis	0	89	0	0	113	0	0	0	0	0	0	0
Park Central	0	1	0	0	1	0	0	0	0	0	0	0
Hallandale Square	0	-53	184	84	-48	0	232	7	0	0	7	0
Domus Hallandale	0	10	0	0	7	0	0	0	0	0	0	7
Total	0	257	184	84	256	0	232	7	0	0	7	7

COMMITTED DEVELOPMENT
WALMART EXPANSION TRAFFIC STUDY

Intersection: Hallandale Beach Boulevard at NE 10th Avenue

Committed Development	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Ocean Marine Yacht Club	0	54	0	0	54	0	0	0	0	0	0	0
Village at Gulfstream Park	0	7	67	50	0	0	86	0	64	0	0	0
The European Club	0	60	0	0	20	0	0	0	0	0	0	0
Millennium Tower	0	11	0	0	4	0	0	0	0	0	0	0
Regency SPA	0	11	0	0	12	0	0	0	0	0	0	0
Oasis	0	89	0	0	113	0	0	0	0	0	0	0
Park Central	0	1	0	0	1	0	0	0	0	0	0	0
Hallandale Square	0	0	0	0	29	0	0	7	76	0	0	0
Domus Hallandale	0	10	0	0	7	0	0	0	0	0	0	0
Total	0	243	67	50	240	0	86	7	140	0	0	0

COMMITTED DEVELOPMENT
WALMART EXPANSION TRAFFIC STUDY

Intersection: Hallandale Beach Boulevard at NE 14th Avenue

Committed Development	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Ocean Marine Yacht Club	0	54	0	0	54	6	0	0	0	6	0	0
Village at Gulfstream Park	0	71	0	0	50	0	0	0	0	0	0	0
The European Club	0	60	0	0	20	2	0	0	0	6	0	0
Millennium Tower	0	11	0	0	4	1	0	0	0	1	0	0
Regency SPA	0	11	0	0	12	1	0	0	0	1	0	0
Oasis	8	81	0	0	63	0	0	0	0	0	0	6
Park Central	1	0	0	0	0	0	0	0	0	0	0	1
Hallandale Square	8	68	0	0	26	0	0	0	0	0	0	3
Domus Hallandale	6	4	0	0	2	0	0	0	0	0	0	5
Total	23	360	0	0	231	10	0	0	0	14	0	15

COMMITTED DEVELOPMENT
WALMART EXPANSION TRAFFIC STUDY

Intersection: Hallandale Beach Boulevard at Diplomat Parkway

Committed Development	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Ocean Marine Yacht Club	0	60	0	0	60	7	0	0	0	8	0	0
Village at Gulfstream Park	7	64	0	0	45	0	0	0	0	0	0	5
The European Club	1	63	2	0	22	0	0	0	0	1	0	0
Millennium Tower	0	0	0	0	0	0	0	0	0	0	0	0
Regency SPA	0	12	0	0	13	0	0	0	0	0	0	0
Oasis	77	4	0	0	3	0	0	0	0	0	0	60
Park Central	0	0	0	0	0	0	0	0	0	0	0	0
Hallandale Square	0	68	0	0	26	0	0	0	0	0	0	0
Domus Hallandale	0	4	0	0	2	0	0	0	0	0	0	0
Total	85	275	2	0	171	7	0	0	0	9	0	65

COMMITTED DEVELOPMENT
WALMART EXPANSION TRAFFIC STUDY

Intersection: Hallandale Beach Boulevard at Three Islands Boulevard

Committed Development	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Ocean Marine Yacht Club	0	68	0	0	67	8	0	0	0	8	0	0
Village at Gulfstream Park	0	64	0	0	45	0	0	0	0	0	0	0
The European Club	23	0	0	0	0	139	0	0	0	118	0	22
Millennium Tower	0	0	0	0	0	0	0	0	0	0	0	0
Regency SPA	0	12	0	0	13	0	0	0	0	0	0	0
Oasis	0	4	0	0	3	0	0	0	0	0	0	0
Park Central	0	0	0	0	0	0	0	0	0	0	0	0
Hallandale Square	0	68	0	0	26	0	0	0	0	0	0	0
Domus Hallandale	0	4	0	0	2	0	0	0	0	0	0	0
Total	23	220	0	0	156	147	0	0	0	126	0	22

COMMITTED DEVELOPMENT
WALMART EXPANSION TRAFFIC STUDY

Intersection: Hallandale Beach Boulevard at Driveway Connection

Committed Development	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Ocean Marine Yacht Club	0	76	0	0	75	0	0	0	0	0	0	0
Village at Gulfstream Park	0	64	0	0	45	0	0	0	0	0	0	0
The European Club	0	35	0	0	139	0	0	0	0	0	0	0
Millennium Tower	0	0	0	0	0	0	0	0	0	0	0	0
Regency SPA	0	12	0	0	13	0	0	0	0	0	0	0
Oasis	0	4	0	0	3	0	0	0	0	0	0	0
Park Central	0	0	0	0	0	0	0	0	0	0	0	0
Hallandale Square	0	68	0	0	26	0	0	0	0	0	0	0
Domus Hallandale	0	4	0	0	2	0	0	0	0	0	0	0
Total	0	263	0	0	303	0	0	0	0	0	0	0

COMMITTED DEVELOPMENT
WALMART EXPANSION TRAFFIC STUDY

Intersection: Hallandale Beach Boulevard at South Ocean Drive

Committed Development	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Ocean Marine Yacht Club	0	0	76	0	0	0	75	38	0	0	37	0
Village at Gulfstream Park	32	0	32	0	0	0	23	0	0	0	0	22
The European Club	18	0	17	0	0	0	69	0	0	0	0	70
Millennium Tower	0	0	0	0	0	0	0	0	0	0	0	0
Regency SPA	0	0	12	0	0	0	13	6	0	0	6	0
Oasis	2	0	2	0	0	0	1	0	0	0	0	2
Park Central	0	0	0	0	0	0	0	0	0	0	0	0
Hallandale Square	34	0	34	0	0	0	13	0	0	0	0	13
Domus Hallandale	2	0	2	0	0	0	1	0	0	0	0	1
Total	88	0	175	0	0	0	195	44	0	0	43	108

COMMITTED DEVELOPMENT
WALMART EXPANSION TRAFFIC STUDY

Intersection: Three Islands Boulevard at Driveway Connection

Committed Development	EBLT	EBTH	EBRT	WBLT	WBTH	WBRT	NBLT	NBTH	NBRT	SBLT	SBTH	SBRT
Ocean Marine Yacht Club	0	0	0	0	0	0	0	8	0	0	8	0
Village at Gulfstream Park	0	0	0	0	0	0	0	0	0	0	0	0
The European Club	0	0	0	2	0	0	2	28	0	0	27	0
Millennium Tower	0	0	0	0	0	0	0	0	0	0	0	0
Regency SPA	0	0	0	0	0	0	0	0	0	0	0	0
Oasis	0	0	0	0	0	0	0	0	0	0	0	0
Park Central	0	0	0	0	0	0	0	0	0	0	0	0
Hallandale Square	0	0	0	0	0	0	0	0	0	0	0	0
Domus Hallandale	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	2	0	0	2	36	0	0	35	0

IMPACT ANALYSIS
FOR

OCEAN MARINE YACHT CLUB

HALLANDALE, FLORIDA

OWNER

OCEAN MARINE YACHT CLUB, INC.

DeSanti & Associates, Inc.
9055 Ibis Blvd.
West Palm Beach, Fl 33412
(561) 630-4877

PalmeriDesign
44 Ironwood Way
Palm Beach Gardens, Fl 33418
(561) 242-2428

Carnahan Proctor & Cross, Inc.
6101 W. Atlantic Blvd.
Margate, Fl. 33063
(954) 972-3959

3/07/03 Submittal
City Council Meeting

#PH-17

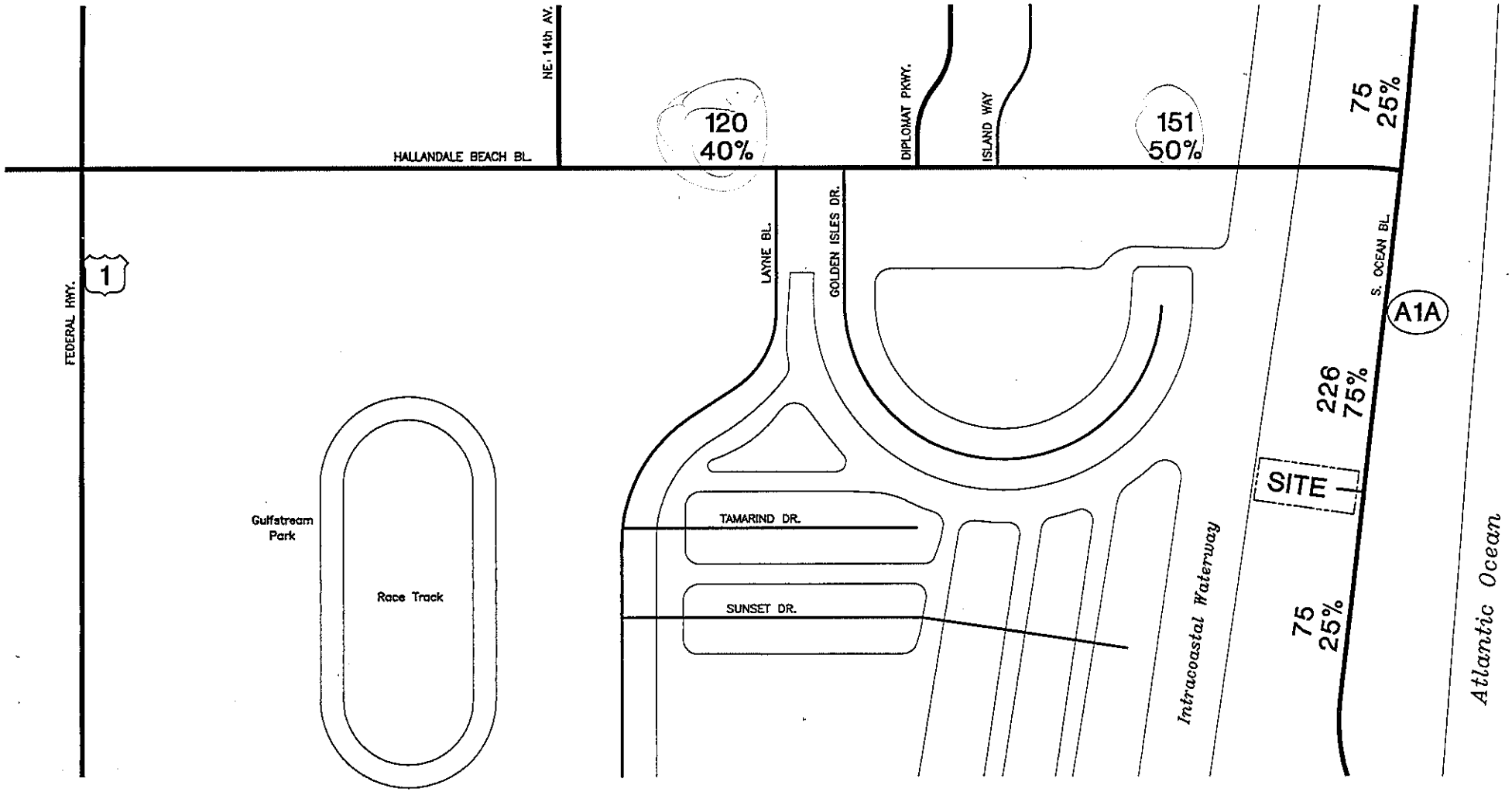
TRAFFIC IMPACT ANALYSIS

OCEAN MARINE YACHT CLUB
HALLANDALE, FL

Prepared for:
Security Management Corporation
Hallandale, Florida

040987000
January 2002
Revised February 2003
© Kimley-Horn and Associates, Inc.
4431 Embarcadero Drive
West Palm Beach, Florida 33407
561/845-0665 TEL
561/882-3703 FAX

Kimley-Horn
and Associates, Inc.



NOT TO SCALE

LEGEND

151	PM PEAK HOUR PROJECT TRAFFIC
50%	PERCENT PROJECT ASSIGNMENT

FIGURE 2
OCEAN MARINE YACHT CLUB
PROJECT TRAFFIC ASSIGNMENT

Kimley-Horn and Associates, Inc.
040987000

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THE EUROPEAN CLUB
MIXED-USE DEVELOPMENT

TRAFFIC IMPACT AND OPERATIONS REPORT

June 20, 2005

Prepared for:
Architectura Group

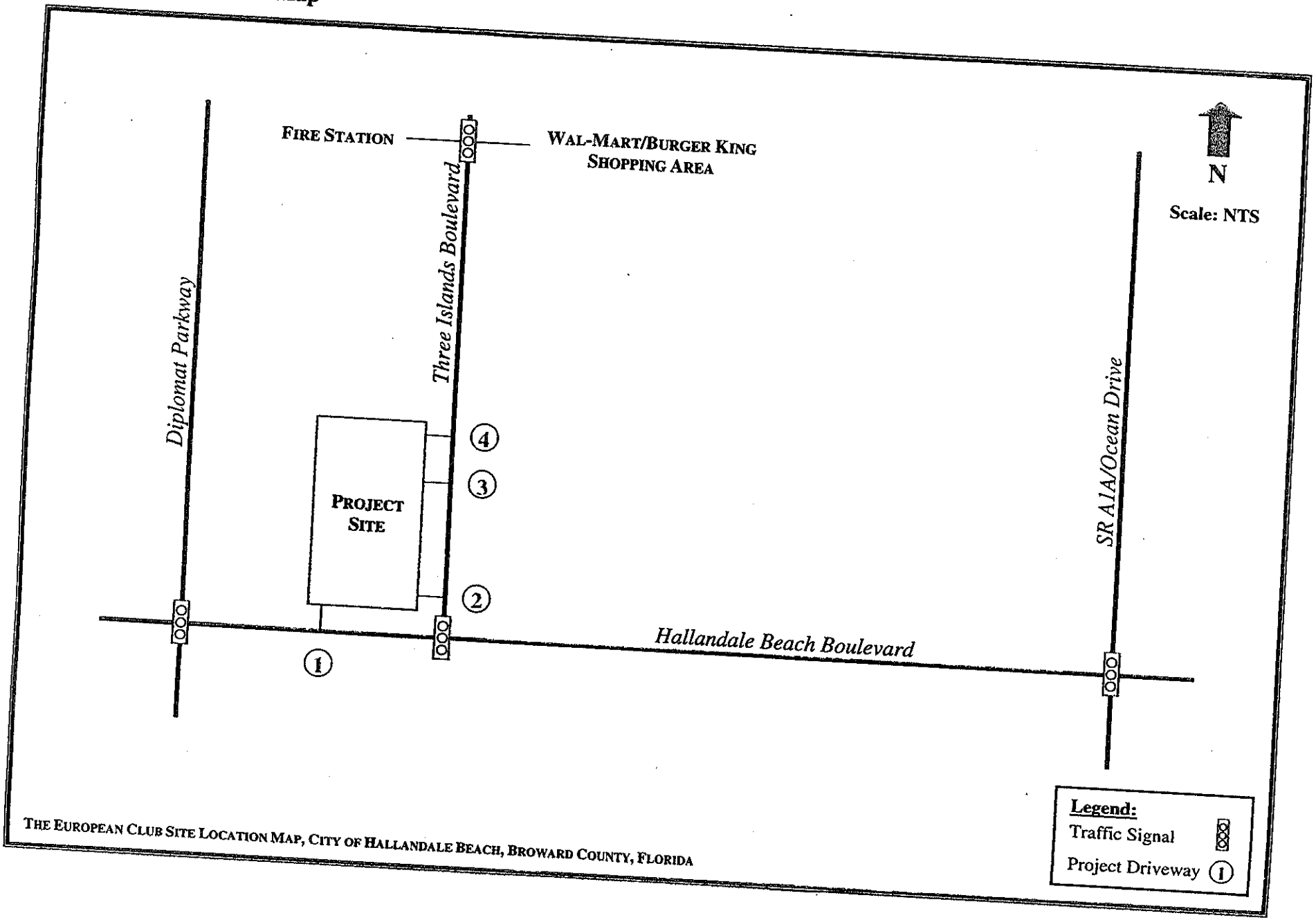
By:

Calvin, Giordano & Associates, Inc.
Engineers Surveyors Planners
1800 Eller Drive, Suite 600
Fort Lauderdale, Florida 33316
Phone: (954) 921-7781 Fax: (954) 921-8807

6-20-2005

Scott Brunner, P.E.
Florida P.E. #47612

Figure 1: Site Location Map



THE EUROPEAN CLUB SITE LOCATION MAP, CITY OF HALLANDALE BEACH, BROWARD COUNTY, FLORIDA

PROJECT LOCATION & ACCESS

There are four (4) project access driveways anticipated to serve the site. The access points configurations are as follows (numbers are keyed to Figure 1):

Access #1: Right-out-only driveway onto Hallandale Beach Boulevard centered approximately 185 feet west of the west right-of-way line of Three Islands Boulevard. This vehicular access connection has preliminary approval from the Florida Department of Transportation as part of the permit pre-application process. (This connection is currently right-in/right-out, and therefore the new access configuration will bring the access connection into full conformance with FDOT access management standards)

Access #2: Right-in-only driveway from southbound Three Islands Boulevard centered approximately 125 feet north of the north right-of-way line of Hallandale Beach Boulevard. This connection will expand into three one-way westbound valet/drop-off lanes once it becomes internal to the site. (This new configuration will eliminate outbound traffic from entering onto Three Islands Boulevard within close proximity to the signalized intersection at Hallandale Beach Boulevard, and therefore adheres to Broward County Traffic Engineering policy of discouraging access onto intersection approaches within 200 feet of a signalized intersection).

Access #3: Right-in/right-out only driveway on Three Islands Boulevard centered approximately 355 feet north of the north right-of-way of Hallandale Beach Boulevard.

Access #4: In-only driveway from Three Islands Boulevard centered approximately 400 feet north of the north right-of-way line of Hallandale Beach Boulevard. This connection will expand into three one-way westbound bank drive-thru lanes once it becomes internal to the site. (This new configuration will eliminate outbound left turns from the site onto westbound Three Islands Boulevard, thus eliminating some existing potential turning movement conflicts.
Access

EXISTING TRANSPORTATION SYSTEM CHARACTERISTICS

Roadway Classification and Permitting Authority

The ***European Club*** project site is served by several vicinity roadways. On the project south limits is Hallandale Beach Boulevard, which is a six-lane-divided east/west roadway that is Functionally Classified as a State Principal Arterial, the highest classification of non-expressway roadways. Hallandale Beach Boulevard is part of the State Highway System (SR-858), and therefore FDOT is the primary permitting authority. Traffic control devices, such as traffic signals are maintained by the Broward County Traffic Engineering Division (BCTED).

TABLE 2 - TRIP GENERATION ANALYSIS

Land Use	ITE Land Use Code	Intensity		ITE 7th Edition Equation	Daily Trips	AM Peak Hour of Adjacent Street					PM Peak Hour of Adjacent Street				
						Trips	%	In	%	Out	Trips	%	In	%	Out
EXISTING USES															
Drive-in Bank	912 912 912 912	10,000	sq. ft.	T = 37.08 (X) T = 45.74 (X) T = 12.34 (X) T = 182.34(X) + 256.87	2,080	123	56%	69	44%	54	457	50%	229	50%	229
SUBTOTAL					*2,080*	123		69		54	457		229		229
General Office	710 BC* 710 710	9,375	sq. ft.	Ln(T) = 0.81 Ln(X) - 0.12 Ln(T) = 0.737 Ln(X) + 1.831 Ln(T) = 0.80 Ln(X) + 1.55 T = 11.01(X)	103	28	88%	25	12%	3	32	17%	6	83%	27
SUBTOTAL					*103*	28		25		3	32		6		27
EXISTING TOTAL NUMBER OF TRIPS					***2,183***	***152***		***94***		***57***	***490***		***235***		***256***
PROPOSED USES															
Drive-in Bank	912 912 912 912	8,129	sq. ft.	T = 37.08 (X) T = 45.74 (X) T = 12.34 (X) T = 182.34(X) + 256.87	1,739	100	56%	56	44%	44	372	50%	186	50%	186
SUBTOTAL					*1,739*	100		56		44	372		186		186
General Office	710 BC* 710 710	72,092	sq. ft.	Ln(T) = 0.81 Ln(X) - 0.12 Ln(T) = 0.737 Ln(X) + 1.831 Ln(T) = 0.80 Ln(X) + 1.55 T = 11.01(X)	794	144	88%	127	12%	17	146	17%	25	83%	121
Internalization		15%			119	22		19		3	22		4		18
SUBTOTAL					*675*	123		108		14	124		21		103
Specialty Retail	814 814 814 814	6,009	sq. ft.	N/A T = 2.40(X) + 21.48 T = 42.78(X) + 37.66	295	0		0		0	36	44%	16	56%	20
Internalization		15%			44	0		0		0	5		2		3
SUBTOTAL					*251*	0		0		0	31		14		17
Gym / Spa	492 BC* 492 492	34,732	sq. ft.	T = 2.60 (X) T = 4.73 (X) T = 1.21 (X) T = 32.93 (X)	1144	42	42%	18	58%	24	164	51%	84	49%	80
Internalization		25%			286	11		5		6	41		21		20
SUBTOTAL					*858*	32		14		18	123		63		60
Hotel	310 BC* 310 310	155	rooms	T = 0.69 (X) + 4.32 T = 0.62 (X) Ln(T) = 1.24 Ln(X) - 2.00 T = 8.95 (X) - 373.16	1014	70	61%	43	39%	27	96	53%	51	47%	45
Internalization		25%			254	18		11		7	24		13		11
SUBTOTAL					*761*	53		32		20	72		38		34
High-Rise Residential Condomi	232 BC* 232 232	118	units	T = 0.35 (X) T = 0.36 (X) T = 0.34 (X) T = 4.18 (X)	493	40	19%	8	81%	32	42	62%	26	38%	16
Internalization		15%			74	6		1		5	6		4		2
SUBTOTAL					*419*	34		7		27	36		22		14
Ballroom	NA	4,839	sq. ft.		0	0		0		0	0		0		0
Restaurant	932 BC* 932 932	4,839	sq. ft.	T = 20.00 (X) T = 9.59 (X) T = 11.52 (X) T = 127.15 (X)	615	56	52%	29	48%	27	46	61%	28	39%	18
Internalization		25%			154	14		7		7	12		7		5
SUBTOTAL					*461*	42		22		20	35		21		14
Transit/Taxi/Walk Trip Reduction		10%			516	36		22		13	77		35		42
PROPOSED TOTAL NUMBER OF TRIPS					***4,647***	***348***		***216***		***131***	***716***		***330***		***385***
NET NEW TRIPS GENERATED:					**2,463**	**196**		**122**		**74**	**226**		**95**		**129**

*(BC) Using Broward County Rates and Equations

Mart/Fire Station is operating in an isolated fashion (off-system), and therefore local controller timings were obtained for this signal. (As indicated earlier in the report, the signal timing data provided by BCTED has been included in **Appendix D**).

Hallandale Beach Boulevard @ Diplomat Parkway

The operational analysis of this intersection is summarized in **Tables 4A** and **4B** for future Year 2007 conditions during the AM and PM peak periods, respectively. The first set of columns reflects Year 2007 exiting-plus-background traffic only (no project). The second set of columns reflects Year 2007 total traffic conditions with the project. (The first and second sets of analysis were performed using existing signal timing parameters). The third set of columns reflects Year 2007 total traffic conditions with modifications to the signal system, such as signal timing and phasing changes in order to better re-balance and optimize operations with the new project traffic.

As be seen from the tables, the future Year 2007 conditions *with or without* the project operate at **LOS C or LOS D** under the existing signal timing parameters. However, under a revised, more optimized signal operations plan, the level of service can potentially be improved to **LOS B** during the AM peak hour. During the PM peak hour, the potential benefit of signal optimization is more limited, however, overall vehicle delay may be able to be improved by approximately 5 seconds.

Hallandale Beach Boulevard @ Three Islands Boulevard

The operational analysis of this intersection is summarized in **Tables 5A** and **5B** for future Year 2007 conditions during the AM and PM peak periods, respectively. As be seen from the tables, the future Year 2007 conditions *with or without* the project operate at **LOS F** during the PM peak period under the existing signal timing parameters. This poor operational conditions should be somewhat expected due to the fact that systems coordination needs to be re-evaluated every several years, and such an evaluation has not been performed recently, and will certainly be necessary in the future. However, under a revised, more optimized signal operations plan, the level of service can potentially be improved back up to **LOS C** with the project.

AM FUTURE (EXISTING + BAKGAR)

Future w/o Site Traffic-A.M. Peak Hour

6/17/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0				4.0	4.0		4.0	4.0	
Lane Util. Factor				0.97	1.00				0.91	1.00		1.00	0.91	
Frt				1.00	0.85				1.00	0.85		1.00	1.00	
Flt Protected				0.95	1.00				1.00	1.00		0.95	1.00	
Satd. Flow (prot)				3433	1583				5080	1583		1770	5085	
Flt Permitted				0.95	1.00				0.91	1.00		0.35	1.00	
Satd. Flow (perm)				3433	1583				4606	1583		650	5085	
Volume (vph)	0	0	0	272	0	82	8	0	402	270	16	120	1018	0
Peak-hour factor, PHF	0.25	0.25	0.25	0.86	0.86	0.86	0.80	0.80	0.80	0.80	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	316	0	95	10	0	502	338	17	130	1107	0
RTOR Reduction (vph)	0	0	0	0	54	0	0	0	0	239	0	0	0	0
Lane Group Flow (vph)	0	0	0	316	41	0	0	0	512	99	0	147	1107	0
Turn Type	Perm			Perm			Perm			Perm	pm+pt	pm+pt		
Protected Phases		4			3				2		1	1	6	
Permitted Phases	4			3			2			2	6	6		
Actuated Green, G (s)				24.2	24.2				15.7	15.7		24.8	24.8	
Effective Green, g (s)				26.2	26.2				17.7	17.7		26.3	26.3	
Actuated g/C Ratio				0.43	0.43				0.29	0.29		0.43	0.43	
Clearance Time (s)				6.0	6.0				6.0	6.0		4.0	5.5	
Vehicle Extension (s)				3.0	3.0				3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)				1487	686				1348	463		368	2211	
v/s Ratio Prot					0.03							0.03	c0.22	
v/s Ratio Perm				c0.09					0.11	0.06		0.14		
v/c Ratio				0.21	0.06				0.38	0.21		0.40	0.50	
Uniform Delay, d1				10.7	10.0				17.0	16.1		10.8	12.4	
Progression Factor				1.00	1.00				1.00	1.00		1.00	1.00	
Incremental Delay, d2				0.1	0.0				0.2	0.2		0.7	0.2	
Delay (s)				10.8	10.0				17.2	16.4		11.5	12.5	
Level of Service				B	B				B	B		B	B	
Approach Delay (s)		0.0			10.6				16.9				12.4	
Approach LOS		A			B				B				B	

Signalized Intersection Capacity Analysis
5: Sea Walk Pointe/Wal Mart & Three Islands Blvd.

AM TOTAL TRAFFIC W/ PROJ.

6/17/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.0	4.0				4.0	4.0		4.0	4.0	
Lane Util. Factor				0.97	1.00				0.91	1.00		1.00	0.91	
Frt				1.00	0.85				1.00	0.85		1.00	1.00	
Flt Protected				0.95	1.00				1.00	1.00		0.95	1.00	
Satd. Flow (prot)				3433	1583				5080	1583		1770	5085	
Flt Permitted				0.95	1.00				0.91	1.00		0.34	1.00	
Satd. Flow (perm)				3433	1583				4611	1583		636	5085	
Volume (vph)	0	0	0	282	0	82	8	0	414	270	16	120	1018	0
Peak-hour factor, PHF	0.25	0.25	0.25	0.86	0.86	0.86	0.80	0.80	0.80	0.80	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	328	0	95	10	0	518	338	17	130	1107	0
RTOR Reduction (vph)	0	0	0	0	54	0	0	0	0	238	0	0	0	0
Lane Group Flow (vph)	0	0	0	328	41	0	0	0	528	100	0	147	1107	0
Turn Type	Perm			Perm			Perm			Perm	pm+pt	pm+pt		
Protected Phases		4			3				2		1	1	6	
Permitted Phases	4						2			2	6	6		
Actuated Green, G (s)				3										
Effective Green, g (s)				24.2	24.2				16.0	16.0		25.1	25.1	
Actuated g/C Ratio				26.2	26.2				18.0	18.0		26.6	26.6	
Clearance Time (s)				0.43	0.43				0.30	0.30		0.44	0.44	
Vehicle Extension (s)				6.0	6.0				6.0	6.0		4.0	5.5	
Lane Grp Cap (vph)				3.0	3.0				3.0	3.0		3.0	3.0	
v/s Ratio Prot				1479	682				1365	469		364	2225	
v/s Ratio Perm					0.03							0.03	c0.22	
v/c Ratio				c0.10					0.11	0.06		0.15		
Uniform Delay, d1				0.22	0.06				0.39	0.21		0.40	0.50	
Progression Factor				10.9	10.1				17.0	16.1		10.8	12.3	
Incremental Delay, d2				1.00	1.00				1.00	1.00		1.00	1.00	
Delay (s)				0.1	0.0				0.2	0.2		0.7	0.2	
Level of Service				11.0	10.1				17.2	16.3		11.5	12.5	
Approach Delay (s)		0.0		B	B				B	B		B	B	
Approach LOS		A			10.8				16.8				12.4	
					B				B				B	

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0	4.0	4.0				
Lane Util. Factor		0.97	0.91			1.00	0.91	1.00				
Frt		1.00	1.00			1.00	1.00	0.85				
Flt Protected		0.95	1.00			0.95	1.00	1.00				
Satd. Flow (prot)		3433	5085			1770	5085	1583				
Flt Permitted		0.95	1.00			0.95	1.00	1.00				
Satd. Flow (perm)		3433	5085			1770	5085	1583				
Volume (vph)	6	521	1475	0	2	0	1481	185	0	0	0	4
Peak-hour factor, PHF	0.92	0.95	0.95	0.95	0.92	0.93	0.93	0.93	0.25	0.25	0.25	0.92
Adj. Flow (vph)	7	548	1553	0	2	0	1592	199	0	0	0	4
RTOR Reduction (vph)	0	0	0	0	0	0	0	80	0	0	0	0
Lane Group Flow (vph)	0	555	1553	0	0	2	1592	119	0	0	0	0
Turn Type	Prot	Prot			Prot	Prot		Perm				Perm
Protected Phases	1!	1	6		5	5	2					
Permitted Phases								2				4
Actuated Green, G (s)		26.0	119.7			1.3	95.0	95.0				
Effective Green, g (s)		27.0	120.7			2.3	96.0	96.0				
Actuated g/C Ratio		0.17	0.75			0.01	0.60	0.60				
Clearance Time (s)		5.0	5.0			5.0	5.0	5.0				
Vehicle Extension (s)		3.0	3.0			3.0	3.0	3.0				
Lane Grp Cap (vph)		579	3836			25	3051	950				
v/s Ratio Prot		c0.16	0.31			0.00	c0.31					
v/s Ratio Perm								0.08				
v/c Ratio		0.96	0.40			0.08	0.52	0.13				
Uniform Delay, d1		65.9	6.9			77.8	18.6	13.8				
Progression Factor		0.93	1.06			1.00	1.00	1.00				
Incremental Delay, d2		23.0	0.2			1.4	0.6	0.3				
Delay (s)		84.3	7.6			79.2	19.3	14.1				
Level of Service		F	A			E	B	B				
Approach Delay (s)			27.8				18.8			0.0		
Approach LOS			C				B			A		

Intersection Summary

HCM Average Control Delay	49.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: Hallandale Beach Blvd. & Three Islands Blvd.

TOTAL TRAFFIC W/PROJECT

6/19/2005

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0	4.0	4.0				
Lane Util. Factor		0.97	0.91			1.00	0.91	1.00				
Frt		1.00	1.00			1.00	1.00	0.85				
Flt Protected		0.95	1.00			0.95	1.00	1.00				
Satd. Flow (prot)		3433	5085			1770	5085	1583				
Flt Permitted		0.95	1.00			0.95	1.00	1.00				
Satd. Flow (perm)		3433	5085			1770	5085	1583				
Volume (vph)	6	541	1475	0	2	0	1443	278	0	0	0	25
Peak-hour factor, PHF	0.92	0.95	0.95	0.95	0.92	0.93	0.93	0.93	0.25	0.25	0.25	0.92
Adj. Flow (vph)	7	569	1553	0	2	0	1552	299	0	0	0	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	120	0	0	0	0
Lane Group Flow (vph)	0	576	1553	0	0	2	1552	179	0	0	0	0
Turn Type	Prot	Prot			Prot	Prot		Perm				Perm
Protected Phases	1!	1	6		5	5	2					
Permitted Phases								2				4
Actuated Green, G (s)		26.0	119.7			1.3	95.0	95.0				
Effective Green, g (s)		27.0	120.7			2.3	96.0	96.0				
Actuated g/C Ratio		0.17	0.75			0.01	0.60	0.60				
Clearance Time (s)		5.0	5.0			5.0	5.0	5.0				
Vehicle Extension (s)		3.0	3.0			3.0	3.0	3.0				
Lane Grp Cap (vph)		579	3836			25	3051	950				
v/s Ratio Prot		c0.17	0.31			0.00	c0.31					
v/s Ratio Perm								0.11				
v/c Ratio		0.99	0.40			0.08	0.51	0.19				
Uniform Delay, d1		66.4	6.9			77.8	18.4	14.4				
Progression Factor		0.93	1.07			1.00	1.00	1.00				
Incremental Delay, d2		31.3	0.2			1.4	0.6	0.4				
Delay (s)		93.0	7.7			79.2	19.0	14.9				
Level of Service		F	A			E	B	B				
Approach Delay (s)			30.8				18.4			0.0		
Approach LOS			C				B			A		

Intersection Summary

HCM Average Control Delay	57.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

AM FUTURE (EXISTING + B[illegible])

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91			1.00	0.91		1.00	1.00		1.00	1.00	
Frt		1.00	0.99			1.00	0.99		1.00	0.88		1.00	0.89	
Flt Protected		0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5053			1770	5055		1770	1637		1770	1655	
Flt Permitted		0.04	1.00			0.06	1.00		0.67	1.00		0.95	1.00	
Satd. Flow (perm)		82	5053			109	5055		1239	1637		1770	1655	
Volume (vph)	37	161	1879	84	4	27	1852	76	27	4	16	107	31	89
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.95	0.95	0.95	0.95	0.64	0.64	0.64	0.83	0.83	0.83
Adj. Flow (vph)	43	187	2185	98	4	28	1949	80	42	6	25	129	37	107
RTOR Reduction (vph)	0	0	2	0	0	0	2	0	0	23	0	0	82	0
Lane Group Flow (vph)	0	230	2281	0	0	32	2027	0	42	8	0	129	62	0
Turn Type	Prot	pm+pt			Prot	pm+pt			Perm			Prot		
Protected Phases	1	1	6		5	5	2			4		3	8	
Permitted Phases		6				2			4					
Actuated Green, G (s)		119.3	109.2			88.9	84.8		9.3	9.3		13.4	28.7	
Effective Green, g (s)		121.3	111.2			92.9	86.8		11.3	11.3		15.4	30.7	
Actuated g/C Ratio		0.76	0.70			0.58	0.54		0.07	0.07		0.10	0.19	
Clearance Time (s)		6.0	6.0			6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		384	3512			127	2742		88	116		170	318	
v/s Ratio Prot		c0.11	c0.45			0.01	c0.40			0.00		c0.07	0.04	
v/s Ratio Perm		0.34				0.14			c0.03					
v/c Ratio		0.60	0.65			0.25	0.74		0.48	0.07		0.76	0.20	
Uniform Delay, d1		45.0	13.6			15.1	28.0		71.5	69.4		70.5	54.3	
Progression Factor		1.00	1.00			1.06	1.27		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.5	0.9			0.8	1.4		4.0	0.2		17.5	0.3	
Delay (s)		47.5	14.5			16.8	37.0		75.5	69.7		88.0	54.6	
Level of Service		D	B			B	D		E	E		F	D	
Approach Delay (s)			17.5				36.7			73.1			70.4	
Approach LOS			B				D			E			E	

AM TOTAL TRAFFIC W/ P

6/17/2005

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91			1.00	0.91		1.00	1.00		1.00	1.00	
Frt		1.00	0.99			1.00	0.99		1.00	0.88		1.00	0.89	
Flt Protected		0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5053			1770	5055		1770	1637		1770	1655	
Flt Permitted		0.04	1.00			0.06	1.00		0.67	1.00		0.95	1.00	
Satd. Flow (perm)		82	5053			105	5055		1239	1637		1770	1655	
Volume (vph)	37	161	1898	84	4	28	1853	77	27	4	16	108	31	89
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.95	0.95	0.95	0.95	0.64	0.64	0.64	0.83	0.83	0.83
Adj. Flow (vph)	43	187	2207	98	4	29	1951	81	42	6	25	130	37	107
RTOR Reduction (vph)	0	0	2	0	0	0	2	0	0	23	0	0	82	0
Lane Group Flow (vph)	0	230	2303	0	0	33	2030	0	42	8	0	130	62	0
Turn Type	Prot	pm+pt			Prot	pm+pt			Perm			Prot		
Protected Phases	1	1	6		5	5	2			4		3	8	
Permitted Phases		6				2			4					
Actuated Green, G (s)		119.2	109.0			88.9	84.7		9.3	9.3		13.5	28.8	
Effective Green, g (s)		121.2	111.0			92.9	86.7		11.3	11.3		15.5	30.8	
Actuated g/C Ratio		0.76	0.69			0.58	0.54		0.07	0.07		0.10	0.19	
Clearance Time (s)		6.0	6.0			6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		384	3506			125	2739		88	116		171	319	
v/s Ratio Prot		c0.11	c0.46			0.01	c0.40			0.00		c0.07	0.04	
v/s Ratio Perm		0.34				0.14			c0.03					
v/c Ratio		0.60	0.66			0.26	0.74		0.48	0.07		0.76	0.20	
Uniform Delay, d1		45.0	13.8			15.3	28.1		71.5	69.4		70.4	54.2	
Progression Factor		1.00	1.00			1.01	1.28		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.5	1.0			0.9	1.4		4.0	0.2		17.9	0.3	
Delay (s)		47.5	14.8			16.4	37.4		75.5	69.7		88.3	54.5	
Level of Service		D	B			B	D		E	E		F	D	
Approach Delay (s)			17.7				37.1			73.1			70.5	
Approach LOS			B				D			E			E	

Signalized Intersection Capacity Analysis
5: Sea Walk Pointe/Wal Mart & Three Islands Blvd.

PM FUTURE (EXISTING + BACK... IND)

Future w/o Site Traffic-P.M. Peak Hour

6/17/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0				4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.97	1.00				0.91	1.00		1.00	0.91	
Frt		0.93		1.00	0.85				1.00	0.85		1.00	1.00	
Flt Protected		0.98		0.95	1.00				1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1695		3433	1583				5084	1583		1770	5083	
Flt Permitted		0.75		0.50	1.00				0.94	1.00		0.13	1.00	
Satd. Flow (perm)		1303		1807	1583				4756	1583		233	5083	
Volume (vph)	2	0	2	472	0	212	2	4	944	464	37	122	639	2
Peak-hour factor, PHF	0.25	0.25	0.25	0.86	0.86	0.86	0.80	0.80	0.80	0.80	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	0	8	549	0	247	2	5	1180	580	40	133	695	2
RTOR Reduction (vph)	0	8	0	0	171	0	0	0	0	354	0	0	0	0
Lane Group Flow (vph)	0	8	0	549	76	0	0	0	1187	226	0	173	697	0
Turn Type	Perm			Perm			Perm	Perm		Perm	custom	pm+pt		
Protected Phases		4			3				2			1	6	
Permitted Phases	4			3			2	2		2	1	6		
Actuated Green, G (s)		2.5		24.8	24.8				31.9	31.9		42.6	42.6	
Effective Green, g (s)		4.0		26.8	26.8				33.9	33.9		44.1	44.1	
Actuated g/C Ratio		0.05		0.31	0.31				0.39	0.39		0.51	0.51	
Clearance Time (s)		5.5		6.0	6.0				6.0	6.0		4.0	5.5	
Vehicle Extension (s)		3.0		3.0	3.0				3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		60		557	488				1855	618		228	2580	
v/s Ratio Prot					0.05							c0.05	0.14	
v/s Ratio Perm		c0.01		c0.30					0.25	0.14		c0.33		
v/c Ratio		0.14		0.99	0.16				0.64	0.37		0.76	0.27	
Uniform Delay, d1		39.8		29.9	21.8				21.5	18.9		14.5	12.2	
Progression Factor		1.00		1.00	1.00				1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.1		34.2	0.2				0.7	0.4		13.5	0.1	
Delay (s)		40.9		64.0	22.0				22.3	19.2		27.9	12.3	
Level of Service		D		E	C				C	B		C	B	
Approach Delay (s)		40.9			51.0				21.3				15.4	
Approach LOS		D			D				C				B	

PM FUTURE ~~(EXISTING + BAC~~ (WD)

Future with Site Traffic-P.M. Peak Hour

TOTAL TRAFFIC W/ PROJECT

6/17/2005

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0				4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00		0.97	1.00				0.91	1.00		1.00	0.91	
Frt		0.93		1.00	0.85				1.00	0.85		1.00	1.00	
Flt Protected		0.98		0.95	1.00				1.00	1.00		0.95	1.00	
Satd. Flow (prot)		1695		3433	1583				5084	1583		1770	5083	
Flt Permitted		0.75		0.50	1.00				0.94	1.00		0.12	1.00	
Satd. Flow (perm)		1303		1807	1583				4756	1583		220	5083	
Volume (vph)	2	0	2	474	0	212	2	4	972	464	37	122	666	2
Peak-hour factor, PHF	0.25	0.25	0.25	0.86	0.86	0.86	0.80	0.80	0.80	0.80	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	0	8	551	0	247	2	5	1215	580	40	133	724	2
RTOR Reduction (vph)	0	8	0	0	171	0	0	0	0	351	0	0	0	0
Lane Group Flow (vph)	0	8	0	551	76	0	0	0	1222	229	0	173	726	0
Turn Type	Perm			Perm			Perm	Perm		Perm	custom	pm+pt		
Protected Phases		4			3				2			1	6	
Permitted Phases	4			3			2	2		2	1	6		
Actuated Green, G (s)		2.5		24.7	24.7				32.4	32.4		43.1	43.1	
Effective Green, g (s)		4.0		26.7	26.7				34.4	34.4		44.6	44.6	
Actuated g/C Ratio		0.05		0.31	0.31				0.39	0.39		0.51	0.51	
Clearance Time (s)		5.5		6.0	6.0				6.0	6.0		4.0	5.5	
Vehicle Extension (s)		3.0		3.0	3.0				3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		60		553	484				1874	624		222	2597	
v/s Ratio Prot					0.05							c0.06	0.14	
v/s Ratio Perm		c0.01		c0.30					0.26	0.14		c0.34		
v/c Ratio		0.14		1.00	0.16				0.65	0.37		0.78	0.28	
Uniform Delay, d1		40.0		30.3	22.1				21.6	18.7		14.6	12.2	
Progression Factor		1.00		1.00	1.00				1.00	1.00		1.00	1.00	
Incremental Delay, d2		1.1		37.1	0.2				0.8	0.4		15.8	0.1	
Delay (s)		41.1		67.3	22.2				22.4	19.1		30.4	12.2	
Level of Service		D		E	C				C	B		C	B	
Approach Delay (s)		41.1			53.4				21.3				15.7	
Approach LOS		D			D				C				B	

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0					4.0
Lane Util. Factor	0.97	0.91			1.00	0.91	1.00					0.95
Frt	1.00	1.00			1.00	1.00	0.85					1.00
Flt Protected	0.95	1.00			0.95	1.00	1.00					0.95
Satd. Flow (prot)	3433	5085			1770	5085	1583					1681
Flt Permitted	0.95	1.00			0.95	1.00	1.00					0.95
Satd. Flow (perm)	3433	5085			1770	5085	1583					1681
Volume (vph)	921	1498	0	155	2	1455	223	0	0	0	4	424
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.93	0.93	0.93	0.25	0.25	0.25	0.92	0.85
Adj. Flow (vph)	969	1577	0	168	2	1565	240	0	0	0	4	499
RTOR Reduction (vph)	0	0	0	0	0	0	96	0	0	0	0	0
Lane Group Flow (vph)	969	1577	0	0	170	1565	144	0	0	0	0	252
Turn Type	Prot			Prot	Prot		Perm				Perm	Perm
Protected Phases	1	6		5	5	2						
Permitted Phases							2				4	4
Actuated Green, G (s)	26.0	101.0			20.0	95.0	95.0					24.0
Effective Green, g (s)	27.0	102.0			21.0	96.0	96.0					25.0
Actuated g/C Ratio	0.17	0.64			0.13	0.60	0.60					0.16
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0					5.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0					3.0
Lane Grp Cap (vph)	579	3242			232	3051	950					263
v/s Ratio Prot	c0.28	0.31			0.10	c0.31						
v/s Ratio Perm							0.09					
v/c Ratio	1.67	0.49			0.73	0.51	0.15					c0.15
Uniform Delay, d1	66.5	15.2			66.8	18.5	14.1					0.96
Progression Factor	0.81	1.60			1.00	1.00	1.00					67.0
Incremental Delay, d2	307.7	0.3			11.3	0.6	0.3					1.00
Delay (s)	361.3	24.8			78.1	19.1	14.4					43.5
Level of Service	F	C			E	B	B					110.5
Approach Delay (s)		152.9				23.6			0.0			F
Approach LOS		F				C			A			

Intersection Summary

HCM Average Control Delay	94.1	HCM Level of Service	F
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0					4.0
Lane Util. Factor	0.97	0.91			1.00	0.91	1.00					0.95
Frt	1.00	1.00			1.00	1.00	0.85					1.00
Flt Protected	0.95	1.00			0.95	1.00	1.00					0.95
Satd. Flow (prot)	3433	5085			1770	5085	1583					1681
Flt Permitted	0.95	1.00			0.95	1.00	1.00					0.95
Satd. Flow (perm)	3433	5085			1770	5085	1583					1681
Volume (vph)	944	1498	0	155	2	1361	360	0	0	0	87	459
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.93	0.93	0.93	0.25	0.25	0.25	0.92	0.85
Adj. Flow (vph)	994	1577	0	168	2	1463	387	0	0	0	95	540
RTOR Reduction (vph)	0	0	0	0	0	0	96	0	0	0	0	0
Lane Group Flow (vph)	994	1577	0	0	170	1463	291	0	0	0	0	318
Turn Type	Prot			Prot	Prot		Perm				Perm	Perm
Protected Phases	1	6		5	5	2						
Permitted Phases							2				4	4
Actuated Green, G (s)	26.0	101.0			20.0	95.0	95.0					24.0
Effective Green, g (s)	27.0	102.0			21.0	96.0	96.0					25.0
Actuated g/C Ratio	0.17	0.64			0.13	0.60	0.60					0.16
Clearance Time (s)	5.0	5.0			5.0	5.0	5.0					5.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0					3.0
Lane Grp Cap (vph)	579	3242			232	3051	950					263
v/s Ratio Prot	c0.29	c0.31			0.10	0.29						
v/s Ratio Perm							0.18					c0.19
v/c Ratio	1.72	0.49			0.73	0.48	0.31					1.21
Uniform Delay, d1	66.5	15.2			66.8	18.0	15.7					67.5
Progression Factor	0.81	1.61			1.00	1.00	1.00					1.00
Incremental Delay, d2	326.8	0.3			11.3	0.5	0.8					124.1
Delay (s)	380.5	24.8			78.1	18.5	16.5					191.6
Level of Service	F	C			E	B	B					F
Approach Delay (s)		162.3				23.1			0.0			
Approach LOS		F				C			A			

Intersection Summary

HCM Average Control Delay	107.3	HCM Level of Service	F
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Signalized Intersection Capacity Analysis
7: Hallandale Beach Blvd. & Diplomat Pkwy.

PM FUTURE (EXISTING + BACKGRO)

Future w/o Site Traffic-P.M. Peak Hour

6/17/2005

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91			1.00	0.91		1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.99		1.00	0.91		1.00	0.86	
Flt Protected		0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5075			1770	5036		1770	1700		1770	1593	
Flt Permitted		0.05	1.00			0.05	1.00		0.66	1.00		0.95	1.00	
Satd. Flow (perm)		99	5075			91	5036		1232	1700		1770	1593	
Volume (vph)	84	183	2248	31	2	25	1626	111	49	19	27	144	4	120
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.95	0.95	0.95	0.95	0.64	0.64	0.64	0.83	0.83	0.83
Adj. Flow (vph)	98	213	2614	36	2	26	1712	117	77	30	42	173	5	145
RTOR Reduction (vph)	0	0	1	0	0	0	3	0	0	37	0	0	112	0
Lane Group Flow (vph)	0	311	2649	0	0	28	1826	0	77	35	0	173	38	0
Turn Type	Prot	pm+pt			Prot	pm+pt			Perm			Prot		
Protected Phases	1	1	6		5	5	2			4		3	8	
Permitted Phases		6				2			4					
Actuated Green, G (s)		113.3	102.7			84.9	80.3		14.7	14.7		14.0	34.7	
Effective Green, g (s)		115.3	104.7			88.9	82.3		16.7	16.7		16.0	36.7	
Actuated g/C Ratio		0.72	0.65			0.56	0.51		0.10	0.10		0.10	0.23	
Clearance Time (s)		6.0	6.0			6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		374	3321			120	2590		129	177		177	365	
v/s Ratio Prot		c0.15	0.52			0.01	0.36			0.02		c0.10	0.02	
v/s Ratio Perm		c0.45				0.12			c0.06					
v/c Ratio		0.83	0.80			0.23	0.70		0.60	0.20		0.98	0.10	
Uniform Delay, d1		49.6	20.0			21.6	29.6		68.4	65.5		71.8	48.7	
Progression Factor		1.00	1.00			1.61	1.75		1.00	1.00		1.00	1.00	
Incremental Delay, d2		14.5	2.1			0.9	1.4		7.2	0.6		60.4	0.1	
Delay (s)		64.2	22.1			35.4	53.3		75.7	66.1		132.2	48.8	
Level of Service		E	C			D	D		E	E		F	D	
Approach Delay (s)			26.5				53.0			71.0			93.5	
Approach LOS			C				D			E			F	

H Signalized Intersection Capacity Analysis
7: Hallandale Beach Blvd. & Diplomat Pkwy.

PM TOTAL TRAFFIC W/PROJ
Future with Site Traffic-P.M. Peak Hour
6/17/2005

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations														
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0			4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00	0.91			1.00	0.91		1.00	1.00		1.00	1.00	
Frt		1.00	1.00			1.00	0.99		1.00	0.91		1.00	0.86	
Flt Protected		0.95	1.00			0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	5075			1770	5037		1770	1700		1770	1593	
Flt Permitted		0.05	1.00			0.05	1.00		0.66	1.00		0.95	1.00	
Satd. Flow (perm)		86	5075			91	5037		1232	1700		1770	1593	
Volume (vph)	84	183	2270	31	2	26	1689	113	49	19	27	145	4	120
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.95	0.95	0.95	0.95	0.64	0.64	0.64	0.83	0.83	0.83
Adj. Flow (vph)	98	213	2640	36	2	27	1778	119	77	30	42	175	5	145
RTOR Reduction (vph)	0	0	1	0	0	0	3	0	0	37	0	0	112	0
Lane Group Flow (vph)	0	311	2675	0	0	29	1894	0	77	35	0	175	38	0
Turn Type	Prot	pm+pt			Prot	pm+pt			Perm			Prot		
Protected Phases	1	1	6		5	5	2			4		3	8	
Permitted Phases		6				2			4					
Actuated Green, G (s)		113.3	102.7			84.9	80.3		14.7	14.7		14.0	34.7	
Effective Green, g (s)		115.3	104.7			88.9	82.3		16.7	16.7		16.0	36.7	
Actuated g/C Ratio		0.72	0.65			0.56	0.51		0.10	0.10		0.10	0.23	
Clearance Time (s)		6.0	6.0			6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0	3.0			3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		367	3321			120	2591		129	177		177	365	
v/s Ratio Prot		c0.15	0.53			0.01	0.38			0.02		c0.10	0.02	
v/s Ratio Perm		c0.46				0.13			c0.06					
v/c Ratio		0.85	0.81			0.24	0.73		0.60	0.20		0.99	0.10	
Uniform Delay, d1		51.8	20.2			22.0	30.2		68.4	65.5		71.9	48.7	
Progression Factor		1.00	1.00			1.58	1.69		1.00	1.00		1.00	1.00	
Incremental Delay, d2		16.4	2.2			0.9	1.6		7.2	0.6		63.7	0.1	
Delay (s)		68.1	22.4			35.5	52.6		75.7	66.1		135.6	48.8	
Level of Service		E	C			D	D		E	E		F	D	
Approach Delay (s)			27.2				52.4			71.0			95.5	
Approach LOS			C				D			E			F	

IMPACT ANALYSIS

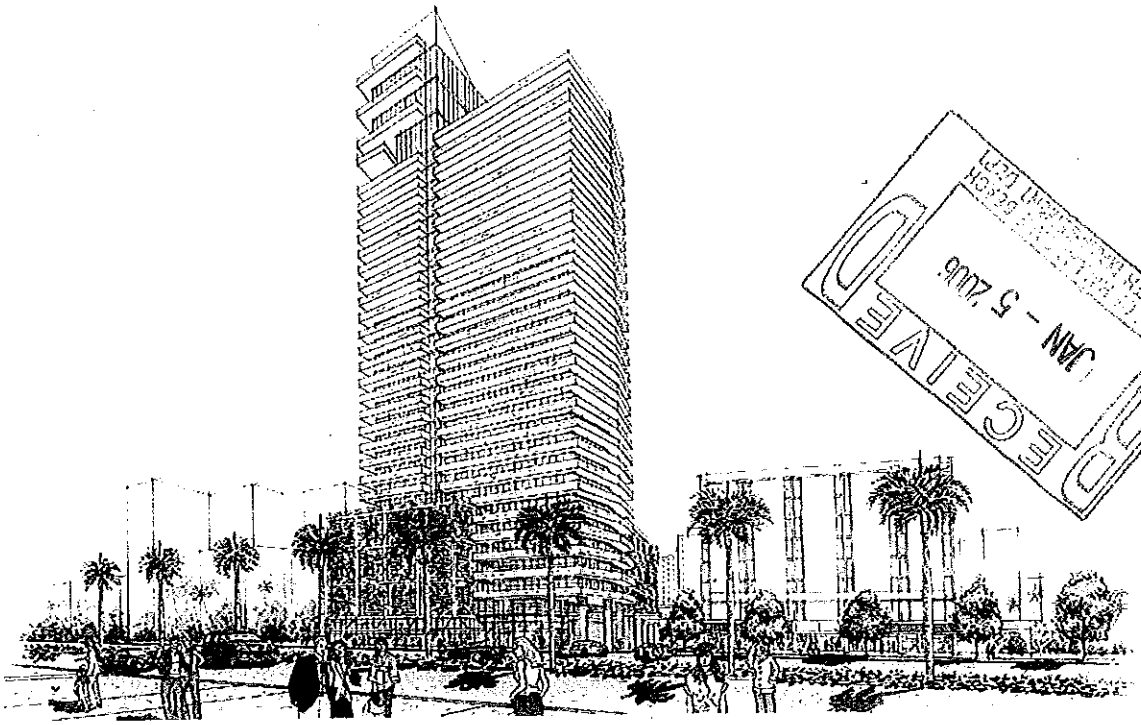
FOR

MILLENNIUM HALLANDALE

HALLANDALE BEACH, FLORIDA

OWNER:

2500 HALLANDALE BEACH, LLC



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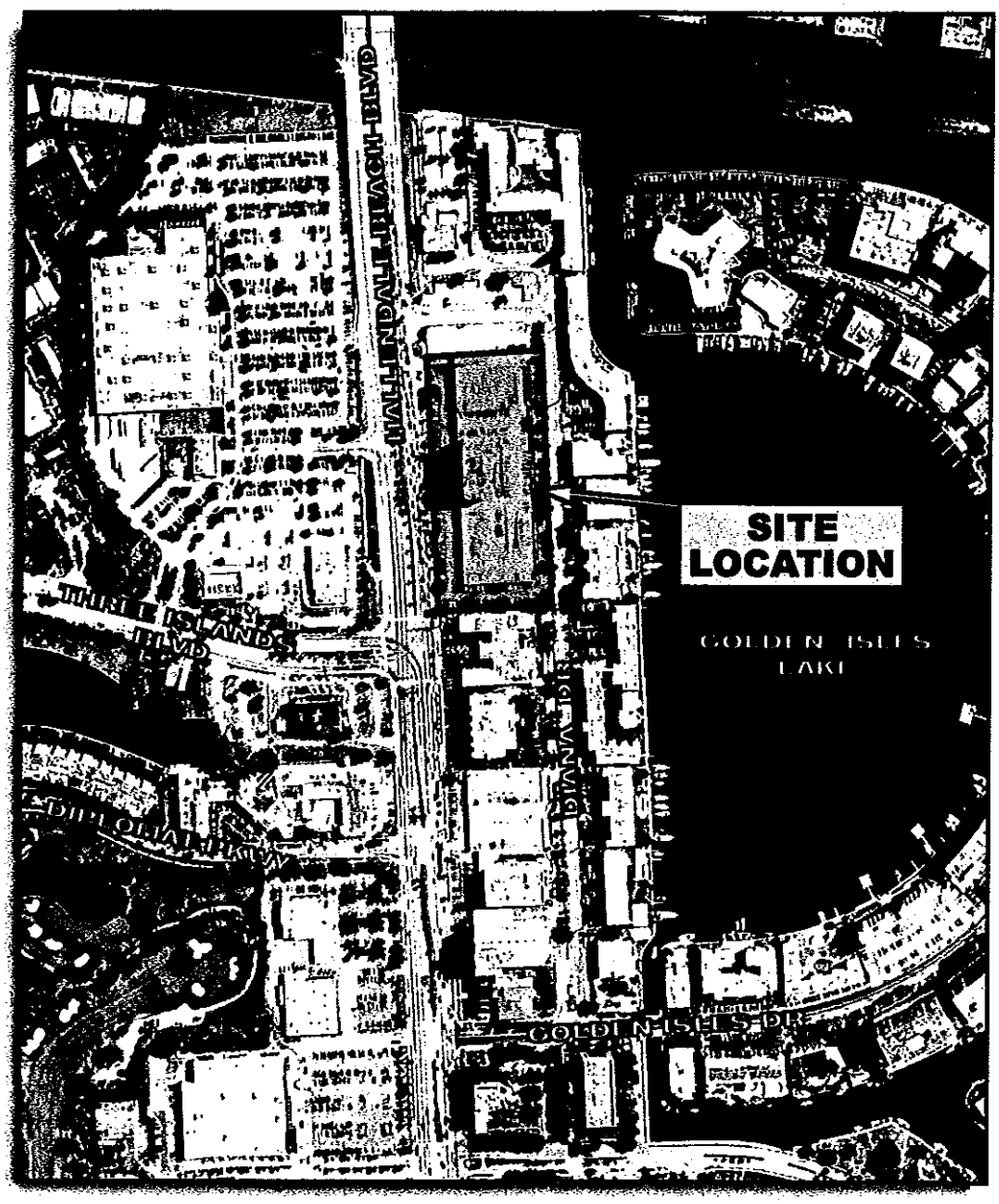
GREATER HALLANDALE BEACH
CRA

GELLER, GELLER, FISHER AND GARFINKEL, LLP
2411 Hollywood Blvd.
Hollywood, FL 33020
Phs: (954) 920-2300/(305) 949-6600
Fax: (954) 920-6885

Traffic Impact Study



Millennium Tower - Hallandale
December 2005

Est. 1985

Tinter Associates, Inc. Transportation Engineers
3303 West Commercial Blvd. • Ste 201 • Ft. Lauderdale, FL 33309
(954) 484-3633 • Fax (954) 484-9612 • www.tinter.com

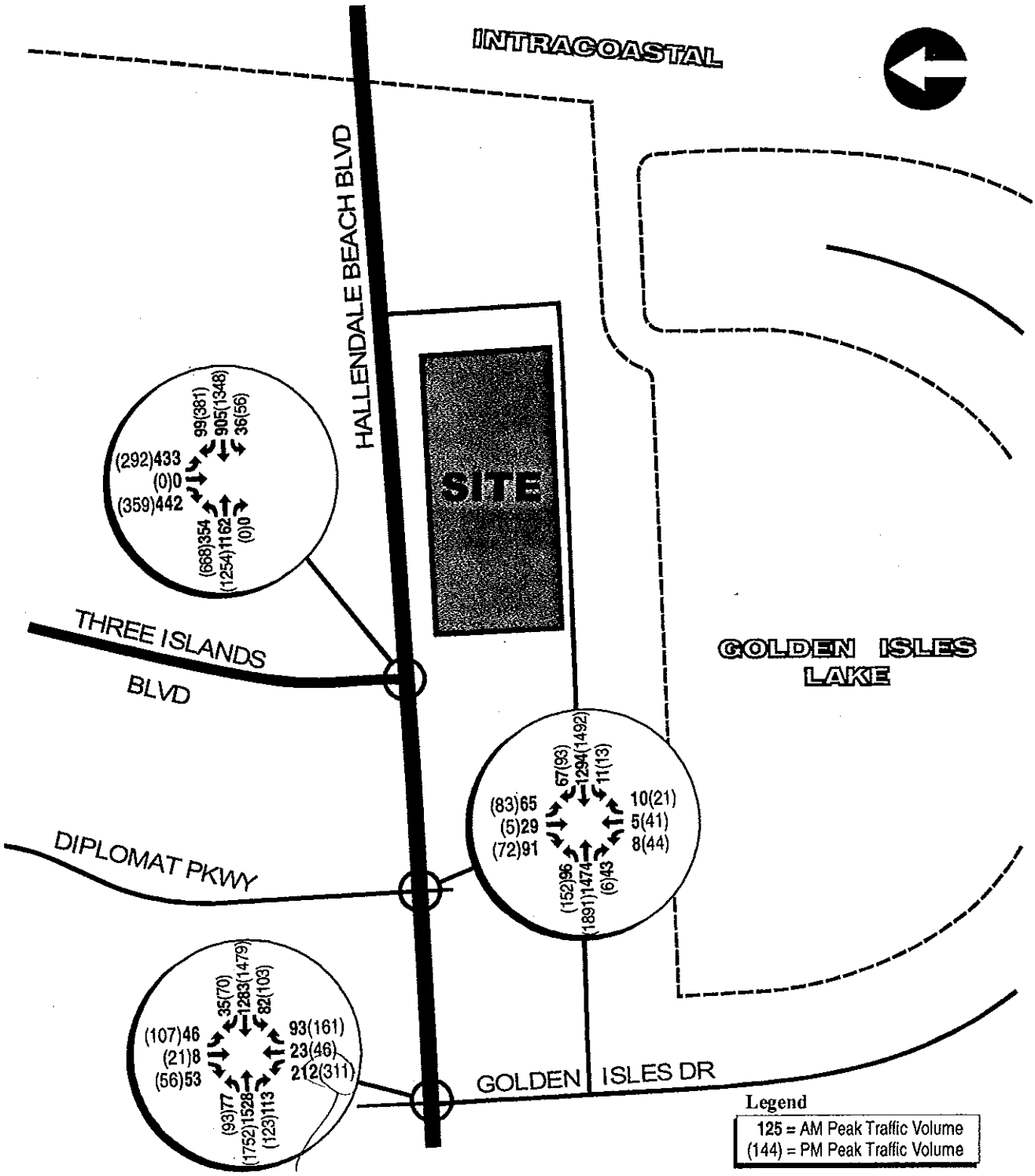


Figure 5 – Future Background Traffic Volumes

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Future Total Traffic

Future total traffic volumes for the study area roadway network were calculated by combining project traffic volumes with future background traffic volumes. Resulting A.M. and P.M. peak hour future total traffic volumes are shown in Figure 6.

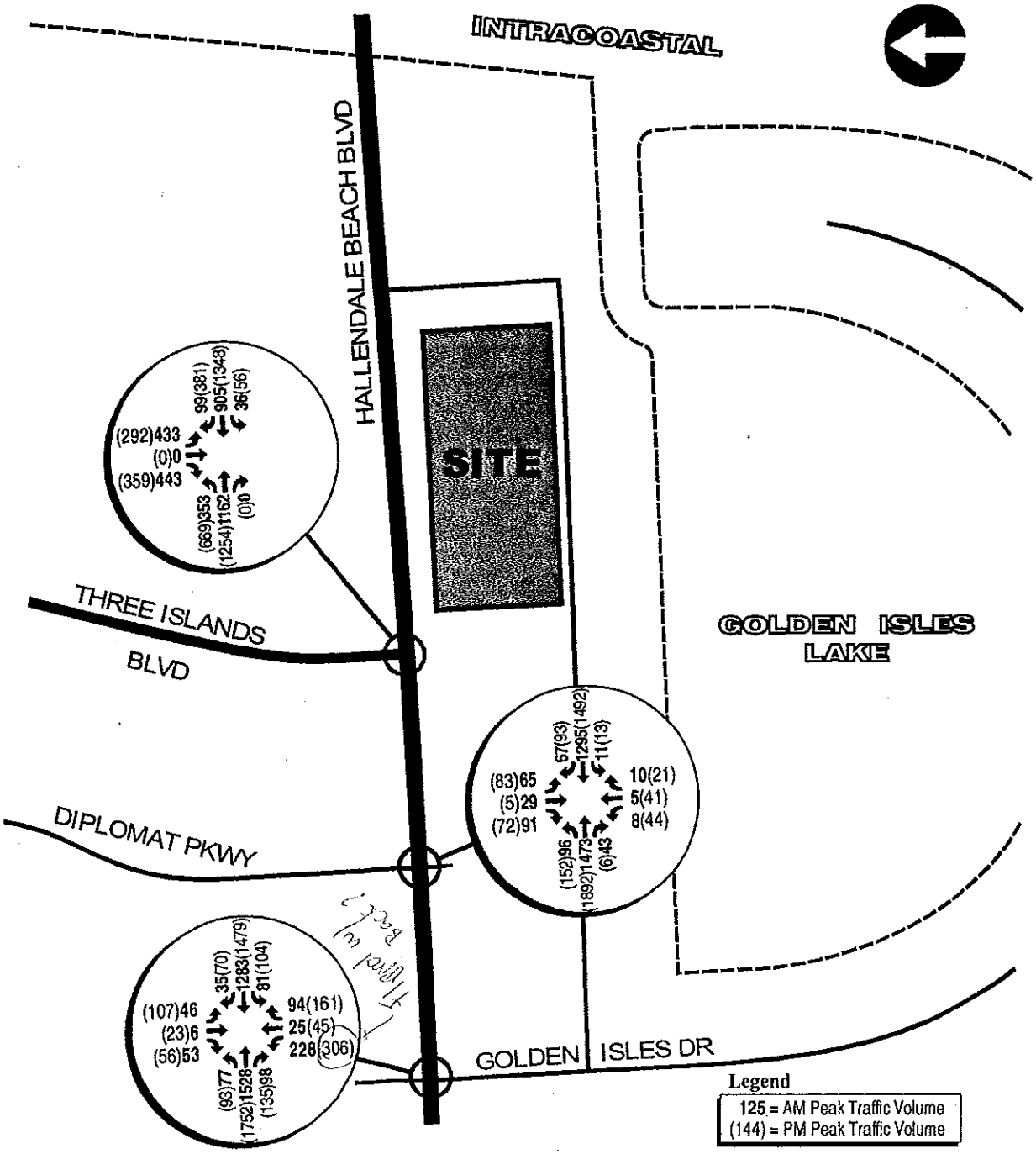

Figure 6 – Total Traffic Volumes

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TRAFFIC IMPACT STUDY

FOR

REGENCY SPA

CITY OF HALLANDALE

Prepared for

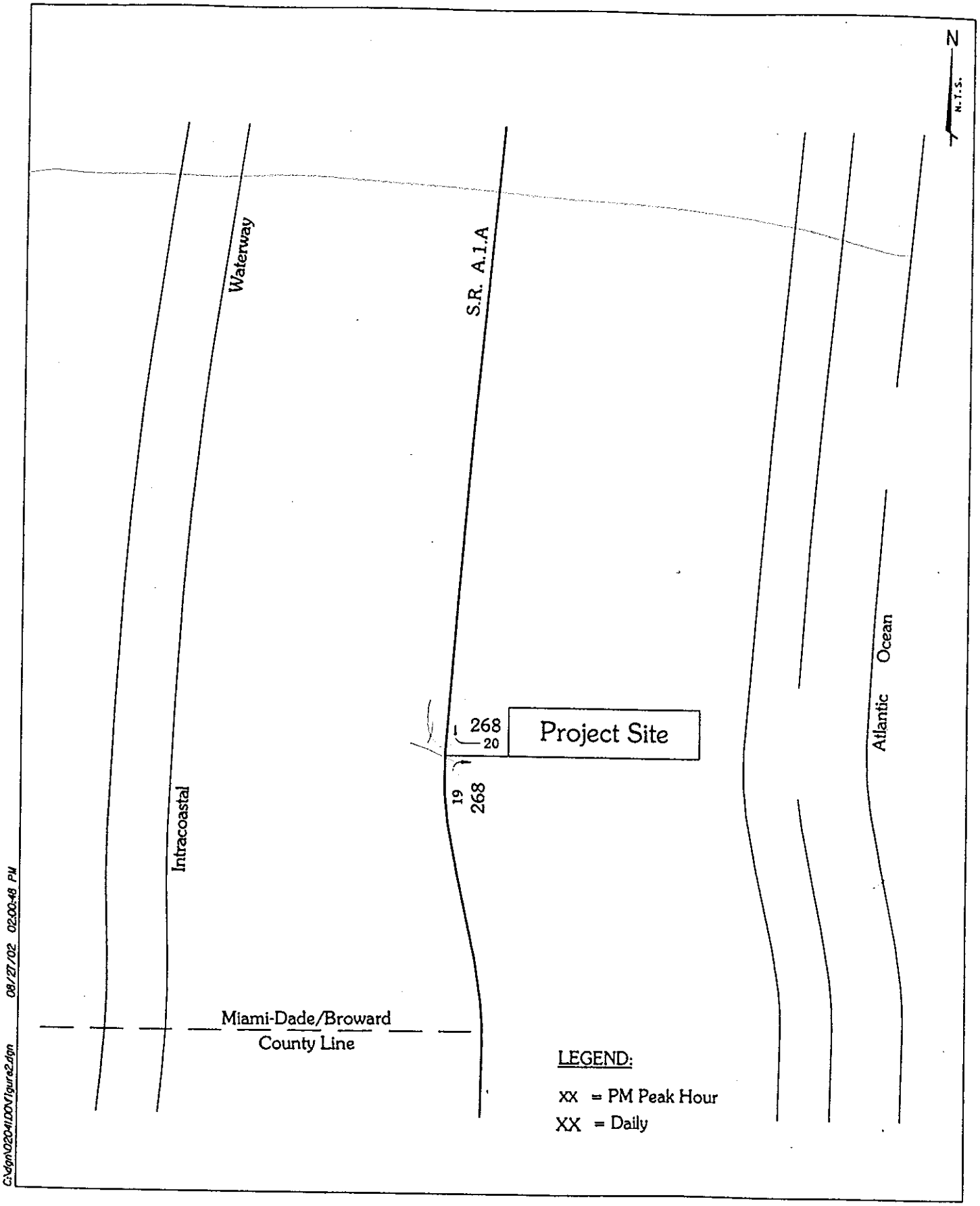
REGENCY HOUSE HEALTH SPA

August 30, 2002

HUGHES HUGHES INC.

TRANSPORTATION ENGINEERS & PLANNERS

2101 N. Andrews Avenue, Suite 406 ■ Fort Lauderdale, FL 33311-3949
954/563-1121 ■ Fax/954/563-9790 ■ www.HughesHughesInc.com



HUGHES HALL INC.
Transportation Engineers Planners
2101 N. Andrews Ave. Suite 406
Fort Lauderdale, FL 33311-3949
(954) 563-1121 Fax: (954) 563-9790

Regency Spa
Project Traffic

Figure
2

to the project location. Trip assignments were based on the assumption that drivers seek the most direct routes to the desired destinations. The actual distribution percentages were determined to be 1.2% to/from the south on S.R. A-1-A, 98.8% to/from the north on S.R. A-1-A, 33.4% of the traffic north of the project was assumed to continue north of Hallandale Beach Boulevard while 65.4% was assumed to be oriented to Hallandale Beach Boulevard west of S.R. A-1-A. Trips associated with the project were assigned to the adjacent roadway network assuming that drivers generally seek the most direct routes to the desired destination.

Figure 2 illustrates the driveway volumes expected to occur at the entrances to the proposed Riviera Club.

Table 3
Regency Spa
Trip Generation

Proposed Land Use (Code)	Scale	AM Peak-Hour Entering	AM Peak-Hour Exiting	AM Peak-Hour Total	PM Peak-Hour Entering	PM Peak-Hour Exiting	PM Peak-Hour Total	Daily Entering	Daily Exiting	Daily Total
Existing Land Use										
Hotel (310)	70 D.U	14	10	25	18	19	38	312	312	624
Proposed Land Use										
Hotel (310)	130 D.U	42	30	72	38	39	77	580	580	1,160
Net New Trips		**27**	**20**	**47**	**19**	**20**	**39**	**268**	**268**	**536**

Notes: Institute of Transportation Engineers' (ITE) Trip Generation manual, 6th Edition trip rates:

Hotel (310)

AM Peak-Hour Rate:	T=0.782(X)-29.797	trips per dwelling unit
PM Peak-Hour Rate:	Ln(T)=1.150Ln(X)-1.255	trips per dwelling unit
Daily Rate:	T=8.92(X)	trips per dwelling unit

Oasis

traffic study

prepared for:
Beacon Investment Properties, LLC

Traf Tech
ENGINEERING, INC.

March 2006

TABLE 4
TOTAL CONDITIONS ANALYSIS
OASIS MIXED-USE DEVELOPMENT

ROADWAY SEGMENT	TRIPS LINK	Roadway Type	LOS D Capacity	Total Background	Oasis Project (2)		Significant Yes/No	Total Traffic	Total V/C
						% LOS D			
Hallandale Beach Boulevard									
I-95 to NW 8th Avenue	921	A6LD	4,550	7,091	42	0.9%	No	7,133	1.57
NW 8th Avenue to Dixie Hwy	922	A6LD	4,550	7,155	42	0.9%	No	7,197	1.58
Dixie Hwy to NE 3rd Ave	923	A6LD	4,550	5,273	56	1.2%	No	5,329	1.17
NE 3rd Ave to US 1	924	A6LD	4,550	5,232	56	1.2%	No	5,288	1.16
US 1 to NE 10th Ave	925	A6LD	3,980	5,260	82	2.1%	No	5,342	1.34
NE 10th Ave to Diplomat Pkwy	926	A6LD	3,980	4,969	116	2.9%	No	5,085	1.28
Diplomat Pkwy to SR A-1-A	927	A6LD	3,980	4,864	7	0.2%	No	4,871	1.22
Dixie Highway									
Pembroke Rd to NW 3rd Street	903	A4LD	2,560	1,179	0	0.0%	No	1,179	0.46
NW 3rd Street to Hallandale	904	A4LD	2,560	1,373	6	0.2%	No	1,379	0.54
Hallandale to SW 3rd Street	932	A4LD	2,560	1,148	8	0.3%	No	1,156	0.45
SW 3rd Street to Miami-Dade	933	A4LD	2,560	516	3	0.1%	No	519	0.20
Federal Highway (US 1)									
NE 9th Street to NE 3rd Street	901	A4LD	2,560	3,465	12	0.5%	No	3,477	1.36
NE 3rd Street to Hallandale	902	A4LD	2,560	2,904	21	0.8%	No	2,925	1.14
Hallandale to SE 3rd Street	930	A6LD	4,550	4,751	6	0.1%	No	4,757	1.05
SE 3rd Street to Miami-Dade	931	A6LD	4,550	4,926	6	0.1%	No	4,932	1.08
SR A-1-A									
Iris Terrace to Hallandale	860	A6LD	3,980	3,271	4	0.1%	No	3,275	0.82
Hallandale to 0.3 miles south	928	A6LD	4,550	4,492	4	0.1%	No	4,496	0.99
0.3 miles south to Miami-Dade	929	A6LD	4,550	3,530	2	0.0%	No	3,532	0.78

Source: Broward County TRIPS Model, Hallandale Beach, and Traf Tech Engineering, Inc.

(2) Trips based on Broward TRIPS model (Proposed Project minus Existing Development)

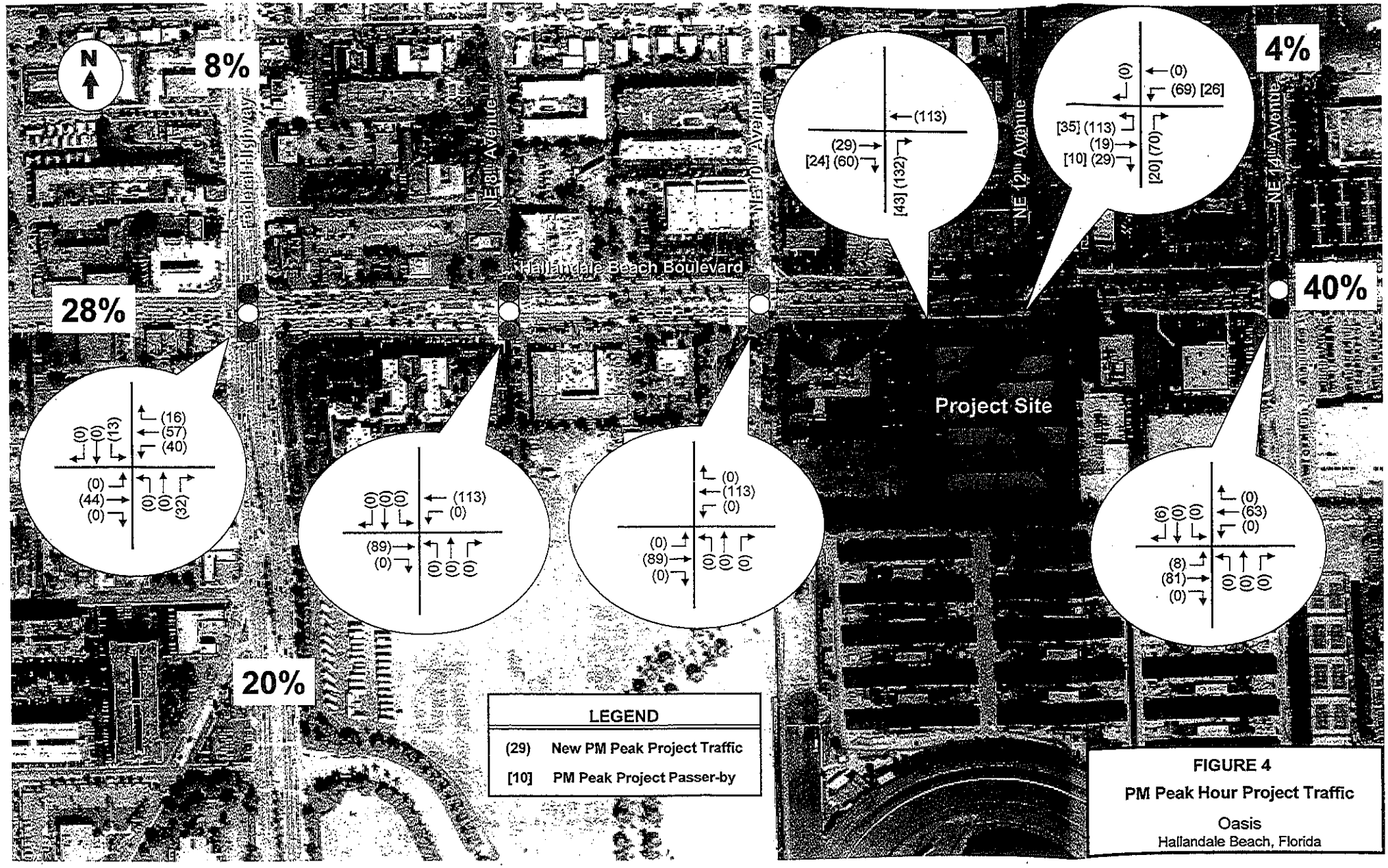


FIGURE 4
PM Peak Hour Project Traffic
Oasis
Hallandale Beach, Florida

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

The project trip distribution was based on a review of the existing transportation network located in the vicinity of the project site, the existing traffic patterns as obtained from the traffic counts, and the existing land uses located within the study area. The following project distribution and assignment was assumed for the Oasis mixed-use development:

- 44% of the project traffic was assigned to Hallandale Beach Boulevard east of the project site. Of the 44%, 4% was assigned to NE 14th Avenue and the remaining 40% was assumed to continue east onto SR A-1-A.

- 56 % of the project traffic was assigned to Hallandale Beach Boulevard west of the project site. Of the 56%, 28% was assumed to continue west on Hallandale Beach Boulevard, 20% was assumed to head south along US 1, and 8% was assigned to the north via Federal Highway.

Using the above trip distribution and traffic assignment, the new project-related trips were assigned to the study area. The resulting project traffic assignment is summarized in Figure 4.

PARK CENTRAL
TRAFFIC IMPACT ANALYSIS
DRC Case

Prepared for

HALLANDALE PARK CENTRAL DEVELOPMENT, LLC
425 North Federal Highway
Hallandale, Florida 33009

by

Jackson M. Ahlstedt, P.E.
46 N.W. 94th Street
Miami Shores, Florida 33150
(305) 754-8695

AUGUST 2006

Jackson M. Ahlstedt, P.E.
Florida Registration #28258

TABLE 19
PEAK HOUR PROJECT TRAFFIC ASSIGNMENT

ROADWAY	FROM	TO	PEAK HOUR CONDITIONS			
			AM		PM	
			NB/EB	SB/WB	NB/EB	SB/WB
DIXIE HIGHWAY	DADE COUNTY LINE	HALLANDALE BEACH BLVD	8	12	6	4
	HALLANDALE BEACH BLVD	PEMBROKE ROAD	53	32	18	26
	PEMBROKE ROAD	HOLLYWOOD BOULEVARD	29	18	10	14
US-1	DADE COUNTY LINE	HALLANDALE BEACH BLVD	5	8	4	7
	HALLANDALE BEACH BLVD	PEMBROKE ROAD	12	7	4	6
	PEMBROKE ROAD	HOLLYWOOD BOULEVARD	12	7	4	6
HALLANDALE BEACH BLVD	I-95	US-1	35	57	28	19
	US-1	DIPLOMAT PARKWAY	2	1	1	1
	DIPLOMAT PARKWAY	A-1-A	2	1	1	1
PEMBROKE ROAD	I-95	US-1	14	23	12	8
HOLLYWOOD BLVD	I-95	DIXIE HIGHWAY	3	2	1	1
	DIXIE HIGHWAY	US-1	0	0	0	0
	US-1	A-1-A	1	1	0	1

Note: Volumes are in vehicles per hour and represent the net additional traffic due to the proposed project.

TABLE 16
FINAL EXTERNAL PROJECT TRAFFIC

TIME	VEHICLE TRIPS							TOTALS	
	CONDOMINIUMS		RETAIL		EXISTING MOBILE HOME PARK				
	ITE (230)		ITE (814)		ITE (240)				
	AUTO	98.00%	AUTO	98.00%	AUTO	98.00%			
AM PEAK HOUR OF ADJACENT STREET									
IN	25		81		(16)			90	VPD
OUT	120		88		(63)			146	VPD
TOTAL	145		169		(78)			235	VPD
PM PEAK HOUR OF ADJACENT STREET									
IN	116		29		(74)			72	VPH
OUT	57		37		(45)			49	VPH
TOTAL	173		67		(119)			121	VPH

As can be seen from Table 16, the estimated number of new vehicle trips entering the site during the AM peak hour is 90 vph. The estimated number of new vehicle trips leaving the site during the AM peak hour is 146 vph.

The estimated number of new vehicle trips entering the site during the PM peak hour is 72 vph. The estimated number of new vehicle trips leaving the site during the PM peak hour is 49 vph.

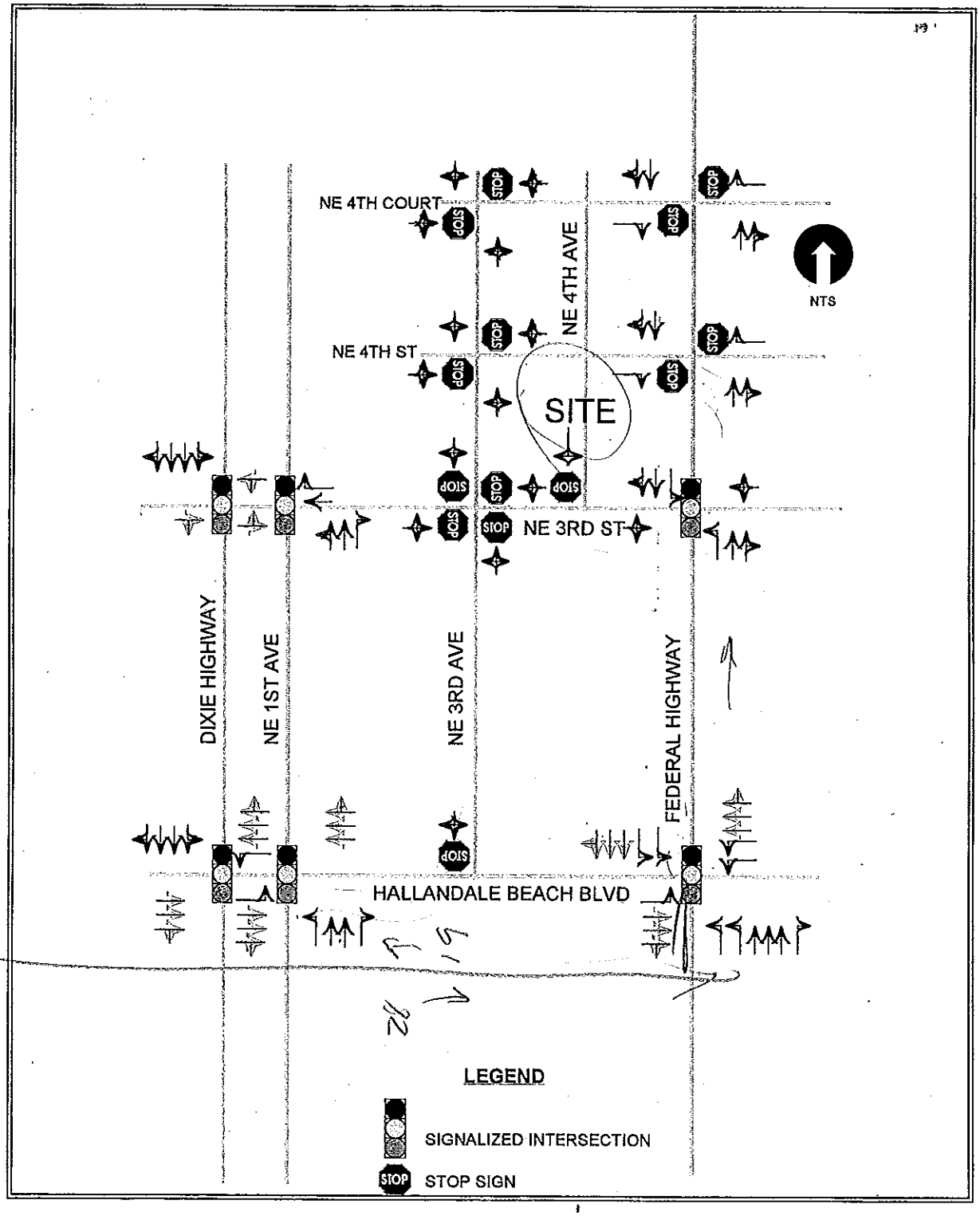


FIGURE 3
LANE CONFIGURATIONS AT INTERSECTIONS

Traffic Impact Analysis
for Submittal to the City of
Hallandale Beach

Hallandale Square
Mixed-Use Development
Hallandale Beach, Florida

Prepared for:

600 Hallandale, LLC
Bay Harbor, Florida

Prepared by:

Kimley-Horn and Associates, Inc.
Fort Lauderdale, Florida

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January 2008
144157000

John J. McWilliams, P.E.
Florida Registration Number 62541
Kimley-Horn and Associates, Inc.
5200 NW 33rd Avenue, Suite 109
Fort Lauderdale, FL 33309
CA # 00000696

EXECUTIVE SUMMARY

600 Hallandale, LLC is proposing a retail development (Hallandale Square) in Hallandale Beach, Florida. The project consists of 347,708 sq. ft. of retail space and a seven (7) screen movie theater. The project site is located on the southeast corner of Hallandale Beach Boulevard and Federal Highway (US 1). The site is currently occupied by 60,609 sq. ft. of retail space. Construction is expected to be completed and the project opened by the year 2009. The project is expected to generate a total of 119 net new A.M. peak hour trips and 711 net new P.M. peak hour trips.

Access to the project is proposed via five (5) access points. Direct access to Federal Highway will be provided via a right-in/right-out driveway located south of Hallandale Beach Boulevard and via Hibiscus Street Direct signalized access to Hallandale Beach Boulevard will be provided via a public roadway aligning with NE 8th Avenue south of Hallandale Beach Boulevard consistent with the Citywide Masterplan. Additionally, a right-in only project driveway is proposed west of NE 8th Avenue for delivery vehicles only. Furthermore, the proposed development is expected to have interconnectivity with the roadway network at the Village of Gulfstream Park via a public roadway network proposed as part of the Citywide Masterplan.

A traffic impact analysis was conducted for intersections in the vicinity of the project site consistent with City of Hallandale Beach's impact evaluation submission requirements (City Code Section 32-788(g)). Intersection capacity analyses were conducted for the existing conditions and for future conditions after the opening of the project. All study intersections are expected to operate at LOS D or better under future total traffic conditions during the peak hour periods with the exception of Hallandale Beach Boulevard and Federal Highway. The subject intersection is expected to operate at LOS F with or without the proposed development. In order to mitigate the additional delay generated by the proposed development, the applicant is proposing two (2) geometric improvements at the intersection.

- Construct an additional northbound right-turn lane on Federal Highway providing for dual northbound right-turn movements at the intersection along with the installation of a northbound right-turn overlap. Dedication of additional right-of-way along the proposed development's frontage will be required in order to construct this improvement.

- Contribute to the City an amount equal to the cost to construct a westbound right-turn lane along Hallandale Beach Boulevard at the intersection of Hallandale Beach Boulevard and Federal Highway (US 1). Once the City completes its Citywide Transportation Study, the City can either proceed to acquire the necessary right-of-way and use these funds to construct this improvement or utilize these funds for other transportation improvements which the Citywide Study recommends equivalent to the construction cost of the westbound right-turn lane to the City of Hallandale Beach to be used towards alternative transportation-related improvements in the area.

In conclusion, the proposed development is not expected to have a significant impact on the adjacent street network with the geometric improvements proposed at the intersection of Hallandale Beach Boulevard and Federal Highway.

Net New External Trips

The resulting net new external trips are presented in Table 2. These trips were then adjusted for the existing land use (57,579 sq. ft. of retail space) to account for traffic being produced by the existing land uses. Table 3 presents the external trips after the existing land use adjustments.

Table 3 External Trip Adjustment

External Trips	In	Out	Total
A.M. Peak Hour			
Project External Vehicular Trips	109	70	179
Existing Retail External Vehicular Trips	42	18	60
Net New External Vehicular Trips	**67**	**52**	**119**
P.M. Peak Hour			
Project External Vehicular Trips	471	477	948
Existing Retail External Vehicular Trips	110	127	237
Net New External Vehicular Trips	**361**	**350**	**711**

Trip Distribution and Assignment

An informational Traffic Review and Impact Planning System (TRIPS) model run was performed to determine the project trip distribution and assignment for the Hallandale Square project in accordance with City Code. This informational TRIPS model run was used as a basis for developing the trip distribution and assignment for the subject project. It should be noted that the TRIPS analysis does not include local roadways in the study area. As a result, the model did not assign trips to the residential streets located around the project site. Furthermore, the analysis does not take into account internalization or pass-by reductions. Therefore, only the cardinal distribution from the TRIPS analysis was utilized. It was also noted that the TRIPS analysis does not accurately estimate the attraction of project trips to/from Miami-Dade County as. However, the project site is adjacent to Miami-Dade County and to the City of Aventura (approximately 0.75 miles). Therefore, a significant percentage of project trips will originate to/from Miami-Dade County. Therefore, the project trip assignment was adjusted to account for the expected attraction into/from Miami-Dade County. The TRIPS analysis output for the current project is included in Appendix C.

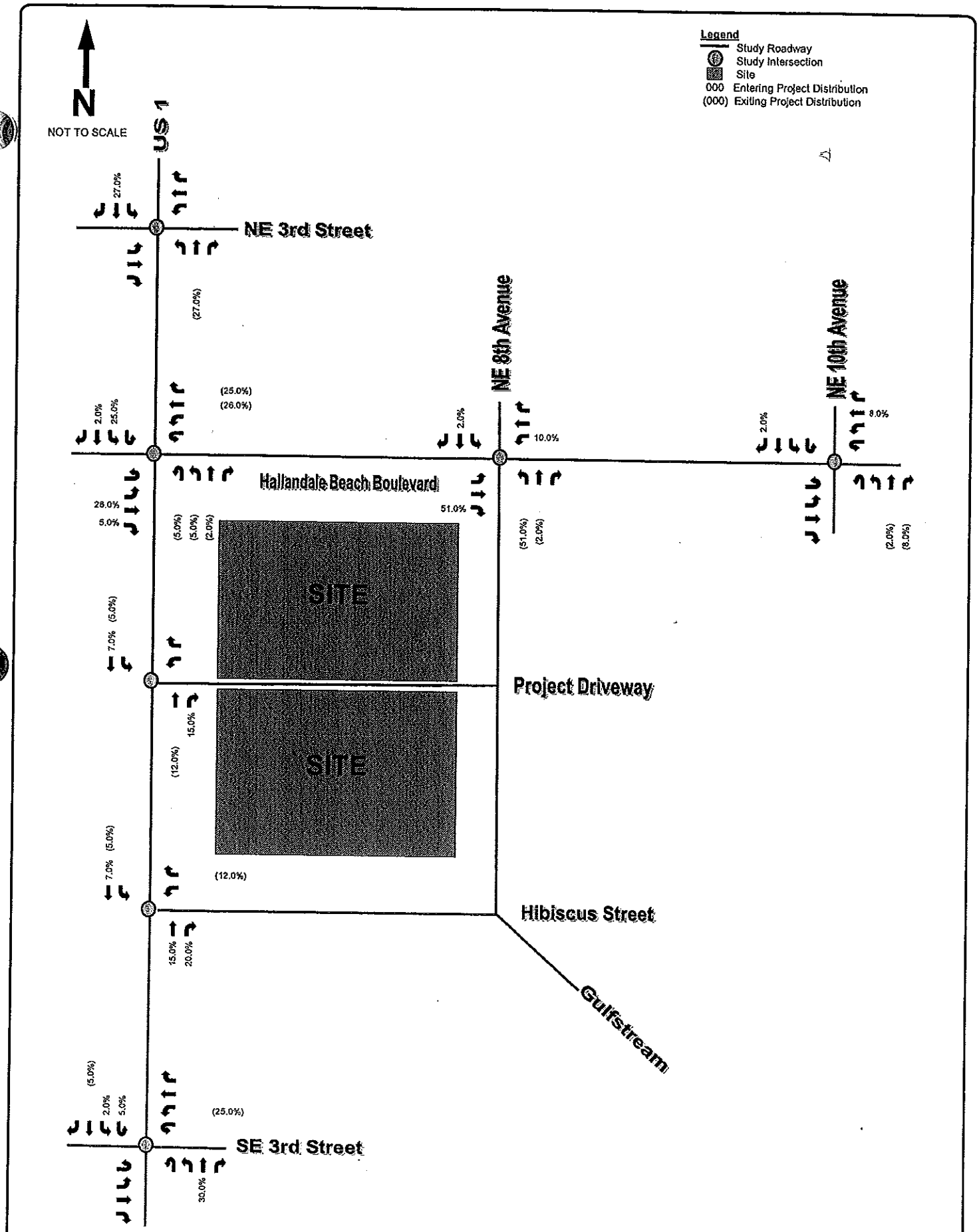

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Figure 2
Project Trip Distribution
Hallandale Square
City of Hallandale Beach, Florida

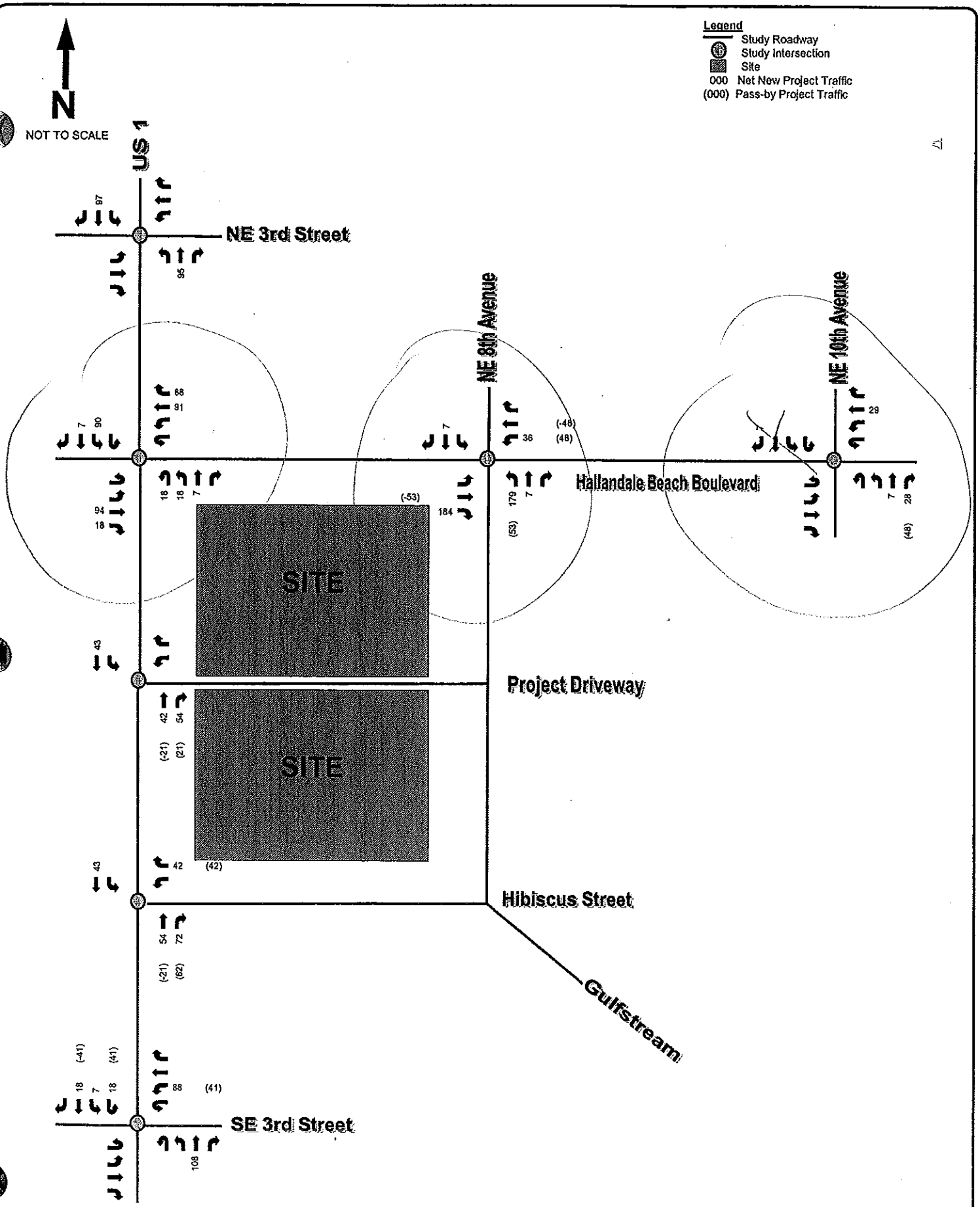

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Figure 4
Project Traffic Assignment P.M. Peak Hour
Hallandale Square
City of Hallandale Beach, Florida

Preliminary
Traffic Impact Study

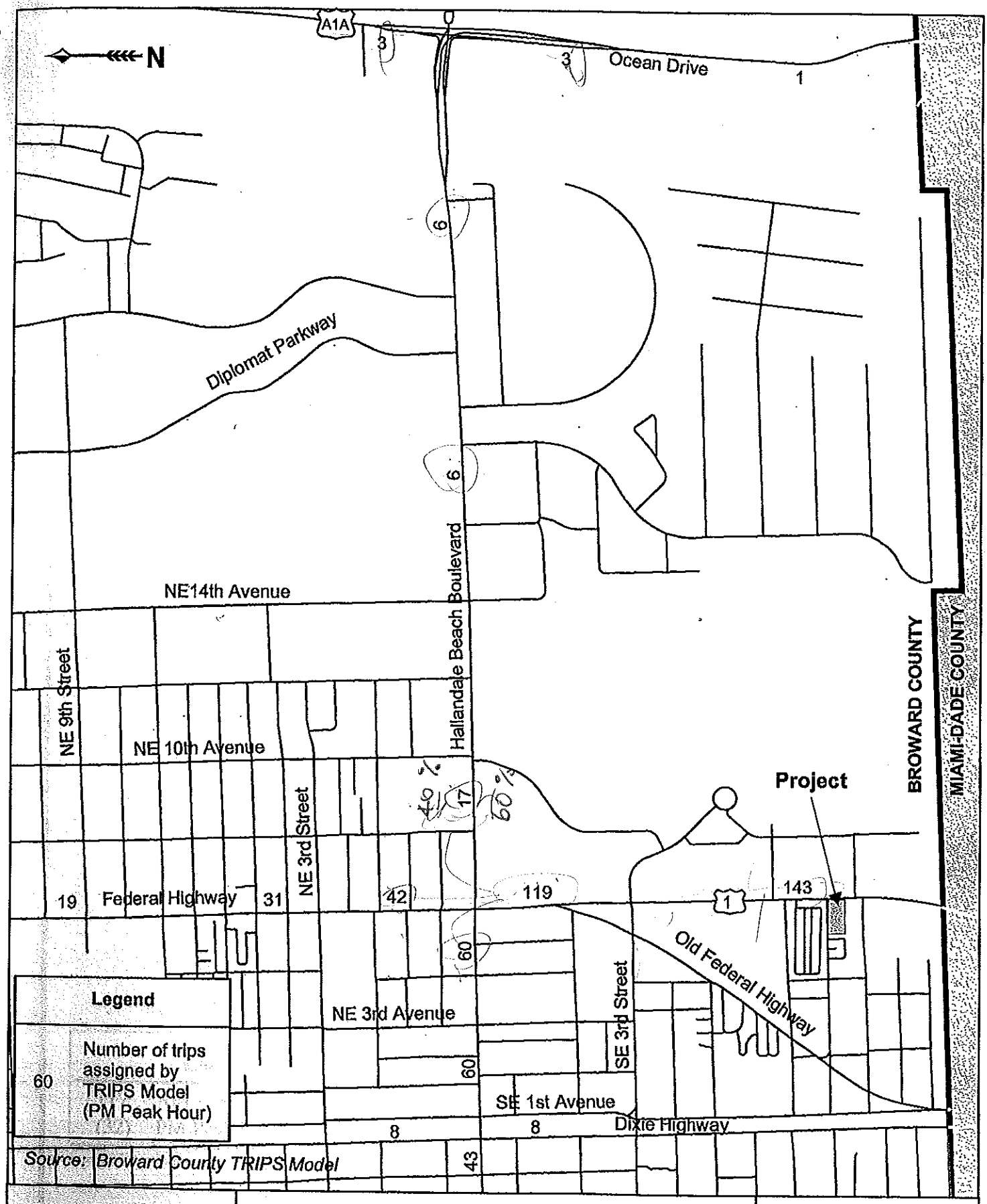
Domus Hallandale
Hallandale Beach, Florida

Prepared For:

RLC Architects
137 West Royal Palm Road
Boca Raton, Florida 33432

Prepared By:

Carter & Burgess, Inc.
6363 NW 6th Way, Suite 300
Fort Lauderdale, Florida 33309
Phone: (954) 315-1020
Fax: (954) 315-1040
E-mail: karl.peterson@c-b.com
http://www.c-b.com



Carter:Burgess
6363 NW 6th Way, Suite 300
Fort Lauderdale, FL 33309

Trip Assignment (PM Peak Hour)

FIGURE 2
Domus Hallandale
Hallandale Beach, Florida

APPENDIX – G

Trip Generation Analysis

Trip Generation - AM Peak Hour

Land Uses	ITE Land Use Code	Description	Unit	Total Units	Rate/Unit	Trips	Driveway Volumes				Passerby Rate		Total Trips	Directional Distribution			
							Entering		Exiting		%	Trips		Entering		Exiting	
EXISTING																	
Lodging	**311**	All Suites Hotel	Rooms	**216**	**0.38**	82	**55.0%**	45	**45.0%**	37	0%	0	82	**55.0%**	45	**45.0%**	37
Lodging	**310**	Hotel	Rooms	**216**	**0.56**	121	**58.0%**	70	**42.0%**	51	0%	0	121	**55.0%**	67	**45.0%**	54
Lodging	**232**	High-Rise Condominium	Dwelling Units	**84**	**0.34**	29	**19.0%**	5	**81.0%**	23	0%	0	29	**19.0%**	5	**81.0%**	23
Total														**Entering**	**117**	**Exiting**	**115**

Trip Generation - PM Peak Hour

Land Uses	ITE Land Use Code	Description	Unit	Total Units	Rate/Unit	Trips	Driveway Volumes				Passerby Rate		Total Trips	Directional Distribution			
							Entering		Exiting		%	Trips		Entering		Exiting	
EXISTING																	
Lodging	**311**	All Suites Hotel	Rooms	**216**	**0.4**	86	**45.0%**	39	**55.0%**	48	0%	0	86	**45.0%**	39	**55.0%**	48
Lodging	**310**	Hotel	Rooms	**216**	**0.59**	127	**49.0%**	62	**51.0%**	65	0%	0	127	**45.0%**	57	**55.0%**	70
Lodging	**232**	High-Rise Condominium	Dwelling Units	**84**	**0.38**	32	**62.0%**	20	**38.0%**	12	0%	0	32	**62.0%**	20	**38.0%**	12
Total														**Entering**	**116**	**Exiting**	**130**

Trip Generation - Daily

Land Uses	ITE Land Use Code	Description	Unit	Total Units	Rate/Unit	Trips	Driveway Volumes				Passerby Rate		Total Trips	Directional Distribution			
							Entering		Exiting		%	Trips		Entering		Exiting	
EXISTING																	
Lodging	**311**	All Suites Hotel	Rooms	**216**	**4.9**	1058	**50.0%**	529	**50.0%**	529	0%	0	1058	**50.0%**	529	**50.0%**	529
Lodging	**310**	Hotel	Rooms	**216**	**8.17**	1765	**50.0%**	882	**50.0%**	882	0%	0	1765	**50.0%**	882	**50.0%**	882
Lodging	**232**	High-Rise Condominium	Dwelling Units	**84**	**4.18**	351	**50.0%**	176	**50.0%**	176	0%	0	351	**50.0%**	176	**50.0%**	176
Total														**Entering**	**1587**	**Exiting**	**1587**

APPENDIX – H

Synchro Output Sheets – Future (2015)

Synchro Output Sheets – Future (2015)

Future Background Traffic - AM

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	4	1271	44	1671	178	17	115	5
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	73.0	73.0	16.0	89.0	43.0	43.0	43.0	27.0
Total Split (%)	45.9%	45.9%	10.1%	56.0%	27.0%	27.0%	27.0%	17.0%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		59.5	8.6	71.4	37.2	37.2	37.2	21.1
Actuated g/C Ratio		0.40	0.06	0.48	0.25	0.25	0.25	0.14
v/c Ratio		0.77	0.47	0.76	0.25	0.25	0.25	0.04
Control Delay		41.6	85.0	33.0	48.5	48.5	8.8	54.7
Queue Delay		37.4	0.0	6.4	0.0	0.0	0.0	0.0
Total Delay		79.0	85.0	39.5	48.5	48.5	8.8	54.7
LOS		E	F	D	D	D	A	D
Approach Delay		79.0		40.6		33.7		54.7
Approach LOS		E		D		C		D

Intersection Summary	
Cycle Length: 159	
Actuated Cycle Length: 147.8	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 55.1	Intersection LOS: E
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1271	63	44	1671	37	178	17	115	13	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5049		1770	5069		1681	1699	1583		3376	
Flt Permitted		0.93		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4704		1770	5069		1681	1699	1583		3376	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1382	68	48	1816	40	193	18	125	14	5	2
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	94	0	2	0
Lane Group Flow (vph)	0	1450	0	48	1854	0	104	107	31	0	19	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		59.5		7.2	72.7		37.2	37.2	37.2		21.1	
Effective Green, g (s)		59.5		7.2	72.7		37.2	37.2	37.2		21.1	
Actuated g/C Ratio		0.40		0.05	0.49		0.25	0.25	0.25		0.14	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1878		86	2473		420	424	395		478	
v/s Ratio Prot				0.03	c0.37		0.06	c0.06			c0.01	
v/s Ratio Perm		0.31							0.02			
v/c Ratio		0.77		0.56	0.75		0.25	0.25	0.08		0.04	
Uniform Delay, d1		38.9		69.3	30.8		44.7	44.8	42.8		55.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		2.0		7.6	1.3		1.4	1.4	0.4		0.2	
Delay (s)		40.9		77.0	32.1		46.1	46.2	43.2		55.4	
Level of Service		D		E	C		D	D	D		E	
Approach Delay (s)		40.9			33.2			45.0			55.4	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	149.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	80	1257	28	1829	104	15	50	21	5	76
Turn Type	Prot		Prot		Prot		Perm	pm+pt		Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	20.0	71.0	20.0	71.0	41.0	41.0	41.0	28.0	28.0	28.0
Total Split (%)	12.5%	44.4%	12.5%	44.4%	25.6%	25.6%	25.6%	17.5%	17.5%	17.5%
Yellow Time (s)	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	11.4	73.8	7.7	65.1	10.4	9.1	38.6		24.8	24.8
Actuated g/C Ratio	0.09	0.55	0.06	0.49	0.08	0.07	0.29		0.19	0.19
v/c Ratio	0.58	0.53	0.29	0.84	0.48	0.56	0.11		0.10	0.23
Control Delay	74.3	20.8	68.3	33.9	71.6	77.6	9.3		50.5	11.9
Queue Delay	0.0	0.0	0.0	153.9	0.0	0.0	0.0		0.0	0.0
Total Delay	74.3	20.8	68.3	187.9	71.6	77.6	9.3		50.5	11.9
LOS	E	C	E	F	E	E	A		D	B
Approach Delay		23.7		186.2		55.3			21.6	
Approach LOS		C		F		E			C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 133.1	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 111.4	Intersection LOS: F
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: E. HALLANDALE BEACH BLVD & LAYNE BLVD

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1257	105	28	1829	83	104	15	50	21	5	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	5027		1770	5052		1681	1705	1583		1789	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.78	1.00		0.78	1.00
Satd. Flow (perm)	1770	5027		1770	5052		1681	1382	1583		1448	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1366	114	30	1988	90	113	16	54	23	5	83
RTOR Reduction (vph)	0	5	0	0	3	0	0	0	38	0	0	68
Lane Group Flow (vph)	87	1475	0	30	2075	0	64	65	16	0	28	15
Turn Type	Prot			Prot			Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2	6		6
Actuated Green, G (s)	11.4	73.8		5.2	67.6		9.1	39.9	39.9		24.8	24.8
Effective Green, g (s)	11.4	73.8		5.2	67.6		9.1	39.9	39.9		24.8	24.8
Actuated g/C Ratio	0.08	0.54		0.04	0.49		0.07	0.29	0.29		0.18	0.18
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	147	2710		67	2495		112	424	461		262	287
v/s Ratio Prot	c0.05	c0.29		0.02	c0.41		c0.04	0.01				
v/s Ratio Perm								c0.03	0.01		0.02	0.01
v/c Ratio	0.59	0.54		0.45	0.83		0.57	0.15	0.03		0.11	0.05
Uniform Delay, d1	60.5	20.6		64.4	29.8		62.0	36.0	34.7		46.8	46.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.3	0.2		4.7	2.5		6.9	0.2	0.1		0.2	0.3
Delay (s)	66.8	20.8		69.1	32.3		68.9	36.1	34.8		47.0	46.7
Level of Service	E	C		E	C		E	D	C		D	D
Approach Delay (s)		23.4			32.8			47.2			46.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	136.9	Sum of lost time (s)	24.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	69	1	2	0	1	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	1	2	0	1	55

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	76	2	57
Volume Left (vph)	75	0	1
Volume Right (vph)	0	0	55
Hadj (s)	0.23	0.03	-0.55
Departure Headway (s)	4.2	4.1	3.5
Degree Utilization, x	0.09	0.00	0.06
Capacity (veh/h)	833	855	988
Control Delay (s)	7.7	7.1	6.7
Approach Delay (s)	7.7	7.1	6.7
Approach LOS	A	A	A

Intersection Summary			
Delay	7.3		
HCM Level of Service	A		
Intersection Capacity Utilization	20.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	115	1153	15	1546	9	1	50	23
Turn Type	Prot		Prot		Perm		Perm	
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	25.0	93.0	25.0	93.0	43.0	43.0	43.0	43.0
Total Split (%)	15.5%	57.8%	15.5%	57.8%	26.7%	26.7%	26.7%	26.7%
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	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				
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	14.2	77.3	6.8	62.0		37.6	37.6	37.6
Actuated g/C Ratio	0.11	0.59	0.05	0.47		0.28	0.28	0.28
v/c Ratio	0.65	0.43	0.17	0.73		0.04	0.14	0.32
Control Delay	75.6	15.9	70.3	29.9		32.9	42.1	11.0
Queue Delay	0.0	0.4	0.0	0.3		0.0	0.0	0.0
Total Delay	75.6	16.3	70.3	30.2		32.9	42.1	11.0
LOS	E	B	E	C		C	D	B
Approach Delay		21.6		30.5		32.9		18.0
Approach LOS		C		C		C		B

Intersection Summary	
Cycle Length: 161	
Actuated Cycle Length: 132.1	
Natural Cycle: 60	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.73	
Intersection Signal Delay: 26.0	Intersection LOS: C
Intersection Capacity Utilization 62.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: E. HALLANDALE BEACH BLVD & DIPLOMAT PKWY

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	1153	16	15	1546	49	9	1	5	50	23	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.96		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1770	5075		1770	5062			1730		1770	1621	
Flt Permitted	0.95	1.00		0.95	1.00			0.84		0.75	1.00	
Satd. Flow (perm)	1770	5075		1770	5062			1503		1392	1621	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	1253	17	16	1680	53	10	1	5	54	25	161
RTOR Reduction (vph)	0	1	0	0	2	0	0	4	0	0	116	0
Lane Group Flow (vph)	125	1269	0	16	1731	0	0	12	0	54	70	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	14.2	77.3		2.9	66.0			37.6		37.6	37.6	
Effective Green, g (s)	14.2	77.3		2.9	66.0			37.6		37.6	37.6	
Actuated g/C Ratio	0.10	0.57		0.02	0.49			0.28		0.28	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	185	2889		38	2460			416		385	449	
v/s Ratio Prot	c0.07	0.25		0.01	c0.34						c0.04	
v/s Ratio Perm								0.01		0.04		
v/c Ratio	0.68	0.44		0.42	0.70			0.03		0.14	0.15	
Uniform Delay, d1	58.6	16.8		65.6	27.3			35.8		36.9	37.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	9.4	0.1		7.4	0.9			0.1		0.8	0.7	
Delay (s)	68.0	16.9		73.0	28.2			35.9		37.7	37.8	
Level of Service	E	B		E	C			D		D	D	
Approach Delay (s)		21.5			28.6			35.9			37.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	135.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø2	ø11
Lane Configurations									
Volume (vph)	202	925	1265	40	225	0	345		
Turn Type	Prot			Perm	Perm		Perm		
Protected Phases	7	4	8			6		2	11
Permitted Phases				8	6		6		
Detector Phase	7	4	8	8	6	6	6		
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	20.0	10.0
Total Split (s)	30.0	59.0	59.0	59.0	30.0	30.0	30.0	20.0	41.0
Total Split (%)	18.8%	36.9%	36.9%	36.9%	18.8%	18.8%	18.8%	13%	26%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.5	0.0
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	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max	None
Act Effct Green (s)	11.9	50.6	32.7	32.7	24.2	24.2	24.2		
Actuated g/C Ratio	0.14	0.58	0.38	0.38	0.28	0.28	0.28		
v/c Ratio	0.47	0.34	0.72	0.07	0.26	0.26	0.53		
Control Delay	39.2	9.5	25.5	5.7	28.8	28.8	6.3		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	39.2	9.6	25.5	5.7	28.8	28.8	6.3		
LOS	D	A	C	A	C	C	A		
Approach Delay		14.9	24.9			15.2			
Approach LOS		B	C			B			

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 87	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 19.3	Intersection LOS: B
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: E. HALLANDALE BEACH BLVD & 3 Islands Drive

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	202	925	0	0	1265	40	0	0	0	225	0	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Lane Util. Factor	0.97	0.91			0.91	1.00				0.95	0.95	1.00
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	3433	5085			5085	1583				1681	1681	1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)	3433	5085			5085	1583				1681	1681	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	220	1005	0	0	1375	43	0	0	0	245	0	375
RTOR Reduction (vph)	0	0	0	0	0	27	0	0	0	0	0	270
Lane Group Flow (vph)	220	1005	0	0	1375	16	0	0	0	122	123	105
Turn Type	Prot			Perm		Perm			custom	Perm		Perm
Protected Phases	7	4			8						6	
Permitted Phases				8		8			2	6		6
Actuated Green, G (s)	11.9	50.6			32.7	32.7				24.2	24.2	24.2
Effective Green, g (s)	11.9	50.6			32.7	32.7				24.2	24.2	24.2
Actuated g/C Ratio	0.14	0.58			0.38	0.38				0.28	0.28	0.28
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	471	2964			1916	596				469	469	441
v/s Ratio Prot	c0.06	0.20			c0.27							
v/s Ratio Perm						0.01				0.07	0.07	0.07
v/c Ratio	0.47	0.34			0.72	0.03				0.26	0.26	0.24
Uniform Delay, d1	34.5	9.4			23.1	17.0				24.3	24.4	24.2
Progression Factor	1.00	1.00			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1			1.3	0.0				1.3	1.4	1.3
Delay (s)	35.3	9.5			24.4	17.1				25.7	25.7	25.4
Level of Service	D	A			C	B				C	C	C
Approach Delay (s)		14.1			24.2			0.0			25.5	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations											
Volume (vph)	481	37	811	176	6	182	474	6	6	362	328
Turn Type	Split		Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7		5	2		1	6	
Permitted Phases			3		7			2			6
Detector Phase	3	3	3	7	7	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	22.0	22.0	10.0	10.0	10.0
Total Split (s)	31.0	31.0	31.0	21.0	21.0	13.0	45.0	45.0	13.0	45.0	45.0
Total Split (%)	28.2%	28.2%	28.2%	19.1%	19.1%	11.8%	40.9%	40.9%	11.8%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	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	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	25.1	25.1	25.1	13.9	13.9	7.0	41.4	41.4	6.0	30.7	30.7
Actuated g/C Ratio	0.25	0.25	0.25	0.14	0.14	0.07	0.41	0.41	0.06	0.30	0.30
v/c Ratio	0.67	0.66	0.84	0.77	0.03	1.61	0.35	0.01	0.07	0.36	0.74
Control Delay	44.8	44.3	10.9	63.6	40.3	339.0	22.1	11.8	48.8	28.3	41.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	44.3	10.9	63.6	40.3	339.0	22.1	11.8	48.8	28.3	41.8
LOS	D	D	B	E	D	F	C	B	D	C	D
Approach Delay		24.0		62.8			109.2			34.9	
Approach LOS		C		E			F			C	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 100.8	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.61	
Intersection Signal Delay: 48.8	Intersection LOS: D
Intersection Capacity Utilization 84.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 21: WB E. Hallandale Beach Blvd & S. OCEAN DR

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	481	37	811	6	176	6	182	474	6	6	362	328
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1697	1583		1859	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.96	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1697	1583		1859	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	523	40	882	7	191	7	198	515	7	7	393	357
RTOR Reduction (vph)	0	0	673	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	282	281	209	0	198	7	198	515	3	7	393	357
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7	7		5	2		1	6	
Permitted Phases			3			7			2			6
Actuated Green, G (s)	25.1	25.1	25.1		13.9	13.9	7.0	41.4	41.4	1.3	35.7	35.7
Effective Green, g (s)	25.1	25.1	25.1		13.9	13.9	7.0	41.4	41.4	1.3	35.7	35.7
Actuated g/C Ratio	0.24	0.24	0.24		0.13	0.13	0.07	0.39	0.39	0.01	0.34	0.34
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	399	403	376		244	208	117	1386	620	22	1195	535
v/s Ratio Prot	c0.17	0.17			c0.11		c0.11	c0.15		0.00	0.11	
v/s Ratio Perm			0.13			0.00			0.00			c0.23
v/c Ratio	0.71	0.70	0.56		0.81	0.03	1.69	0.37	0.00	0.32	0.33	0.67
Uniform Delay, d1	36.9	36.8	35.4		44.6	40.0	49.4	22.9	19.6	51.8	26.1	29.9
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.1	9.6	5.8		18.2	0.1	345.5	0.8	0.0	8.2	0.2	3.1
Delay (s)	47.0	46.4	41.3		62.8	40.1	394.8	23.7	19.6	59.9	26.2	33.1
Level of Service	D	D	D		E	D	F	C	B	E	C	C
Approach Delay (s)		43.4			62.0			125.7			29.8	
Approach LOS		D			E			F			C	

Intersection Summary			
HCM Average Control Delay	60.3	HCM Level of Service	E
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.7	Sum of lost time (s)	30.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	102	1498	228	16	1729	249	73	128	84
Turn Type	Prot		Perm	Prot		Prot		Prot	
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0
Total Split (s)	19.0	63.0	63.0	19.0	63.0	24.0	55.0	24.0	55.0
Total Split (%)	11.8%	39.1%	39.1%	11.8%	39.1%	14.9%	34.2%	14.9%	34.2%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	12.4	67.1	67.1	7.1	57.0	16.5	49.4	16.1	49.0
Actuated g/C Ratio	0.08	0.42	0.42	0.04	0.36	0.10	0.31	0.10	0.31
v/c Ratio	0.80	0.76	0.32	0.22	1.06	0.76	0.18	0.77	0.54
Control Delay	109.0	43.1	10.7	79.8	87.5	83.7	37.9	96.7	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.0	43.1	10.7	79.8	87.5	83.7	37.9	96.7	38.1
LOS	F	D	B	E	F	F	D	F	D
Approach Delay		42.8			87.5		71.0		56.5
Approach LOS		D			F		E		E

Intersection Summary	
Cycle Length: 161	
Actuated Cycle Length: 159	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 64.6	Intersection LOS: E
Intersection Capacity Utilization 83.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: E. HALLANDALE BEACH BLVD & NE 14 AVE

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	1498	228	16	1729	46	249	73	23	128	84	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.96		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5066		3433	1796		1770	1667	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5066		3433	1796		1770	1667	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	1628	248	17	1879	50	271	79	25	139	91	213
RTOR Reduction (vph)	0	0	106	0	2	0	0	7	0	0	52	0
Lane Group Flow (vph)	111	1628	142	17	1927	0	271	97	0	139	252	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	12.4	67.1	67.1	4.8	59.5		16.5	49.4		16.1	49.0	
Effective Green, g (s)	12.4	67.1	67.1	4.8	59.5		16.5	49.4		16.1	49.0	
Actuated g/C Ratio	0.08	0.42	0.42	0.03	0.37		0.10	0.31		0.10	0.30	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	2114	658	53	1868		351	550		177	506	
v/s Ratio Prot	c0.06	c0.32		0.01	c0.38		c0.08	0.05		0.08	c0.15	
v/s Ratio Perm			0.09									
v/c Ratio	0.82	0.77	0.22	0.32	1.03		0.77	0.18		0.79	0.50	
Uniform Delay, d1	73.4	40.5	30.3	76.7	51.0		70.6	41.1		71.0	46.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	30.0	1.8	0.2	3.5	29.4		10.1	0.7		20.1	3.5	
Delay (s)	103.4	42.3	30.4	80.2	80.4		80.7	41.8		91.0	49.6	
Level of Service	F	D	C	F	F		F	D		F	D	
Approach Delay (s)		44.2			80.4			69.9			62.6	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM Average Control Delay	62.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	161.4	Sum of lost time (s)	30.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Configurations									
Volume (vph)	119	1730	135	278	1919	33	67	2	111
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2	
Permitted Phases			4			8			2
Detector Phase	7	4	4	3	8	8	5	2	2
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	29.0	95.0	95.0	22.0	88.0	88.0	43.0	43.0	43.0
Total Split (%)	18.1%	59.4%	59.4%	13.8%	55.0%	55.0%	26.9%	26.9%	26.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	None	None	Max	Max
Act Effct Green (s)	16.3	78.5	78.5	15.6	77.8	77.8	29.9	28.6	37.3
Actuated g/C Ratio	0.11	0.53	0.53	0.10	0.52	0.52	0.20	0.19	0.25
v/c Ratio	0.67	0.70	0.17	0.84	0.79	0.04	0.11	0.12	0.25
Control Delay	82.2	28.1	13.2	87.2	32.0	11.2	48.1	48.1	9.0
Queue Delay	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	82.2	29.2	13.2	87.2	32.0	11.2	48.1	48.1	9.0
LOS	F	C	B	F	C	B	D	D	A
Approach Delay		31.3			38.6			24.0	
Approach LOS		C			D			C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 149.5	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 34.7	Intersection LOS: C
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 26: E. HALLANDALE BEACH BLVD & NE 10 AVE

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	1730	135	278	1919	33	67	2	111	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583	1681	1690	1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	5085	1583	3433	5085	1583	1681	1690	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	129	1880	147	302	2086	36	73	2	121	0	0	0
RTOR Reduction (vph)	0	0	19	0	0	9	0	0	91	0	0	0
Lane Group Flow (vph)	129	1880	128	302	2086	27	37	38	30	0	0	0
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm			
Protected Phases	7	4		3	8		5	2				
Permitted Phases			4			8			2			
Actuated Green, G (s)	16.3	78.5	78.5	15.6	77.8	77.8	37.3	37.3	37.3			
Effective Green, g (s)	16.3	78.5	78.5	15.6	77.8	77.8	37.3	37.3	37.3			
Actuated g/C Ratio	0.11	0.53	0.53	0.10	0.52	0.52	0.25	0.25	0.25			
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	193	2672	832	358	2648	824	420	422	395			
v/s Ratio Prot	0.07	0.37		c0.09	c0.41		0.02	c0.02				
v/s Ratio Perm			0.08			0.02			0.02			
v/c Ratio	0.67	0.70	0.15	0.84	0.79	0.03	0.09	0.09	0.08			
Uniform Delay, d1	64.0	26.7	18.3	65.7	29.1	17.5	43.0	43.0	42.9			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	8.5	0.9	0.1	16.4	1.6	0.0	0.1	0.1	0.4			
Delay (s)	72.4	27.5	18.4	82.1	30.7	17.5	43.1	43.1	43.3			
Level of Service	E	C	B	F	C	B	D	D	D			
Approach Delay (s)		29.6			36.9			43.2			0.0	
Approach LOS		C			D			D			A	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	149.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	2024	241	2	2022	192	0	97	8	189
Turn Type		Perm	pm+pt		pm+pt		pm+pt		Perm
Protected Phases	4		3	8	5	2	1	6	
Permitted Phases		4	8		2		6		6
Detector Phase	4	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0	22.0
Total Split (s)	76.0	76.0	18.0	94.0	25.0	25.0	41.0	41.0	41.0
Total Split (%)	47.5%	47.5%	11.3%	58.8%	15.6%	15.6%	25.6%	25.6%	25.6%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	77.2	77.2	79.4	79.4		23.2	35.6	35.6	35.6
Actuated g/C Ratio	0.61	0.61	0.63	0.63		0.18	0.28	0.28	0.28
v/c Ratio	0.71	0.25	0.02	0.69		1.20	0.16	0.15	0.42
Control Delay	19.3	4.8	9.0	17.0		163.8	37.7	37.6	30.0
Queue Delay	9.2	0.0	0.0	0.7		0.0	0.0	0.0	0.0
Total Delay	28.4	4.8	9.0	17.7		163.8	37.7	37.6	30.0
LOS	C	A	A	B		F	D	D	C
Approach Delay	25.9			17.6		163.8		32.8	
Approach LOS	C			B		F		C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 127	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.20	
Intersection Signal Delay: 31.1	Intersection LOS: C
Intersection Capacity Utilization 82.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 29: E. HALLANDALE BEACH BLVD & NE 8 AVE

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2024	241	2	2022	0	192	0	96	97	8	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lane Util. Factor		0.91	1.00	1.00	0.91			1.00		0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00			0.96		1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.97		0.95	0.96	1.00
Satd. Flow (prot)		5085	1583	1770	5085			1722		1681	1698	1583
Flt Permitted		1.00	1.00	0.05	1.00			0.76		0.66	0.74	1.00
Satd. Flow (perm)		5085	1583	90	5085			1357		1163	1305	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2200	262	2	2198	0	209	0	104	105	9	205
RTOR Reduction (vph)	0	0	73	0	0	0	0	12	0	0	0	44
Lane Group Flow (vph)	0	2200	189	2	2198	0	0	301	0	57	57	161
Turn Type			Perm	pm+pt			pm+pt			pm+pt		Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases			4	8			2			6		6
Actuated Green, G (s)		77.2	77.2	84.3	84.3			23.2		36.8	36.8	36.8
Effective Green, g (s)		77.2	77.2	84.3	84.3			23.2		36.8	36.8	36.8
Actuated g/C Ratio		0.58	0.58	0.63	0.63			0.17		0.28	0.28	0.28
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		2949	918	71	3221			237		351	383	438
v/s Ratio Prot		c0.43		0.00	c0.43					0.01	0.01	
v/s Ratio Perm			0.12	0.02				c0.22		0.04	0.03	c0.10
v/c Ratio		0.75	0.21	0.03	0.68			1.27		0.16	0.15	0.37
Uniform Delay, d1		20.7	13.3	16.7	15.8			55.0		38.5	36.3	38.8
Progression Factor		1.00	1.00	1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.1	0.1	0.2	0.6			149.7		0.2	0.2	2.4
Delay (s)		21.8	13.4	16.9	16.4			204.7		38.7	36.5	41.1
Level of Service		C	B	B	B			F		D	D	D
Approach Delay (s)		20.9			16.4			204.7			39.9	
Approach LOS		C			B			F			D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	133.1	Sum of lost time (s)	24.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	49	70	241	69	12	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	76	262	75	13	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	402	299			337	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	402	299			337	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	90			99	
cM capacity (veh/h)	598	740			1222	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	129	337	89
Volume Left	53	0	13
Volume Right	76	75	0
cSH	674	1700	1222
Volume to Capacity	0.19	0.20	0.01
Queue Length 95th (ft)	18	0	1
Control Delay (s)	11.6	0.0	1.2
Lane LOS	B		A
Approach Delay (s)	11.6	0.0	1.2
Approach LOS	B		

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	116	1280	632	1394	483	696	437	417	1237
Turn Type	Prot		Prot		Prot		Perm	Prot	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	24.0	12.0	24.0	12.0	24.0	24.0	12.0	24.0
Total Split (s)	30.0	50.0	30.0	50.0	30.0	50.0	50.0	30.0	50.0
Total Split (%)	18.8%	31.3%	18.8%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%
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	4.0
Lost Time Adjust (s)	0.0	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	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	16.7	44.0	24.0	51.3	24.0	44.6	44.6	23.4	42.0
Actuated g/C Ratio	0.10	0.28	0.15	0.32	0.15	0.28	0.28	0.15	0.26
v/c Ratio	0.68	1.52	1.33	1.12	1.02	0.53	0.73	0.90	1.09
Control Delay	87.0	274.7	212.6	112.7	110.1	50.7	27.1	88.5	105.4
Queue Delay	0.0	0.0	0.0	68.7	0.0	0.0	0.0	0.0	0.0
Total Delay	87.0	274.7	212.6	181.3	110.1	50.7	27.1	88.5	105.4
LOS	F	F	F	F	F	D	C	F	F
Approach Delay		264.1		190.0		62.0			101.4
Approach LOS		F		F		E			F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.52	
Intersection Signal Delay: 162.8	Intersection LOS: F
Intersection Capacity Utilization 118.7%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 34: E. HALLANDALE BEACH BLVD & U.S. 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	1280	655	632	1394	271	483	696	437	417	1237	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4827		3433	4961		3433	5085	1583	3433	5034	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4827		3433	4961		3433	5085	1583	3433	5034	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	1391	712	687	1515	295	525	757	475	453	1345	96
RTOR Reduction (vph)	0	57	0	0	17	0	0	0	209	0	5	0
Lane Group Flow (vph)	126	2046	0	687	1793	0	525	757	266	453	1436	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	16.7	44.0		24.0	51.3		24.0	44.6	44.6	23.4	42.0	
Effective Green, g (s)	16.7	44.0		24.0	51.3		24.0	44.6	44.6	23.4	42.0	
Actuated g/C Ratio	0.10	0.28		0.15	0.32		0.15	0.28	0.28	0.15	0.26	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	185	1327		515	1591		515	1417	441	502	1321	
v/s Ratio Prot	0.07	c0.42		c0.20	c0.36		c0.15	0.15		0.13	c0.29	
v/s Ratio Perm									0.17			
v/c Ratio	0.68	1.54		1.33	1.13		1.02	0.53	0.60	0.90	1.09	
Uniform Delay, d1	69.1	58.0		68.0	54.4		68.0	48.9	50.0	67.2	59.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.9	247.5		163.2	65.9		44.6	1.4	6.0	19.3	51.9	
Delay (s)	79.0	305.5		231.2	120.2		112.6	50.3	56.0	86.5	110.9	
Level of Service	E	F		F	F		F	D	E	F	F	
Approach Delay (s)		292.7			150.7			70.5			105.1	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM Average Control Delay	161.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	118.7%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	AM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Background AM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1282	4	48	1448	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1393	4	52	1573	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			59			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	64	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		52			64			
C (m) (veh/h)		485			389			
v/c		0.11			0.16			
95% queue length		0.36			0.59			
Control Delay (s/veh)		13.3			16.1			
LOS		B			C			
Approach Delay (s/veh)	--	--	16.1					
Approach LOS	--	--	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1282	4	48	1448	0	0	59	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1286	0	48	1448	0	0	59	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	1.00	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5173	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	29.8	0.0	3.2	33.6		0.0	4.4		0.0
Adj Reference Time (s)	33.8	0.0	8.0	37.6		0.0	8.4		0.0
Permitted Option									
Adj Saturation A (vph)	1724		120	1725	0			0	
Reference Time A (s)	29.8		47.9	33.6	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	29.8			47.9					
Adj Reference Time (s)	33.8			51.9					
Split Option									
Ref Time Combined (s)	29.8		3.2	33.6	0.0			0.0	
Ref Time Seperate (s)	29.7		3.2	33.6	0.0			0.0	
Reference Time (s)	29.8		33.6	33.6	0.0			0.0	
Adj Reference Time (s)	33.8		37.6	37.6	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	41.8	NA	NA	
Permitted Option (s)	51.9	Err	Err	
Split Option (s)	71.4	0.0	0.0	
Minimum (s)	41.8	0.0	0.0	41.8

Right Turns	NBR2
Adj Reference Time (s)	8.4
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	33.8
Combined (s)	42.2

Intersection Summary			
Intersection Capacity Utilization	35.2%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

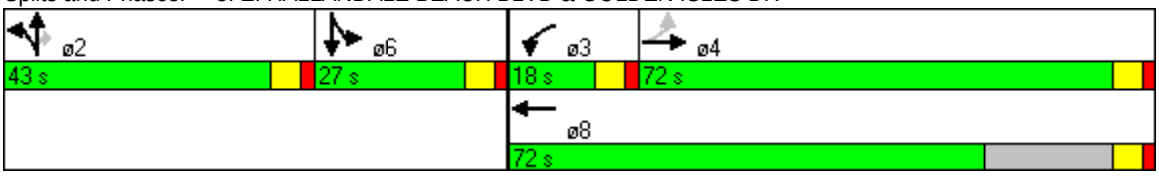
Synchro Output Sheets – Future (2015)

Future Background Traffic – PM

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	2	2047	119	1677	142	18	55	13
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	72.0	72.0	18.0	72.0	43.0	43.0	43.0	27.0
Total Split (%)	45.0%	45.0%	11.3%	45.0%	26.9%	26.9%	26.9%	16.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		66.0	12.0	84.0	37.0	37.0	37.0	21.0
Actuated g/C Ratio		0.41	0.08	0.52	0.23	0.23	0.23	0.13
v/c Ratio		1.22	0.97	0.71	0.22	0.22	0.15	0.23
Control Delay		144.9	141.9	30.4	51.7	51.7	11.4	60.1
Queue Delay		244.4	0.0	75.7	0.0	0.0	0.0	0.0
Total Delay		389.2	141.9	106.2	51.7	51.7	11.4	60.1
LOS		F	F	F	D	D	B	E
Approach Delay		389.2		108.5		41.4		60.1
Approach LOS		F		F		D		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Natural Cycle: 120	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.22	
Intersection Signal Delay: 245.7	Intersection LOS: F
Intersection Capacity Utilization 102.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	2047	146	119	1677	51	142	18	55	74	13	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (prot)		5034		1770	5063		1681	1704	1583		3359	
Flt Permitted		0.94		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (perm)		4722		1770	5063		1681	1704	1583		3359	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2225	159	129	1823	55	154	20	60	80	14	10
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	46	0	5	0
Lane Group Flow (vph)	0	2381	0	129	1876	0	86	88	14	0	99	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		66.0		12.0	84.0		37.0	37.0	37.0		21.0	
Effective Green, g (s)		66.0		12.0	84.0		37.0	37.0	37.0		21.0	
Actuated g/C Ratio		0.41		0.08	0.52		0.23	0.23	0.23		0.13	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1948		133	2658		389	394	366		441	
v/s Ratio Prot				c0.07	0.37		0.05	c0.05			c0.03	
v/s Ratio Perm		c0.50							0.01			
v/c Ratio		1.22		0.97	0.71		0.22	0.22	0.04		0.22	
Uniform Delay, d1		47.0		73.8	28.7		49.8	49.9	47.7		62.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		104.8		67.9	0.9		1.3	1.3	0.2		1.2	
Delay (s)		151.8		141.7	29.5		51.1	51.2	47.9		63.4	
Level of Service		F		F	C		D	D	D		E	
Approach Delay (s)		151.8			36.8			50.3			63.4	
Approach LOS		F			D			D			E	

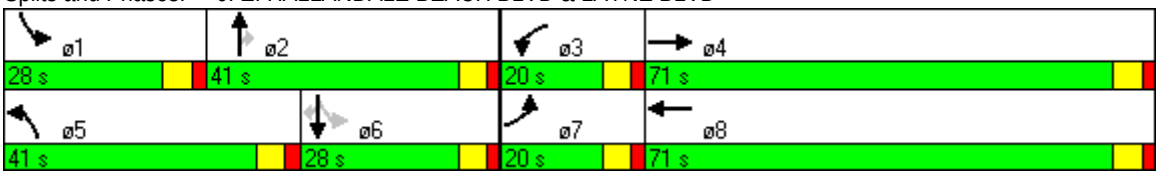
Intersection Summary			
HCM Average Control Delay	96.0	HCM Level of Service	F
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	125	1978	24	1647	167	15	59	142	12	102
Turn Type	Prot		Prot		Prot		Perm	pm+pt		Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	20.0	71.0	20.0	71.0	41.0	41.0	41.0	28.0	28.0	28.0
Total Split (%)	12.5%	44.4%	12.5%	44.4%	25.6%	25.6%	25.6%	17.5%	17.5%	17.5%
Yellow Time (s)	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	13.6	72.3	7.5	61.0	13.2	13.2	41.4		22.1	22.1
Actuated g/C Ratio	0.10	0.54	0.06	0.45	0.10	0.10	0.31		0.16	0.16
v/c Ratio	0.76	0.81	0.26	0.79	0.59	0.60	0.12		0.81	0.31
Control Delay	85.8	29.8	69.8	34.4	73.7	74.0	8.3		84.6	11.6
Queue Delay	0.0	0.0	0.0	102.9	0.0	0.0	0.0		0.0	0.0
Total Delay	85.8	29.8	69.8	137.2	73.7	74.0	8.3		84.6	11.6
LOS	F	C	E	F	E	E	A		F	B
Approach Delay		33.1		136.3		57.8			55.5	
Approach LOS		C		F		E			E	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 134.1
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 76.1 — Intersection LOS: E
Intersection Capacity Utilization 72.9% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: E. HALLANDALE BEACH BLVD & LAYNE BLVD



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	1978	54	24	1647	32	167	15	59	142	12	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	5065		1770	5071		1681	1698	1583		1781	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.41	1.00		0.67	1.00
Satd. Flow (perm)	1770	5065		1770	5071		1681	733	1583		1245	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	2150	59	26	1790	35	182	16	64	154	13	111
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	45	0	0	93
Lane Group Flow (vph)	136	2208	0	26	1824	0	98	100	19	0	167	18
Turn Type	Prot			Prot			Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2	6		6
Actuated Green, G (s)	13.6	72.3		4.9	63.6		13.2	41.4	41.4		22.2	22.2
Effective Green, g (s)	13.6	72.3		4.9	63.6		13.2	41.4	41.4		22.2	22.2
Actuated g/C Ratio	0.10	0.53		0.04	0.47		0.10	0.30	0.30		0.16	0.16
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	176	2681		63	2361		162	315	480		202	257
v/s Ratio Prot	c0.08	c0.44		0.01	0.36		c0.06	0.03				
v/s Ratio Perm								0.07	0.01		c0.13	0.01
v/c Ratio	0.77	0.82		0.41	0.77		0.60	0.32	0.04		0.83	0.07
Uniform Delay, d1	60.0	26.8		64.4	30.5		59.2	36.7	33.6		55.3	48.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	18.7	2.2		4.3	1.6		6.2	0.6	0.2		23.3	0.5
Delay (s)	78.7	29.0		68.8	32.1		65.4	37.3	33.7		78.6	49.0
Level of Service	E	C		E	C		E	D	C		E	D
Approach Delay (s)		31.9			32.6			47.0			66.8	
Approach LOS		C			C			D			E	

Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	136.6	Sum of lost time (s)	24.0
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	45	6	1	2	5	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	7	1	2	5	67

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	55	3	73
Volume Left (vph)	49	0	5
Volume Right (vph)	0	2	67
Hadj (s)	0.21	-0.37	-0.51
Departure Headway (s)	4.3	3.7	3.5
Degree Utilization, x	0.07	0.00	0.07
Capacity (veh/h)	828	939	993
Control Delay (s)	7.6	6.7	6.8
Approach Delay (s)	7.6	6.7	6.8
Approach LOS	A	A	A

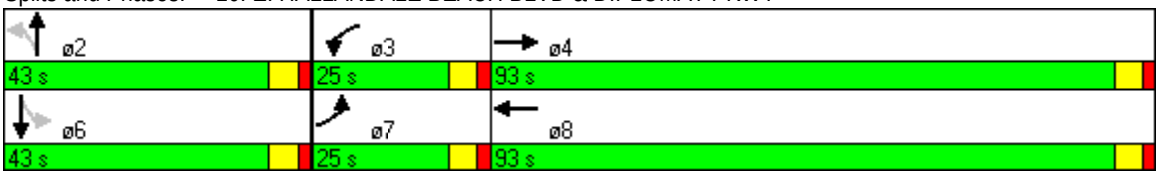
Intersection Summary			
Delay	7.1		
HCM Level of Service	A		
Intersection Capacity Utilization	20.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	192	1997	4	1609	9	11	71	1
Turn Type	Prot		Prot		Perm		Perm	
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	25.0	93.0	25.0	93.0	43.0	43.0	43.0	43.0
Total Split (%)	15.5%	57.8%	15.5%	57.8%	26.7%	26.7%	26.7%	26.7%
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	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				
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	19.1	91.1	6.0	68.2		37.3	37.3	37.3
Actuated g/C Ratio	0.13	0.64	0.04	0.48		0.26	0.26	0.26
v/c Ratio	0.88	0.67	0.05	0.75		0.08	0.22	0.25
Control Delay	95.6	17.8	73.0	31.9		32.1	46.7	8.8
Queue Delay	0.0	22.3	0.0	0.8		0.0	0.0	0.0
Total Delay	95.6	40.0	73.0	32.7		32.1	46.7	8.8
LOS	F	D	E	C		C	D	A
Approach Delay		44.9		32.8		32.1		23.0
Approach LOS		D		C		C		C

Intersection Summary

Cycle Length: 161
Actuated Cycle Length: 142.7
Natural Cycle: 65
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 38.8 — Intersection LOS: D
Intersection Capacity Utilization 68.5% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 10: E. HALLANDALE BEACH BLVD & DIPLOMAT PKWY



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	1997	0	4	1609	51	9	11	12	71	1	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.95		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	
Satd. Flow (prot)	1770	5085		1770	5062			1744		1770	1585	
Flt Permitted	0.95	1.00		0.95	1.00			0.92		0.73	1.00	
Satd. Flow (perm)	1770	5085		1770	5062			1632		1368	1585	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	209	2171	0	4	1749	55	10	12	13	77	1	128
RTOR Reduction (vph)	0	0	0	0	2	0	0	10	0	0	96	0
Lane Group Flow (vph)	209	2171	0	4	1802	0	0	25	0	77	33	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	19.1	91.1		1.2	73.2			37.3		37.3	37.3	
Effective Green, g (s)	19.1	91.1		1.2	73.2			37.3		37.3	37.3	
Actuated g/C Ratio	0.13	0.62		0.01	0.50			0.25		0.25	0.25	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	229	3139		14	2510			412		346	401	
v/s Ratio Prot	c0.12	0.43		0.00	c0.36						0.02	
v/s Ratio Perm								0.02		c0.06		
v/c Ratio	0.91	0.69		0.29	0.72			0.06		0.22	0.08	
Uniform Delay, d1	63.4	18.9		72.8	29.1			41.9		43.7	42.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	36.5	0.7		10.9	1.0			0.3		1.5	0.4	
Delay (s)	99.9	19.5		83.7	30.1			42.1		45.2	42.5	
Level of Service	F	B		F	C			D		D	D	
Approach Delay (s)		26.6			30.2			42.1			43.5	
Approach LOS		C			C			D			D	

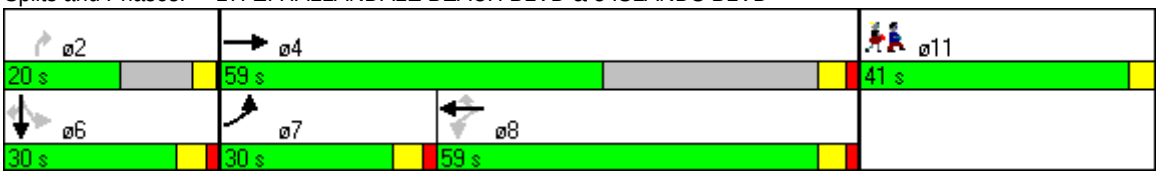
Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	147.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø2	ø11
Lane Configurations									
Volume (vph)	553	1520	1457	180	220	0	272		
Turn Type	Prot			Perm	Perm		Perm		
Protected Phases	7	4	8			6		2	11
Permitted Phases				8	6		6		
Detector Phase	7	4	8	8	6	6	6		
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	20.0	10.0
Total Split (s)	30.0	59.0	59.0	59.0	30.0	30.0	30.0	20.0	41.0
Total Split (%)	18.8%	36.9%	36.9%	36.9%	18.8%	18.8%	18.8%	13%	26%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.5	0.0
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	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max	None
Act Effct Green (s)	24.1	76.8	46.7	46.7	24.1	24.1	24.1		
Actuated g/C Ratio	0.21	0.68	0.41	0.41	0.21	0.21	0.21		
v/c Ratio	0.82	0.48	0.75	0.25	0.33	0.34	0.52		
Control Delay	53.6	9.0	30.6	3.6	42.1	42.2	8.1		
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0	0.0		
Total Delay	53.6	9.4	30.6	3.6	42.1	42.2	8.1		
LOS	D	A	C	A	D	D	A		
Approach Delay		21.2	27.7			23.3			
Approach LOS		C	C			C			

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 112.9
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 24.0 — Intersection LOS: C
Intersection Capacity Utilization 65.0% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 17: E. HALLANDALE BEACH BLVD & 3 ISLANDS BLVD



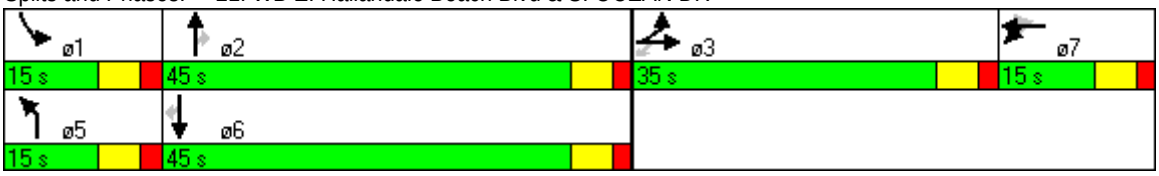
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	553	1520	0	0	1457	180	0	0	0	220	0	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Lane Util. Factor	0.97	0.91			0.91	1.00				0.95	0.95	1.00
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	3433	5085			5085	1583				1681	1681	1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)	3433	5085			5085	1583				1681	1681	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	601	1652	0	0	1584	196	0	0	0	239	0	296
RTOR Reduction (vph)	0	0	0	0	0	115	0	0	0	0	0	233
Lane Group Flow (vph)	601	1652	0	0	1584	81	0	0	0	119	120	63
Turn Type	Prot			Perm		Perm			custom	Perm		Perm
Protected Phases	7	4			8						6	
Permitted Phases				8		8			2	6		6
Actuated Green, G (s)	24.1	76.8			46.7	46.7				24.1	24.1	24.1
Effective Green, g (s)	24.1	76.8			46.7	46.7				24.1	24.1	24.1
Actuated g/C Ratio	0.21	0.68			0.41	0.41				0.21	0.21	0.21
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	733	3459			2103	655				359	359	338
v/s Ratio Prot	c0.18	0.32			c0.31							
v/s Ratio Perm						0.05				0.07	0.07	0.04
v/c Ratio	0.82	0.48			0.75	0.12				0.33	0.33	0.19
Uniform Delay, d1	42.3	8.5			28.2	20.5				37.6	37.6	36.4
Progression Factor	1.00	1.00			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	7.2	0.1			1.6	0.1				2.5	2.5	1.2
Delay (s)	49.5	8.7			29.8	20.5				40.0	40.1	37.6
Level of Service	D	A			C	C				D	D	D
Approach Delay (s)		19.5			28.7			0.0			38.7	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	112.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations											
Volume (vph)	730	86	1056	91	31	152	712	6	17	768	671
Turn Type	Split		Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7		5	2		1	6	
Permitted Phases			3		7			2			6
Detector Phase	3	3	3	7	7	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	22.0	22.0	10.0	10.0	10.0
Total Split (s)	35.0	35.0	35.0	15.0	15.0	15.0	45.0	45.0	15.0	45.0	45.0
Total Split (%)	31.8%	31.8%	31.8%	13.6%	13.6%	13.6%	40.9%	40.9%	13.6%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	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	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	29.0	29.0	29.0	8.8	8.8	9.0	48.5	48.5	6.7	39.0	39.0
Actuated g/C Ratio	0.26	0.26	0.26	0.08	0.08	0.08	0.44	0.44	0.06	0.36	0.36
v/c Ratio	1.00	0.98	0.96	0.75	0.27	1.14	0.50	0.01	0.17	0.66	1.30
Control Delay	84.2	79.6	22.8	79.6	53.2	162.1	24.6	12.7	51.9	33.0	178.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.2	79.6	22.8	79.6	53.2	162.1	24.6	12.7	51.9	33.0	178.2
LOS	F	E	C	E	D	F	C	B	D	C	F
Approach Delay		48.6		73.4			48.5			100.1	
Approach LOS		D		E			D			F	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 109.8	
Natural Cycle: 130	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.30	
Intersection Signal Delay: 66.6	Intersection LOS: E
Intersection Capacity Utilization 107.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 21: WB E. Hallandale Beach Blvd & S. OCEAN DR



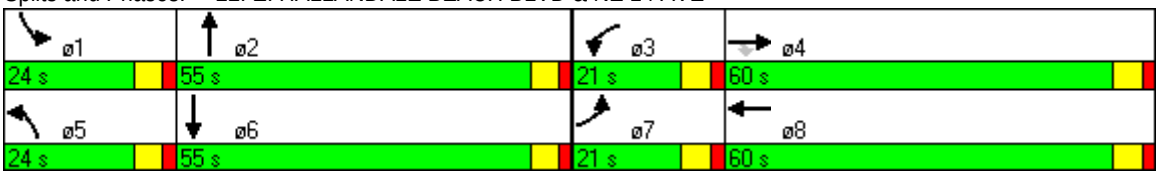
Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	730	86	1056	12	91	31	152	712	6	17	768	671
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1702	1583		1852	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.96	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1702	1583		1852	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	793	93	1148	13	99	34	165	774	7	18	835	729
RTOR Reduction (vph)	0	0	789	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	444	442	359	0	112	34	165	774	3	18	835	729
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7	7		5	2		1	6	
Permitted Phases			3			7			2			6
Actuated Green, G (s)	29.0	29.0	29.0		8.8	8.8	9.0	48.5	48.5	3.1	42.6	42.6
Effective Green, g (s)	29.0	29.0	29.0		8.8	8.8	9.0	48.5	48.5	3.1	42.6	42.6
Actuated g/C Ratio	0.26	0.26	0.26		0.08	0.08	0.08	0.43	0.43	0.03	0.38	0.38
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	430	435	405		144	123	140	1514	677	48	1329	595
v/s Ratio Prot	c0.26	0.26			c0.06		c0.09	c0.22		0.01	0.24	
v/s Ratio Perm			0.23			0.02			0.00			c0.46
v/c Ratio	1.03	1.02	0.89		0.78	0.28	1.18	0.51	0.00	0.38	0.63	1.23
Uniform Delay, d1	42.2	42.2	40.6		51.3	49.3	52.2	23.8	18.6	54.2	28.9	35.4
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	52.0	47.3	23.7		22.7	1.2	132.0	1.2	0.0	4.9	0.9	115.8
Delay (s)	94.2	89.5	64.3		74.1	50.5	184.2	25.0	18.6	59.1	29.9	151.2
Level of Service	F	F	E		E	D	F	C	B	E	C	F
Approach Delay (s)		76.3			68.6			52.7			86.1	
Approach LOS		E			E			D			F	

Intersection Summary			
HCM Average Control Delay	74.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	113.4	Sum of lost time (s)	30.0
Intersection Capacity Utilization	107.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	327	2022	361	59	2039	279	142	94	121
Turn Type	Prot		Perm	Prot		Prot		Prot	
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0
Total Split (s)	21.0	60.0	60.0	21.0	60.0	24.0	55.0	24.0	55.0
Total Split (%)	13.1%	37.5%	37.5%	13.1%	37.5%	15.0%	34.4%	15.0%	34.4%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	15.0	60.6	60.6	11.0	54.0	17.2	52.1	14.1	49.0
Actuated g/C Ratio	0.09	0.38	0.38	0.07	0.34	0.11	0.33	0.09	0.31
v/c Ratio	2.13	1.14	0.54	0.52	1.35	0.82	0.46	0.65	0.53
Control Delay	558.2	111.9	21.3	86.2	200.2	87.2	42.1	89.1	43.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	558.2	111.9	21.3	86.2	200.2	87.2	42.1	89.1	43.3
LOS	F	F	C	F	F	F	D	F	D
Approach Delay		153.6			197.1		66.0		55.2
Approach LOS		F			F		E		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 159.2	
Natural Cycle: 130	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 2.13	
Intersection Signal Delay: 155.9	Intersection LOS: F
Intersection Capacity Utilization 102.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: E. HALLANDALE BEACH BLVD & NE 14 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	327	2022	361	59	2039	88	279	142	107	94	121	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.94		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5054		3433	1743		1770	1710	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5054		3433	1743		1770	1710	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	355	2198	392	64	2216	96	303	154	116	102	132	160
RTOR Reduction (vph)	0	0	129	0	3	0	0	16	0	0	27	0
Lane Group Flow (vph)	355	2198	263	64	2309	0	303	254	0	102	265	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.0	60.6	60.6	9.6	55.2		17.2	52.1		14.1	49.0	
Effective Green, g (s)	15.0	60.6	60.6	9.6	55.2		17.2	52.1		14.1	49.0	
Actuated g/C Ratio	0.09	0.38	0.38	0.06	0.34		0.11	0.32		0.09	0.31	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	166	1921	598	106	1739		368	566		156	522	
v/s Ratio Prot	c0.20	c0.43		0.04	c0.46		c0.09	c0.15		0.06	c0.15	
v/s Ratio Perm			0.17									
v/c Ratio	2.14	1.14	0.44	0.60	1.33		0.82	0.45		0.65	0.51	
Uniform Delay, d1	72.7	49.9	37.2	73.5	52.6		70.1	42.8		70.8	45.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	532.0	71.6	0.5	9.3	151.7		13.8	2.6		9.5	3.5	
Delay (s)	604.7	121.5	37.7	82.9	204.3		83.9	45.4		80.2	49.3	
Level of Service	F	F	D	F	F		F	D		F	D	
Approach Delay (s)		168.6			201.0			65.8			57.3	
Approach LOS		F			F			E			E	

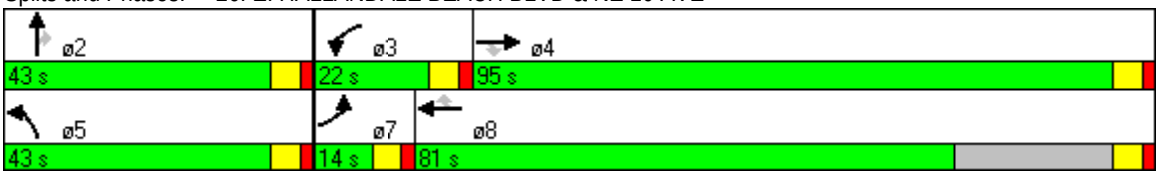
Intersection Summary			
HCM Average Control Delay	164.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	160.4	Sum of lost time (s)	36.0
Intersection Capacity Utilization	102.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Configurations									
Volume (vph)	109	2084	143	105	2256	33	86	7	149
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2	
Permitted Phases			4			8			2
Detector Phase	7	4	4	3	8	8	5	2	2
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	14.0	95.0	95.0	22.0	81.0	81.0	43.0	43.0	43.0
Total Split (%)	8.8%	59.4%	59.4%	13.8%	50.6%	50.6%	26.9%	26.9%	26.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	None	None	Max	Max
Act Effct Green (s)	8.0	86.5	86.5	10.4	89.0	89.0	30.3	29.0	37.1
Actuated g/C Ratio	0.05	0.57	0.57	0.07	0.59	0.59	0.20	0.19	0.24
v/c Ratio	1.27	0.78	0.17	0.48	0.82	0.04	0.15	0.16	0.34
Control Delay	233.9	28.0	12.5	75.9	28.1	7.6	48.5	48.3	18.3
Queue Delay	0.0	24.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	233.9	52.3	12.5	75.9	28.1	7.6	48.5	48.3	18.3
LOS	F	D	B	E	C	A	D	D	B
Approach Delay		58.3			29.9			29.8	
Approach LOS		E			C			C	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 152.1
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.27
Intersection Signal Delay: 43.3 — Intersection LOS: D
Intersection Capacity Utilization 68.0% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 26: E. HALLANDALE BEACH BLVD & NE 10 AVE



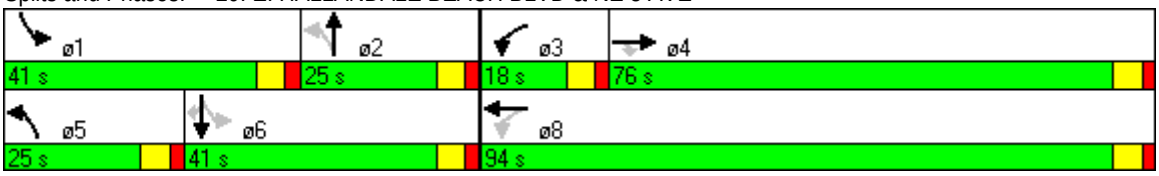
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	2084	143	105	2256	33	86	7	149	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00			
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583	1681	1698	1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00			
Satd. Flow (perm)	1770	5085	1583	3433	5085	1583	1681	1698	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	118	2265	155	114	2452	36	93	8	162	0	0	0
RTOR Reduction (vph)	0	0	16	0	0	8	0	0	86	0	0	0
Lane Group Flow (vph)	118	2265	139	114	2452	28	50	51	76	0	0	0
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm			
Protected Phases	7	4		3	8		5	2				
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.0	86.5	86.5	10.4	88.9	88.9	37.1	37.1	37.1			
Effective Green, g (s)	8.0	86.5	86.5	10.4	88.9	88.9	37.1	37.1	37.1			
Actuated g/C Ratio	0.05	0.57	0.57	0.07	0.58	0.58	0.24	0.24	0.24			
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	93	2894	901	235	2974	926	410	414	386			
v/s Ratio Prot	c0.07	0.45		0.03	c0.48		0.03	0.03				
v/s Ratio Perm			0.09			0.02			c0.05			
v/c Ratio	1.27	0.78	0.15	0.49	0.82	0.03	0.12	0.12	0.20			
Uniform Delay, d1	72.0	25.4	15.5	68.2	25.3	13.3	44.8	44.8	45.6			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	181.8	1.4	0.1	1.6	2.0	0.0	0.1	0.1	1.1			
Delay (s)	253.8	26.9	15.6	69.8	27.3	13.3	44.9	44.9	46.8			
Level of Service	F	C	B	E	C	B	D	D	D			
Approach Delay (s)		36.7			28.9			46.0			0.0	
Approach LOS		D			C			D			A	

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	152.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	2247	196	86	2171	246	0	105	12	170
Turn Type		Perm	pm+pt		pm+pt		pm+pt		Perm
Protected Phases	4		3	8	5	2	1	6	
Permitted Phases		4	8		2		6		6
Detector Phase	4	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0	22.0
Total Split (s)	76.0	76.0	18.0	94.0	25.0	25.0	41.0	41.0	41.0
Total Split (%)	47.5%	47.5%	11.3%	58.8%	15.6%	15.6%	25.6%	25.6%	25.6%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	71.5	71.5	86.2	86.2		22.8	35.6	35.6	35.6
Actuated g/C Ratio	0.53	0.53	0.64	0.64		0.17	0.27	0.27	0.27
v/c Ratio	0.90	0.24	0.54	0.72		1.37	0.15	0.15	0.41
Control Delay	33.8	7.5	30.0	17.5		233.4	39.2	39.1	34.8
Queue Delay	80.1	0.0	0.0	3.6		0.0	0.0	0.0	0.0
Total Delay	113.9	7.5	30.0	21.1		233.4	39.2	39.1	34.8
LOS	F	A	C	C		F	D	D	C
Approach Delay	105.3			21.4		233.4		36.6	
Approach LOS	F			C		F		D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 133.8	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.37	
Intersection Signal Delay: 72.6	Intersection LOS: E
Intersection Capacity Utilization 85.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 29: E. HALLANDALE BEACH BLVD & NE 8 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2247	196	86	2171	0	246	0	39	105	12	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lane Util. Factor		0.91	1.00	1.00	0.91			1.00		0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00			0.98		1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.96		0.95	0.96	1.00
Satd. Flow (prot)		5085	1583	1770	5085			1753		1681	1702	1583
Flt Permitted		1.00	1.00	0.05	1.00			0.71		0.84	0.88	1.00
Satd. Flow (perm)		5085	1583	96	5085			1294		1484	1553	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2442	213	93	2360	0	267	0	42	114	13	185
RTOR Reduction (vph)	0	0	60	0	0	0	0	4	0	0	0	29
Lane Group Flow (vph)	0	2442	153	93	2360	0	0	305	0	63	64	156
Turn Type			Perm	pm+pt			pm+pt			pm+pt		Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases			4	8			2			6		6
Actuated Green, G (s)		71.5	71.5	86.2	86.2			22.8		36.8	36.8	36.8
Effective Green, g (s)		71.5	71.5	86.2	86.2			22.8		36.8	36.8	36.8
Actuated g/C Ratio		0.53	0.53	0.64	0.64			0.17		0.27	0.27	0.27
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		2693	838	169	3247			219		416	432	432
v/s Ratio Prot		c0.48		0.04	c0.46					0.01	0.01	
v/s Ratio Perm			0.10	0.32				c0.24		0.03	0.03	c0.10
v/c Ratio		0.91	0.18	0.55	0.73			1.39		0.15	0.15	0.36
Uniform Delay, d1		28.7	16.5	27.2	16.5			56.1		39.4	37.2	39.6
Progression Factor		1.00	1.00	1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		4.9	0.1	3.8	0.8			201.9		0.2	0.2	2.3
Delay (s)		33.6	16.6	31.0	17.3			258.0		39.6	37.4	41.9
Level of Service		C	B	C	B			F		D	D	D
Approach Delay (s)		32.3			17.8			258.0			40.5	
Approach LOS		C			B			F			D	

Intersection Summary			
HCM Average Control Delay	38.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	135.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	67	108	116	56	44	219
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	73	117	126	61	48	238
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	490	157			187	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	490	157			187	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	86	87			97	
cM capacity (veh/h)	519	889			1387	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	190	187	286
Volume Left	73	0	48
Volume Right	117	61	0
cSH	698	1700	1387
Volume to Capacity	0.27	0.11	0.03
Queue Length 95th (ft)	28	0	3
Control Delay (s)	12.1	0.0	1.5
Lane LOS	B		A
Approach Delay (s)	12.1	0.0	1.5
Approach LOS	B		

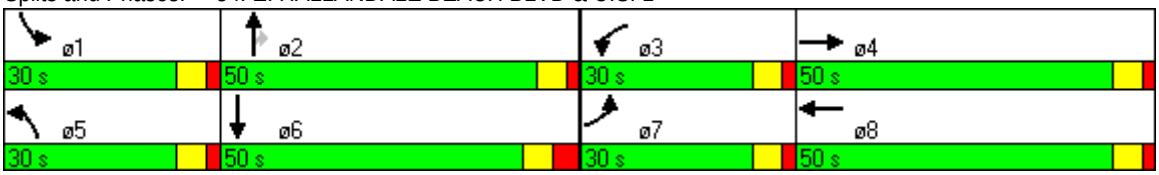
Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	209	1192	722	1597	847	1473	719	521	1082
Turn Type	Prot		Prot		Prot		Perm	Prot	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	24.0	12.0	24.0	12.0	24.0	24.0	12.0	24.0
Total Split (s)	30.0	50.0	30.0	50.0	30.0	50.0	50.0	30.0	50.0
Total Split (%)	18.8%	31.3%	18.8%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%
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	4.0
Lost Time Adjust (s)	0.0	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	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	23.0	44.0	24.0	45.0	24.0	44.0	44.0	24.0	42.0
Actuated g/C Ratio	0.14	0.28	0.15	0.28	0.15	0.28	0.28	0.15	0.26
v/c Ratio	0.89	1.38	1.52	1.49	1.79	1.15	1.22	1.10	0.99
Control Delay	101.1	218.2	288.5	263.6	398.6	125.0	141.4	130.1	79.6
Queue Delay	0.0	0.0	0.0	40.2	0.0	0.0	0.0	0.0	0.0
Total Delay	101.1	218.2	288.5	303.8	398.6	125.0	141.4	130.1	79.6
LOS	F	F	F	F	F	F	F	F	E
Approach Delay		205.8		299.7		205.2			94.8
Approach LOS		F		F		F			F

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.79
Intersection Signal Delay: 211.8 — Intersection LOS: F
Intersection Capacity Utilization 125.8% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 34: E. HALLANDALE BEACH BLVD & U.S. 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	1192	570	722	1597	343	847	1473	719	521	1082	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4838		3433	4950		3433	5085	1583	3433	5008	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4838		3433	4950		3433	5085	1583	3433	5008	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	227	1296	620	785	1736	373	921	1601	782	566	1176	132
RTOR Reduction (vph)	0	54	0	0	21	0	0	0	208	0	9	0
Lane Group Flow (vph)	227	1862	0	785	2088	0	921	1601	574	566	1299	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	23.0	44.0		24.0	45.0		24.0	44.0	44.0	24.0	42.0	
Effective Green, g (s)	23.0	44.0		24.0	45.0		24.0	44.0	44.0	24.0	42.0	
Actuated g/C Ratio	0.14	0.28		0.15	0.28		0.15	0.28	0.28	0.15	0.26	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	254	1330		515	1392		515	1398	435	515	1315	
v/s Ratio Prot	0.13	0.38		c0.23	c0.42		c0.27	0.31		0.16	0.26	
v/s Ratio Perm									c0.36			
v/c Ratio	0.89	1.40		1.52	1.50		1.79	1.15	1.32	1.10	0.99	
Uniform Delay, d1	67.3	58.0		68.0	57.5		68.0	58.0	58.0	68.0	58.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	30.1	184.7		245.7	228.9		362.5	74.3	159.2	69.5	22.1	
Delay (s)	97.4	242.7		313.7	286.4		430.5	132.3	217.2	137.5	80.9	
Level of Service	F	F		F	F		F	F	F	F	F	
Approach Delay (s)		227.3			293.8			235.5			97.9	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	225.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	125.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	PM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Background PM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1824	7	76	1605	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1982	7	82	1744	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			53			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	57	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		82			57			
C (m) (veh/h)		286			248			
v/c		0.29			0.23			
95% queue length		1.19			0.89			
Control Delay (s/veh)		22.6			23.8			
LOS		C			C			
Approach Delay (s/veh)	--	--	23.8					
Approach LOS	--	--	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1824	7	76	1605	0	0	53	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1831	0	76	1605	0	0	53	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	1.00	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5173	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	42.5	0.0	5.1	37.2		0.0	3.9		0.0
Adj Reference Time (s)	46.5	0.0	9.1	41.2		0.0	8.0		0.0
Permitted Option									
Adj Saturation A (vph)	1724		120	1725	0			0	
Reference Time A (s)	42.5		75.8	37.2	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	42.5			75.8					
Adj Reference Time (s)	46.5			79.8					
Split Option									
Ref Time Combined (s)	42.5		5.1	37.2	0.0			0.0	
Ref Time Seperate (s)	42.3		5.1	37.2	0.0			0.0	
Reference Time (s)	42.5		37.2	37.2	0.0			0.0	
Adj Reference Time (s)	46.5		41.2	41.2	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	55.5	NA	NA	
Permitted Option (s)	79.8	Err	Err	
Split Option (s)	87.7	0.0	0.0	
Minimum (s)	55.5	0.0	0.0	55.5

Right Turns	NBR2
Adj Reference Time (s)	8.0
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	46.5
Combined (s)	54.5

Intersection Summary			
Intersection Capacity Utilization	46.3%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Synchro Output Sheets – Future (2015)

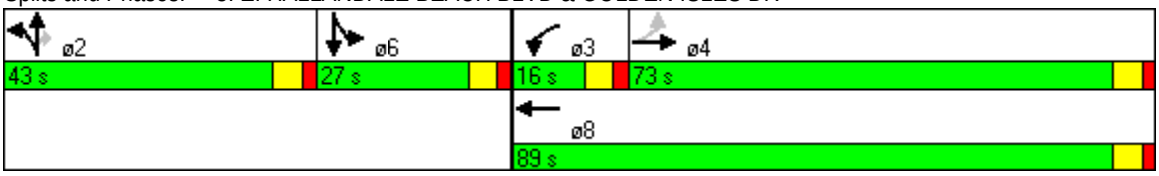
Future Background Traffic plus project traffic – AM Peak

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	4	1351	44	1671	263	18	123	5
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	73.0	73.0	16.0	89.0	43.0	43.0	43.0	27.0
Total Split (%)	45.9%	45.9%	10.1%	56.0%	27.0%	27.0%	27.0%	17.0%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		62.1	8.6	74.1	37.2	37.2	37.2	21.1
Actuated g/C Ratio		0.41	0.06	0.49	0.25	0.25	0.25	0.14
v/c Ratio		0.79	0.48	0.74	0.37	0.37	0.27	0.05
Control Delay		42.3	86.7	32.3	52.0	52.0	8.7	55.9
Queue Delay		93.2	0.0	21.0	0.0	0.0	0.0	0.0
Total Delay		135.5	86.7	53.3	52.0	52.0	8.7	55.9
LOS		F	F	D	D	D	A	E
Approach Delay		135.5		54.1		38.8		55.9
Approach LOS		F		D		D		E

Intersection Summary

Cycle Length: 159
Actuated Cycle Length: 150.5
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 84.5 — Intersection LOS: F
Intersection Capacity Utilization 61.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1351	63	44	1671	37	263	18	123	14	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5051		1770	5069		1681	1696	1583		3376	
Flt Permitted		0.93		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4708		1770	5069		1681	1696	1583		3376	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1468	68	48	1816	40	286	20	134	15	5	2
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	101	0	2	0
Lane Group Flow (vph)	0	1537	0	48	1854	0	152	154	33	0	20	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		62.1		7.3	75.4		37.2	37.2	37.2		21.1	
Effective Green, g (s)		62.1		7.3	75.4		37.2	37.2	37.2		21.1	
Actuated g/C Ratio		0.41		0.05	0.50		0.25	0.25	0.25		0.14	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1927		85	2519		412	416	388		470	
v/s Ratio Prot				0.03	c0.37		0.09	c0.09			c0.01	
v/s Ratio Perm		c0.33							0.02			
v/c Ratio		0.80		0.56	0.74		0.37	0.37	0.08		0.04	
Uniform Delay, d1		39.3		70.6	30.3		47.5	47.5	44.1		56.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		2.4		8.3	1.1		2.5	2.5	0.4		0.2	
Delay (s)		41.7		79.0	31.4		50.0	50.0	44.6		56.7	
Level of Service		D		E	C		D	D	D		E	
Approach Delay (s)		41.7			32.6			48.4			56.7	
Approach LOS		D			C			D			E	

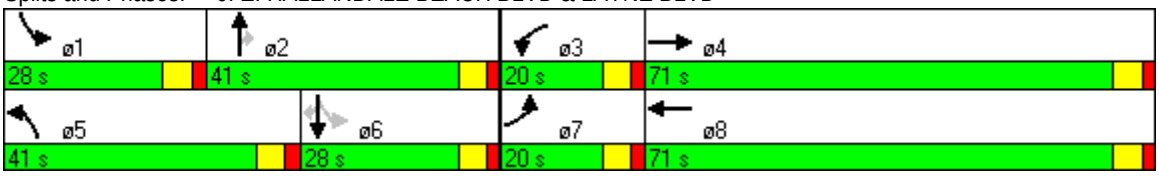
Intersection Summary			
HCM Average Control Delay	38.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	151.7	Sum of lost time (s)	24.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	80	1333	29	1911	104	15	53	22	5	76
Turn Type	Prot		Prot		Prot		Perm	pm+pt		Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	20.0	71.0	20.0	71.0	41.0	41.0	41.0	28.0	28.0	28.0
Total Split (%)	12.5%	44.4%	12.5%	44.4%	25.6%	25.6%	25.6%	17.5%	17.5%	17.5%
Yellow Time (s)	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	11.4	73.7	7.8	65.1	10.4	9.1	38.6		24.8	24.8
Actuated g/C Ratio	0.09	0.55	0.06	0.49	0.08	0.07	0.29		0.19	0.19
v/c Ratio	0.58	0.56	0.31	0.88	0.48	0.56	0.12		0.11	0.23
Control Delay	74.3	21.4	68.8	35.9	71.6	77.6	8.9		50.6	11.9
Queue Delay	0.0	0.0	0.0	168.0	0.0	0.0	0.0		0.0	0.0
Total Delay	74.3	21.4	68.8	203.9	71.6	77.6	8.9		50.6	11.9
LOS	E	C	E	F	E	E	A		D	B
Approach Delay		24.2		201.9		54.3			21.9	
Approach LOS		C		F		D			C	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 133.1
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 119.7 — Intersection LOS: F
Intersection Capacity Utilization 68.2% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: E. HALLANDALE BEACH BLVD & LAYNE BLVD



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1333	105	29	1911	84	104	15	53	22	5	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	5030		1770	5053		1681	1705	1583		1789	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.78	1.00		0.77	1.00
Satd. Flow (perm)	1770	5030		1770	5053		1681	1381	1583		1440	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1449	114	32	2077	91	113	16	58	24	5	83
RTOR Reduction (vph)	0	4	0	0	3	0	0	0	41	0	0	68
Lane Group Flow (vph)	87	1559	0	32	2165	0	64	65	17	0	29	15
Turn Type	Prot			Prot			Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2	6		6
Actuated Green, G (s)	11.4	73.7		5.3	67.6		9.1	39.9	39.9		24.8	24.8
Effective Green, g (s)	11.4	73.7		5.3	67.6		9.1	39.9	39.9		24.8	24.8
Actuated g/C Ratio	0.08	0.54		0.04	0.49		0.07	0.29	0.29		0.18	0.18
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	147	2708		69	2495		112	424	461		261	287
v/s Ratio Prot	c0.05	c0.31		0.02	c0.43		c0.04	0.01				
v/s Ratio Perm								c0.03	0.01		0.02	0.01
v/c Ratio	0.59	0.58		0.46	0.87		0.57	0.15	0.04		0.11	0.05
Uniform Delay, d1	60.5	21.1		64.4	30.7		62.0	36.0	34.7		46.8	46.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	6.3	0.3		4.9	3.5		6.9	0.2	0.1		0.2	0.3
Delay (s)	66.8	21.4		69.3	34.2		68.9	36.1	34.9		47.0	46.7
Level of Service	E	C		E	C		E	D	C		D	D
Approach Delay (s)		23.8			34.7			47.0			46.8	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	136.9	Sum of lost time (s)	24.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	69	1	2	0	1	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	1	2	0	1	154

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	76	2	155
Volume Left (vph)	75	0	1
Volume Right (vph)	0	0	154
Hadj (s)	0.23	0.03	-0.56
Departure Headway (s)	4.4	4.3	3.5
Degree Utilization, x	0.09	0.00	0.15
Capacity (veh/h)	783	799	992
Control Delay (s)	7.9	7.3	7.2
Approach Delay (s)	7.9	7.3	7.2
Approach LOS	A	A	A

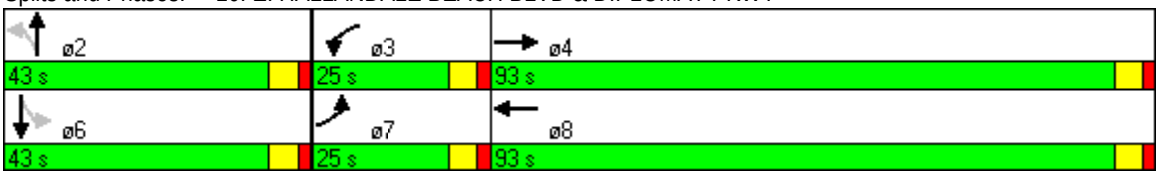
Intersection Summary			
Delay	7.4		
HCM Level of Service	A		
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	116	1238	15	1546	9	1	51	23
Turn Type	Prot		Prot		Perm		Perm	
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	25.0	93.0	25.0	93.0	43.0	43.0	43.0	43.0
Total Split (%)	15.5%	57.8%	15.5%	57.8%	26.7%	26.7%	26.7%	26.7%
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	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				
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	14.3	77.3	6.8	62.0		37.5	37.5	37.5
Actuated g/C Ratio	0.11	0.59	0.05	0.47		0.28	0.28	0.28
v/c Ratio	0.66	0.46	0.17	0.73		0.04	0.14	0.32
Control Delay	75.8	16.3	70.3	29.9		32.9	42.2	11.0
Queue Delay	0.0	0.5	0.0	0.3		0.0	0.0	0.0
Total Delay	75.8	16.8	70.3	30.2		32.9	42.2	11.0
LOS	E	B	E	C		C	D	B
Approach Delay		21.8		30.6		32.9		18.1
Approach LOS		C		C		C		B

Intersection Summary

Cycle Length: 161
Actuated Cycle Length: 132.1
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 26.0 — Intersection LOS: C
Intersection Capacity Utilization 62.7% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: E. HALLANDALE BEACH BLVD & DIPLOMAT PKWY



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	1238	17	15	1546	49	9	1	5	51	23	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.96		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1770	5075		1770	5062			1730		1770	1621	
Flt Permitted	0.95	1.00		0.95	1.00			0.84		0.75	1.00	
Satd. Flow (perm)	1770	5075		1770	5062			1503		1392	1621	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	1346	18	16	1680	53	10	1	5	55	25	161
RTOR Reduction (vph)	0	1	0	0	2	0	0	4	0	0	116	0
Lane Group Flow (vph)	126	1363	0	16	1731	0	0	12	0	55	70	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	14.3	77.4		2.9	66.0			37.6		37.6	37.6	
Effective Green, g (s)	14.3	77.4		2.9	66.0			37.6		37.6	37.6	
Actuated g/C Ratio	0.11	0.57		0.02	0.49			0.28		0.28	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	186	2890		38	2458			416		385	448	
v/s Ratio Prot	c0.07	0.27		0.01	c0.34						c0.04	
v/s Ratio Perm								0.01		0.04		
v/c Ratio	0.68	0.47		0.42	0.70			0.03		0.14	0.16	
Uniform Delay, d1	58.6	17.2		65.7	27.3			35.8		37.0	37.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	9.4	0.1		7.4	0.9			0.1		0.8	0.7	
Delay (s)	68.0	17.3		73.0	28.3			36.0		37.8	37.9	
Level of Service	E	B		E	C			D		D	D	
Approach Delay (s)		21.6			28.7			36.0			37.9	
Approach LOS		C			C			D			D	

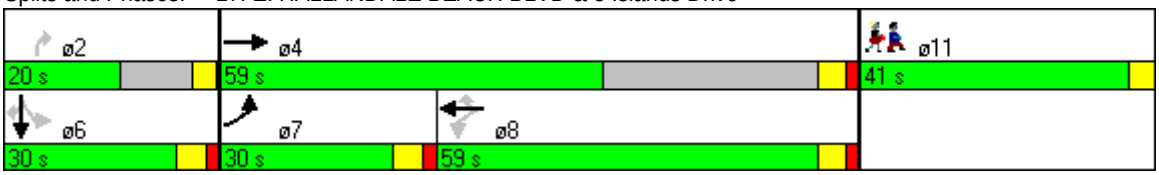
Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	135.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø2	ø11
Lane Configurations									
Volume (vph)	205	1010	1265	40	233	0	345		
Turn Type	Prot			Perm	Perm		Perm		
Protected Phases	7	4	8			6		2	11
Permitted Phases				8	6		6		
Detector Phase	7	4	8	8	6	6	6		
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	20.0	10.0
Total Split (s)	30.0	59.0	59.0	59.0	30.0	30.0	30.0	20.0	41.0
Total Split (%)	18.8%	36.9%	36.9%	36.9%	18.8%	18.8%	18.8%	13%	26%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.5	0.0
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	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max	None
Act Effct Green (s)	12.0	50.8	32.8	32.8	24.2	24.2	24.2		
Actuated g/C Ratio	0.14	0.58	0.38	0.38	0.28	0.28	0.28		
v/c Ratio	0.47	0.37	0.72	0.07	0.27	0.27	0.53		
Control Delay	39.2	9.8	25.6	5.7	29.0	29.0	6.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	39.2	9.8	25.6	5.7	29.0	29.0	6.4		
LOS	D	A	C	A	C	C	A		
Approach Delay		14.8	24.9			15.5			
Approach LOS		B	C			B			

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 87.1
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 19.2 — Intersection LOS: B
Intersection Capacity Utilization 55.8% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 17: E. HALLANDALE BEACH BLVD & 3 Islands Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	205	1010	0	0	1265	40	0	0	0	233	0	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Lane Util. Factor	0.97	0.91			0.91	1.00				0.95	0.95	1.00
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	3433	5085			5085	1583				1681	1681	1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)	3433	5085			5085	1583				1681	1681	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	1098	0	0	1375	43	0	0	0	253	0	375
RTOR Reduction (vph)	0	0	0	0	0	27	0	0	0	0	0	271
Lane Group Flow (vph)	223	1098	0	0	1375	16	0	0	0	126	127	104
Turn Type	Prot			Perm		Perm			custom	Perm		Perm
Protected Phases	7	4			8						6	
Permitted Phases				8		8			2	6		6
Actuated Green, G (s)	12.0	50.8			32.8	32.8				24.2	24.2	24.2
Effective Green, g (s)	12.0	50.8			32.8	32.8				24.2	24.2	24.2
Actuated g/C Ratio	0.14	0.58			0.38	0.38				0.28	0.28	0.28
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	474	2969			1917	597				468	468	440
v/s Ratio Prot	0.06	c0.22			c0.27							
v/s Ratio Perm						0.01				0.07	0.08	0.07
v/c Ratio	0.47	0.37			0.72	0.03				0.27	0.27	0.24
Uniform Delay, d1	34.6	9.6			23.1	17.1				24.5	24.5	24.3
Progression Factor	1.00	1.00			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1			1.3	0.0				1.4	1.4	1.3
Delay (s)	35.3	9.7			24.4	17.1				25.9	25.9	25.5
Level of Service	D	A			C	B				C	C	C
Approach Delay (s)		14.0			24.2			0.0			25.7	
Approach LOS		B			C			A			C	

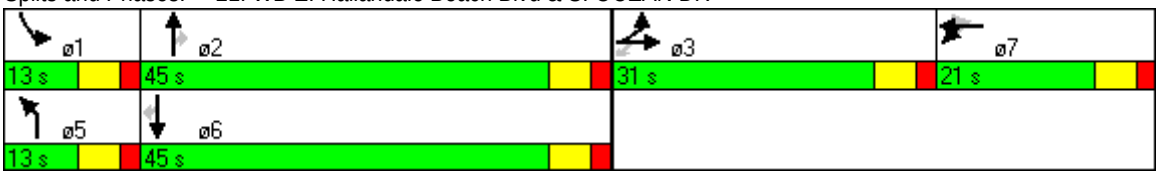
Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations											
Volume (vph)	492	37	823	179	6	188	474	6	6	362	337
Turn Type	Split		Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7		5	2		1	6	
Permitted Phases			3		7			2			6
Detector Phase	3	3	3	7	7	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	22.0	22.0	10.0	10.0	10.0
Total Split (s)	31.0	31.0	31.0	21.0	21.0	13.0	45.0	45.0	13.0	45.0	45.0
Total Split (%)	28.2%	28.2%	28.2%	19.1%	19.1%	11.8%	40.9%	40.9%	11.8%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	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	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	25.1	25.1	25.1	14.0	14.0	7.0	41.6	41.6	6.0	31.0	31.0
Actuated g/C Ratio	0.25	0.25	0.25	0.14	0.14	0.07	0.41	0.41	0.06	0.31	0.31
v/c Ratio	0.69	0.68	0.84	0.78	0.03	1.66	0.35	0.01	0.07	0.36	0.75
Control Delay	46.0	45.2	11.0	64.7	40.5	361.2	22.1	11.8	49.0	28.3	42.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	45.2	11.0	64.7	40.5	361.2	22.1	11.8	49.0	28.3	42.6
LOS	D	D	B	E	D	F	C	B	D	C	D
Approach Delay		24.6		63.9			117.3			35.3	
Approach LOS		C		E			F			D	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 101.2
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.66
Intersection Signal Delay: 51.0 — Intersection LOS: D
Intersection Capacity Utilization 85.7% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 21: WB E. Hallandale Beach Blvd & S. OCEAN DR



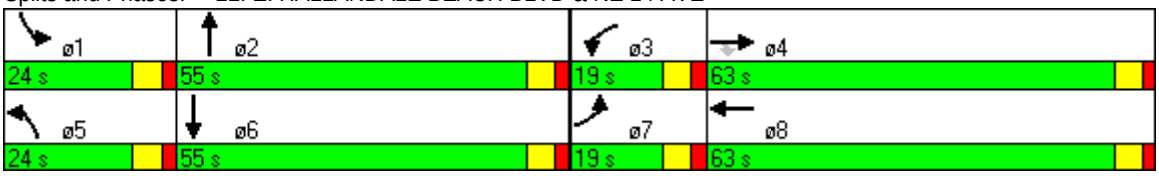
Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	492	37	823	6	179	6	188	474	6	6	362	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1697	1583		1860	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.96	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1697	1583		1860	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	535	40	895	7	195	7	204	515	7	7	393	366
RTOR Reduction (vph)	0	0	683	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	289	286	212	0	202	7	204	515	3	7	393	366
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7	7		5	2		1	6	
Permitted Phases			3			7			2			6
Actuated Green, G (s)	25.1	25.1	25.1		14.0	14.0	7.0	41.6	41.6	1.3	35.9	35.9
Effective Green, g (s)	25.1	25.1	25.1		14.0	14.0	7.0	41.6	41.6	1.3	35.9	35.9
Actuated g/C Ratio	0.24	0.24	0.24		0.13	0.13	0.07	0.39	0.39	0.01	0.34	0.34
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	398	402	375		246	209	117	1389	621	22	1199	536
v/s Ratio Prot	c0.17	0.17			c0.11		c0.12	c0.15		0.00	0.11	
v/s Ratio Perm			0.13			0.00			0.00			c0.23
v/c Ratio	0.73	0.71	0.57		0.82	0.03	1.74	0.37	0.00	0.32	0.33	0.68
Uniform Delay, d1	37.3	37.1	35.6		44.8	40.1	49.5	22.9	19.6	51.9	26.1	30.2
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	11.0	10.2	6.1		19.3	0.1	367.5	0.8	0.0	8.2	0.2	3.6
Delay (s)	48.3	47.4	41.7		64.1	40.2	417.0	23.7	19.6	60.1	26.2	33.7
Level of Service	D	D	D		E	D	F	C	B	E	C	C
Approach Delay (s)		44.1			63.3			134.1			30.1	
Approach LOS		D			E			F			C	

Intersection Summary			
HCM Average Control Delay	62.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	106.0	Sum of lost time (s)	30.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	102	1564	228	20	1805	249	73	133	84
Turn Type	Prot		Perm	Prot		Prot		Prot	
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0
Total Split (s)	19.0	63.0	63.0	19.0	63.0	24.0	55.0	24.0	55.0
Total Split (%)	11.8%	39.1%	39.1%	11.8%	39.1%	14.9%	34.2%	14.9%	34.2%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	12.4	66.8	66.8	7.5	57.0	16.5	49.2	16.4	49.1
Actuated g/C Ratio	0.08	0.42	0.42	0.05	0.36	0.10	0.31	0.10	0.31
v/c Ratio	0.80	0.80	0.32	0.27	1.11	0.76	0.19	0.80	0.54
Control Delay	109.0	44.8	11.6	81.0	103.6	83.8	37.5	98.9	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.0	44.8	11.6	81.0	103.6	83.8	37.5	98.9	38.1
LOS	F	D	B	F	F	F	D	F	D
Approach Delay		44.3			103.4		70.5		57.7
Approach LOS		D			F		E		E

Intersection Summary	
Cycle Length: 161	
Actuated Cycle Length: 159	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.11	
Intersection Signal Delay: 72.0	Intersection LOS: E
Intersection Capacity Utilization 85.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 22: E. HALLANDALE BEACH BLVD & NE 14 AVE



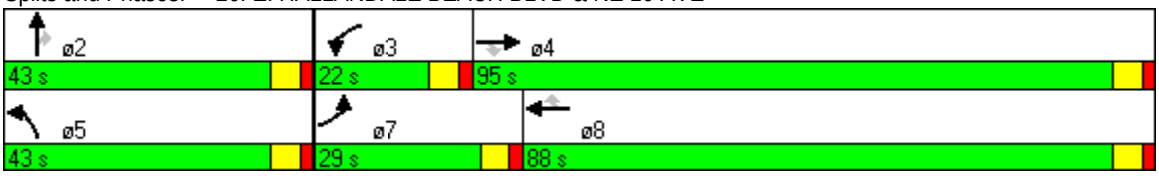
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	1564	228	20	1805	48	249	73	28	133	84	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.96		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5066		3433	1786		1770	1667	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5066		3433	1786		1770	1667	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	1700	248	22	1962	52	271	79	30	145	91	213
RTOR Reduction (vph)	0	0	102	0	2	0	0	8	0	0	52	0
Lane Group Flow (vph)	111	1700	146	22	2012	0	271	101	0	145	252	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	12.4	66.8	66.8	5.1	59.5		16.5	49.2		16.4	49.1	
Effective Green, g (s)	12.4	66.8	66.8	5.1	59.5		16.5	49.2		16.4	49.1	
Actuated g/C Ratio	0.08	0.41	0.41	0.03	0.37		0.10	0.30		0.10	0.30	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	2103	655	56	1866		351	544		180	507	
v/s Ratio Prot	c0.06	c0.33		0.01	c0.40		0.08	0.06		c0.08	c0.15	
v/s Ratio Perm			0.09									
v/c Ratio	0.82	0.81	0.22	0.39	1.08		0.77	0.19		0.81	0.50	
Uniform Delay, d1	73.4	41.7	30.6	76.7	51.0		70.7	41.4		71.0	46.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	30.0	2.4	0.2	4.5	45.5		10.1	0.7		22.4	3.5	
Delay (s)	103.4	44.1	30.8	81.2	96.5		80.8	42.1		93.4	49.5	
Level of Service	F	D	C	F	F		F	D		F	D	
Approach Delay (s)		45.7			96.4			69.7			63.7	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM Average Control Delay	70.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	161.5	Sum of lost time (s)	30.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Configurations									
Volume (vph)	119	1795	135	281	1991	35	67	2	112
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2	
Permitted Phases			4			8			2
Detector Phase	7	4	4	3	8	8	5	2	2
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	29.0	95.0	95.0	22.0	88.0	88.0	43.0	43.0	43.0
Total Split (%)	18.1%	59.4%	59.4%	13.8%	55.0%	55.0%	26.9%	26.9%	26.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	None	None	Max	Max
Act Effct Green (s)	16.4	80.7	80.7	15.7	80.1	80.1	30.0	28.8	37.2
Actuated g/C Ratio	0.11	0.53	0.53	0.10	0.53	0.53	0.20	0.19	0.25
v/c Ratio	0.68	0.72	0.17	0.86	0.81	0.05	0.11	0.12	0.25
Control Delay	83.4	28.5	13.2	89.9	32.7	11.5	48.5	48.5	9.0
Queue Delay	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.4	30.3	13.2	89.9	32.7	11.5	48.5	48.5	9.0
LOS	F	C	B	F	C	B	D	D	A
Approach Delay		32.3			39.3			24.1	
Approach LOS		C			D			C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 151.7	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.86	
Intersection Signal Delay: 35.5	Intersection LOS: D
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 26: E. HALLANDALE BEACH BLVD & NE 10 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	1795	135	281	1991	35	67	2	112	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583	1681	1690	1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	5085	1583	3433	5085	1583	1681	1690	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	129	1951	147	305	2164	38	73	2	122	0	0	0
RTOR Reduction (vph)	0	0	19	0	0	8	0	0	92	0	0	0
Lane Group Flow (vph)	129	1951	128	305	2164	30	37	38	30	0	0	0
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm			
Protected Phases	7	4		3	8		5	2				
Permitted Phases			4			8			2			
Actuated Green, G (s)	16.4	80.8	80.8	15.7	80.1	80.1	37.2	37.2	37.2			
Effective Green, g (s)	16.4	80.8	80.8	15.7	80.1	80.1	37.2	37.2	37.2			
Actuated g/C Ratio	0.11	0.53	0.53	0.10	0.53	0.53	0.25	0.25	0.25			
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	191	2708	843	355	2685	836	412	414	388			
v/s Ratio Prot	0.07	0.38		c0.09	c0.43		0.02	c0.02				
v/s Ratio Perm			0.08			0.02			0.02			
v/c Ratio	0.68	0.72	0.15	0.86	0.81	0.04	0.09	0.09	0.08			
Uniform Delay, d1	65.1	26.9	18.0	66.9	29.4	17.2	44.2	44.2	44.0			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	9.1	1.0	0.1	18.3	1.9	0.0	0.1	0.1	0.4			
Delay (s)	74.2	27.9	18.1	85.2	31.3	17.2	44.3	44.3	44.4			
Level of Service	E	C	B	F	C	B	D	D	D			
Approach Delay (s)		29.9			37.6			44.4			0.0	
Approach LOS		C			D			D			A	

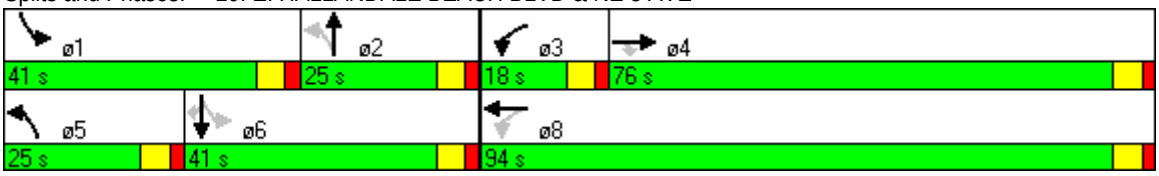
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	151.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	2085	241	3	2093	192	0	101	8	189
Turn Type		Perm	pm+pt		pm+pt		pm+pt		Perm
Protected Phases	4		3	8	5	2	1	6	
Permitted Phases		4	8		2		6		6
Detector Phase	4	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0	22.0
Total Split (s)	76.0	76.0	18.0	94.0	25.0	25.0	41.0	41.0	41.0
Total Split (%)	47.5%	47.5%	11.3%	58.8%	15.6%	15.6%	25.6%	25.6%	25.6%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	79.7	79.7	81.9	81.9		23.2	35.6	35.6	35.6
Actuated g/C Ratio	0.61	0.61	0.63	0.63		0.18	0.27	0.27	0.27
v/c Ratio	0.72	0.25	0.02	0.71		1.23	0.17	0.16	0.43
Control Delay	19.5	4.9	9.0	17.2		174.4	38.8	38.6	31.1
Queue Delay	17.8	0.0	0.0	1.3		0.0	0.0	0.0	0.0
Total Delay	37.3	4.9	9.0	18.5		174.4	38.8	38.6	31.1
LOS	D	A	A	B		F	D	D	C
Approach Delay	34.0			18.5		174.4		33.9	
Approach LOS	C			B		F		C	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 129.6
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 35.6 — Intersection LOS: D
Intersection Capacity Utilization 83.6% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 29: E. HALLANDALE BEACH BLVD & NE 8 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2085	241	3	2093	0	192	0	96	101	8	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lane Util. Factor		0.91	1.00	1.00	0.91			1.00		0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00			0.96		1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.97		0.95	0.96	1.00
Satd. Flow (prot)		5085	1583	1770	5085			1722		1681	1697	1583
Flt Permitted		1.00	1.00	0.05	1.00			0.76		0.66	0.73	1.00
Satd. Flow (perm)		5085	1583	87	5085			1353		1166	1295	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2266	262	3	2275	0	209	0	104	110	9	205
RTOR Reduction (vph)	0	0	70	0	0	0	0	12	0	0	0	44
Lane Group Flow (vph)	0	2266	192	3	2275	0	0	301	0	59	60	161
Turn Type			Perm	pm+pt			pm+pt			pm+pt		Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases			4	8			2			6		6
Actuated Green, G (s)		79.7	79.7	86.8	86.8			23.2		36.9	36.9	36.9
Effective Green, g (s)		79.7	79.7	86.8	86.8			23.2		36.9	36.9	36.9
Actuated g/C Ratio		0.59	0.59	0.64	0.64			0.17		0.27	0.27	0.27
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		2987	930	69	3253			231		346	375	430
v/s Ratio Prot		c0.45		0.00	c0.45					0.01	0.01	
v/s Ratio Perm			0.12	0.03				c0.22		0.04	0.03	c0.10
v/c Ratio		0.76	0.21	0.04	0.70			1.30		0.17	0.16	0.38
Uniform Delay, d1		20.8	13.2	17.4	15.9			56.2		39.6	37.6	40.1
Progression Factor		1.00	1.00	1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		1.1	0.1	0.3	0.7			163.4		0.2	0.2	2.5
Delay (s)		22.0	13.3	17.7	16.6			219.7		39.9	37.8	42.5
Level of Service		C	B	B	B			F		D	D	D
Approach Delay (s)		21.1			16.6			219.7			41.2	
Approach LOS		C			B			F			D	

Intersection Summary			
HCM Average Control Delay	31.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	135.7	Sum of lost time (s)	24.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	91	24	69	0	117	51
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	99	26	75	0	127	55
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	385	75			75	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	385	75			75	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	83	97			92	
cM capacity (veh/h)	567	986			1524	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	125	75	183
Volume Left	99	0	127
Volume Right	26	0	0
cSH	622	1700	1524
Volume to Capacity	0.20	0.04	0.08
Queue Length 95th (ft)	19	0	7
Control Delay (s)	12.2	0.0	5.5
Lane LOS	B		A
Approach Delay (s)	12.2	0.0	5.5
Approach LOS	B		

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	50	160	243	69	12	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	174	264	75	13	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	404	302			339	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	404	302			339	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	76			99	
cM capacity (veh/h)	596	738			1220	

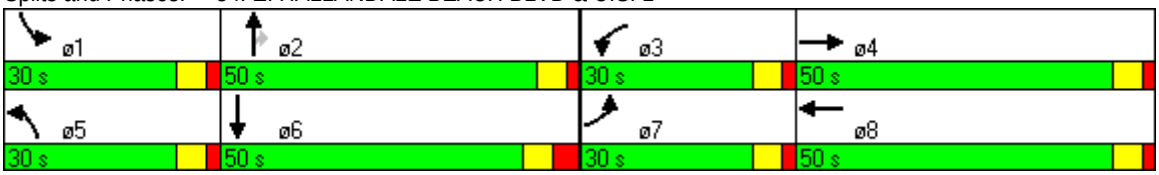
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	228	339	89
Volume Left	54	0	13
Volume Right	174	75	0
cSH	698	1700	1220
Volume to Capacity	0.33	0.20	0.01
Queue Length 95th (ft)	36	0	1
Control Delay (s)	12.6	0.0	1.2
Lane LOS	B		A
Approach Delay (s)	12.6	0.0	1.2
Approach LOS	B		

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	116	1302	673	1414	483	696	455	437	1237
Turn Type	Prot		Prot		Prot		Perm	Prot	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	24.0	12.0	24.0	12.0	24.0	24.0	12.0	24.0
Total Split (s)	30.0	50.0	30.0	50.0	30.0	50.0	50.0	30.0	50.0
Total Split (%)	18.8%	31.3%	18.8%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%
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	4.0
Lost Time Adjust (s)	0.0	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	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	16.7	44.0	24.0	51.3	24.0	44.2	44.2	23.8	42.0
Actuated g/C Ratio	0.10	0.28	0.15	0.32	0.15	0.28	0.28	0.15	0.26
v/c Ratio	0.68	1.54	1.42	1.15	1.02	0.54	0.77	0.93	1.09
Control Delay	87.0	281.6	246.9	120.4	110.1	50.9	30.1	92.8	105.4
Queue Delay	0.0	0.0	0.0	69.4	0.0	0.0	0.0	0.0	0.0
Total Delay	87.0	281.6	246.9	189.8	110.1	50.9	30.1	92.8	105.4
LOS	F	F	F	F	F	D	C	F	F
Approach Delay		270.7		206.0		62.6			102.3
Approach LOS		F		F		E			F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.54	
Intersection Signal Delay: 169.9	Intersection LOS: F
Intersection Capacity Utilization 120.3%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 34: E. HALLANDALE BEACH BLVD & U.S. 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	1302	655	673	1414	281	483	696	455	437	1237	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4830		3433	4959		3433	5085	1583	3433	5034	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4830		3433	4959		3433	5085	1583	3433	5034	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	1415	712	732	1537	305	525	757	495	475	1345	96
RTOR Reduction (vph)	0	57	0	0	18	0	0	0	209	0	5	0
Lane Group Flow (vph)	126	2070	0	732	1824	0	525	757	286	475	1436	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	16.7	44.0		24.0	51.3		24.0	44.2	44.2	23.8	42.0	
Effective Green, g (s)	16.7	44.0		24.0	51.3		24.0	44.2	44.2	23.8	42.0	
Actuated g/C Ratio	0.10	0.28		0.15	0.32		0.15	0.28	0.28	0.15	0.26	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	185	1328		515	1590		515	1405	437	511	1321	
v/s Ratio Prot	0.07	c0.43		c0.21	c0.37		c0.15	0.15		0.14	c0.29	
v/s Ratio Perm									0.18			
v/c Ratio	0.68	1.56		1.42	1.15		1.02	0.54	0.65	0.93	1.09	
Uniform Delay, d1	69.1	58.0		68.0	54.4		68.0	49.2	51.1	67.3	59.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.9	255.3		200.7	74.2		44.6	1.5	7.4	23.3	51.9	
Delay (s)	79.0	313.3		268.7	128.5		112.6	50.7	58.6	90.6	110.9	
Level of Service	E	F		F	F		F	D	E	F	F	
Approach Delay (s)		300.2			168.4			71.2			105.9	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM Average Control Delay	168.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	32.0
Intersection Capacity Utilization	120.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	AM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Future Total AM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1282	96	72	1448	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1393	104	78	1573	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	64	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		78			64			
C (m) (veh/h)		444			389			
v/c		0.18			0.16			
95% queue length		0.64			0.59			
Control Delay (s/veh)		14.8			16.1			
LOS		B			C			
Approach Delay (s/veh)	--	--	16.1					
Approach LOS	--	--	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1282	96	72	1448	0	0	83	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1378	0	72	1448	0	0	83	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.99	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5122	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	32.3	0.0	4.8	33.6		0.0	6.2		0.0
Adj Reference Time (s)	36.3	0.0	8.8	37.6		0.0	10.2		0.0
Permitted Option									
Adj Saturation A (vph)	1707		120	1725	0			0	
Reference Time A (s)	32.3		71.8	33.6	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	32.3			71.8					
Adj Reference Time (s)	36.3			75.8					
Split Option									
Ref Time Combined (s)	32.3		4.8	33.6	0.0			0.0	
Ref Time Seperate (s)	30.0		4.8	33.6	0.0			0.0	
Reference Time (s)	32.3		33.6	33.6	0.0			0.0	
Adj Reference Time (s)	36.3		37.6	37.6	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	45.1	NA	NA	
Permitted Option (s)	75.8	Err	Err	
Split Option (s)	73.9	0.0	0.0	
Minimum (s)	45.1	0.0	0.0	45.1

Right Turns	NBR2
Adj Reference Time (s)	10.2
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	36.3
Combined (s)	46.5

Intersection Summary			
Intersection Capacity Utilization	38.7%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Synchro Output Sheets – Future (2015)

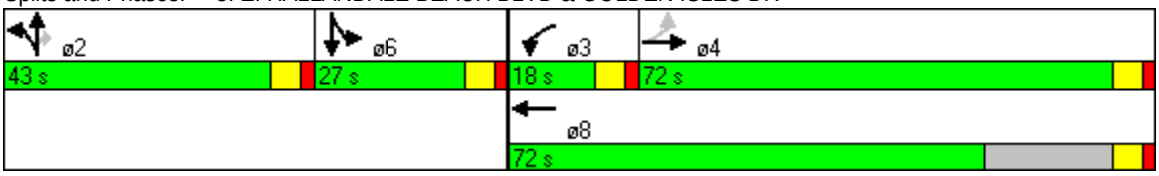
Future Background Traffic plus project traffic – PM Peak

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	2	2123	119	1677	230	19	66	13
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	72.0	72.0	18.0	72.0	43.0	43.0	43.0	27.0
Total Split (%)	45.0%	45.0%	11.3%	45.0%	26.9%	26.9%	26.9%	16.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		66.0	12.0	84.0	37.0	37.0	37.0	21.0
Actuated g/C Ratio		0.41	0.08	0.52	0.23	0.23	0.23	0.13
v/c Ratio		1.26	0.97	0.71	0.35	0.35	0.17	0.24
Control Delay		162.4	141.9	30.4	54.5	54.4	10.7	60.3
Queue Delay		239.9	0.0	75.7	0.0	0.0	0.0	0.0
Total Delay		402.3	141.9	106.2	54.5	54.4	10.7	60.3
LOS		F	F	F	D	D	B	E
Approach Delay		402.3		108.5		45.3		60.3
Approach LOS		F		F		D		E

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 130
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.26
Intersection Signal Delay: 250.3 — Intersection LOS: F
Intersection Capacity Utilization 106.4% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



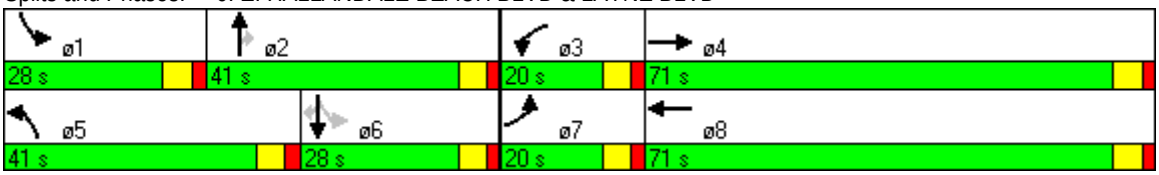
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	2123	146	119	1677	51	230	19	66	75	13	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (prot)		5036		1770	5063		1681	1698	1583		3359	
Flt Permitted		0.94		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (perm)		4724		1770	5063		1681	1698	1583		3359	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2308	159	129	1823	55	250	21	72	82	14	10
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	55	0	5	0
Lane Group Flow (vph)	0	2464	0	129	1876	0	135	136	17	0	101	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		66.0		12.0	84.0		37.0	37.0	37.0		21.0	
Effective Green, g (s)		66.0		12.0	84.0		37.0	37.0	37.0		21.0	
Actuated g/C Ratio		0.41		0.08	0.52		0.23	0.23	0.23		0.13	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1949		133	2658		389	393	366		441	
v/s Ratio Prot				c0.07	0.37		c0.08	0.08			c0.03	
v/s Ratio Perm		c0.52							0.01			
v/c Ratio		1.26		0.97	0.71		0.35	0.35	0.05		0.23	
Uniform Delay, d1		47.0		73.8	28.7		51.4	51.4	47.8		62.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		123.2		67.9	0.9		2.4	2.4	0.2		1.2	
Delay (s)		170.2		141.7	29.5		53.8	53.8	48.0		63.5	
Level of Service		F		F	C		D	D	D		E	
Approach Delay (s)		170.2			36.8			52.6			63.5	
Approach LOS		F			D			D			E	

Intersection Summary			
HCM Average Control Delay	105.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	125	2050	25	1733	167	15	61	144	12	102
Turn Type	Prot		Prot		Prot		Perm	pm+pt		Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	20.0	71.0	20.0	71.0	41.0	41.0	41.0	28.0	28.0	28.0
Total Split (%)	12.5%	44.4%	12.5%	44.4%	25.6%	25.6%	25.6%	17.5%	17.5%	17.5%
Yellow Time (s)	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	13.6	74.4	7.6	63.4	13.3	13.3	41.4		22.1	22.1
Actuated g/C Ratio	0.10	0.55	0.06	0.46	0.10	0.10	0.30		0.16	0.16
v/c Ratio	0.77	0.83	0.28	0.81	0.60	0.61	0.13		0.85	0.32
Control Delay	88.1	30.6	70.3	35.3	74.8	75.0	8.2		89.9	11.7
Queue Delay	0.0	0.0	0.0	138.5	0.0	0.0	0.0		0.0	0.0
Total Delay	88.1	30.6	70.3	173.8	74.8	75.0	8.2		89.9	11.7
LOS	F	C	E	F	E	E	A		F	B
Approach Delay		33.8		172.3		58.2			59.0	
Approach LOS		C		F		E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 136.4	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 91.4	Intersection LOS: F
Intersection Capacity Utilization 74.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: E. HALLANDALE BEACH BLVD & LAYNE BLVD



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	2050	54	25	1733	33	167	15	61	144	12	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	5066		1770	5071		1681	1698	1583		1781	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.40	1.00		0.67	1.00
Satd. Flow (perm)	1770	5066		1770	5071		1681	702	1583		1244	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	2228	59	27	1884	36	182	16	66	157	13	111
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	46	0	0	93
Lane Group Flow (vph)	136	2286	0	27	1919	0	98	100	20	0	170	18
Turn Type	Prot			Prot			Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2	6		6
Actuated Green, G (s)	13.6	74.4		5.1	65.9		13.3	41.4	41.4		22.1	22.1
Effective Green, g (s)	13.6	74.4		5.1	65.9		13.3	41.4	41.4		22.1	22.1
Actuated g/C Ratio	0.10	0.54		0.04	0.47		0.10	0.30	0.30		0.16	0.16
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	173	2714		65	2406		161	305	472		198	252
v/s Ratio Prot	c0.08	c0.45		0.02	0.38		c0.06	0.03				
v/s Ratio Perm								0.07	0.01		c0.14	0.01
v/c Ratio	0.79	0.84		0.42	0.80		0.61	0.33	0.04		0.86	0.07
Uniform Delay, d1	61.2	27.3		65.4	30.9		60.3	37.9	34.7		56.9	49.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	20.5	2.5		4.3	1.9		6.4	0.6	0.2		28.9	0.5
Delay (s)	81.8	29.8		69.7	32.8		66.7	38.6	34.8		85.7	50.2
Level of Service	F	C		E	C		E	D	C		F	D
Approach Delay (s)		32.7			33.3			48.1			71.7	
Approach LOS		C			C			D			E	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	138.9	Sum of lost time (s)	24.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	45	6	1	2	5	161
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	7	1	2	5	175

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	55	3	180
Volume Left (vph)	49	0	5
Volume Right (vph)	0	2	175
Hadj (s)	0.21	-0.37	-0.54
Departure Headway (s)	4.5	3.9	3.5
Degree Utilization, x	0.07	0.00	0.18
Capacity (veh/h)	775	868	1004
Control Delay (s)	7.8	6.9	7.2
Approach Delay (s)	7.8	6.9	7.2
Approach LOS	A	A	A

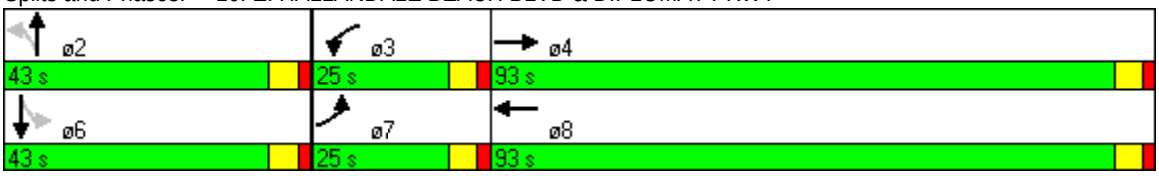
Intersection Summary			
Delay	7.4		
HCM Level of Service	A		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	193	2082	4	1609	9	11	73	1
Turn Type	Prot		Prot		Perm		Perm	
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	25.0	93.0	25.0	93.0	43.0	43.0	43.0	43.0
Total Split (%)	15.5%	57.8%	15.5%	57.8%	26.7%	26.7%	26.7%	26.7%
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	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				
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	19.1	91.1	6.0	68.2		37.3	37.3	37.3
Actuated g/C Ratio	0.13	0.64	0.04	0.48		0.26	0.26	0.26
v/c Ratio	0.89	0.70	0.05	0.75		0.08	0.22	0.25
Control Delay	96.2	18.5	73.0	31.9		31.4	46.8	8.8
Queue Delay	0.0	30.9	0.0	0.8		0.0	0.0	0.0
Total Delay	96.2	49.4	73.0	32.7		31.4	46.8	8.8
LOS	F	D	E	C		C	D	A
Approach Delay		53.4		32.8		31.4		23.3
Approach LOS		D		C		C		C

Intersection Summary

Cycle Length: 161
Actuated Cycle Length: 142.7
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 43.6 — Intersection LOS: D
Intersection Capacity Utilization 69.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 10: E. HALLANDALE BEACH BLVD & DIPLOMAT PKWY



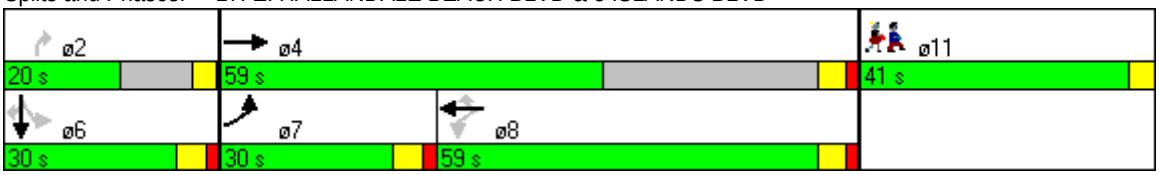
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	2082	0	4	1609	51	9	11	13	73	1	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.95		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	
Satd. Flow (prot)	1770	5085		1770	5062			1741		1770	1585	
Flt Permitted	0.95	1.00		0.95	1.00			0.92		0.73	1.00	
Satd. Flow (perm)	1770	5085		1770	5062			1631		1367	1585	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	2263	0	4	1749	55	10	12	14	79	1	128
RTOR Reduction (vph)	0	0	0	0	2	0	0	10	0	0	96	0
Lane Group Flow (vph)	210	2263	0	4	1802	0	0	26	0	79	33	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	19.1	91.1		1.2	73.2			37.3		37.3	37.3	
Effective Green, g (s)	19.1	91.1		1.2	73.2			37.3		37.3	37.3	
Actuated g/C Ratio	0.13	0.62		0.01	0.50			0.25		0.25	0.25	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	229	3139		14	2510			412		345	401	
v/s Ratio Prot	c0.12	c0.45		0.00	0.36						0.02	
v/s Ratio Perm								0.02		c0.06		
v/c Ratio	0.92	0.72		0.29	0.72			0.06		0.23	0.08	
Uniform Delay, d1	63.5	19.5		72.8	29.1			41.9		43.7	42.1	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	37.2	0.8		10.9	1.0			0.3		1.5	0.4	
Delay (s)	100.7	20.3		83.7	30.1			42.2		45.3	42.5	
Level of Service	F	C		F	C			D		D	D	
Approach Delay (s)		27.1			30.2			42.2			43.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	147.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø2	ø11
Lane Configurations									
Volume (vph)	560	1600	1457	180	231	0	272		
Turn Type	Prot			Perm	Perm		Perm		
Protected Phases	7	4	8			6		2	11
Permitted Phases				8	6		6		
Detector Phase	7	4	8	8	6	6	6		
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	20.0	10.0
Total Split (s)	30.0	59.0	59.0	59.0	30.0	30.0	30.0	20.0	41.0
Total Split (%)	18.8%	36.9%	36.9%	36.9%	18.8%	18.8%	18.8%	13%	26%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.5	0.0
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	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max	None
Act Effct Green (s)	24.1	76.8	46.7	46.7	24.1	24.1	24.1		
Actuated g/C Ratio	0.21	0.68	0.41	0.41	0.21	0.21	0.21		
v/c Ratio	0.83	0.50	0.75	0.25	0.35	0.35	0.52		
Control Delay	54.4	9.3	30.6	3.6	42.4	42.5	8.1		
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0	0.0		
Total Delay	54.4	9.7	30.6	3.6	42.4	42.5	8.1		
LOS	D	A	C	A	D	D	A		
Approach Delay		21.3	27.7			23.9			
Approach LOS		C	C			C			

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 112.9	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 24.0	Intersection LOS: C
Intersection Capacity Utilization 65.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: E. HALLANDALE BEACH BLVD & 3 ISLANDS BLVD



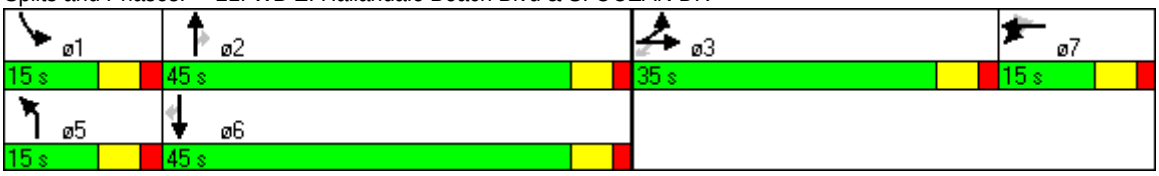
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	560	1600	0	0	1457	180	0	0	0	231	0	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Lane Util. Factor	0.97	0.91			0.91	1.00				0.95	0.95	1.00
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	3433	5085			5085	1583				1681	1681	1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)	3433	5085			5085	1583				1681	1681	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	609	1739	0	0	1584	196	0	0	0	251	0	296
RTOR Reduction (vph)	0	0	0	0	0	115	0	0	0	0	0	233
Lane Group Flow (vph)	609	1739	0	0	1584	81	0	0	0	125	126	63
Turn Type	Prot			Perm		Perm			custom	Perm		Perm
Protected Phases	7	4			8						6	
Permitted Phases				8		8			2	6		6
Actuated Green, G (s)	24.1	76.8			46.7	46.7				24.1	24.1	24.1
Effective Green, g (s)	24.1	76.8			46.7	46.7				24.1	24.1	24.1
Actuated g/C Ratio	0.21	0.68			0.41	0.41				0.21	0.21	0.21
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	733	3459			2103	655				359	359	338
v/s Ratio Prot	c0.18	0.34			c0.31							
v/s Ratio Perm						0.05				0.07	0.07	0.04
v/c Ratio	0.83	0.50			0.75	0.12				0.35	0.35	0.19
Uniform Delay, d1	42.5	8.8			28.2	20.5				37.7	37.8	36.4
Progression Factor	1.00	1.00			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	7.9	0.1			1.6	0.1				2.7	2.7	1.2
Delay (s)	50.4	8.9			29.8	20.5				40.4	40.4	37.6
Level of Service	D	A			C	C				D	D	D
Approach Delay (s)		19.7			28.7			0.0			38.9	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	112.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations											
Volume (vph)	743	87	1072	92	31	159	712	6	17	768	685
Turn Type	Split		Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7		5	2		1	6	
Permitted Phases			3		7			2			6
Detector Phase	3	3	3	7	7	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	22.0	22.0	10.0	10.0	10.0
Total Split (s)	35.0	35.0	35.0	15.0	15.0	15.0	45.0	45.0	15.0	45.0	45.0
Total Split (%)	31.8%	31.8%	31.8%	13.6%	13.6%	13.6%	40.9%	40.9%	13.6%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	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	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	29.0	29.0	29.0	8.8	8.8	9.0	48.5	48.5	6.7	39.0	39.0
Actuated g/C Ratio	0.26	0.26	0.26	0.08	0.08	0.08	0.44	0.44	0.06	0.36	0.36
v/c Ratio	1.02	1.00	0.97	0.76	0.27	1.19	0.50	0.01	0.17	0.66	1.33
Control Delay	88.4	84.6	25.7	80.2	53.1	179.5	24.6	12.7	51.9	33.1	189.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.4	84.6	25.7	80.2	53.1	179.5	24.6	12.7	51.9	33.1	189.9
LOS	F	F	C	F	D	F	C	B	D	C	F
Approach Delay		52.2		73.9			52.6			106.4	
Approach LOS		D		E			D			F	

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 109.8	
Natural Cycle: 130	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.33	
Intersection Signal Delay: 71.1	Intersection LOS: E
Intersection Capacity Utilization 108.1%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 21: WB E. Hallandale Beach Blvd & S. OCEAN DR



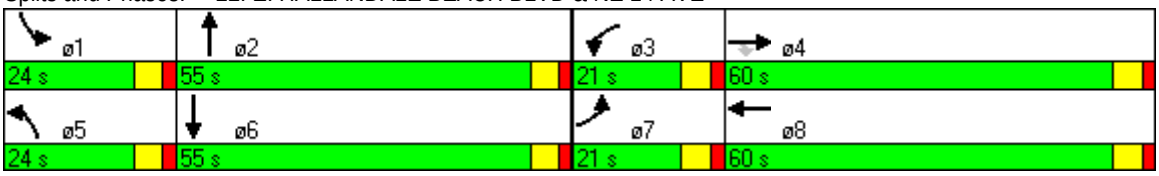
Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	743	87	1072	12	92	31	159	712	6	17	768	685
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1702	1583		1852	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.96	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1702	1583		1852	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	808	95	1165	13	100	34	173	774	7	18	835	745
RTOR Reduction (vph)	0	0	789	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	452	451	376	0	113	34	173	774	3	18	835	745
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7	7		5	2		1	6	
Permitted Phases			3			7			2			6
Actuated Green, G (s)	29.0	29.0	29.0		8.8	8.8	9.0	48.5	48.5	3.1	42.6	42.6
Effective Green, g (s)	29.0	29.0	29.0		8.8	8.8	9.0	48.5	48.5	3.1	42.6	42.6
Actuated g/C Ratio	0.26	0.26	0.26		0.08	0.08	0.08	0.43	0.43	0.03	0.38	0.38
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	430	435	405		144	123	140	1514	677	48	1329	595
v/s Ratio Prot	c0.27	0.26			c0.06		c0.10	c0.22		0.01	0.24	
v/s Ratio Perm			0.24			0.02			0.00			c0.47
v/c Ratio	1.05	1.04	0.93		0.78	0.28	1.24	0.51	0.00	0.38	0.63	1.25
Uniform Delay, d1	42.2	42.2	41.2		51.4	49.3	52.2	23.8	18.6	54.2	28.9	35.4
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	57.5	53.0	29.9		23.8	1.2	152.8	1.2	0.0	4.9	0.9	126.9
Delay (s)	99.7	95.2	71.1		75.2	50.5	205.0	25.0	18.6	59.1	29.9	162.3
Level of Service	F	F	E		E	D	F	C	B	E	C	F
Approach Delay (s)		82.6			69.5			57.6			91.9	
Approach LOS		F			E			E			F	

Intersection Summary			
HCM Average Control Delay	80.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	113.4	Sum of lost time (s)	30.0
Intersection Capacity Utilization	108.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	327	2085	361	64	2114	279	142	98	121
Turn Type	Prot		Perm	Prot		Prot		Prot	
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0
Total Split (s)	21.0	60.0	60.0	21.0	60.0	24.0	55.0	24.0	55.0
Total Split (%)	13.1%	37.5%	37.5%	13.1%	37.5%	15.0%	34.4%	15.0%	34.4%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	15.0	57.6	57.6	11.4	54.0	17.2	51.8	14.4	49.0
Actuated g/C Ratio	0.09	0.36	0.36	0.07	0.34	0.11	0.33	0.09	0.31
v/c Ratio	2.13	1.23	0.56	0.55	1.40	0.82	0.47	0.67	0.53
Control Delay	558.2	151.8	22.7	87.4	221.6	87.2	42.4	89.7	43.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	558.2	151.8	22.7	87.4	221.6	87.2	42.4	89.7	43.3
LOS	F	F	C	F	F	F	D	F	D
Approach Delay		182.9			217.8		65.8		55.8
Approach LOS		F			F		E		E

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 159.2	
Natural Cycle: 150	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 2.13	
Intersection Signal Delay: 177.9	Intersection LOS: F
Intersection Capacity Utilization 104.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: E. HALLANDALE BEACH BLVD & NE 14 AVE



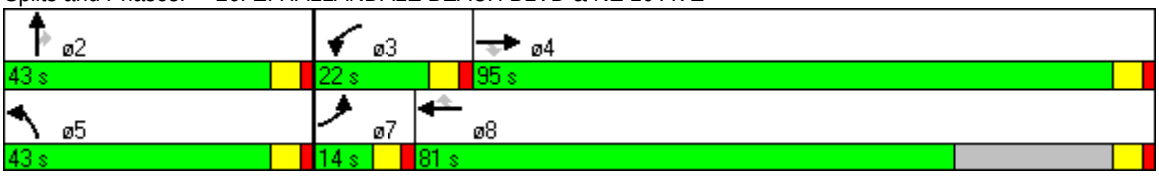
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	327	2085	361	64	2114	94	279	142	112	98	121	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5053		3433	1739		1770	1710	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5053		3433	1739		1770	1710	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	355	2266	392	70	2298	102	303	154	122	107	132	160
RTOR Reduction (vph)	0	0	129	0	3	0	0	18	0	0	27	0
Lane Group Flow (vph)	355	2266	263	70	2397	0	303	258	0	107	265	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.0	57.6	57.6	11.4	54.0		17.2	51.8		14.4	49.0	
Effective Green, g (s)	15.0	57.6	57.6	11.4	54.0		17.2	51.8		14.4	49.0	
Actuated g/C Ratio	0.09	0.36	0.36	0.07	0.34		0.11	0.33		0.09	0.31	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	1840	573	127	1714		371	566		160	526	
v/s Ratio Prot	c0.20	c0.45		0.04	c0.47		c0.09	c0.15		0.06	c0.16	
v/s Ratio Perm			0.17									
v/c Ratio	2.13	1.23	0.46	0.55	1.40		0.82	0.46		0.67	0.50	
Uniform Delay, d1	72.1	50.8	38.9	71.4	52.6		69.5	42.5		70.1	45.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	526.2	109.2	0.6	5.1	183.0		13.0	2.6		10.1	3.4	
Delay (s)	598.3	160.0	39.5	76.5	235.6		82.5	45.2		80.2	48.6	
Level of Service	F	F	D	E	F		F	D		F	D	
Approach Delay (s)		195.9			231.1			64.7			57.1	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM Average Control Delay	189.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	159.2	Sum of lost time (s)	36.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Configurations									
Volume (vph)	109	2148	143	106	2328	34	86	7	149
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2	
Permitted Phases			4			8			2
Detector Phase	7	4	4	3	8	8	5	2	2
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	14.0	95.0	95.0	22.0	81.0	81.0	43.0	43.0	43.0
Total Split (%)	8.8%	59.4%	59.4%	13.8%	50.6%	50.6%	26.9%	26.9%	26.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	None	None	Max	Max
Act Effct Green (s)	8.0	87.6	87.6	10.5	90.1	90.1	30.5	29.2	37.0
Actuated g/C Ratio	0.05	0.57	0.57	0.07	0.59	0.59	0.20	0.19	0.24
v/c Ratio	1.27	0.80	0.17	0.49	0.85	0.04	0.15	0.16	0.35
Control Delay	238.1	28.8	12.6	76.2	29.2	7.7	48.6	48.3	18.5
Queue Delay	0.0	37.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	238.1	66.6	12.6	76.2	29.2	7.7	48.6	48.3	18.5
LOS	F	E	B	E	C	A	D	D	B
Approach Delay		71.2			30.9			30.0	
Approach LOS		E			C			C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 153.2	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.27	
Intersection Signal Delay: 49.8	Intersection LOS: D
Intersection Capacity Utilization 69.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 26: E. HALLANDALE BEACH BLVD & NE 10 AVE



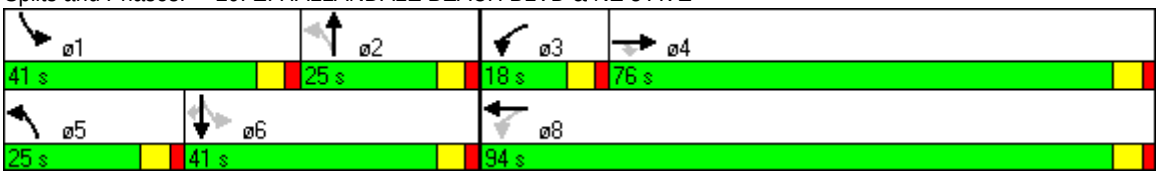
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	2148	143	106	2328	34	86	7	149	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00			
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583	1681	1698	1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00			
Satd. Flow (perm)	1770	5085	1583	3433	5085	1583	1681	1698	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	118	2335	155	115	2530	37	93	8	162	0	0	0
RTOR Reduction (vph)	0	0	15	0	0	8	0	0	86	0	0	0
Lane Group Flow (vph)	118	2335	140	115	2530	29	50	51	76	0	0	0
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm			
Protected Phases	7	4		3	8		5	2				
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.0	87.6	87.6	10.5	90.1	90.1	37.0	37.0	37.0			
Effective Green, g (s)	8.0	87.6	87.6	10.5	90.1	90.1	37.0	37.0	37.0			
Actuated g/C Ratio	0.05	0.57	0.57	0.07	0.59	0.59	0.24	0.24	0.24			
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	92	2910	906	235	2993	932	406	410	383			
v/s Ratio Prot	c0.07	0.46		0.03	c0.50		0.03	0.03				
v/s Ratio Perm			0.09			0.02			c0.05			
v/c Ratio	1.28	0.80	0.15	0.49	0.85	0.03	0.12	0.12	0.20			
Uniform Delay, d1	72.5	25.9	15.4	68.7	25.8	13.2	45.4	45.4	46.2			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	187.4	1.7	0.1	1.6	2.4	0.0	0.1	0.1	1.2			
Delay (s)	260.0	27.6	15.5	70.3	28.2	13.2	45.5	45.5	47.4			
Level of Service	F	C	B	E	C	B	D	D	D			
Approach Delay (s)		37.4			29.8			46.7			0.0	
Approach LOS		D			C			D			A	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	153.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	2307	196	87	2243	246	0	108	12	170
Turn Type		Perm	pm+pt		pm+pt		pm+pt		Perm
Protected Phases	4		3	8	5	2	1	6	
Permitted Phases		4	8		2		6		6
Detector Phase	4	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0	22.0
Total Split (s)	76.0	76.0	18.0	94.0	25.0	25.0	41.0	41.0	41.0
Total Split (%)	47.5%	47.5%	11.3%	58.8%	15.6%	15.6%	25.6%	25.6%	25.6%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	72.2	72.2	86.9	86.9		22.8	35.7	35.7	35.7
Actuated g/C Ratio	0.54	0.54	0.65	0.65		0.17	0.27	0.27	0.27
v/c Ratio	0.92	0.24	0.56	0.74		1.39	0.16	0.16	0.41
Control Delay	35.5	7.8	31.6	18.1		239.8	39.4	39.4	35.3
Queue Delay	87.1	0.0	0.0	6.5		0.0	0.0	0.0	0.0
Total Delay	122.6	7.8	31.6	24.5		239.8	39.4	39.4	35.3
LOS	F	A	C	C		F	D	D	D
Approach Delay	113.6			24.8		239.8		37.0	
Approach LOS	F			C		F		D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 134.6	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.39	
Intersection Signal Delay: 77.9	Intersection LOS: E
Intersection Capacity Utilization 87.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 29: E. HALLANDALE BEACH BLVD & NE 8 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2307	196	87	2243	0	246	0	40	108	12	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lane Util. Factor		0.91	1.00	1.00	0.91			1.00		0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00			0.98		1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.96		0.95	0.96	1.00
Satd. Flow (prot)		5085	1583	1770	5085			1752		1681	1701	1583
Flt Permitted		1.00	1.00	0.05	1.00			0.71		0.84	0.88	1.00
Satd. Flow (perm)		5085	1583	95	5085			1292		1483	1550	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2508	213	95	2438	0	267	0	43	117	13	185
RTOR Reduction (vph)	0	0	58	0	0	0	0	4	0	0	0	28
Lane Group Flow (vph)	0	2508	155	95	2438	0	0	306	0	64	66	157
Turn Type			Perm	pm+pt			pm+pt			pm+pt		Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases			4	8			2			6		6
Actuated Green, G (s)		72.2	72.2	86.9	86.9			22.8		36.9	36.9	36.9
Effective Green, g (s)		72.2	72.2	86.9	86.9			22.8		36.9	36.9	36.9
Actuated g/C Ratio		0.53	0.53	0.64	0.64			0.17		0.27	0.27	0.27
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		2704	842	168	3254			217		415	430	430
v/s Ratio Prot		c0.49		0.04	c0.48					0.01	0.01	
v/s Ratio Perm			0.10	0.32				c0.24		0.03	0.03	c0.10
v/c Ratio		0.93	0.18	0.57	0.75			1.41		0.15	0.15	0.36
Uniform Delay, d1		29.4	16.5	28.4	16.9			56.5		39.7	37.6	40.0
Progression Factor		1.00	1.00	1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		6.2	0.1	4.3	1.0			209.4		0.2	0.2	2.4
Delay (s)		35.6	16.6	32.7	17.9			265.9		39.9	37.7	42.3
Level of Service		D	B	C	B			F		D	D	D
Approach Delay (s)		34.1			18.4			265.9			40.9	
Approach LOS		C			B			F			D	

Intersection Summary			
HCM Average Control Delay	40.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	135.8	Sum of lost time (s)	24.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	99	31	48	0	116	84
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	108	34	52	0	126	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	396	52			52	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	396	52			52	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	81	97			92	
cM capacity (veh/h)	560	1015			1554	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	141	52	217
Volume Left	108	0	126
Volume Right	34	0	0
cSH	627	1700	1554
Volume to Capacity	0.23	0.03	0.08
Queue Length 95th (ft)	22	0	7
Control Delay (s)	12.4	0.0	4.6
Lane LOS	B		A
Approach Delay (s)	12.4	0.0	4.6
Approach LOS	B		

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	69	205	118	56	44	220
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	223	128	61	48	239
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	493	159			189	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	493	159			189	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	85	75			97	
cM capacity (veh/h)	516	887			1385	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	298	189	287
Volume Left	75	0	48
Volume Right	223	61	0
cSH	751	1700	1385
Volume to Capacity	0.40	0.11	0.03
Queue Length 95th (ft)	48	0	3
Control Delay (s)	12.9	0.0	1.5
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	1.5
Approach LOS	B		

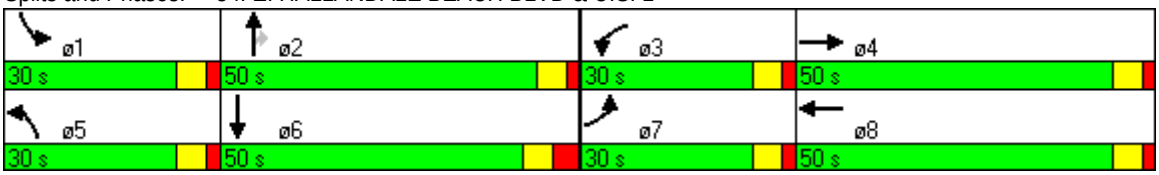
Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	209	1209	755	1618	847	1473	746	537	1082
Turn Type	Prot		Prot		Prot		Perm	Prot	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	24.0	12.0	24.0	12.0	24.0	24.0	12.0	24.0
Total Split (s)	30.0	50.0	30.0	50.0	30.0	50.0	50.0	30.0	50.0
Total Split (%)	18.8%	31.3%	18.8%	31.3%	18.8%	31.3%	31.3%	18.8%	31.3%
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	4.0
Lost Time Adjust (s)	0.0	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	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	23.0	44.0	24.0	45.0	24.0	44.0	44.0	24.0	42.0
Actuated g/C Ratio	0.14	0.28	0.15	0.28	0.15	0.28	0.28	0.15	0.26
v/c Ratio	0.89	1.40	1.59	1.52	1.79	1.15	1.26	1.13	0.99
Control Delay	101.1	223.6	317.2	275.5	398.6	125.0	159.9	140.7	79.6
Queue Delay	0.0	0.0	0.0	40.4	0.0	0.0	0.0	0.0	0.0
Total Delay	101.1	223.6	317.2	315.9	398.6	125.0	159.9	140.7	79.6
LOS	F	F	F	F	F	F	F	F	E
Approach Delay		210.8		316.3		209.1			98.5
Approach LOS		F		F		F			F

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.79
Intersection Signal Delay: 220.0 — Intersection LOS: F
Intersection Capacity Utilization 127.1% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 34: E. HALLANDALE BEACH BLVD & U.S. 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	1209	570	755	1618	361	847	1473	746	537	1082	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4841		3433	4946		3433	5085	1583	3433	5008	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4841		3433	4946		3433	5085	1583	3433	5008	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	227	1314	620	821	1759	392	921	1601	811	584	1176	132
RTOR Reduction (vph)	0	53	0	0	22	0	0	0	207	0	9	0
Lane Group Flow (vph)	227	1881	0	821	2129	0	921	1601	604	584	1299	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	23.0	44.0		24.0	45.0		24.0	44.0	44.0	24.0	42.0	
Effective Green, g (s)	23.0	44.0		24.0	45.0		24.0	44.0	44.0	24.0	42.0	
Actuated g/C Ratio	0.14	0.28		0.15	0.28		0.15	0.28	0.28	0.15	0.26	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	254	1331		515	1391		515	1398	435	515	1315	
v/s Ratio Prot	0.13	0.39		c0.24	c0.43		c0.27	0.31		0.17	0.26	
v/s Ratio Perm									c0.38			
v/c Ratio	0.89	1.41		1.59	1.53		1.79	1.15	1.39	1.13	0.99	
Uniform Delay, d1	67.3	58.0		68.0	57.5		68.0	58.0	58.0	68.0	58.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	30.1	190.5		276.4	242.3		362.5	74.3	188.2	82.0	22.1	
Delay (s)	97.4	248.5		344.4	299.8		430.5	132.3	246.2	150.0	80.9	
Level of Service	F	F		F	F		F	F	F	F	F	
Approach Delay (s)		232.6			312.2			242.4			102.2	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	234.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	127.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	PM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Future Total PM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1824	93	107	1605	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1982	101	116	1744	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			83			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	90	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		116			90			
C (m) (veh/h)		262			248			
v/c		0.44			0.36			
95% queue length		2.31			1.67			
Control Delay (s/veh)		29.5			27.7			
LOS		D			D			
Approach Delay (s/veh)	--	--	27.7					
Approach LOS	--	--	D					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1824	93	107	1605	0	0	83	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1917	0	107	1605	0	0	83	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.99	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5138	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	44.8	0.0	7.1	37.2		0.0	6.2		0.0
Adj Reference Time (s)	48.8	0.0	11.1	41.2		0.0	10.2		0.0
Permitted Option									
Adj Saturation A (vph)	1713		120	1725	0			0	
Reference Time A (s)	44.8		106.7	37.2	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	44.8			106.7					
Adj Reference Time (s)	48.8			110.7					
Split Option									
Ref Time Combined (s)	44.8		7.1	37.2	0.0			0.0	
Ref Time Seperate (s)	42.6		7.1	37.2	0.0			0.0	
Reference Time (s)	44.8		37.2	37.2	0.0			0.0	
Adj Reference Time (s)	48.8		41.2	41.2	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	59.9	NA	NA	
Permitted Option (s)	110.7	Err	Err	
Split Option (s)	90.0	0.0	0.0	
Minimum (s)	59.9	0.0	0.0	59.9

Right Turns	NBR2
Adj Reference Time (s)	10.2
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	48.8
Combined (s)	58.9

Intersection Summary			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Synchro Output Sheets – Future (2015)

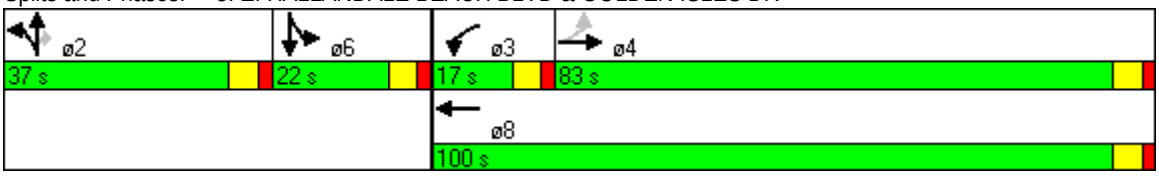
Optimized Future Background Traffic plus project traffic – AM Peak

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	4	1351	44	1671	263	18	123	5
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	83.0	83.0	17.0	100.0	37.0	37.0	37.0	22.0
Total Split (%)	52.2%	52.2%	10.7%	62.9%	23.3%	23.3%	23.3%	13.8%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		60.2	8.8	72.3	31.4	31.4	31.4	16.2
Actuated g/C Ratio		0.44	0.06	0.52	0.23	0.23	0.23	0.12
v/c Ratio		0.75	0.42	0.70	0.40	0.40	0.29	0.06
Control Delay		35.2	77.9	25.6	52.4	52.4	9.5	56.2
Queue Delay		1.5	0.0	0.6	0.0	0.0	0.0	0.0
Total Delay		36.8	77.9	26.2	52.4	52.4	9.5	56.2
LOS		D	E	C	D	D	A	E
Approach Delay		36.8		27.5		39.3		56.3
Approach LOS		D		C		D		E

Intersection Summary

Cycle Length: 159
Actuated Cycle Length: 138
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 32.6 — Intersection LOS: C
Intersection Capacity Utilization 61.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1351	63	44	1671	37	263	18	123	14	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5051		1770	5069		1681	1696	1583		3376	
Flt Permitted		0.93		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4709		1770	5069		1681	1696	1583		3376	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1468	68	48	1816	40	286	20	134	15	5	2
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	104	0	2	0
Lane Group Flow (vph)	0	1537	0	48	1855	0	152	154	30	0	20	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		60.2		7.4	73.6		31.4	31.4	31.4		16.2	
Effective Green, g (s)		60.2		7.4	73.6		31.4	31.4	31.4		16.2	
Actuated g/C Ratio		0.43		0.05	0.53		0.23	0.23	0.23		0.12	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		2037		94	2680		379	383	357		393	
v/s Ratio Prot				0.03	c0.37		0.09	c0.09			c0.01	
v/s Ratio Perm		c0.33							0.02			
v/c Ratio		0.75		0.51	0.69		0.40	0.40	0.08		0.05	
Uniform Delay, d1		33.3		64.1	24.4		45.9	45.9	42.6		54.7	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		1.6		4.6	0.8		3.1	3.1	0.5		0.2	
Delay (s)		34.9		68.8	25.2		49.0	49.0	43.0		54.9	
Level of Service		C		E	C		D	D	D		D	
Approach Delay (s)		34.9			26.3			47.2			54.9	
Approach LOS		C			C			D			D	

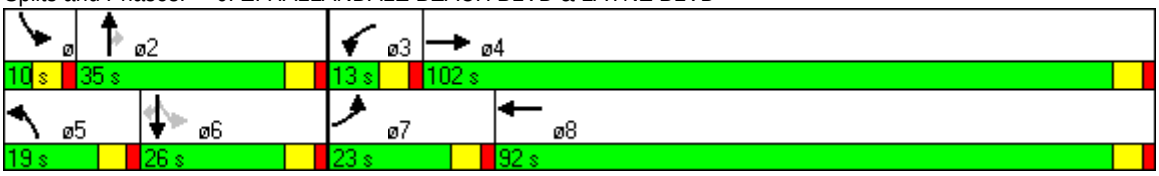
Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	139.2	Sum of lost time (s)	24.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	80	1333	29	1911	104	15	53	22	5	76
Turn Type	Prot		Prot		Prot		Perm	pm+pt		Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	23.0	102.0	13.0	92.0	19.0	35.0	35.0	10.0	26.0	26.0
Total Split (%)	14.4%	63.8%	8.1%	57.5%	11.9%	21.9%	21.9%	6.3%	16.3%	16.3%
Yellow Time (s)	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	12.5	88.9	6.7	80.3	10.5	8.8	35.9		22.5	22.5
Actuated g/C Ratio	0.09	0.61	0.05	0.55	0.07	0.06	0.24		0.15	0.15
v/c Ratio	0.58	0.51	0.40	0.78	0.53	0.64	0.13		0.13	0.27
Control Delay	82.6	17.7	87.6	29.3	85.5	96.3	11.4		62.9	14.2
Queue Delay	0.0	0.0	0.0	80.5	0.0	0.0	0.0		0.0	0.0
Total Delay	82.6	17.7	87.6	109.8	85.5	96.3	11.4		62.9	14.2
LOS	F	B	F	F	F	F	B		E	B
Approach Delay		21.2		109.5		66.3			26.8	
Approach LOS		C		F		E			C	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 146.9
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 70.2 — Intersection LOS: E
Intersection Capacity Utilization 68.2% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 6: E. HALLANDALE BEACH BLVD & LAYNE BLVD



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1333	105	29	1911	84	104	15	53	22	5	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	5030		1770	5053		1681	1705	1583		1789	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.73	1.00		0.76	1.00
Satd. Flow (perm)	1770	5030		1770	5053		1681	1293	1583		1417	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1449	114	32	2077	91	113	16	58	24	5	83
RTOR Reduction (vph)	0	6	0	0	3	0	0	0	44	0	0	71
Lane Group Flow (vph)	87	1557	0	32	2165	0	64	65	14	0	29	12
Turn Type	Prot			Prot			Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2	6		6
Actuated Green, G (s)	12.5	88.9		5.3	81.7		8.8	37.3	37.3		22.5	22.5
Effective Green, g (s)	12.5	88.9		5.3	81.7		8.8	37.3	37.3		22.5	22.5
Actuated g/C Ratio	0.08	0.59		0.04	0.55		0.06	0.25	0.25		0.15	0.15
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	148	2991		63	2761		99	347	395		213	238
v/s Ratio Prot	c0.05	c0.31		0.02	c0.43		c0.04	0.01				
v/s Ratio Perm								c0.04	0.01		0.02	0.01
v/c Ratio	0.59	0.52		0.51	0.78		0.65	0.19	0.04		0.14	0.05
Uniform Delay, d1	66.0	17.8		70.8	26.9		68.8	44.2	42.5		55.1	54.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	5.9	0.2		6.3	1.5		13.6	0.3	0.2		0.3	0.4
Delay (s)	71.9	18.0		77.1	28.4		82.4	44.4	42.7		55.4	54.8
Level of Service	E	B		E	C		F	D	D		E	D
Approach Delay (s)		20.8			29.1			56.9			54.9	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	149.5	Sum of lost time (s)	24.0
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	69	1	2	0	1	142
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	1	2	0	1	154

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	76	2	155
Volume Left (vph)	75	0	1
Volume Right (vph)	0	0	154
Hadj (s)	0.23	0.03	-0.56
Departure Headway (s)	4.4	4.3	3.5
Degree Utilization, x	0.09	0.00	0.15
Capacity (veh/h)	783	799	992
Control Delay (s)	7.9	7.3	7.2
Approach Delay (s)	7.9	7.3	7.2
Approach LOS	A	A	A

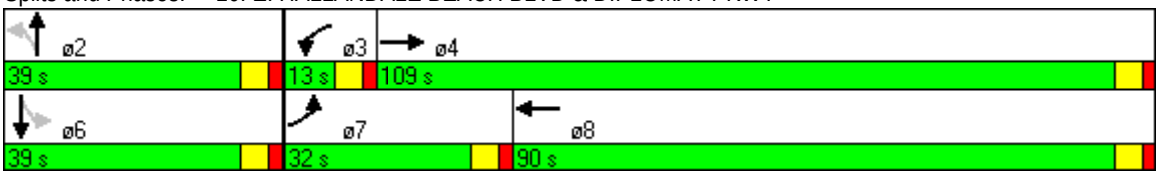
Intersection Summary			
Delay	7.4		
HCM Level of Service	A		
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	116	1238	15	1546	9	1	51	23
Turn Type	Prot		Prot		Perm		Perm	
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	32.0	109.0	13.0	90.0	39.0	39.0	39.0	39.0
Total Split (%)	19.9%	67.7%	8.1%	55.9%	24.2%	24.2%	24.2%	24.2%
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	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				
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	14.7	76.5	6.4	60.2		33.6	33.6	33.6
Actuated g/C Ratio	0.12	0.60	0.05	0.47		0.26	0.26	0.26
v/c Ratio	0.61	0.45	0.18	0.72		0.04	0.15	0.34
Control Delay	69.0	14.3	69.6	28.2		34.4	43.4	11.6
Queue Delay	0.0	0.1	0.0	0.3		0.0	0.0	0.0
Total Delay	69.0	14.5	69.6	28.5		34.4	43.4	11.6
LOS	E	B	E	C		C	D	B
Approach Delay		19.1		28.9		34.4		18.8
Approach LOS		B		C		C		B

Intersection Summary

Cycle Length: 161
Actuated Cycle Length: 126.9
Natural Cycle: 60
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 24.0 — Intersection LOS: C
Intersection Capacity Utilization 62.7% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 10: E. HALLANDALE BEACH BLVD & DIPLOMAT PKWY



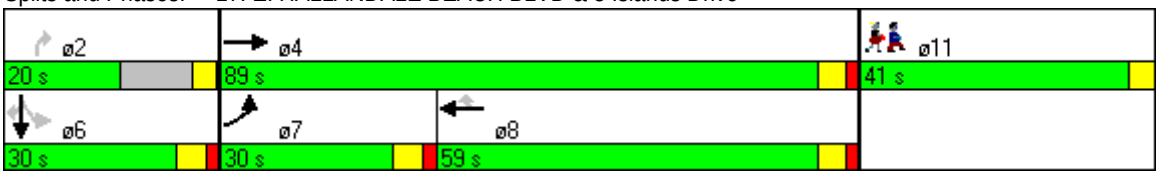
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	1238	17	15	1546	49	9	1	5	51	23	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.96		1.00	0.87	
Flt Protected	0.95	1.00		0.95	1.00			0.97		0.95	1.00	
Satd. Flow (prot)	1770	5075		1770	5062			1730		1770	1621	
Flt Permitted	0.95	1.00		0.95	1.00			0.84		0.75	1.00	
Satd. Flow (perm)	1770	5075		1770	5062			1497		1392	1621	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	1346	18	16	1680	53	10	1	5	55	25	161
RTOR Reduction (vph)	0	1	0	0	2	0	0	4	0	0	120	0
Lane Group Flow (vph)	126	1363	0	16	1731	0	0	12	0	55	66	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	14.7	76.5		2.5	64.3			33.6		33.6	33.6	
Effective Green, g (s)	14.7	76.5		2.5	64.3			33.6		33.6	33.6	
Actuated g/C Ratio	0.11	0.59		0.02	0.49			0.26		0.26	0.26	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	199	2973		34	2492			385		358	417	
v/s Ratio Prot	c0.07	0.27		0.01	c0.34						c0.04	
v/s Ratio Perm								0.01		0.04		
v/c Ratio	0.63	0.46		0.47	0.69			0.03		0.15	0.16	
Uniform Delay, d1	55.4	15.3		63.4	25.6			36.3		37.5	37.6	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	6.4	0.1		9.9	0.9			0.2		0.9	0.8	
Delay (s)	61.8	15.4		73.3	26.4			36.5		38.4	38.4	
Level of Service	E	B		E	C			D		D	D	
Approach Delay (s)		19.4			26.9			36.5			38.4	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	130.6	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø2	ø11
Lane Configurations									
Volume (vph)	205	1010	1265	40	233	0	345		
Turn Type	Prot			Perm	Perm		Perm		
Protected Phases	7	4	8			6		2	11
Permitted Phases				8	6		6		
Detector Phase	7	4	8	8	6	6	6		
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	20.0	10.0
Total Split (s)	30.0	89.0	59.0	59.0	30.0	30.0	30.0	20.0	41.0
Total Split (%)	18.8%	55.6%	36.9%	36.9%	18.8%	18.8%	18.8%	13%	26%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.5	0.0
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	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max	None
Act Effct Green (s)	12.0	50.8	32.8	32.8	24.2	24.2	24.2		
Actuated g/C Ratio	0.14	0.58	0.38	0.38	0.28	0.28	0.28		
v/c Ratio	0.47	0.37	0.72	0.07	0.27	0.27	0.53		
Control Delay	39.2	9.8	25.6	5.7	29.0	29.0	6.4		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay	39.2	9.8	25.6	5.7	29.0	29.0	6.4		
LOS	D	A	C	A	C	C	A		
Approach Delay		14.8	24.9			15.5			
Approach LOS		B	C			B			

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 87.1	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 55.8%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 17: E. HALLANDALE BEACH BLVD & 3 Islands Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	205	1010	0	0	1265	40	0	0	0	233	0	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Lane Util. Factor	0.97	0.91			0.91	1.00				0.95	0.95	1.00
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	3433	5085			5085	1583				1681	1681	1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)	3433	5085			5085	1583				1681	1681	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	223	1098	0	0	1375	43	0	0	0	253	0	375
RTOR Reduction (vph)	0	0	0	0	0	27	0	0	0	0	0	271
Lane Group Flow (vph)	223	1098	0	0	1375	16	0	0	0	126	127	104
Turn Type	Prot					Perm			custom	Perm		Perm
Protected Phases	7	4			8						6	
Permitted Phases						8			2	6		6
Actuated Green, G (s)	12.0	50.8			32.8	32.8				24.2	24.2	24.2
Effective Green, g (s)	12.0	50.8			32.8	32.8				24.2	24.2	24.2
Actuated g/C Ratio	0.14	0.58			0.38	0.38				0.28	0.28	0.28
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	474	2969			1917	597				468	468	440
v/s Ratio Prot	0.06	c0.22			c0.27							
v/s Ratio Perm						0.01				0.07	0.08	0.07
v/c Ratio	0.47	0.37			0.72	0.03				0.27	0.27	0.24
Uniform Delay, d1	34.6	9.6			23.1	17.1				24.5	24.5	24.3
Progression Factor	1.00	1.00			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	0.7	0.1			1.3	0.0				1.4	1.4	1.3
Delay (s)	35.3	9.7			24.4	17.1				25.9	25.9	25.5
Level of Service	D	A			C	B				C	C	C
Approach Delay (s)		14.0			24.2			0.0			25.7	
Approach LOS		B			C			A			C	

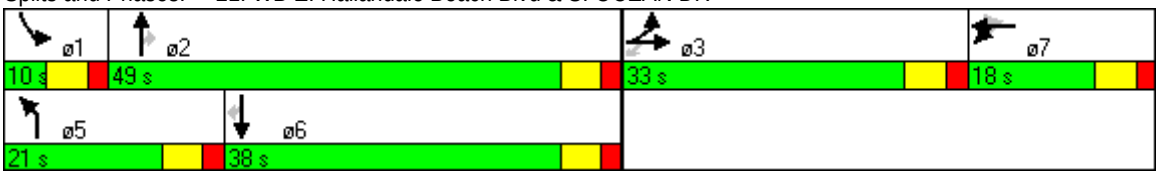
Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations											
Volume (vph)	492	37	823	179	6	188	474	6	6	362	337
Turn Type	Split		Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7		5	2		1	6	
Permitted Phases			3		7			2			6
Detector Phase	3	3	3	7	7	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	22.0	22.0	10.0	10.0	10.0
Total Split (s)	33.0	33.0	33.0	18.0	18.0	21.0	49.0	49.0	10.0	38.0	38.0
Total Split (%)	30.0%	30.0%	30.0%	16.4%	16.4%	19.1%	44.5%	44.5%	9.1%	34.5%	34.5%
Yellow Time (s)	4.0	4.0	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	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	27.0	27.0	27.0	12.0	12.0	14.5	48.2	48.2	4.0	29.6	29.6
Actuated g/C Ratio	0.25	0.25	0.25	0.11	0.11	0.14	0.45	0.45	0.04	0.28	0.28
v/c Ratio	0.68	0.67	0.84	0.97	0.04	0.85	0.32	0.01	0.11	0.40	0.84
Control Delay	46.2	45.5	10.8	103.9	44.7	77.1	20.2	10.7	54.8	32.9	54.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	45.5	10.8	103.9	44.7	77.1	20.2	10.7	54.8	32.9	54.3
LOS	D	D	B	F	D	E	C	B	D	C	D
Approach Delay		24.5		101.9			36.1			43.3	
Approach LOS		C		F			D			D	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 107.2
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 36.8 — Intersection LOS: D
Intersection Capacity Utilization 85.7% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 21: WB E. Hallandale Beach Blvd & S. OCEAN DR



Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	492	37	823	6	179	6	188	474	6	6	362	337
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1697	1583		1860	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.96	1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1697	1583		1860	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	535	40	895	7	195	7	204	515	7	7	393	366
RTOR Reduction (vph)	0	0	679	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	289	286	216	0	202	7	204	515	3	7	393	366
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7	7		5	2		1	6	
Permitted Phases			3			7			2			6
Actuated Green, G (s)	27.0	27.0	27.0		12.0	12.0	14.5	48.2	48.2	0.8	34.5	34.5
Effective Green, g (s)	27.0	27.0	27.0		12.0	12.0	14.5	48.2	48.2	0.8	34.5	34.5
Actuated g/C Ratio	0.24	0.24	0.24		0.11	0.11	0.13	0.43	0.43	0.01	0.31	0.31
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	405	409	382		199	170	229	1523	681	13	1090	488
v/s Ratio Prot	c0.17	0.17			c0.11		c0.12	0.15		0.00	0.11	
v/s Ratio Perm			0.14			0.00			0.00			c0.23
v/c Ratio	0.71	0.70	0.56		1.02	0.04	0.89	0.34	0.00	0.54	0.36	0.75
Uniform Delay, d1	39.0	38.8	37.3		50.0	44.8	48.0	21.3	18.2	55.4	30.2	34.9
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.3	9.6	5.9		67.8	0.1	32.0	0.6	0.0	36.8	0.2	6.4
Delay (s)	49.2	48.4	43.3		117.8	44.9	80.0	21.9	18.2	92.2	30.4	41.3
Level of Service	D	D	D		F	D	E	C	B	F	C	D
Approach Delay (s)		45.4			115.3			38.2			36.1	
Approach LOS		D			F			D			D	

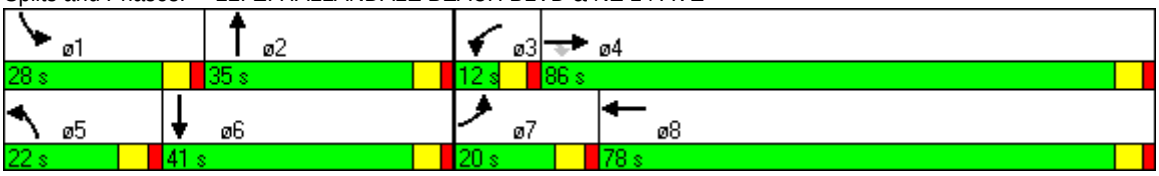
Intersection Summary			
HCM Average Control Delay	46.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	112.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	102	1564	228	20	1805	249	73	133	84
Turn Type	Prot		Perm	Prot		Prot		Prot	
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0
Total Split (s)	20.0	86.0	86.0	12.0	78.0	22.0	35.0	28.0	41.0
Total Split (%)	12.4%	53.4%	53.4%	7.5%	48.4%	13.7%	21.7%	17.4%	25.5%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	13.0	83.2	83.2	5.9	71.3	15.4	32.8	17.7	35.0
Actuated g/C Ratio	0.08	0.52	0.52	0.04	0.45	0.10	0.21	0.11	0.22
v/c Ratio	0.76	0.64	0.26	0.33	0.89	0.81	0.29	0.74	0.72
Control Delay	102.3	29.1	4.4	89.3	46.0	89.4	52.4	89.8	55.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	102.3	29.1	4.4	89.3	46.0	89.4	52.4	89.8	55.8
LOS	F	C	A	F	D	F	D	F	E
Approach Delay		30.1			46.4		78.8		66.8
Approach LOS		C			D		E		E

Intersection Summary

Cycle Length: 161
Actuated Cycle Length: 158.8
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 44.0 — Intersection LOS: D
Intersection Capacity Utilization 85.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 22: E. HALLANDALE BEACH BLVD & NE 14 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	1564	228	20	1805	48	249	73	28	133	84	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.96		1.00	0.89	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5066		3433	1786		1770	1667	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5066		3433	1786		1770	1667	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	111	1700	248	22	1962	52	271	79	30	145	91	213
RTOR Reduction (vph)	0	0	108	0	2	0	0	8	0	0	52	0
Lane Group Flow (vph)	111	1700	140	22	2012	0	271	101	0	145	252	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	13.0	83.2	83.2	3.6	73.8		15.4	32.8		17.7	35.1	
Effective Green, g (s)	13.0	83.2	83.2	3.6	73.8		15.4	32.8		17.7	35.1	
Actuated g/C Ratio	0.08	0.52	0.52	0.02	0.46		0.10	0.20		0.11	0.22	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	143	2623	817	40	2318		328	363		194	363	
v/s Ratio Prot	c0.06	0.33		0.01	c0.40		0.08	0.06		c0.08	c0.15	
v/s Ratio Perm			0.09									
v/c Ratio	0.78	0.65	0.17	0.55	0.87		0.83	0.28		0.75	0.69	
Uniform Delay, d1	72.7	28.4	20.7	78.0	39.4		71.6	54.3		69.6	58.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.7	0.6	0.1	15.3	3.7		15.5	1.9		14.5	10.4	
Delay (s)	95.5	29.0	20.8	93.4	43.1		87.1	56.2		84.1	68.5	
Level of Service	F	C	C	F	D		F	E		F	E	
Approach Delay (s)		31.6			43.6			78.3			73.6	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	44.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	161.3	Sum of lost time (s)	18.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	91	24	69	0	117	51
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	99	26	75	0	127	55
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	385	75			75	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	385	75			75	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	83	97			92	
cM capacity (veh/h)	567	986			1524	

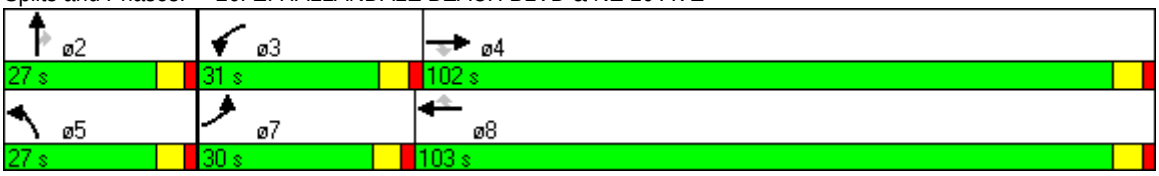
Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	125	75	183
Volume Left	99	0	127
Volume Right	26	0	0
cSH	622	1700	1524
Volume to Capacity	0.20	0.04	0.08
Queue Length 95th (ft)	19	0	7
Control Delay (s)	12.2	0.0	5.5
Lane LOS	B		A
Approach Delay (s)	12.2	0.0	5.5
Approach LOS	B		

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Configurations									
Volume (vph)	119	1795	135	281	1991	35	67	2	112
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2	
Permitted Phases			4			8			2
Detector Phase	7	4	4	3	8	8	5	2	2
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	30.0	102.0	102.0	31.0	103.0	103.0	27.0	27.0	27.0
Total Split (%)	18.8%	63.8%	63.8%	19.4%	64.4%	64.4%	16.9%	16.9%	16.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	None	None	Max	Max
Act Effct Green (s)	15.6	79.9	79.9	17.8	82.2	82.2	14.4	11.5	21.4
Actuated g/C Ratio	0.11	0.58	0.58	0.13	0.60	0.60	0.10	0.08	0.16
v/c Ratio	0.64	0.66	0.16	0.69	0.71	0.04	0.21	0.27	0.35
Control Delay	75.9	20.6	9.4	67.4	20.9	6.4	61.8	64.1	12.6
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	21.0	9.4	67.4	20.9	6.4	61.8	64.1	12.6
LOS	E	C	A	E	C	A	E	E	B
Approach Delay		23.4			26.3			31.8	
Approach LOS		C			C			C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 137.6	
Natural Cycle: 70	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 25.2	Intersection LOS: C
Intersection Capacity Utilization 63.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 26: E. HALLANDALE BEACH BLVD & NE 10 AVE



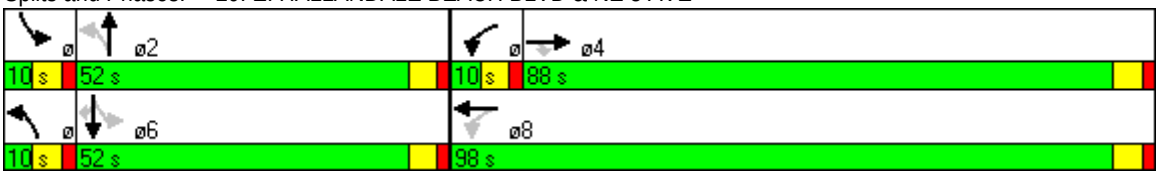
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	1795	135	281	1991	35	67	2	112	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583	1681	1690	1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	5085	1583	3433	5085	1583	1681	1690	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	129	1951	147	305	2164	38	73	2	122	0	0	0
RTOR Reduction (vph)	0	0	18	0	0	9	0	0	103	0	0	0
Lane Group Flow (vph)	129	1951	129	305	2164	29	37	38	19	0	0	0
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm			
Protected Phases	7	4		3	8		5	2				
Permitted Phases			4			8			2			
Actuated Green, G (s)	15.6	80.0	80.0	17.8	82.2	82.2	21.4	21.4	21.4			
Effective Green, g (s)	15.6	80.0	80.0	17.8	82.2	82.2	21.4	21.4	21.4			
Actuated g/C Ratio	0.11	0.58	0.58	0.13	0.60	0.60	0.16	0.16	0.16			
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	201	2965	923	445	3047	948	262	264	247			
v/s Ratio Prot	0.07	0.38		c0.09	c0.43		0.02	c0.02				
v/s Ratio Perm			0.08			0.02			0.01			
v/c Ratio	0.64	0.66	0.14	0.69	0.71	0.03	0.14	0.14	0.08			
Uniform Delay, d1	58.1	19.3	13.0	57.0	19.2	11.2	50.0	50.0	49.5			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	6.8	0.5	0.1	4.3	0.8	0.0	0.2	0.3	0.6			
Delay (s)	65.0	19.9	13.0	61.4	20.0	11.2	50.2	50.2	50.1			
Level of Service	E	B	B	E	B	B	D	D	D			
Approach Delay (s)		22.0			24.9			50.1			0.0	
Approach LOS		C			C			D			A	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	137.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	2085	241	3	2093	192	0	101	8	189
Turn Type		Perm	pm+pt		pm+pt		pm+pt		Perm
Protected Phases	4		3	8	5	2	1	6	
Permitted Phases		4	8		2		6		6
Detector Phase	4	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0	22.0
Total Split (s)	88.0	88.0	10.0	98.0	10.0	52.0	10.0	52.0	52.0
Total Split (%)	55.0%	55.0%	6.3%	61.3%	6.3%	32.5%	6.3%	32.5%	32.5%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	87.2	87.2	89.2	89.2		46.2	54.0	54.0	54.0
Actuated g/C Ratio	0.56	0.56	0.57	0.57		0.30	0.35	0.35	0.35
v/c Ratio	0.79	0.27	0.03	0.78		0.75	0.15	0.14	0.36
Control Delay	30.2	5.8	15.3	27.9		60.9	36.2	36.1	36.3
Queue Delay	55.0	0.0	0.0	22.2		0.0	0.0	0.0	0.0
Total Delay	85.2	5.8	15.3	50.2		60.9	36.2	36.1	36.3
LOS	F	A	B	D		E	D	D	D
Approach Delay	77.0			50.1		60.9		36.3	
Approach LOS	E			D		E		D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 155.2	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 62.4	Intersection LOS: E
Intersection Capacity Utilization 83.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 29: E. HALLANDALE BEACH BLVD & NE 8 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2085	241	3	2093	0	192	0	96	101	8	189
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lane Util. Factor		0.91	1.00	1.00	0.91			1.00		0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00			0.96		1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.97		0.95	0.96	1.00
Satd. Flow (prot)		5085	1583	1770	5085			1722		1681	1697	1583
Flt Permitted		1.00	1.00	0.04	1.00			0.76		0.62	0.67	1.00
Satd. Flow (perm)		5085	1583	80	5085			1353		1095	1191	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2266	262	3	2275	0	209	0	104	110	9	205
RTOR Reduction (vph)	0	0	90	0	0	0	0	11	0	0	0	14
Lane Group Flow (vph)	0	2266	172	3	2275	0	0	302	0	59	60	191
Turn Type			Perm	pm+pt			pm+pt			pm+pt		Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases			4	8			2			6		6
Actuated Green, G (s)		87.2	87.2	94.0	94.0			46.2		55.3	55.3	55.3
Effective Green, g (s)		87.2	87.2	94.0	94.0			46.2		55.3	55.3	55.3
Actuated g/C Ratio		0.54	0.54	0.58	0.58			0.29		0.34	0.34	0.34
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		2749	856	55	2963			388		387	418	543
v/s Ratio Prot		c0.45		0.00	c0.45					0.00	0.00	
v/s Ratio Perm			0.11	0.03				c0.22		0.05	0.05	c0.12
v/c Ratio		0.82	0.20	0.05	0.77			0.78		0.15	0.14	0.35
Uniform Delay, d1		30.7	19.1	26.7	25.4			52.8		41.6	36.6	39.6
Progression Factor		1.00	1.00	1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		2.1	0.1	0.4	1.2			9.4		0.2	0.2	1.8
Delay (s)		32.8	19.2	27.1	26.6			62.3		41.8	36.8	41.4
Level of Service		C	B	C	C			E		D	D	D
Approach Delay (s)		31.4			26.6			62.3			40.6	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	161.3	Sum of lost time (s)	24.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	50	160	243	69	12	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	174	264	75	13	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	404	302			339	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	404	302			339	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	76			99	
cM capacity (veh/h)	596	738			1220	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	228	339	89
Volume Left	54	0	13
Volume Right	174	75	0
cSH	698	1700	1220
Volume to Capacity	0.33	0.20	0.01
Queue Length 95th (ft)	36	0	1
Control Delay (s)	12.6	0.0	1.2
Lane LOS	B		A
Approach Delay (s)	12.6	0.0	1.2
Approach LOS	B		

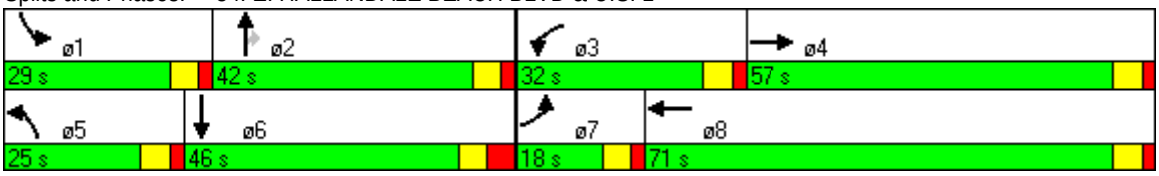
Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	116	1302	673	1414	483	696	455	437	1237
Turn Type	Prot		Prot		Prot		Perm	Prot	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	24.0	12.0	24.0	12.0	24.0	24.0	12.0	24.0
Total Split (s)	18.0	57.0	32.0	71.0	25.0	42.0	42.0	29.0	46.0
Total Split (%)	11.3%	35.6%	20.0%	44.4%	15.6%	26.3%	26.3%	18.1%	28.8%
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	4.0
Lost Time Adjust (s)	0.0	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	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	12.0	51.0	26.0	65.0	19.0	36.0	36.0	23.0	38.0
Actuated g/C Ratio	0.08	0.32	0.16	0.41	0.12	0.22	0.22	0.14	0.24
v/c Ratio	0.95	1.33	1.31	0.91	1.29	0.66	0.90	0.96	1.20
Control Delay	136.6	194.4	202.6	51.3	199.3	59.7	50.9	99.5	148.6
Queue Delay	0.0	0.0	0.0	86.2	0.0	0.0	0.0	0.0	0.0
Total Delay	136.6	194.4	202.6	137.5	199.3	59.7	50.9	99.5	148.6
LOS	F	F	F	F	F	E	D	F	F
Approach Delay		191.2		156.0		98.5			136.4
Approach LOS		F		F		F			F

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.33
Intersection Signal Delay: 148.9 — Intersection LOS: F
Intersection Capacity Utilization 120.3% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 34: E. HALLANDALE BEACH BLVD & U.S. 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	116	1302	655	673	1414	281	483	696	455	437	1237	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4830		3433	4959		3433	5085	1583	3433	5034	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4830		3433	4959		3433	5085	1583	3433	5034	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	1415	712	732	1537	305	525	757	495	475	1345	96
RTOR Reduction (vph)	0	57	0	0	18	0	0	0	191	0	5	0
Lane Group Flow (vph)	126	2070	0	732	1824	0	525	757	304	475	1436	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	12.0	51.0		26.0	65.0		19.0	36.0	36.0	23.0	38.0	
Effective Green, g (s)	12.0	51.0		26.0	65.0		19.0	36.0	36.0	23.0	38.0	
Actuated g/C Ratio	0.08	0.32		0.16	0.41		0.12	0.22	0.22	0.14	0.24	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	133	1540		558	2015		408	1144	356	493	1196	
v/s Ratio Prot	0.07	c0.43		c0.21	0.37		c0.15	0.15		0.14	c0.29	
v/s Ratio Perm									0.19			
v/c Ratio	0.95	1.34		1.31	0.91		1.29	0.66	0.85	0.96	1.20	
Uniform Delay, d1	73.7	54.5		67.0	44.6		70.5	56.5	59.5	68.1	61.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	61.3	159.4		152.8	6.2		146.5	3.0	22.2	31.1	98.4	
Delay (s)	135.0	213.9		219.8	50.8		217.0	59.5	81.7	99.2	159.4	
Level of Service	F	F		F	D		F	E	F	F	F	
Approach Delay (s)		209.5			98.9			112.2			144.5	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	141.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	26.0
Intersection Capacity Utilization	120.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	AM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Future Total AM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1282	96	72	1448	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1393	104	78	1573	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	64	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		78			64			
C (m) (veh/h)		444			389			
v/c		0.18			0.16			
95% queue length		0.64			0.59			
Control Delay (s/veh)		14.8			16.1			
LOS		B			C			
Approach Delay (s/veh)	--	--	16.1					
Approach LOS	--	--	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1282	96	72	1448	0	0	83	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1378	0	72	1448	0	0	83	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.99	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5122	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	32.3	0.0	4.8	33.6		0.0	6.2		0.0
Adj Reference Time (s)	36.3	0.0	8.8	37.6		0.0	10.2		0.0
Permitted Option									
Adj Saturation A (vph)	1707		120	1725	0			0	
Reference Time A (s)	32.3		71.8	33.6	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	32.3			71.8					
Adj Reference Time (s)	36.3			75.8					
Split Option									
Ref Time Combined (s)	32.3		4.8	33.6	0.0			0.0	
Ref Time Seperate (s)	30.0		4.8	33.6	0.0			0.0	
Reference Time (s)	32.3		33.6	33.6	0.0			0.0	
Adj Reference Time (s)	36.3		37.6	37.6	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	45.1	NA	NA	
Permitted Option (s)	75.8	Err	Err	
Split Option (s)	73.9	0.0	0.0	
Minimum (s)	45.1	0.0	0.0	45.1

Right Turns	NBR2
Adj Reference Time (s)	10.2
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	36.3
Combined (s)	46.5

Intersection Summary			
Intersection Capacity Utilization	38.7%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Synchro Output Sheets – Future (2015)

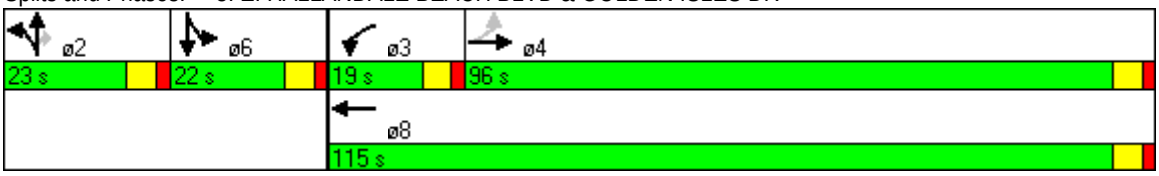
Optimized Future Background Traffic plus project traffic – PM Peak

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	2	2123	119	1677	230	19	66	13
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	96.0	96.0	19.0	115.0	23.0	23.0	23.0	22.0
Total Split (%)	60.0%	60.0%	11.9%	71.9%	14.4%	14.4%	14.4%	13.8%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		90.0	13.0	109.0	17.0	17.0	17.0	16.0
Actuated g/C Ratio		0.56	0.08	0.68	0.11	0.11	0.11	0.10
v/c Ratio		0.93	0.90	0.54	0.75	0.76	0.31	0.31
Control Delay		39.3	122.6	13.6	94.6	94.6	16.8	66.4
Queue Delay		180.3	0.0	7.1	0.0	0.0	0.0	0.0
Total Delay		219.6	122.6	20.6	94.6	94.6	16.8	66.4
LOS		F	F	C	F	F	B	E
Approach Delay		219.6		27.2		78.3		66.4
Approach LOS		F		C		E		E

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 130
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 128.0 — Intersection LOS: F
Intersection Capacity Utilization 106.4% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	2123	146	119	1677	51	230	19	66	75	13	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (prot)		5036		1770	5063		1681	1698	1583		3359	
Flt Permitted		0.94		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (perm)		4725		1770	5063		1681	1698	1583		3359	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2308	159	129	1823	55	250	21	72	82	14	10
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	64	0	5	0
Lane Group Flow (vph)	0	2464	0	129	1876	0	135	136	8	0	102	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		90.0		13.0	109.0		17.0	17.0	17.0		16.0	
Effective Green, g (s)		90.0		13.0	109.0		17.0	17.0	17.0		16.0	
Actuated g/C Ratio		0.56		0.08	0.68		0.11	0.11	0.11		0.10	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		2658		144	3449		179	180	168		336	
v/s Ratio Prot				c0.07	0.37		c0.08	0.08			c0.03	
v/s Ratio Perm		c0.52							0.00			
v/c Ratio		0.93		0.90	0.54		0.75	0.76	0.05		0.30	
Uniform Delay, d1		32.0		72.8	12.9		69.5	69.5	64.2		66.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		6.3		45.1	0.2		25.1	25.2	0.5		2.3	
Delay (s)		38.3		118.0	13.1		94.6	94.6	64.7		69.1	
Level of Service		D		F	B		F	F	E		E	
Approach Delay (s)		38.3			19.8			88.3			69.1	
Approach LOS		D			B			F			E	

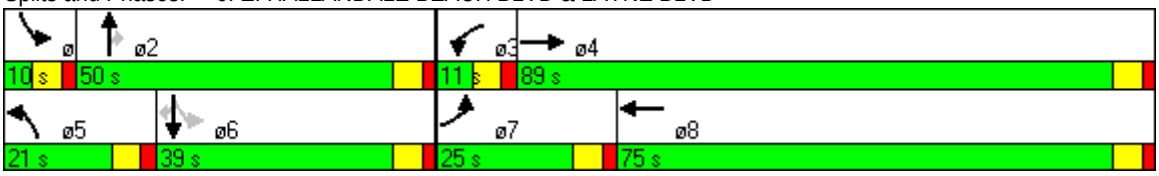
Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	125	2050	25	1733	167	15	61	144	12	102
Turn Type	Prot		Prot		Prot		Perm	pm+pt		Perm
Protected Phases	7	4	3	8	5	2		1	6	
Permitted Phases							2	6		6
Detector Phase	7	4	3	8	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	25.0	89.0	11.0	75.0	21.0	50.0	50.0	10.0	39.0	39.0
Total Split (%)	15.6%	55.6%	6.9%	46.9%	13.1%	31.3%	31.3%	6.3%	24.4%	24.4%
Yellow Time (s)	4.0	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	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)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max	Max
Act Effct Green (s)	16.0	83.1	5.0	67.5	12.9	12.9	52.1		33.1	33.1
Actuated g/C Ratio	0.10	0.54	0.03	0.44	0.08	0.08	0.34		0.22	0.22
v/c Ratio	0.74	0.83	0.47	0.86	0.69	0.70	0.11		0.63	0.26
Control Delay	91.1	33.8	100.9	44.2	94.4	94.9	8.1		68.4	10.0
Queue Delay	0.0	0.0	0.0	184.1	0.0	0.0	0.0		0.0	0.0
Total Delay	91.1	33.8	100.9	228.3	94.4	94.9	8.1		68.4	10.0
LOS	F	C	F	F	F	F	A		E	B
Approach Delay		37.0		226.5		73.0			45.3	
Approach LOS		D		F		E			D	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 153.6
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 114.5 — Intersection LOS: F
Intersection Capacity Utilization 74.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 6: E. HALLANDALE BEACH BLVD & LAYNE BLVD



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	2050	54	25	1733	33	167	15	61	144	12	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	0.96	1.00		0.96	1.00
Satd. Flow (prot)	1770	5066		1770	5071		1681	1698	1583		1781	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	0.47	1.00		0.67	1.00
Satd. Flow (perm)	1770	5066		1770	5071		1681	839	1583		1244	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	2228	59	27	1884	36	182	16	66	157	13	111
RTOR Reduction (vph)	0	2	0	0	1	0	0	0	44	0	0	87
Lane Group Flow (vph)	136	2285	0	27	1919	0	98	100	22	0	170	24
Turn Type	Prot			Prot			Prot		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2	6		6
Actuated Green, G (s)	16.0	83.1		2.9	70.0		12.9	52.1	52.1		33.2	33.2
Effective Green, g (s)	16.0	83.1		2.9	70.0		12.9	52.1	52.1		33.2	33.2
Actuated g/C Ratio	0.10	0.53		0.02	0.45		0.08	0.33	0.33		0.21	0.21
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0		6.0	6.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	181	2697		33	2274		139	351	528		265	337
v/s Ratio Prot	c0.08	c0.45		0.02	0.38		c0.06	0.02				
v/s Ratio Perm								0.07	0.01		c0.14	0.01
v/c Ratio	0.75	0.85		0.82	0.84		0.71	0.28	0.04		0.64	0.07
Uniform Delay, d1	68.1	31.1		76.3	38.2		69.7	38.3	35.1		56.0	49.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	16.0	2.7		84.2	3.1		15.0	0.4	0.1		5.2	0.4
Delay (s)	84.2	33.7		160.5	41.3		84.8	38.7	35.3		61.3	49.5
Level of Service	F	C		F	D		F	D	D		E	D
Approach Delay (s)		36.6			42.9			55.0			56.6	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	156.1	Sum of lost time (s)	24.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Stop	Stop		Stop	
Volume (vph)	45	6	1	2	5	161
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	7	1	2	5	175

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total (vph)	55	3	180
Volume Left (vph)	49	0	5
Volume Right (vph)	0	2	175
Hadj (s)	0.21	-0.37	-0.54
Departure Headway (s)	4.5	3.9	3.5
Degree Utilization, x	0.07	0.00	0.18
Capacity (veh/h)	775	868	1004
Control Delay (s)	7.8	6.9	7.2
Approach Delay (s)	7.8	6.9	7.2
Approach LOS	A	A	A

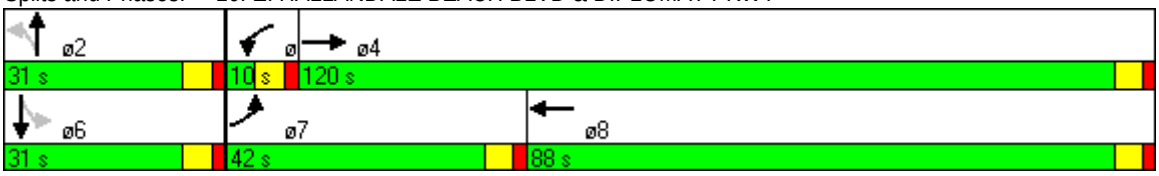
Intersection Summary			
Delay	7.4		
HCM Level of Service	A		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Volume (vph)	193	2082	4	1609	9	11	73	1
Turn Type	Prot		Prot		Perm		Perm	
Protected Phases	7	4	3	8		2		6
Permitted Phases					2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	42.0	120.0	10.0	88.0	31.0	31.0	31.0	31.0
Total Split (%)	26.1%	74.5%	6.2%	54.7%	19.3%	19.3%	19.3%	19.3%
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	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				
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)	21.3	89.5	4.1	63.7		25.6	25.6	25.6
Actuated g/C Ratio	0.16	0.69	0.03	0.49		0.20	0.20	0.20
v/c Ratio	0.72	0.64	0.07	0.72		0.11	0.29	0.31
Control Delay	67.5	11.7	74.0	27.4		36.5	54.1	11.2
Queue Delay	0.0	0.3	0.0	0.4		0.0	0.0	0.0
Total Delay	67.5	12.0	74.0	27.8		36.5	54.1	11.2
LOS	E	B	E	C		D	D	B
Approach Delay		16.7		27.9		36.5		27.5
Approach LOS		B		C		D		C

Intersection Summary

Cycle Length: 161
Actuated Cycle Length: 129.1
Natural Cycle: 70
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 21.9 — Intersection LOS: C
Intersection Capacity Utilization 69.3% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 10: E. HALLANDALE BEACH BLVD & DIPLOMAT PKWY



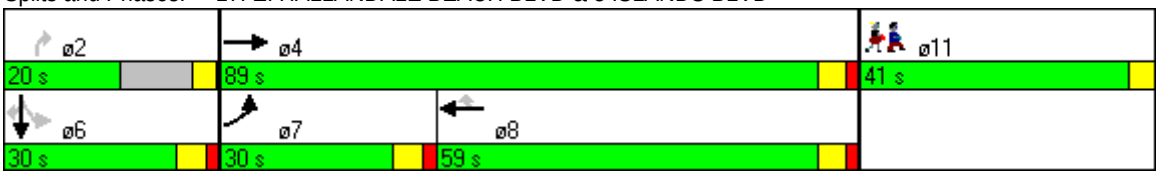
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	2082	0	4	1609	51	9	11	13	73	1	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91			1.00		1.00	1.00	
Frt	1.00	1.00		1.00	1.00			0.95		1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	
Satd. Flow (prot)	1770	5085		1770	5062			1741		1770	1585	
Flt Permitted	0.95	1.00		0.95	1.00			0.92		0.73	1.00	
Satd. Flow (perm)	1770	5085		1770	5062			1618		1367	1585	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	2263	0	4	1749	55	10	12	14	79	1	128
RTOR Reduction (vph)	0	0	0	0	2	0	0	11	0	0	103	0
Lane Group Flow (vph)	210	2263	0	4	1802	0	0	25	0	79	26	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	21.3	89.6		0.6	68.9			25.7		25.7	25.7	
Effective Green, g (s)	21.3	89.6		0.6	68.9			25.7		25.7	25.7	
Actuated g/C Ratio	0.16	0.67		0.00	0.51			0.19		0.19	0.19	
Clearance Time (s)	6.0	6.0		6.0	6.0			6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)	282	3403		8	2605			311		262	304	
v/s Ratio Prot	c0.12	0.45		0.00	c0.36						0.02	
v/s Ratio Perm								0.02		c0.06		
v/c Ratio	0.74	0.67		0.50	0.69			0.08		0.30	0.08	
Uniform Delay, d1	53.7	13.2		66.5	24.5			44.4		46.4	44.4	
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	
Incremental Delay, d2	10.2	0.5		41.8	0.8			0.5		2.9	0.5	
Delay (s)	63.9	13.7		108.3	25.3			44.9		49.3	45.0	
Level of Service	E	B		F	C			D		D	D	
Approach Delay (s)		18.0			25.5			44.9			46.6	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	22.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	133.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBT	SBR	ø2	ø11
Lane Configurations									
Volume (vph)	560	1600	1457	180	231	0	272		
Turn Type	Prot			Perm	Perm		Perm		
Protected Phases	7	4	8			6		2	11
Permitted Phases				8	6		6		
Detector Phase	7	4	8	8	6	6	6		
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	20.0	10.0
Total Split (s)	30.0	89.0	59.0	59.0	30.0	30.0	30.0	20.0	41.0
Total Split (%)	18.8%	55.6%	36.9%	36.9%	18.8%	18.8%	18.8%	13%	26%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.5	0.0
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	Lag					
Lead-Lag Optimize?	Yes		Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max	None
Act Effct Green (s)	24.1	76.8	46.7	46.7	24.1	24.1	24.1		
Actuated g/C Ratio	0.21	0.68	0.41	0.41	0.21	0.21	0.21		
v/c Ratio	0.83	0.50	0.75	0.25	0.35	0.35	0.52		
Control Delay	54.4	9.3	30.6	3.6	42.4	42.5	8.1		
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0	0.0		
Total Delay	54.4	9.7	30.6	3.6	42.4	42.5	8.1		
LOS	D	A	C	A	D	D	A		
Approach Delay		21.3	27.7			23.9			
Approach LOS		C	C			C			

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 112.9	
Natural Cycle: 90	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 24.0	Intersection LOS: C
Intersection Capacity Utilization 65.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 17: E. HALLANDALE BEACH BLVD & 3 ISLANDS BLVD



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	560	1600	0	0	1457	180	0	0	0	231	0	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Lane Util. Factor	0.97	0.91			0.91	1.00				0.95	0.95	1.00
Frt	1.00	1.00			1.00	0.85				1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (prot)	3433	5085			5085	1583				1681	1681	1583
Flt Permitted	0.95	1.00			1.00	1.00				0.95	0.95	1.00
Satd. Flow (perm)	3433	5085			5085	1583				1681	1681	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	609	1739	0	0	1584	196	0	0	0	251	0	296
RTOR Reduction (vph)	0	0	0	0	0	115	0	0	0	0	0	233
Lane Group Flow (vph)	609	1739	0	0	1584	81	0	0	0	125	126	63
Turn Type	Prot					Perm			custom	Perm		Perm
Protected Phases	7	4			8						6	
Permitted Phases						8			2	6		6
Actuated Green, G (s)	24.1	76.8			46.7	46.7				24.1	24.1	24.1
Effective Green, g (s)	24.1	76.8			46.7	46.7				24.1	24.1	24.1
Actuated g/C Ratio	0.21	0.68			0.41	0.41				0.21	0.21	0.21
Clearance Time (s)	6.0	6.0			6.0	6.0				6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0				3.0	3.0	3.0
Lane Grp Cap (vph)	733	3459			2103	655				359	359	338
v/s Ratio Prot	c0.18	0.34			c0.31							
v/s Ratio Perm						0.05				0.07	0.07	0.04
v/c Ratio	0.83	0.50			0.75	0.12				0.35	0.35	0.19
Uniform Delay, d1	42.5	8.8			28.2	20.5				37.7	37.8	36.4
Progression Factor	1.00	1.00			1.00	1.00				1.00	1.00	1.00
Incremental Delay, d2	7.9	0.1			1.6	0.1				2.7	2.7	1.2
Delay (s)	50.4	8.9			29.8	20.5				40.4	40.4	37.6
Level of Service	D	A			C	C				D	D	D
Approach Delay (s)		19.7			28.7			0.0			38.9	
Approach LOS		B			C			A			D	

Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	112.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR2	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations											
Volume (vph)	743	87	1072	92	31	159	712	6	17	768	685
Turn Type	Split		Perm		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7		5	2		1	6	
Permitted Phases			3		7			2			6
Detector Phase	3	3	3	7	7	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	10.0	10.0	10.0	10.0	22.0	22.0	10.0	10.0	10.0
Total Split (s)	35.0	35.0	35.0	10.0	10.0	20.0	50.0	50.0	15.0	45.0	45.0
Total Split (%)	31.8%	31.8%	31.8%	9.1%	9.1%	18.2%	45.5%	45.5%	13.6%	40.9%	40.9%
Yellow Time (s)	4.0	4.0	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	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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	Max	None	None	None	Max	Max	None	None	None
Act Effct Green (s)	29.0	29.0	29.0	4.0	4.0	13.3	52.8	52.8	6.7	39.0	39.0
Actuated g/C Ratio	0.27	0.27	0.27	0.04	0.04	0.12	0.48	0.48	0.06	0.36	0.36
v/c Ratio	1.01	1.00	0.97	1.69	0.59	0.80	0.45	0.01	0.17	0.66	1.32
Control Delay	87.1	83.2	25.6	393.8	89.8	73.9	20.9	11.0	51.9	32.8	187.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.1	83.2	25.6	393.8	89.8	73.9	20.9	11.0	51.9	32.8	187.2
LOS	F	F	C	F	F	E	C	B	D	C	F
Approach Delay		51.6		323.5			30.5			105.0	
Approach LOS		D		F			C			F	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 109.3
Natural Cycle: 130
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.69
Intersection Signal Delay: 73.7 — Intersection LOS: E
Intersection Capacity Utilization 108.1% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 21: WB E. Hallandale Beach Blvd & S. OCEAN DR

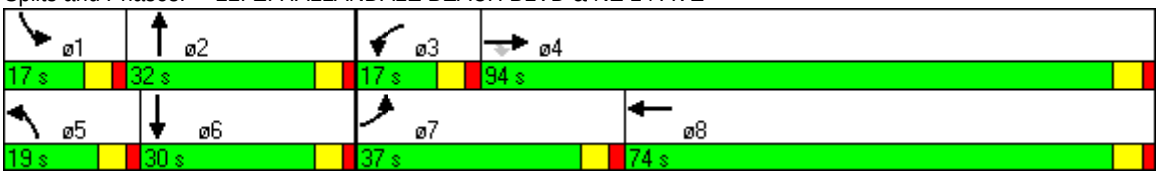
Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR2
Lane Configurations												
Volume (vph)	743	87	1072	12	92	31	159	712	6	17	768	685
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	0.95	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1681	1702	1583		1852	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	0.96	1.00		0.99	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1681	1702	1583		1852	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	808	95	1165	13	100	34	173	774	7	18	835	745
RTOR Reduction (vph)	0	0	788	0	0	0	0	0	4	0	0	0
Lane Group Flow (vph)	452	451	377	0	113	34	173	774	3	18	835	745
Turn Type	Split		Perm	Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	3	3		7	7		5	2		1	6	
Permitted Phases			3			7			2			6
Actuated Green, G (s)	29.0	29.0	29.0		4.0	4.0	13.3	52.8	52.8	3.1	42.6	42.6
Effective Green, g (s)	29.0	29.0	29.0		4.0	4.0	13.3	52.8	52.8	3.1	42.6	42.6
Actuated g/C Ratio	0.26	0.26	0.26		0.04	0.04	0.12	0.47	0.47	0.03	0.38	0.38
Clearance Time (s)	6.0	6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	432	437	407		66	56	209	1655	740	49	1335	597
v/s Ratio Prot	c0.27	0.26			c0.06		c0.10	0.22		0.01	0.24	
v/s Ratio Perm			0.24			0.02			0.00			c0.47
v/c Ratio	1.05	1.03	0.93		1.71	0.61	0.83	0.47	0.00	0.37	0.63	1.25
Uniform Delay, d1	42.0	42.0	40.9		54.4	53.7	48.7	20.5	16.0	53.9	28.6	35.2
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	55.9	51.5	29.6		376.3	17.2	22.8	1.0	0.0	4.6	0.9	125.1
Delay (s)	97.9	93.5	70.5		430.7	70.9	71.5	21.4	16.0	58.6	29.6	160.2
Level of Service	F	F	E		F	E	E	C	B	E	C	F
Approach Delay (s)		81.5			347.5			30.5			90.8	
Approach LOS		F			F			C			F	

Intersection Summary			
HCM Average Control Delay	82.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	112.9	Sum of lost time (s)	24.0
Intersection Capacity Utilization	108.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Volume (vph)	327	2085	361	64	2114	279	142	98	121
Turn Type	Prot		Perm	Prot		Prot		Prot	
Protected Phases	7	4		3	8	5	2	1	6
Permitted Phases			4						
Detector Phase	7	4	4	3	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0
Total Split (s)	37.0	94.0	94.0	17.0	74.0	19.0	32.0	17.0	30.0
Total Split (%)	23.1%	58.8%	58.8%	10.6%	46.3%	11.9%	20.0%	10.6%	18.8%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Max	None	Max
Act Effct Green (s)	31.0	89.0	89.0	10.0	68.0	13.0	26.0	11.0	24.0
Actuated g/C Ratio	0.19	0.56	0.56	0.06	0.42	0.08	0.16	0.07	0.15
v/c Ratio	1.03	0.80	0.39	0.63	1.12	1.09	0.92	0.88	1.03
Control Delay	118.9	31.4	5.8	97.8	101.5	144.3	95.1	125.7	118.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	118.9	31.4	5.8	97.8	101.5	144.3	95.1	125.7	118.2
LOS	F	C	A	F	F	F	F	F	F
Approach Delay		38.4			101.4		120.9		120.2
Approach LOS		D			F		F		F

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Natural Cycle: 150	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.12	
Intersection Signal Delay: 74.9	Intersection LOS: E
Intersection Capacity Utilization 104.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 22: E. HALLANDALE BEACH BLVD & NE 14 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	327	2085	361	64	2114	94	279	142	112	98	121	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.93		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5053		3433	1739		1770	1710	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5053		3433	1739		1770	1710	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	355	2266	392	70	2298	102	303	154	122	107	132	160
RTOR Reduction (vph)	0	0	132	0	3	0	0	18	0	0	27	0
Lane Group Flow (vph)	355	2266	260	70	2397	0	303	258	0	107	265	0
Turn Type	Prot		Perm	Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	31.0	89.0	89.0	10.0	68.0		13.0	26.0		11.0	24.0	
Effective Green, g (s)	31.0	89.0	89.0	10.0	68.0		13.0	26.0		11.0	24.0	
Actuated g/C Ratio	0.19	0.56	0.56	0.06	0.42		0.08	0.16		0.07	0.15	
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	343	2829	881	111	2148		279	283		122	257	
v/s Ratio Prot	c0.20	0.45		0.04	c0.47		c0.09	0.15		0.06	c0.15	
v/s Ratio Perm			0.16									
v/c Ratio	1.03	0.80	0.29	0.63	1.12		1.09	0.91		0.88	1.03	
Uniform Delay, d1	64.5	28.4	18.8	73.2	46.0		73.5	65.9		73.8	68.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	57.9	1.7	0.2	11.1	59.3		78.7	35.2		45.7	64.2	
Delay (s)	122.4	30.1	19.0	84.3	105.3		152.2	101.1		119.5	132.2	
Level of Service	F	C	B	F	F		F	F		F	F	
Approach Delay (s)		39.6			104.7			127.9			128.8	
Approach LOS		D			F			F			F	

Intersection Summary			
HCM Average Control Delay	77.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	104.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Configurations									
Volume (vph)	109	2148	143	106	2328	34	86	7	149
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2	
Permitted Phases			4			8			2
Detector Phase	7	4	4	3	8	8	5	2	2
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	22.0	22.0	10.0	22.0	22.0	10.0	22.0	22.0
Total Split (s)	25.0	115.0	115.0	16.0	106.0	106.0	29.0	29.0	29.0
Total Split (%)	15.6%	71.9%	71.9%	10.0%	66.3%	66.3%	18.1%	18.1%	18.1%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	None	None	Max	Max
Act Effct Green (s)	15.1	103.6	103.6	9.3	97.9	97.9	19.2	17.9	23.1
Actuated g/C Ratio	0.10	0.67	0.67	0.06	0.64	0.64	0.12	0.12	0.15
v/c Ratio	0.68	0.68	0.14	0.55	0.78	0.04	0.24	0.26	0.50
Control Delay	87.9	16.5	6.4	82.2	22.9	6.4	63.4	63.9	29.1
Queue Delay	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.9	18.9	6.4	82.2	22.9	6.4	63.4	63.9	29.1
LOS	F	B	A	F	C	A	E	E	C
Approach Delay		21.3			25.2			42.4	
Approach LOS		C			C			D	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 154.1	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 69.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 26: E. HALLANDALE BEACH BLVD & NE 10 AVE

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	2148	143	106	2328	34	86	7	149	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Lane Util. Factor	1.00	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00			
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00			
Satd. Flow (prot)	1770	5085	1583	3433	5085	1583	1681	1698	1583			
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.96	1.00			
Satd. Flow (perm)	1770	5085	1583	3433	5085	1583	1681	1698	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	118	2335	155	115	2530	37	93	8	162	0	0	0
RTOR Reduction (vph)	0	0	16	0	0	7	0	0	89	0	0	0
Lane Group Flow (vph)	118	2335	139	115	2530	30	50	51	73	0	0	0
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm			
Protected Phases	7	4		3	8		5	2				
Permitted Phases			4			8			2			
Actuated Green, G (s)	15.1	103.7	103.7	9.3	97.9	97.9	23.1	23.1	23.1			
Effective Green, g (s)	15.1	103.7	103.7	9.3	97.9	97.9	23.1	23.1	23.1			
Actuated g/C Ratio	0.10	0.67	0.67	0.06	0.64	0.64	0.15	0.15	0.15			
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	173	3422	1065	207	3231	1006	252	255	237			
v/s Ratio Prot	c0.07	c0.46		0.03	c0.50		0.03	0.03				
v/s Ratio Perm			0.09			0.02			c0.05			
v/c Ratio	0.68	0.68	0.13	0.56	0.78	0.03	0.20	0.20	0.31			
Uniform Delay, d1	67.2	15.2	9.0	70.4	20.4	10.4	57.4	57.4	58.4			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	10.6	0.6	0.1	3.2	1.3	0.0	0.4	0.4	3.3			
Delay (s)	77.7	15.8	9.1	73.6	21.7	10.5	57.8	57.8	61.7			
Level of Service	E	B	A	E	C	B	E	E	E			
Approach Delay (s)		18.2			23.8			60.2			0.0	
Approach LOS		B			C			E			A	

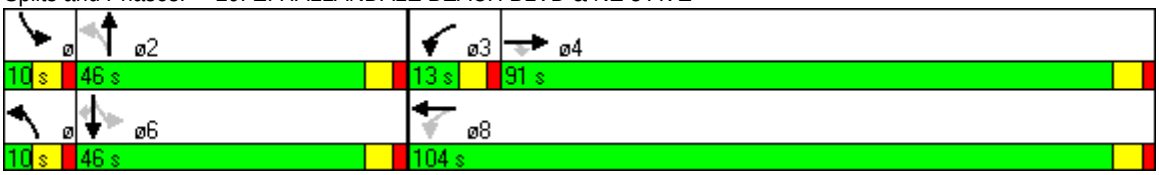
Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	154.1	Sum of lost time (s)	24.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Volume (vph)	2307	196	87	2243	246	0	108	12	170
Turn Type		Perm	pm+pt		pm+pt		pm+pt		Perm
Protected Phases	4		3	8	5	2	1	6	
Permitted Phases		4	8		2		6		6
Detector Phase	4	4	3	8	5	2	1	6	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	10.0	22.0	10.0	22.0	22.0
Total Split (s)	91.0	91.0	13.0	104.0	10.0	46.0	10.0	46.0	46.0
Total Split (%)	56.9%	56.9%	8.1%	65.0%	6.3%	28.8%	6.3%	28.8%	28.8%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	None	Max	Max
Act Effct Green (s)	85.1	85.1	98.1	98.1		40.0	47.9	47.9	47.9
Actuated g/C Ratio	0.54	0.54	0.62	0.62		0.25	0.30	0.30	0.30
v/c Ratio	0.92	0.23	0.75	0.77		0.94	0.16	0.16	0.38
Control Delay	40.0	6.8	62.0	24.4		92.2	40.8	40.8	42.5
Queue Delay	109.7	0.0	0.0	35.3		0.0	0.0	0.0	0.0
Total Delay	149.7	6.8	62.0	59.6		92.2	40.8	40.8	42.5
LOS	F	A	E	E		F	D	D	D
Approach Delay	138.5			59.7		92.2		41.8	
Approach LOS	F			E		F		D	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 158
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 96.9 — Intersection LOS: F
Intersection Capacity Utilization 87.1% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 29: E. HALLANDALE BEACH BLVD & NE 8 AVE



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	2307	196	87	2243	0	246	0	40	108	12	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Lane Util. Factor		0.91	1.00	1.00	0.91			1.00		0.95	0.95	1.00
Frt		1.00	0.85	1.00	1.00			0.98		1.00	1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00			0.96		0.95	0.96	1.00
Satd. Flow (prot)		5085	1583	1770	5085			1752		1681	1701	1583
Flt Permitted		1.00	1.00	0.04	1.00			0.71		0.74	0.77	1.00
Satd. Flow (perm)		5085	1583	82	5085			1292		1310	1364	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2508	213	95	2438	0	267	0	43	117	13	185
RTOR Reduction (vph)	0	0	69	0	0	0	0	4	0	0	0	9
Lane Group Flow (vph)	0	2508	144	95	2438	0	0	306	0	64	66	176
Turn Type			Perm	pm+pt			pm+pt			pm+pt		Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases			4	8			2			6		6
Actuated Green, G (s)		85.1	85.1	98.1	98.1			40.0		49.2	49.2	49.2
Effective Green, g (s)		85.1	85.1	98.1	98.1			40.0		49.2	49.2	49.2
Actuated g/C Ratio		0.53	0.53	0.62	0.62			0.25		0.31	0.31	0.31
Clearance Time (s)		6.0	6.0	6.0	6.0			6.0		6.0	6.0	6.0
Vehicle Extension (s)		3.0	3.0	3.0	3.0			3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		2716	846	125	3131			324		412	428	489
v/s Ratio Prot		c0.49		0.03	c0.48					0.00	0.00	
v/s Ratio Perm			0.09	0.44				c0.24		0.04	0.04	c0.11
v/c Ratio		0.92	0.17	0.76	0.78			0.95		0.16	0.15	0.36
Uniform Delay, d1		34.1	19.0	40.3	22.6			58.6		46.8	40.0	42.8
Progression Factor		1.00	1.00	1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2		5.9	0.1	23.4	1.3			35.5		0.2	0.2	2.1
Delay (s)		40.0	19.1	63.6	23.9			94.1		47.0	40.1	44.9
Level of Service		D	B	E	C			F		D	D	D
Approach Delay (s)		38.4			25.4			94.1			44.3	
Approach LOS		D			C			F			D	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	159.3	Sum of lost time (s)	24.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	99	31	48	0	116	84
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	108	34	52	0	126	91
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	396	52			52	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	396	52			52	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	81	97			92	
cM capacity (veh/h)	560	1015			1554	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	141	52	217
Volume Left	108	0	126
Volume Right	34	0	0
cSH	627	1700	1554
Volume to Capacity	0.23	0.03	0.08
Queue Length 95th (ft)	22	0	7
Control Delay (s)	12.4	0.0	4.6
Lane LOS	B		A
Approach Delay (s)	12.4	0.0	4.6
Approach LOS	B		

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	31.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	69	205	118	56	44	220
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	223	128	61	48	239
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	493	159			189	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	493	159			189	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	85	75			97	
cM capacity (veh/h)	516	887			1385	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	298	189	287
Volume Left	75	0	48
Volume Right	223	61	0
cSH	751	1700	1385
Volume to Capacity	0.40	0.11	0.03
Queue Length 95th (ft)	48	0	3
Control Delay (s)	12.9	0.0	1.5
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	1.5
Approach LOS	B		

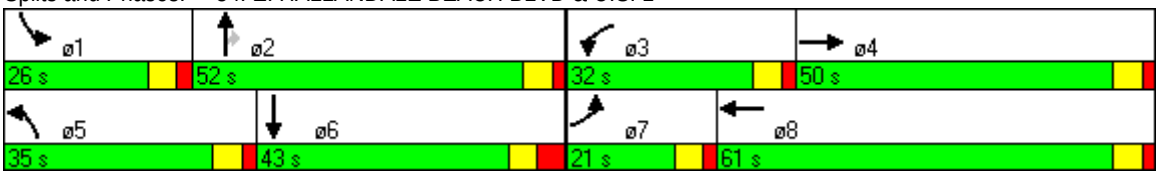
Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	209	1209	755	1618	847	1473	746	537	1082
Turn Type	Prot		Prot		Prot		Perm	Prot	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases							2		
Detector Phase	7	4	3	8	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	12.0	24.0	12.0	24.0	12.0	24.0	24.0	12.0	24.0
Total Split (s)	21.0	50.0	32.0	61.0	35.0	52.0	52.0	26.0	43.0
Total Split (%)	13.1%	31.3%	20.0%	38.1%	21.9%	32.5%	32.5%	16.3%	26.9%
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	4.0
Lost Time Adjust (s)	0.0	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	8.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Max	Max	None	Max
Act Effct Green (s)	15.0	44.0	26.0	55.0	29.0	46.0	46.0	20.0	35.0
Actuated g/C Ratio	0.09	0.28	0.16	0.34	0.18	0.29	0.29	0.12	0.22
v/c Ratio	1.37	1.40	1.47	1.25	1.48	1.10	1.27	1.36	1.18
Control Delay	249.1	223.6	265.7	159.4	267.9	106.1	162.5	226.5	144.5
Queue Delay	0.0	0.0	0.0	101.7	0.0	0.0	0.0	0.0	0.0
Total Delay	249.1	223.6	265.7	261.1	267.9	106.1	162.5	226.5	144.5
LOS	F	F	F	F	F	F	F	F	F
Approach Delay		226.3		262.4		164.5			169.8
Approach LOS		F		F		F			F

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.48
Intersection Signal Delay: 206.5 — Intersection LOS: F
Intersection Capacity Utilization 127.1% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 34: E. HALLANDALE BEACH BLVD & U.S. 1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	1209	570	755	1618	361	847	1473	746	537	1082	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Lane Util. Factor	1.00	0.91		0.97	0.91		0.97	0.91	1.00	0.97	0.91	
Frt	1.00	0.95		1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	4841		3433	4946		3433	5085	1583	3433	5008	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1770	4841		3433	4946		3433	5085	1583	3433	5008	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	227	1314	620	821	1759	392	921	1601	811	584	1176	132
RTOR Reduction (vph)	0	53	0	0	22	0	0	0	186	0	9	0
Lane Group Flow (vph)	227	1881	0	821	2129	0	921	1601	625	584	1299	0
Turn Type	Prot			Prot			Prot		Perm	Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			
Actuated Green, G (s)	15.0	44.0		26.0	55.0		29.0	46.0	46.0	20.0	35.0	
Effective Green, g (s)	15.0	44.0		26.0	55.0		29.0	46.0	46.0	20.0	35.0	
Actuated g/C Ratio	0.09	0.28		0.16	0.34		0.18	0.29	0.29	0.12	0.22	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	8.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	166	1331		558	1700		622	1462	455	429	1096	
v/s Ratio Prot	0.13	c0.39		c0.24	0.43		c0.27	0.31		0.17	0.26	
v/s Ratio Perm									c0.39			
v/c Ratio	1.37	1.41		1.47	1.25		1.48	1.10	1.37	1.36	1.19	
Uniform Delay, d1	72.5	58.0		67.0	52.5		65.5	57.0	57.0	70.0	62.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	198.9	190.5		221.7	118.5		224.9	54.0	181.6	177.1	92.9	
Delay (s)	271.4	248.5		288.7	171.0		290.4	111.0	238.6	247.1	155.4	
Level of Service	F	F		F	F		F	F	F	F	F	
Approach Delay (s)		250.9			203.5			191.6			183.7	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	206.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.46		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	127.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	PM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Future Total PM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1824	93	107	1605	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1982	101	116	1744	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			83			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	90	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		116			90			
C (m) (veh/h)		262			248			
v/c		0.44			0.36			
95% queue length		2.31			1.67			
Control Delay (s/veh)		29.5			27.7			
LOS		D			D			
Approach Delay (s/veh)	--	--	27.7					
Approach LOS	--	--	D					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1824	93	107	1605	0	0	83	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1917	0	107	1605	0	0	83	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.99	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5138	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	44.8	0.0	7.1	37.2		0.0	6.2		0.0
Adj Reference Time (s)	48.8	0.0	11.1	41.2		0.0	10.2		0.0
Permitted Option									
Adj Saturation A (vph)	1713		120	1725	0			0	
Reference Time A (s)	44.8		106.7	37.2	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	44.8			106.7					
Adj Reference Time (s)	48.8			110.7					
Split Option									
Ref Time Combined (s)	44.8		7.1	37.2	0.0			0.0	
Ref Time Seperate (s)	42.6		7.1	37.2	0.0			0.0	
Reference Time (s)	44.8		37.2	37.2	0.0			0.0	
Adj Reference Time (s)	48.8		41.2	41.2	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	59.9	NA	NA	
Permitted Option (s)	110.7	Err	Err	
Split Option (s)	90.0	0.0	0.0	
Minimum (s)	59.9	0.0	0.0	59.9

Right Turns	NBR2
Adj Reference Time (s)	10.2
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	48.8
Combined (s)	58.9

Intersection Summary			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS

Fort Lauderdale Office - 1800 Eller Drive, Suite 600, Fort Lauderdale, Florida 33316
Phone: 954.921.7781 • Fax: 954.921.8807
Palm Beach Office - 560 Village Blvd, Suite 340, West Palm Beach, Florida 33409
Phone: 561.684.6161 • Fax: 561.684.6360

Memorandum

DATE:	October 10, 2011
TO:	Eric D. Fordin, Vice President The Related Group 315 S. Biscayne Blvd, 4th Flr Miami, FL 33132 e: efordin@relatedgroup.com
FROM:	James E. Spinks III, PE, PTOE Calvin, Giordano & Associates, Incorporated 1800 Eller Drive, Suite 600 Fort Lauderdale, FL 33316
SUBJECT:	Qualitative Assessment - Golden Isles
PROJECT:	11-4216.6
CC:	Jeffery Maxwell, PE, PTOE Carmelo Caratozzolo, PE

1.0 INTRODUCTION

As a result of community concerns from the residents in the area of Golden Isles Drive near Hallandale Beach Boulevard in Hallandale Beach, Florida, a Qualitative Assessment of the existing traffic conditions was performed at the intersections of Hallandale Beach Boulevard at Golden Isles Drive, Golden Isles Drive at Diana Drive and NE 26th Avenue at Hallandale Beach Boulevard. A Qualitative Assessment is a study where a professionally registered qualified traffic engineer experienced in the traffic engineering discipline, visits the location under study during the morning and evening peak traffic periods to make qualitative assessments of the intersection operation. Such factors as queue lengths, delays, vehicular conflicts or any other operational characteristics critical to evaluate the need for intersection improvements, such as signal control or geometric improvements are noted. During the field review safety conditions are also observed and recorded, with photographs taken of all intersection approaches with emphasis on obtaining visual information that would be of value to the study.

Field observation reports for each of the study intersection are included in **Appendix A**.

2.0 EXISTING CONDITIONS

2.1 General Description

In the vicinity of the study area, Hallandale Beach Boulevard is a six-lane divided state road, running in an east-west direction; with a posted speed limit of 35 mph. Golden Isles Drive is a two-lane undivided local road running in a north-south direction; with posted speed limit of 25 mph. Diana Drive is a two-lane undivided local road, running in an east-west direction, with a posted speed limit of 30 mph. NE 26th Avenue is two-lane undivided local road running in a north-south direction; with no posted speed limit.

Hallandale Beach Boulevard is serviced by Broward County Transit lines 4 and 28, connecting to other service lines such as lines 1, 5, and the US 1 Breeze.

Pavement condition and pavement markings appear to be in fair to good condition at each of the intersections. No notable regulatory signage problems were observed. Roadway lighting exists along Hallandale Beach Boulevard, Golden Isles Drive, Diana Drive and NE 26th Avenue. At the study intersections, sidewalks exist along the north and south sides of Hallandale Beach Boulevard, and the east and west sides of both NE 26th Avenue and Golden Isles Drive. However, no sidewalks are present along Diana Drive.

2.1.1 Hallandale Beach Boulevard at Golden Isles Drive (signalized)

The intersection of Hallandale Beach Boulevard at Golden Isles Drive is signalized, with up to four phases operating during the day. A bank exists directly on the southeast corner of the intersection with a two-way driveway on Hallandale Beach Boulevard just east of the intersection and one-way inbound driveway on Golden Isles Drive just south of the intersection. A law office exists on the southwest corner of the intersection with a two-way driveway on Golden Isles Drive just south of the intersection. A commercial shopping exists on the north side of the intersection.

Signal operation provides up to four phases including the following:

- Westbound left-turn lead phase
- Eastbound/Westbound phase
- Northbound split phase
- Southbound split phase

A field sketch is included as part of the Field Observation Report in Appendix A. Intersection approach lane configuration is as follows:

- Northbound: 1 Left, 1 Shared Thru/left, 1 Right
- Southbound: 1 Left, 1 Shared Thru/right
- Eastbound: 2 Thru, 1 Shared Thru/right
- Westbound: 1 Left, 2 Thru, 1 Shared Thru/right

North of Diana Drive, northbound Golden Isles widens from a 1-lane section to a 2-lane section to accommodate the Hallandale Beach Boulevard/Golden Isles Drive intersection. The northbound approach has a left-turn bay of nearly 200 feet. This lane appears to have the

capacity to store up to approximately 12 vehicles before spilling back into the thru lane. The shared thru/left turn lane and the right turn lane have approximately 300 feet of queue storage between Hallandale Beach Boulevard and Diana Drive, which appears to have the capacity to store up to approximately 15 vehicles, before impeding the Golden Isles Drive/Diana Drive intersection. A small 4-foot concrete median divider exists on the northbound approach from the stop bar for approximately 140 feet.

The southbound approach serves as a driveway ingress/egress to a commercial shopping center. At the intersection there is one wide ingress lane with an exclusive left turn lane and one shared right/thru lane for the egress movement on the north leg. The southbound approach has approximately 120 feet of queue storage for both lanes. No median exists on the southbound approach.

The westbound approach contains three lanes serving thru traffic, with the outside lane acting as a shared thru/right lane and a separate left-turn lane of approximately 200 feet, which appears to have a length sufficient for storing approximately 8 to 10 vehicles. There is approximately 350 feet of storage along Hallandale Beach Boulevard between the Golden Isles Drive intersection and the preceding Diplomat Parkway intersection.

The eastbound approach contains three lanes serving thru traffic, with the outside lane acting as a shared thru/right lane. Eastbound left turns are prohibited and no left-turn lane exists. There is approximately 200 feet of storage along Hallandale Beach Boulevard between the Golden Isles Drive intersection and the preceding Layne Boulevard intersection.

At the intersection, designated pedestrian crossings, each with corresponding pedestrian signal heads, are present on the south and east legs. The crosswalks on the south and east legs are stamped asphalt brick paver type. Pedestrian curb ramps and push buttons are present on the northeast, southeast and southwest corners of the intersection to correspond with the crosswalk locations. Although measurements to check compliance with the Americans with Disability Act (ADA) standards are not part of this study, these ramps appear to be in compliance.

2.1.2 Golden Isles Drive at Diana Drive (un-signalized)

The intersection of Golden Isles Drive at Diana Drive is an un-signalized T-intersection, with no west leg. The westbound approach is stop controlled and the north and south approaches are free flow. There is a service driveway approximately 50 feet north of the intersection that runs only in the westbound direction and is right-turn only at Golden Isles Drive. This driveway services the rear entrance several of the residential buildings and commercial businesses between Hallandale Beach Boulevard and Diana Drive. The service driveway and Diana Drive are separated by an approximately 10-foot wide landscaped median and a 8-foot wide parallel parking lane.

Each of the approaches is 1-lane on a 2-lane undivided roadway. There is no separate left-turn or right-turn lanes. There are no crosswalks present at the intersection.

2.1.3 Hallandale Beach Boulevard at NE 26th Avenue (un-signalized)

The intersection of Hallandale Beach Boulevard at NE 26th Avenue is an un-signalized T-intersection, with no north leg. The northbound approach is stop controlled and the east and west approaches are free flow. The ingress of a service driveway is approximately 275 feet south of the intersection that runs only in the westbound direction.

At the intersection, the northbound approach consists of a single right-turn only lane and the eastbound and westbound approaches are separated by approximately an 18-foot center landscaped median. There is a separate left-turn lanes approximately 350 feet in length in the westbound direction, which appears to have sufficient length for storing approximately 16 to 18 vehicles. There is a designated crosswalk with corresponding curb ramps present on the south leg of the intersection.

2.2 Field Observations

The following section documents observations made regarding traffic operations and safety at the study intersection during field visits conducted by a qualified traffic engineer during the AM and PM peak periods on Thursday, October 6, 2011. Photographs pertinent to field conditions and traffic operations are included in **Appendix B**.

2.2.1 General Observations

Based on observation during both morning and evening periods, the eastbound and westbound approaches of Hallandale Beach Boulevard both serve heavy traffic movements, and eastbound and westbound thru movements receive a high percentage of green time at the Hallandale Beach Boulevard/Golden Isles Drive intersection. At times, the signal timing coordination at the adjacent intersections appears to get off and queues from the Layne Boulevard intersection and the Diplomat Parkway intersection and extends through the Golden Isles Drive intersection. However, the queues dispersed quickly and did not impact the northbound or southbound movements at Golden Isles Drive. In comparison, northbound and southbound approaches both receive a limited amount of green time, but did not experience cycle failure. A signal cycle length of approximately 160 seconds was observed in both the AM peak period and PM peak period.

Very little traffic was observed along Diana Drive and NE 26th Avenue during both the AM and PM peak periods. Occasionally a westbound right turning vehicle was observed at the Hallandale Beach Boulevard/NE 26th Avenue intersection, however there was no queue at most times during both the AM and PM peak periods. In addition, during both the AM and PM peak periods, there was little to no queue observed in the westbound direction at the Golden Isles Drive/Diana Drive intersection. However, the maximum queue observed in the during both peak periods was 2 vehicles.

2.2.2 AM Peak Period (7:00 AM to 9:00 AM)

Hallandale Beach Boulevard at Golden Isles Drive

- All northbound vehicles were able to clear the intersection during the green phase with no cycle failures.
- On the northbound approach an average queue of 4 vehicles was observed (2 vehicles in the left turn lane, 2 vehicles in the shared thru/left turn lane), maximum 8 vehicles (4 vehicles in the left turn lane, 4 vehicles in the shared thru/left turn lane).
- A couple of northbound vehicles were observed to utilizing the Post Office parking lot as a cut-thru from Golden Isles to Layne Boulevard, although little to no queue was present at in the northbound direction on Golden Isles Drive.
- Very few westbound left turns were observed.

2.2.3 PM Peak (4:00 PM to 6:00 PM)

Hallandale Beach Boulevard at Golden Isles Drive

- All northbound vehicles were able to clear the intersection during the green phase with no cycle failures.
- On the northbound approach an average queue of 8 vehicles was observed (4 vehicles in the left turn lane, 4 vehicles in the shared thru/left turn lane), maximum 14 vehicles (7 vehicles in the left turn lane, 7 vehicles in the shared thru/left turn lane). These vehicles were accommodated within the existing storage, without impacting the Golden Isles Drive/Diana Drive intersection.
- A moderate amount of westbound left turns were observed (max 2 vehicle queue).

2.2 Traffic Count Data

Manual turning movement counts were conducted on July 13, 2011 for the Hallandale Beach Boulevard/Golden Isles Drive and Hallandale Beach Boulevard/NE 26th Avenue intersections. The intersection of Golden Isles Drive at Diana Drive was conducted on July 28, 2011. The turning movement counts were performed from 7:00 to 9:00 AM and 4:00 to 6:00 PM. A summary of the turning movement counts are shown in Table 1. Raw traffic count data is included in **Appendix C**.

From reviewing the traffic count, it is noted that the northbound approach at the Hallandale Beach Boulevard/Golden Isles Drive intersection is heaviest during the PM peak period. Combined with heavier westbound right turn movements at the Golden Isles Drive/Diana Drive intersection resulted in longer queue lengths in the on the northbound approach at the Hallandale Beach Boulevard/Golden Isles Drive intersection during the PM peak period, as observed during the field observations.

As noted in the field observations, the northbound approach at the Hallandale Beach Boulevard/NE 26th Avenue intersection showed very little traffic, which resulted in little to no queuing.

Table 1 – Turning Movement Counts

Turning Movement Counts (AM Peak Hour)													
		EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBT	SBR	NBL	NBT	NBR
Hallandale Beach Blvd & Golden Isles Dr	Raw Counts	3	839	43	36	1072	14	11	4	2	95	14	37
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	4	1067	52	43	1286	17	13	5	2	114	17	44
Hallandale Beach Blvd & SE 26 Ave	Raw Counts	-	792	3	39	898	-	-	-	-	-	-	48
	Seasonal Factor	-	1.20	1.20	1.20	1.20	-	-	-	-	-	-	1.20
	Adjusted Existing Volumes	-	950	4	47	1072	-	-	-	-	-	-	58
Golden Isles Drive & Diana Drive	Raw Counts	-	-	-	40	-	41	6	53	-	-	105	56
	Seasonal Factor	-	-	-	1.20	-	1.20	1.20	1.20	-	-	1.20	1.20
	Adjusted Existing Volumes	-	-	-	48	-	49	7	64	-	-	126	67
Turning Movement Counts (PM Peak Hour)													
		EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBT	SBR	NBL	NBT	NBR
Hallandale Beach Blvd & Golden Isles Dr*	Raw Counts	2	1379	69	40	1220	42	44	11	7	108	15	43
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	2	1655	83	48	1464	50	53	13	8	130	18	54
Hallandale Beach Blvd & SE 26 Ave*	Raw Counts	0	1296	6	62	1170	0	0	0	0	0	0	43
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	0	1555	7	74	1404	0	0	0	0	0	0	52
Golden Isles Drive & Diana Drive***	Raw Counts	0	0	0	55	0	84	20	87	0	0	91	46
	Seasonal Factor	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
	Adjusted Existing Volumes	0	0	0	66	0	101	24	104	0	0	109	55

*- Committed development determined from existing traffic studies.

**- Raw data collected manually from 5PM to 6PM on 7/28/11, committed development determined from existing traffic studies.

***- See note **. There is a one-way westbound driveway, just north of Diana Drive between Golden Isles and 26 Avenue. To be conservative, right turns from this driveway were included included with the right turns on Diana Drive.

3.0 LEVEL OF SERVICE ANALYSIS

Existing and future intersection levels of service were determined for the AM and PM peak period conditions using Synchro (version 7.0) based on the procedures of the Highway Capacity Manual (HCM) at all intersections within the study area.

Level of Service (LOS) is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Six (6) LOS are defined for each type of facility that have HCM analysis procedures available. Letters designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions and the driver's perception of those conditions. Safety is not included in the measures that establish service levels.

As shown in the traffic data section, the collected turning movement counts were converted to average turning movement volumes by applying a peak season conversion factor (PSCF).

The peak season conversion factors were obtained from the 2010 Florida Traffic Information & Highway DVD.

The existing intersection level of service analysis shows that the intersections of Hallandale Beach Boulevard at Golden Isles Drive, Golden Isles Drive at Diana Drive and NE 26th Avenue at Hallandale Beach Boulevard currently operate within the Broward County acceptable level of service "D" range during both the AM and PM peak hours.

The future intersection level of service analysis performed for future (2015) conditions both with and without project traffic also show that showed that the intersections of Hallandale Beach Boulevard at Golden Isles Drive, Golden Isles Drive at Diana Drive and NE 26th Avenue at Hallandale Beach Boulevard currently operate within the Broward County acceptable level of service "D" range during both the AM and PM peak hours, with the exception of the Hallandale Beach Boulevard at Golden Isles Drive during the PM peak period.

Because of the fact that during the PM peak period the Hallandale Beach Boulevard/Golden Isles Drive intersection is failing in the future without the proposed project trips of the Beachwalk development, it can be assumed that the increase in delay and level of service is primarily attributed to other committed developments in the area.

However, operational improvements were examined at the Hallandale Beach Boulevard/Golden Isles Drive intersection to improve future intersection levels of service during the PM peak period. As a first step, signal operations were improved by optimization of the intersection green splits and improved coordination along Hallandale Beach Boulevard. This operational improvement showed reduced delay time the signalized intersection and even improved the level of service within the Broward County acceptable level of service "D" range.

The existing intersection and future levels of service analysis worksheets are summarized in Table 2 and included in **Appendix D**.

Table 2 – Level of Service Analysis

AM Peak Level Of Service Summary Table									
INTERSECTION		Existing		Future Background		Future Total Traffic with Project Trips		Future Total Traffic with Project Trips Optimized	
		2011		2015		2015		2015	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Hallandale Beach Boulevard	Golden Isles	36.7	D	37.8	D	38.8	D	32.4	C
	NE 26 Avenue		A		A		A		A
Diana Drive	Golden Isles	2.9	A	2.9	A	4.6	A	4.6	A
PM Peak Level Of Service Summary Table									
Hallandale Beach Boulevard	Golden Isles	42.7	D	104.3	F	113.6	F	36.8	D
	NE 26 Avenue		A		A		A		A
Diana Drive	Golden Isles	4.4	A	4.1	A	5.5	A	5.5	A

4.0 CONCLUSIONS AND RECOMMENDATIONS

From a review of field conditions, traffic operations, traffic count data and level of service analysis, for the most part there were very little traffic concerns observed at the study intersections of Hallandale Beach Boulevard at Golden Isles Drive, Golden Isles Drive at Diana Drive and NE 26th Avenue at Hallandale Beach Boulevard.

Based on field observations, it appears that during both the AM and PM peak periods that Hallandale Beach Boulevard has congestion which is primarily due to poor signal coordination. However, the queues dispersed quickly and did not impact the northbound or southbound movements along Golden Isles Drive.

The northbound approach on Hallandale Beach Boulevard at Golden Isles Drive showed the highest queues during the PM peak period. During this time, a maximum of 14 vehicles (7 vehicles in the left turn lane, 7 vehicles in the shared thru/left turn lane) were observed. These vehicles were accommodated within the existing storage, without impacting the Golden Isles Drive/Diana Drive intersection. In addition, during the maximum queue length no cycle failures were observed and all northbound vehicles were able to clear the intersection during the green phase.

Very little traffic was observed along Diana Drive and NE 26th Avenue during both the AM and PM peak periods. Occasionally a westbound right turning vehicle was observed at the Hallandale Beach Boulevard/NE 26th Avenue intersection, however there was no queue at most times during both the AM and PM peak periods.

The existing intersection level of service analysis shows that the intersections of Hallandale Beach Boulevard at Golden Isles Drive, Golden Isles Drive at Diana Drive and NE 26th

Avenue at Hallandale Beach Boulevard currently operate within the Broward County acceptable level of service "D" range during both the AM and PM peak hours.

However, the future intersection level of service analysis performed for future (2015) conditions both with and without project traffic also show that showed that the intersections of Hallandale Beach Boulevard at Golden Isles Drive, Golden Isles Drive at Diana Drive and NE 26th Avenue at Hallandale Beach Boulevard currently operate within the Broward County acceptable level of service "D" range during both the AM and PM peak hours, with the exception of the Hallandale Beach Boulevard at Golden Isles Drive during the PM peak period.

Because of the fact that during the PM peak period the Hallandale Beach Boulevard/Golden Isles Drive intersection is failing in the future without the proposed project trips of the Beachwalk development, it can be assumed that the increase in delay and level of service is primarily attributed to other committed developments in the area.

However, operational improvements were examined at the Hallandale Beach Boulevard/Golden Isles Drive intersection to improve future intersection levels of service during the PM peak period. As a first step, signal operations were improved by optimization of the intersection green splits and improved coordination along Hallandale Beach Boulevard. This operational improvement showed reduced delay time the signalized intersection and even improved the level of service within the Broward County acceptable level of service "D" range.

Based on the result of this study, the only recommendations that are suggested for the Hallandale Beach Boulevard at Golden Isles Drive, Golden Isles Drive at Diana Drive and NE 26th Avenue at Hallandale Beach Boulevard intersections is to coordinate with Broward County Traffic Engineering Division to suggest identified signal timing improvements along Hallandale Beach Boulevard and at the Hallandale Beach Boulevard at Golden Isles Drive intersection at completion of the proposed Beachwalk development.

Prepared By:

James E. Spinks III, PE, PTOE
Registered Florida Professional Engineer Number 66775

Date: 10-11-2011

APPENDIX A –

Field Observation Reports

FIELD OBSERVATION REPORT

Location Hallandale Beach Blvd / Golden Isles Dr. / Diana Dr / Golden Isles NE 26 Ave / Date 10/6/11

Observer J. Spinks / L. Carmazzolo Time 7-9 AM 4-6 PM

PART I - PHYSICAL CHECKLIST

	No	Yes	Comments
1. Are there sight distance obstructions to:			
a. Traffic control devices?	✓		
b. Intersections and driveways?	✓		
c. Turning or oncoming vehicles?	✓		
2. Does parking affect:			
a. Sight distance?	✓		
b. Through or turning vehicle paths?	✓		
3. Is horizontal alignment inadequate?	✓		
4. Is vertical alignment inadequate?	✓		
5. Is pavement width or the number of lanes inadequate?	✓		
6. Are intersection or driveway radii too short?	✓		
7. Are there problems with driveways such as:			
a. Inadequate design?	✓		
b. Location near major intersection?		✓	Service drive next to Diana Drive
c. Too many driveways?	✓		
8. Is channelization inadequate for:			
a. Reducing conflict points?	✓		
b. Separating traffic flows or defining movements?	✓		
9. Should pedestrian crosswalks be:			
a. Added?	✓		No x-walk on north/east leg
b. Relocated or repainted?		✓	
10. Are there problems with traffic signs such as:			
a. Inadequate or improper message?	✓		
b. Too many signs?	✓		
c. Placement or size?	✓		
11. Are there problems with traffic signals such as:			
a. Timing?		✓	Timing improvements needed on Hallandale Beach Blvd.
b. Number of signal heads?	✓		
c. Placement or size?	✓		
12. Are there problems with pavement markings such as:			
a. Vehicle paths not clearly marked?	✓		
b. Location of the markings?	✓		
13. Do posted speed limits appear to be too high or too low for conditions?	✓		
14. Does the pavement condition (potholes, irregular surface, etc.) appear to contribute to safety problems?	✓		
15. Is roadway lighting inadequate?	✓		No night review
16. Are there tire skid marks on the pavement?	✓		
17. Is there evidence of vehicle accidents such as scar marks on trees, utility poles, embankments, or other objects?	✓		
18. Is there an abundance of vehicle accident debris such as small pieces of crushed glass, plastic, etc., along the shoulder or in the median area?	✓		

Figure 7. Field review checklists.

FIELD OBSERVATION REPORT (CONTINUED)

PART II - OPERATIONAL CHECKLIST

	No	Yes	Comments
1. Do obstructions block the driver's view of opposing or conflicting vehicles?	✓		
2. Do drivers have trouble finding the correct path through the location?	✓		
3. Is there any indication of driver confusion about routes, street names, or other guidance information?	✓		
4. Do steep grades create large speed differences?	✓		
5. Are pavement surface conditions creating erratic driver movements?	✓		
6. Does the presence of existing driveways contribute to erratic driver movements?	✓		
7. Is excessive vehicle delay creating unsafe risk taking by motorists?	✓		
8. Are there large speed differences between vehicles:			
a. Traveling through the location?	✓		
b. Turning at driveways or intersections?	✓		
9. Do drivers respond incorrectly to:			
a. Signals?		✓	AT TIMES E/W VEHICLE BLOCK INTERSECTION
b. Signs or other traffic control devices?	✓		
c. Turning lanes?	✓		
10. Are problems being caused by the volume of:			
a. Through traffic?	✓		
b. Turning traffic?	✓		
11. Do pedestrian movements create conflicts?	✓		
12. Do bicycle movements create conflicts?	✓		
13. Is there considerable weaving or lane changing by drivers at the location?	✓		
14. Are there violations of parking at the location?	✓		
15. Are there violations of other traffic control devices or regulations such as:			
a. Running red light?	✓		
b. Failing to stop or yield the right-of-way?	✓		
c. Speed limits?	✓		
d. Right-turn-on-red?	✓		
e. Other?	✓		
16. Are there traffic flow problems or traffic conflict patterns associated with turning vehicles?	✓		
17. Are there any other unusual traffic flow problems or traffic conflict patterns?	✓		
18. Does inadequate lighting cause drivers to slow down or create erratic maneuvers?	✓		NO NIGHT REVIEW.

Figure 7. Field review checklists (Continued).

FIELD OBSERVATION REPORT (CONTINUED)

PART III - SKETCH OF LOCATION

Instructions: In the space below, draw a free hand sketch of the location and identify areas with considerable vehicle accident debris and mark the paths of any obvious high-risk movements.

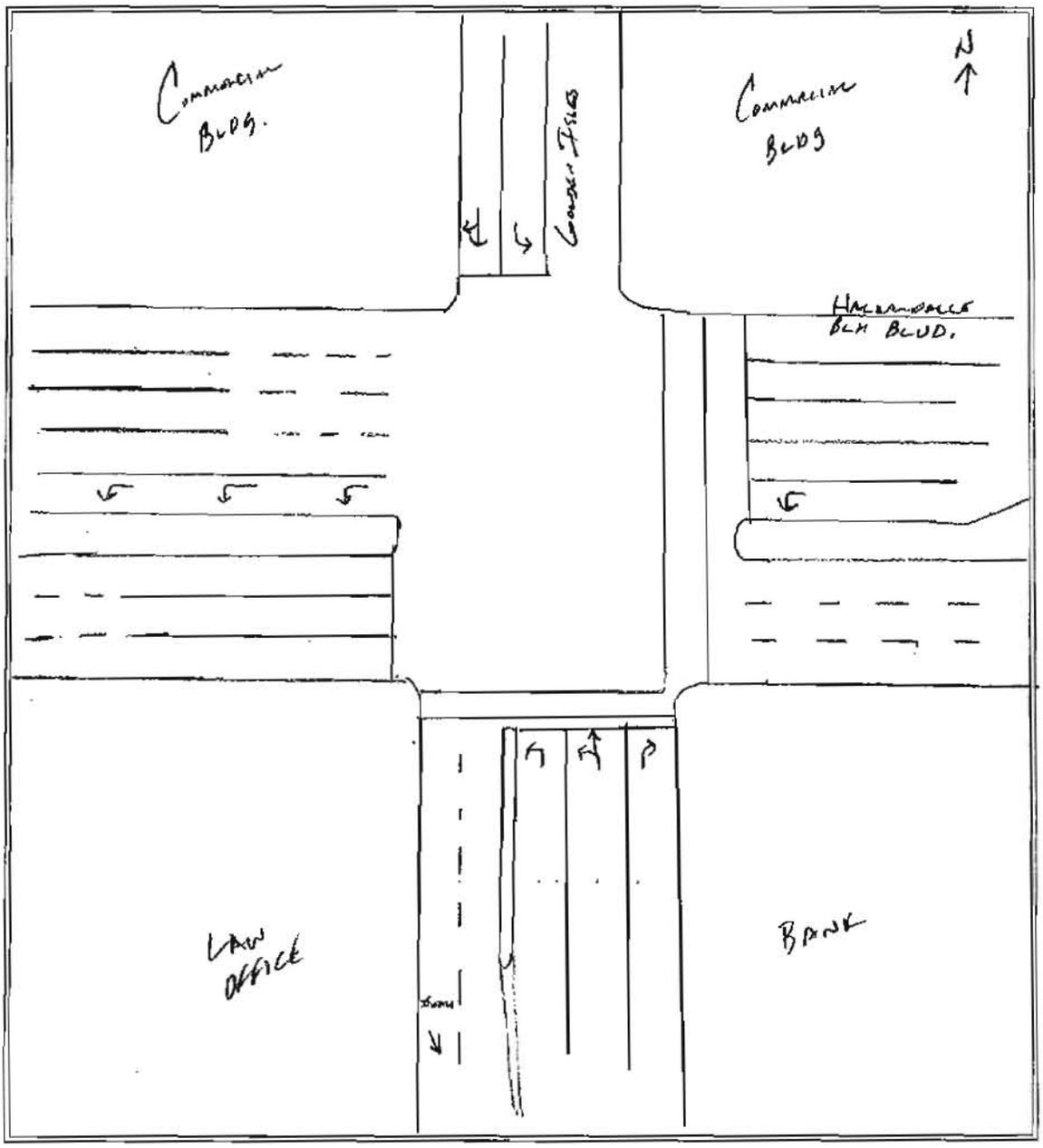

Figure 7. Field review checklists (Continued).

FIELD OBSERVATION REPORT (CONTINUED)

PART III - SKETCH OF LOCATION

Instructions: In the space below, draw a free hand sketch of the location and identify areas with considerable vehicle accident debris and mark the paths of any obvious high-risk movements.

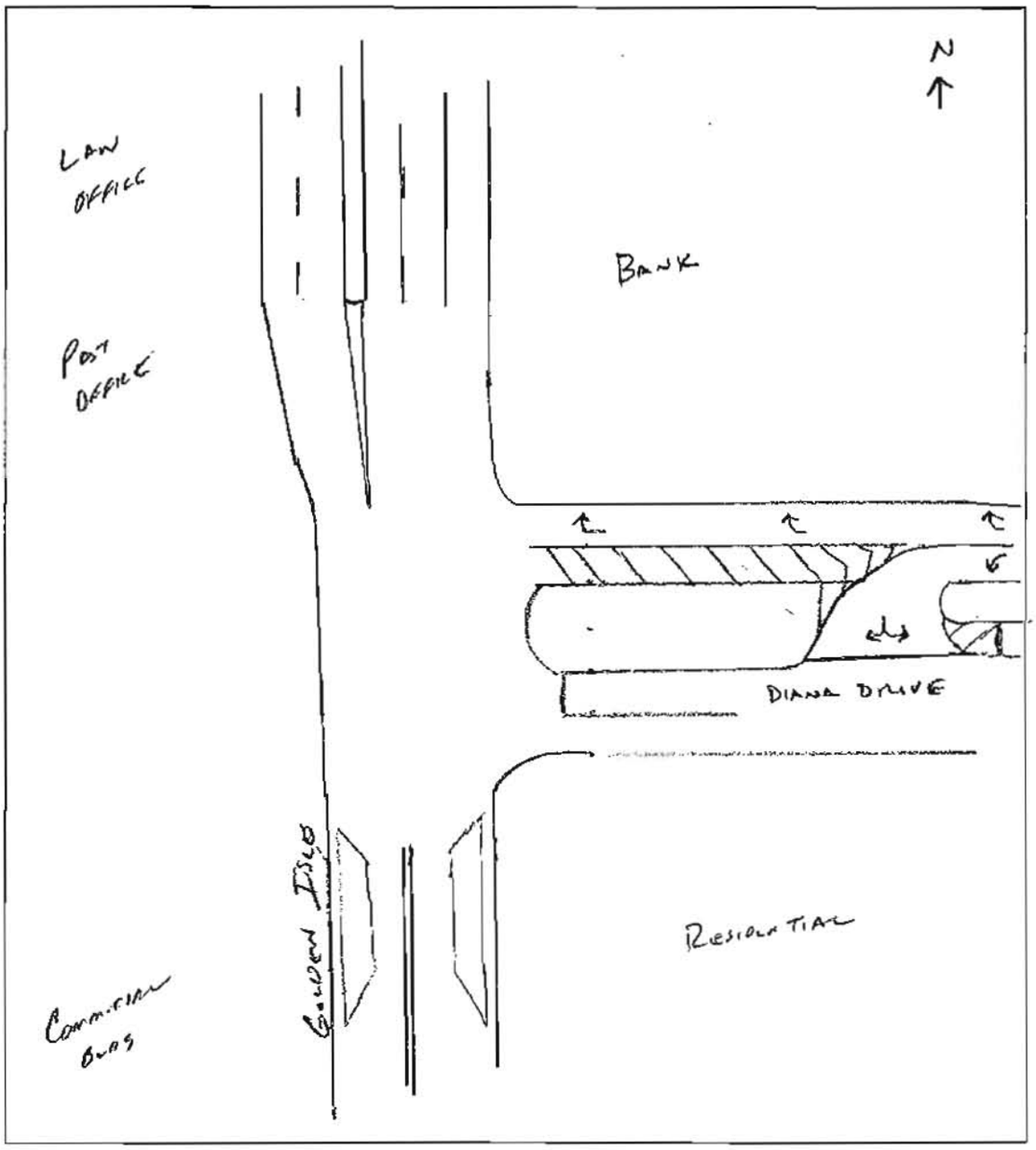

Figure 7. Field review checklists (Continued).

FIELD OBSERVATION REPORT (CONTINUED)

PART III - SKETCH OF LOCATION

Instructions: In the space below, draw a free hand sketch of the location and identify areas with considerable vehicle accident debris and mark the paths of any obvious high-risk movements.

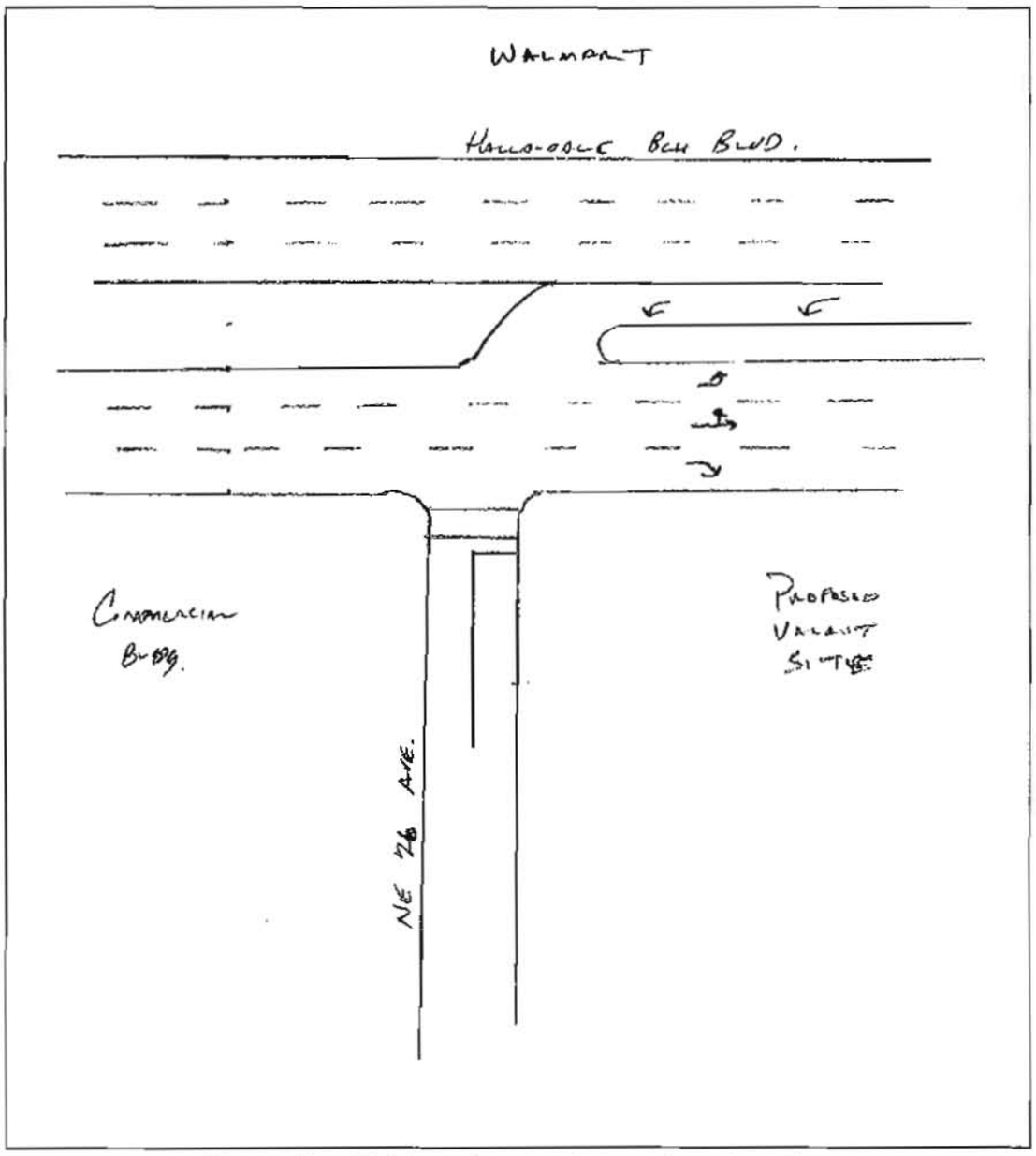

Figure 7. Field review checklists (Continued).

APPENDIX B –

Project Photographs

PHOTO 1

View of Northbound approach at Hallandale Beach Boulevard/Golden Isles Drive – 8 vehicles queued – AM PEAK

PHOTO 2

View of Northbound approach at Hallandale Beach Boulevard/Golden Isles Drive – No cycle failures– AM PEAK

PHOTO 3

View of westbound approach at Golden Isles Drive/Diana Drive intersection – 1 vehicle queued – AM PEAK

PHOTO 4

View of northbound approach at Hallandale Bch Blvd/NE 26th Avenue intersection – 1 vehicle queued – AM PEAK

PHOTO 5

Eastbound on Hallandale Bch Blvd, just west of Golden Isles Drive – Notice the queue nearly back to Layne Blvd due lack of proper signal timing coordination – AM PEAK

PHOTO 6

WB on Hallandale Beach Blvd, just east of Golden Isles Drive – Notice the queue backed up from Layne Boulevard into the Golden Isles Intersection – AM PEAK

PHOTO 7

View of Northbound approach at Hallandale Beach Boulevard/Golden Isles Drive – 7 vehicle queue in left turn lane – PM PEAK

PHOTO 8

View of Northbound approach at Hallandale Beach Boulevard/Golden Isles Drive – Last vehicle of 7 vehicle queue in left turn lane clears on yellow indication – PM PEAK

PHOTO 9

Eastbound on Hallandale Bch Blvd, just west of Layne Boulevard– Notice the queue back into the Layne Blvd intersection due lack of proper signal timing coordination – PM PEAK

PHOTO 10

View of Northbound approach at Hallandale Beach Boulevard/Golden Isles Drive – Notice WB vehicles queued which quickly disperse to allow NB vehicles to clear with no cycle failures– PM PEAK

APPENDIX C –

Traffic Data

KMF Traffic Group, LLC
www.kmftraffic.com
Stuart, FL(772-221-7971

Manual Turning Movement - All Traffic
Hallandale Beach Blvd & Golden Isles Dr
Hallandale Beach, FL
Locatin counted: July 13, 2011

File Name : HAL-GOLD
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 1

Groups Printed- All Traffic

	Golden Isles Dr SB			Hallandale Beach Blvd WB			Golden Isles Dr NB			Hallandale Beach Blvd EB			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00 AM	4	0	0	5	212	1	4	2	13	1	113	0	355
07:15 AM	1	0	3	6	180	0	4	0	19	10	162	0	385
07:30 AM	6	0	2	2	239	4	6	4	20	4	204	0	491
07:45 AM	3	0	2	4	228	5	9	2	16	7	183	0	459
Total	14	0	7	17	859	10	23	8	68	22	662	0	1690
08:00 AM	0	1	4	2	266	5	13	2	26	10	189	0	518
08:15 AM	2	0	1	4	278	6	4	6	23	7	224	0	555
08:30 AM	0	2	1	6	245	9	7	2	27	10	190	0	499
08:45 AM	0	1	5	2	283	16	13	4	19	16	286	3	648
Total	2	4	11	14	1072	36	37	14	95	43	889	3	2220
*** BREAK ***													
04:00 PM	0	2	14	11	361	12	11	3	39	21	336	0	810
04:15 PM	2	4	9	7	350	16	9	7	31	21	317	1	774
04:30 PM	4	5	11	2	276	12	12	5	45	8	262	0	642
04:45 PM	3	2	9	11	293	22	14	3	36	23	326	0	742
Total	9	13	43	31	1280	62	46	18	151	73	1241	1	2968
05:00 PM	2	3	9	7	277	9	14	6	44	3	305	1	680
05:15 PM	1	1	12	12	366	13	8	3	21	22	341	0	800
05:30 PM	3	4	5	11	318	7	15	1	26	13	375	1	779
05:45 PM	1	3	18	12	259	11	8	5	17	31	358	0	723
Total	7	11	44	42	1220	40	45	15	108	69	1379	2	2982
Grand Total	32	28	105	104	4431	148	151	55	422	207	4171	6	9860
Apprch %	19.4	17	63.6	2.2	94.6	3.2	24	8.8	67.2	4.7	95.1	0.1	
Total %	0.3	0.3	1.1	1.1	44.9	1.5	1.5	0.6	4.3	2.1	42.3	0.1	

KMF Traffic Group, LLC
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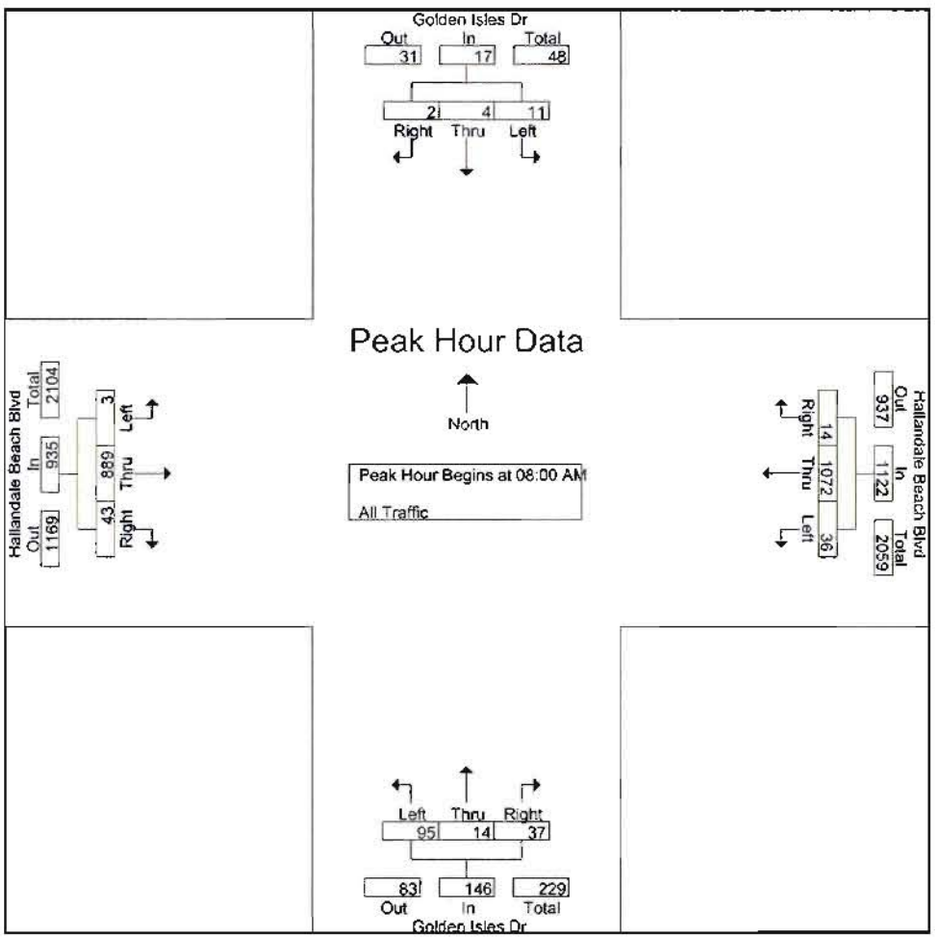
Stuart, FL(772-221-7971

Manual Turning Movement - All Traffic
Hallandale Beach Blvd & Golden Isles Dr
Hallandale Beach, FL
Locatin counted: July 13, 2011

File Name : HAL-GOLD
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 2

	Golden Isles Dr SB				Hallandale Beach Blvd WB				Golden Isles Dr NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	1	4	5	2	266	5	273	13	2	26	41	10	189	0	199	518
08:15 AM	2	0	1	3	4	278	6	288	4	6	23	33	7	224	0	231	555
08:30 AM	0	2	1	3	6	245	9	260	7	2	27	36	10	190	0	200	499
08:45 AM	0	1	5	6	2	283	16	301	13	4	19	36	16	286	3	305	648
Total Volume	2	4	11	17	14	1072	36	1122	37	14	95	146	43	889	3	935	2220
% App. Total	11.8	23.5	64.7		1.2	95.5	3.2		25.3	9.6	65.1		4.6	95.1	0.3		
PHF	.250	.500	.550	.708	.583	.947	.563	.932	.712	.583	.880	.890	.672	.777	.250	.766	.856



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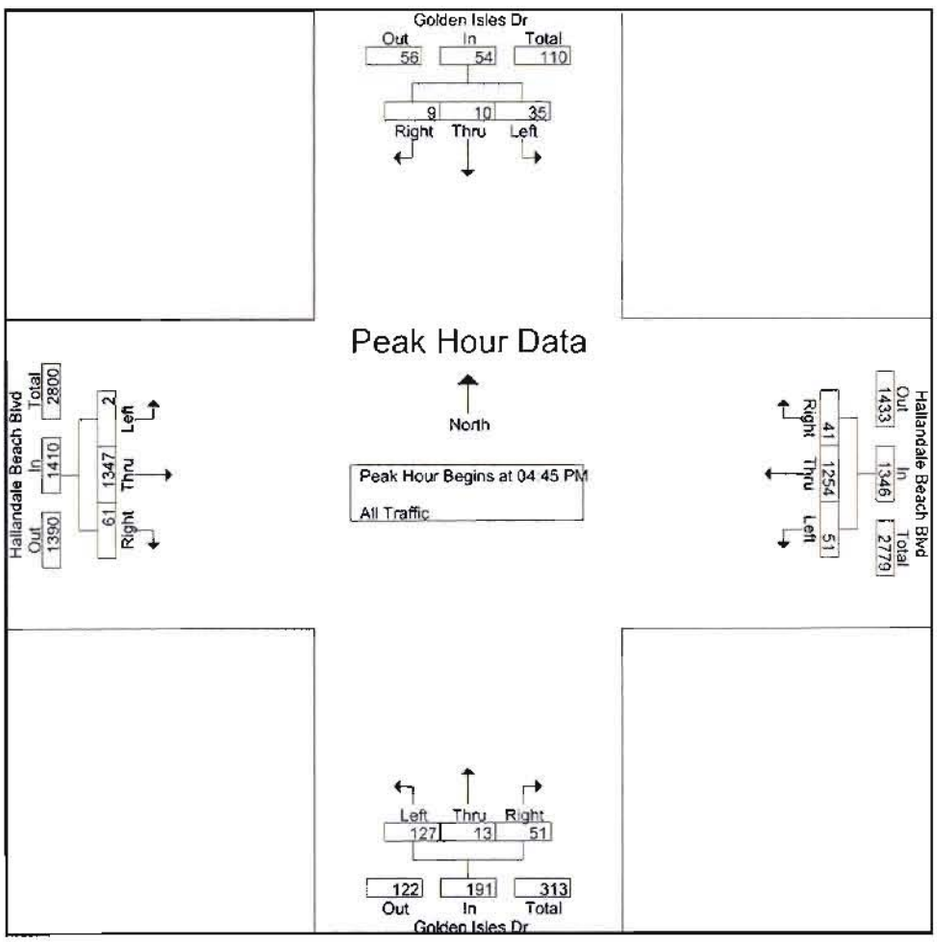
Manual Turning Movement - All Traffic
Hallandale Beach Blvd & Golden Isles Dr
Hallandale Beach, FL
Locatin counted: July 13, 2011

File Name : HAL-GOLD
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 3

	Golden Isles Dr SB				Hallandale Beach Blvd WB				Golden Isles Dr NB				Hallandale Beach Blvd EB				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	3	2	9	14	11	293	22	326	14	3	36	53	23	326	0	349	742
05:00 PM	2	3	9	14	7	277	9	293	14	6	44	64	3	305	1	309	680
05:15 PM	1	1	12	14	12	366	13	391	8	3	21	32	22	341	0	363	800
05:30 PM	3	4	5	12	11	318	7	336	15	1	26	42	13	375	1	389	779
Total Volume	9	10	35	54	41	1254	51	1346	51	13	127	191	61	1347	2	1410	3001
% App. Total	16.7	18.5	64.8		3	93.2	3.8		26.7	6.8	66.5		4.3	95.5	0.1		
PHF	.750	.625	.729	.964	.854	.857	.580	.861	.850	.542	.722	.746	.663	.898	.500	.906	.938



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Turning Movement - All Traffic
Hallandale Beach Blvd & SE 26 Ave
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-26
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 1

Groups Printed- All Traffic

	Hallandale Beach Blvd WB		SE 26 Ave NB	Hallandale Beach Blvd EB		
Start Time	Thru	Left	Right	Right	Thru	Int. Total
07:00 AM	163	5	6	2	97	273
07:15 AM	132	5	8	1	144	290
07:30 AM	179	7	10	1	185	382
07:45 AM	190	6	10	0	175	381
Total	664	23	34	4	601	1326
08:00 AM	215	8	13	0	188	424
08:15 AM	198	9	13	1	179	400
08:30 AM	233	9	12	1	182	437
08:45 AM	247	13	10	1	243	514
Total	893	39	48	3	792	1775
*** BREAK ***						
04:00 PM	313	13	3	1	277	607
04:15 PM	283	12	8	1	256	560
04:30 PM	325	10	6	0	270	611
04:45 PM	225	14	7	4	285	535
Total	1146	49	24	6	1088	2313
05:00 PM	288	13	11	2	301	615
05:15 PM	333	14	13	0	317	677
05:30 PM	298	21	6	3	358	686
05:45 PM	251	14	13	1	320	599
Total	1170	62	43	6	1296	2577
Grand Total	3873	173	149	19	3777	7991
Apprch %	95.7	4.3	100	0.5	99.5	
Total %	48.5	2.2	1.9	0.2	47.3	

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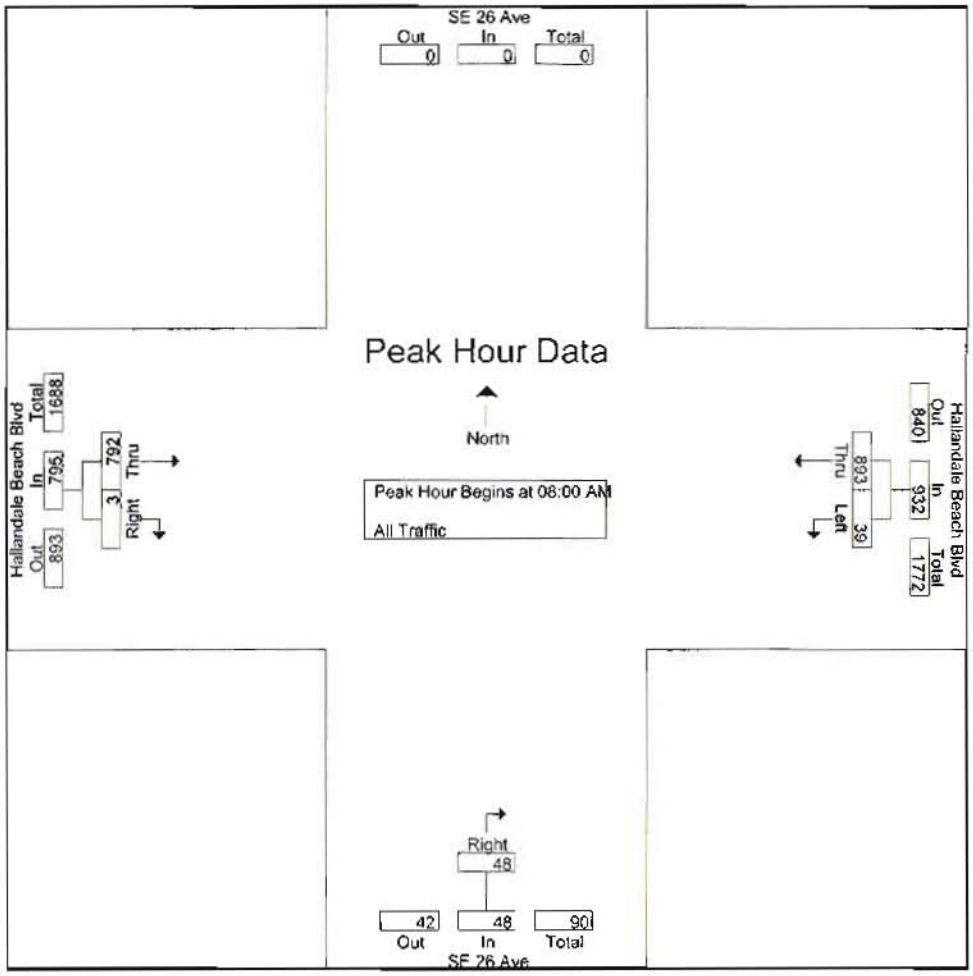
Turning Movement - All Traffic
Hallandale Beach Blvd & SE 26 Ave
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-26
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 2

	Hallandale Beach Blvd WB			SE 26 Ave NB		Hallandale Beach Blvd EB			
Start Time	Thru	Left	App. Total	Right	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 08:00 AM									
08:00 AM	215	8	223	13	13	0	188	188	424
08:15 AM	198	9	207	13	13	1	179	180	400
08:30 AM	233	9	242	12	12	1	182	183	437
08:45 AM	247	13	260	10	10	1	243	244	514
Total Volume	893	39	932	48	48	3	792	795	1775
% App. Total	95.8	4.2		100		0.4	99.6		
PHF	.904	.750	.896	.923	.923	.750	.815	.815	.863



KMF Traffic Group, LLC
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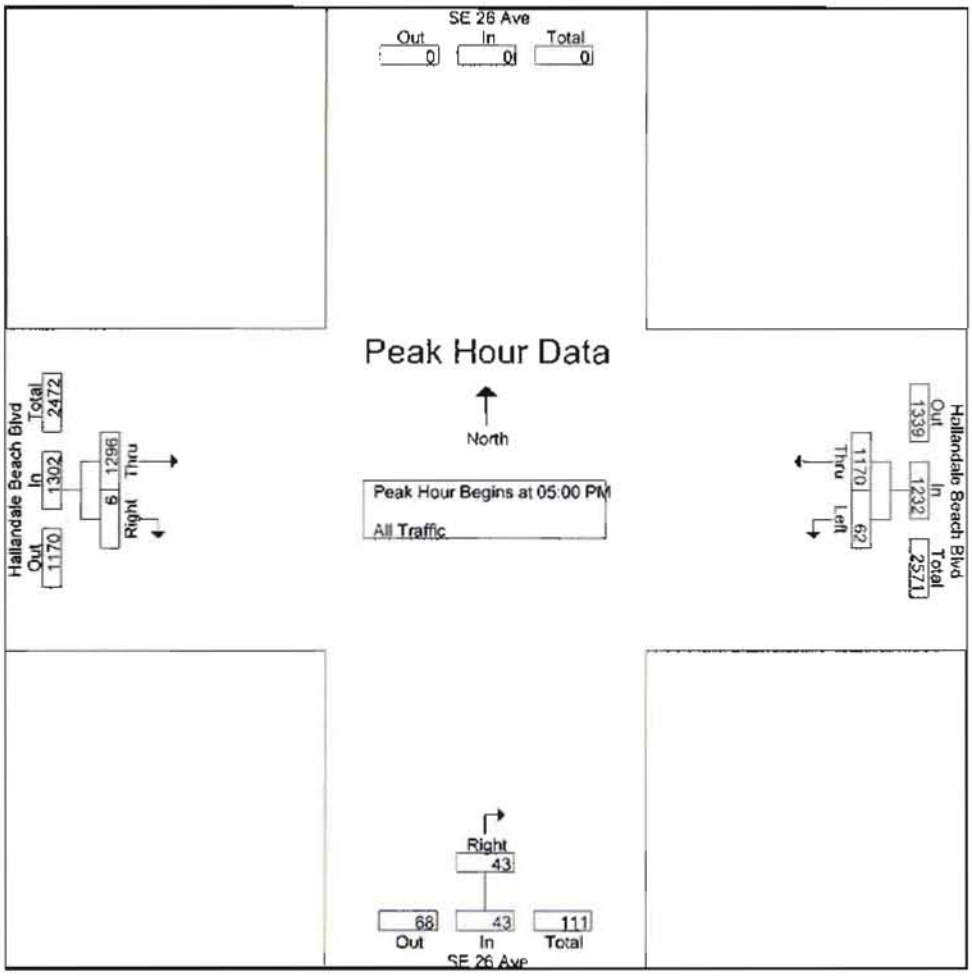
Stuart, FL(772-221-7971

Turning Movement - All Traffic
Hallandale Beach Blvd & SE 26 Ave
Hallandale Beach, FL
Location counted: July 14, 2011

File Name : HAL-26
Site Code : CGA11505
Start Date : 7/13/2011
Page No : 3

	Hallandale Beach Blvd WB			SE 26 Ave NB		Hallandale Beach Blvd EB			
Start Time	Thru	Left	App. Total	Right	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1									
Peak Hour for Entire Intersection Begins at 05:00 PM									
05:00 PM	288	13	301	11	11	2	301	303	615
05:15 PM	333	14	347	13	13	0	317	317	677
05:30 PM	298	21	319	6	6	3	358	361	686
05:45 PM	251	14	265	13	13	1	320	321	599
Total Volume	1170	62	1232	43	43	6	1296	1302	2577
% App. Total	95	5		100		0.5	99.5		
PHF	.878	.738	.888	.827	.827	.500	.905	.902	.939



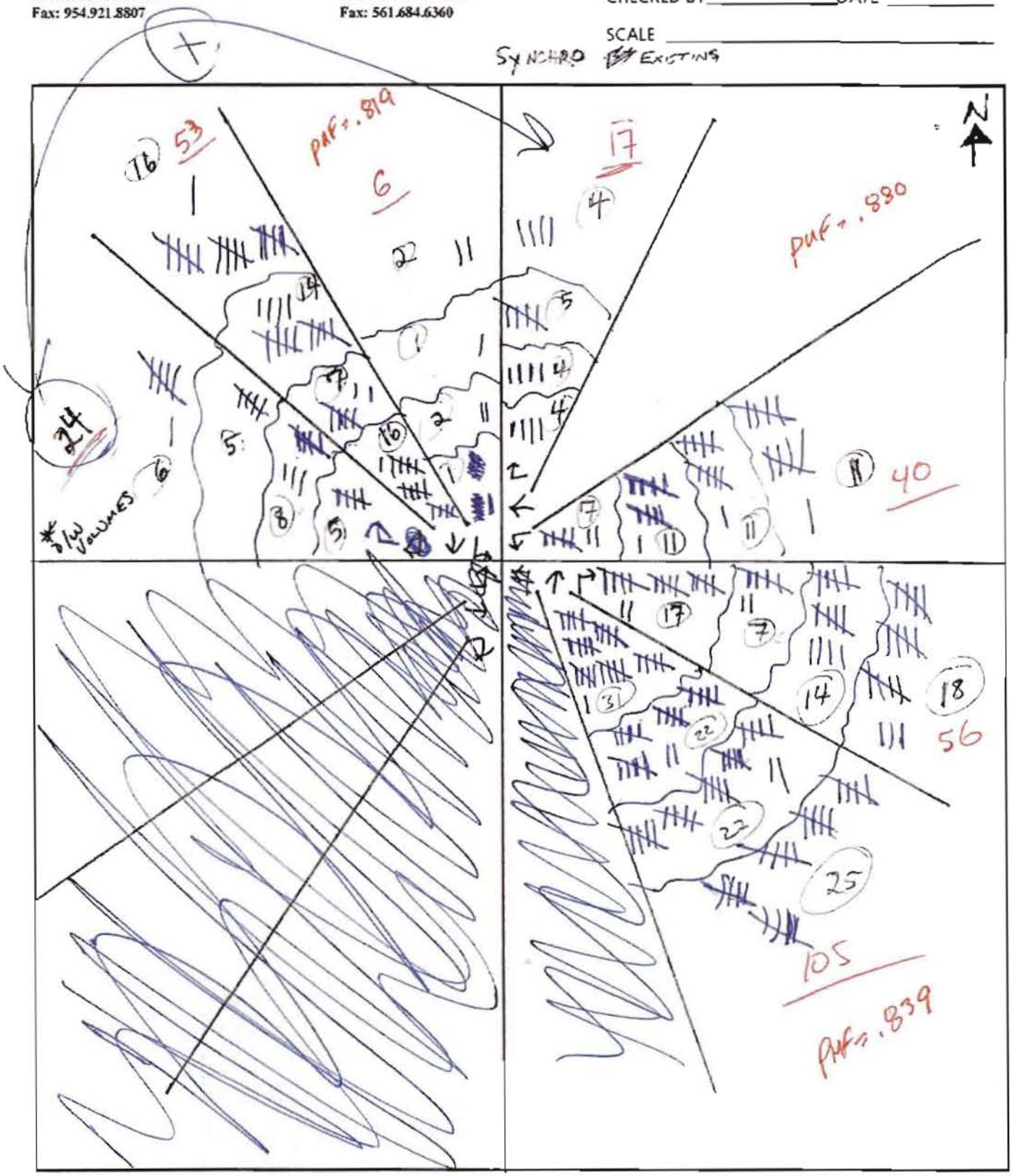
Calvin, Giordano & Associates, Inc.
EXCEPTIONAL SOLUTIONS

1800 Eller Drive, Suite 600
Fort Lauderdale, Florida 33316
Phone: 954.921.7781
Fax: 954.921.8807

560 Village Boulevard, Suite 340
West Palm Beach, Florida 33409
Phone: 561.684.6161
Fax: 561.684.6360

JOB DIANA / GOLDEN ISLES
SHEET NO. AM OF 8AM - 9PM
CALCULATED BY _____ DATE 7/28/11
CHECKED BY _____ DATE _____
SCALE _____

SYNCHRO ~~EX~~ EXISTING



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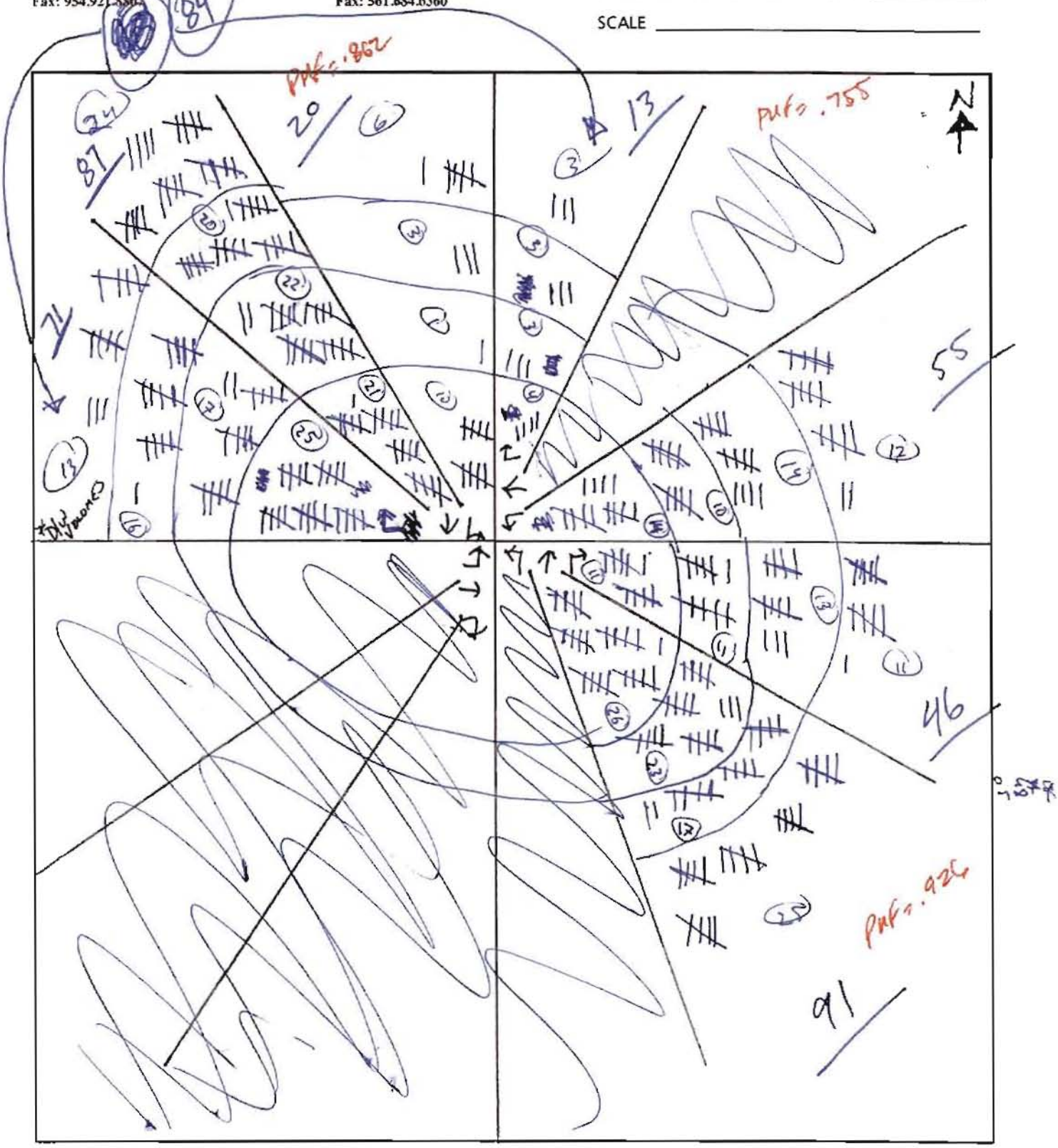
Fort Lauderdale, Florida 33316
Phone: 954.921.7781
Fax: 954.921.8807

560 Village Boulevard, Suite 340
West Palm Beach, Florida 33409
Phone: 561.684.6161
Fax: 561.684.6360

JOB GOLDEN ISLES / DIANA DR.
SHEET NO. PM OF 5
CALCULATED BY SPM - LPM DATE 7/28/11
CHECKED BY _____ DATE _____
SCALE _____



APPENDIX D –

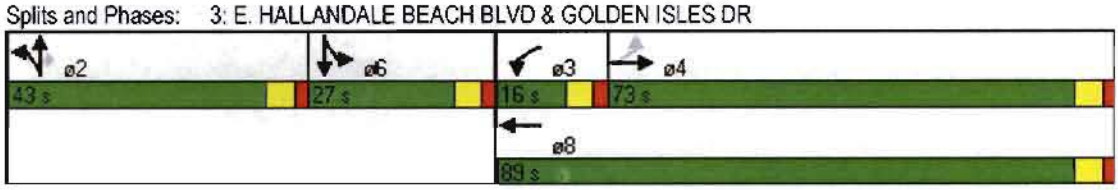
Level of Service Analysis Output Sheets

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	4	1067	43	1286	114	17	44	5
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	73.0	73.0	16.0	89.0	43.0	43.0	43.0	27.0
Total Split (%)	45.9%	45.9%	10.1%	56.0%	27.0%	27.0%	27.0%	17.0%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		56.0	8.5	67.6	37.5	37.5	37.5	21.3
Actuated g/C Ratio		0.39	0.06	0.47	0.26	0.26	0.26	0.15
v/c Ratio		0.80	0.44	0.59	0.17	0.17	0.11	0.06
Control Delay		42.9	83.6	28.6	47.2	47.2	12.7	54.0
Queue Delay		19.9	0.0	0.7	0.0	0.0	0.0	0.0
Total Delay		62.7	83.6	29.3	47.2	47.2	12.7	54.0
LOS		E	F	C	D	D	B	D
Approach Delay		62.7		31.1		38.6		54.0
Approach LOS		E		C		D		D

Intersection Summary

Cycle Length: 159
Actuated Cycle Length: 144.6
Natural Cycle: 80
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 46.5 — Intersection LOS: D
Intersection Capacity Utilization 56.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1067	52	43	1286	17	114	17	44	13	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5049		1770	5075		1681	1706	1583		3374	
Flt Permitted		0.93		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4711		1770	5075		1681	1706	1583		3374	
Peak-hour factor, PHF	0.77	0.77	0.77	0.93	0.93	0.93	0.89	0.89	0.89	0.71	0.71	0.71
Adj. Flow (vph)	5	1386	68	46	1383	18	128	19	49	18	7	3
RTOR Reduction (vph)	0	4	0	0	1	0	0	0	36	0	3	0
Lane Group Flow (vph)	0	1455	0	46	1400	0	73	74	13	0	25	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		56.0		7.0	69.0		37.5	37.5	37.5		21.3	
Effective Green, g (s)		56.0		7.0	69.0		37.5	37.5	37.5		21.3	
Actuated g/C Ratio		0.38		0.05	0.47		0.26	0.26	0.26		0.15	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1809		85	2402		432	439	407		493	
v/s Ratio Prot				0.03	c0.28		c0.04	0.04			c0.01	
v/s Ratio Perm		c0.31							0.01			
v/c Ratio		0.80		0.54	0.58		0.17	0.17	0.03		0.05	
Uniform Delay, d1		40.0		67.8	27.9		42.1	42.0	40.5		53.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		2.7		6.9	0.4		0.8	0.8	0.1		0.2	
Delay (s)		42.7		74.7	28.3		42.9	42.9	40.7		53.8	
Level of Service		D		E	C		D	D	D		D	
Approach Delay (s)		42.7			29.8			42.3			53.8	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	36.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	145.8	Sum of lost time (s)	24.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	48	49	126	67	7	64
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	53	137	73	8	70
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	258	173			210	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	258	173			210	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	93	94			99	
cM capacity (veh/h)	727	870			1361	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	105	210	77
Volume Left	52	0	8
Volume Right	53	73	0
cSH	793	1700	1361
Volume to Capacity	0.13	0.12	0.01
Queue Length 95th (ft)	11	0	0
Control Delay (s)	10.2	0.0	0.8
Lane LOS	B		A
Approach Delay (s)	10.2	0.0	0.8
Approach LOS	B		

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	AM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Existing AM

Project Description: Beachwalk

East/West Street: Hallandale Beach Blvd | North/South Street: 26 Avenue

Intersection Orientation: East-West | Study Period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		950	4	47	1072	
Peak-Hour Factor, PHF	1.00	0.82	0.82	0.90	0.90	1.00
Hourly Flow Rate, HFR (veh/h)	0	1158	4	52	1191	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			58			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	63	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		52			63			
C (m) (veh/h)		597			463			
v/c		0.09			0.14			
95% queue length		0.29			0.47			
Control Delay (s/veh)		11.6			14.0			
LOS		B			B			
Approach Delay (s/veh)	--	--	14.0					
Approach LOS	--	--	B					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	950	4	47	1072	0	0	58	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	954	0	47	1072	0	0	58	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	1.00	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5172	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	22.1	0.0	3.1	24.9		0.0	4.3		0.0
Adj Reference Time (s)	26.1	0.0	8.0	28.9		0.0	8.3		0.0
Permitted Option									
Adj Saturation A (vph)	1724		120	1725	0			0	
Reference Time A (s)	22.1		46.9	24.9	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	22.1			46.9					
Adj Reference Time (s)	26.1			50.9					
Split Option									
Ref Time Combined (s)	22.1		3.1	24.9	0.0			0.0	
Ref Time Seperate (s)	22.0		3.1	24.9	0.0			0.0	
Reference Time (s)	22.1		24.9	24.9	0.0			0.0	
Adj Reference Time (s)	26.1		28.9	28.9	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	34.1	NA	NA	
Permitted Option (s)	50.9	Err	Err	
Split Option (s)	55.0	0.0	0.0	
Minimum (s)	34.1	0.0	0.0	34.1

Right Turns	NBR2
Adj Reference Time (s)	8.3
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	26.1
Combined (s)	34.4

Intersection Summary			
Intersection Capacity Utilization	28.7%	ICU Level of Service	A

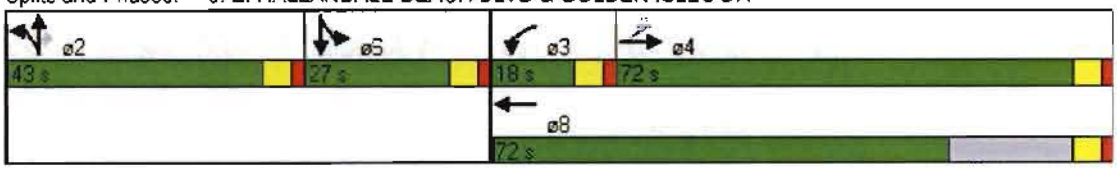
Reference Times and Phasing Options do not represent an optimized timing plan.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	2	1655	48	1464	130	18	54	13
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	72.0	72.0	18.0	72.0	43.0	43.0	43.0	27.0
Total Split (%)	45.0%	45.0%	11.3%	45.0%	26.9%	26.9%	26.9%	16.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		66.1	9.8	79.3	37.1	37.1	37.1	21.0
Actuated g/C Ratio		0.43	0.06	0.51	0.24	0.24	0.24	0.14
v/c Ratio		0.95	0.50	0.68	0.25	0.24	0.17	0.17
Control Delay		54.2	87.0	29.9	51.3	51.1	10.8	57.2
Queue Delay		221.5	0.0	28.6	0.0	0.0	0.0	0.0
Total Delay		275.6	87.0	58.6	51.3	51.1	10.8	57.2
LOS		F	F	E	D	D	B	E
Approach Delay		275.6		59.4		40.4		57.2
Approach LOS		F		E		D		E

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 155.4
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.95
Intersection Signal Delay: 159.6 — Intersection LOS: F
Intersection Capacity Utilization 60.6% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	1655	83	48	1464	50	130	18	54	53	13	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.98	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5049		1770	5060		1681	1705	1583		3364	
Flt Permitted		0.94		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4735		1770	5060		1681	1705	1583		3364	
Peak-hour factor, PHF	0.91	0.91	0.91	0.86	0.86	0.86	0.75	0.75	0.75	0.96	0.96	0.96
Adj. Flow (vph)	2	1819	91	56	1702	58	173	24	72	55	14	8
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	55	0	5	0
Lane Group Flow (vph)	0	1909	0	56	1758	0	99	98	17	0	72	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		66.1		8.4	80.5		37.1	37.1	37.1		21.0	
Effective Green, g (s)		66.1		8.4	80.5		37.1	37.1	37.1		21.0	
Actuated g/C Ratio		0.42		0.05	0.51		0.24	0.24	0.24		0.13	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1999		95	2601		398	404	375		451	
v/s Ratio Prot				0.03	c0.35		c0.06	0.06			c0.02	
v/s Ratio Perm		c0.40							0.01			
v/c Ratio		0.95		0.59	0.68		0.25	0.24	0.05		0.16	
Uniform Delay, d1		43.8		72.4	28.3		48.4	48.4	46.1		60.0	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		11.3		9.0	0.7		1.5	1.4	0.2		0.8	
Delay (s)		55.1		81.4	29.0		49.9	49.8	46.3		60.7	
Level of Service		E		F	C		D	D	D		E	
Approach Delay (s)		55.1			30.7			48.9			60.7	
Approach LOS		E			C			D			E	

Intersection Summary			
HCM Average Control Delay	43.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	156.6	Sum of lost time (s)	24.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	66	101	109	55	24	104
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.76	0.76	0.92	0.92	0.86	0.86
Hourly flow rate (vph)	87	133	118	60	28	121
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	325	148			178	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	325	148			178	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	87	85			98	
cM capacity (veh/h)	656	898			1398	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	220	178	149
Volume Left	87	0	28
Volume Right	133	60	0
cSH	784	1700	1398
Volume to Capacity	0.28	0.10	0.02
Queue Length 95th (ft)	29	0	2
Control Delay (s)	11.4	0.0	1.6
Lane LOS	B		A
Approach Delay (s)	11.4	0.0	1.6
Approach LOS	B		

Intersection Summary			
Average Delay	5.0		
Intersection Capacity Utilization	35.8%	ICU Level of Service	A
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	PM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Existing PM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1555	7	74	1404	
Peak-Hour Factor, PHF	1.00	0.90	0.90	0.89	0.89	1.00
Hourly Flow Rate, HFR (veh/h)	0	1727	7	83	1577	0
Percent Heavy Vehicles	0	–	–	2	–	–
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			52			
Peak-Hour Factor, PHF	1.00	1.00	0.83	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	62	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		83			62			
C (m) (veh/h)		359			301			
v/c		0.23			0.21			
95% queue length		0.90			0.77			
Control Delay (s/veh)		18.0			20.1			
LOS		C			C			
Approach Delay (s/veh)	–	–	20.1					
Approach LOS	–	–	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1555	7	74	1404	0	0	52	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1562	0	74	1404	0	0	52	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	1.00	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5172	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	36.2	0.0	4.9	32.6		0.0	3.9		0.0
Adj Reference Time (s)	40.2	0.0	8.9	36.6		0.0	8.0		0.0
Permitted Option									
Adj Saturation A (vph)	1724		120	1725	0			0	
Reference Time A (s)	36.2		73.8	32.6	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	36.2			73.8					
Adj Reference Time (s)	40.2			77.8					
Split Option									
Ref Time Combined (s)	36.2		4.9	32.6	0.0			0.0	
Ref Time Seperate (s)	36.1		4.9	32.6	0.0			0.0	
Reference Time (s)	36.2		32.6	32.6	0.0			0.0	
Adj Reference Time (s)	40.2		36.6	36.6	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	49.2	NA	NA	
Permitted Option (s)	77.8	Err	Err	
Split Option (s)	76.8	0.0	0.0	
Minimum (s)	49.2	0.0	0.0	49.2

Right Turns	NBR2
Adj Reference Time (s)	8.0
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	40.2
Combined (s)	48.2

Intersection Summary			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	4	1271	44	1671	178	17	115	5
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	73.0	73.0	16.0	89.0	43.0	43.0	43.0	27.0
Total Split (%)	45.9%	45.9%	10.1%	56.0%	27.0%	27.0%	27.0%	17.0%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		59.5	8.6	71.4	37.2	37.2	37.2	21.1
Actuated g/C Ratio		0.40	0.06	0.48	0.25	0.25	0.25	0.14
v/c Ratio		0.77	0.47	0.76	0.25	0.25	0.25	0.04
Control Delay		41.6	85.0	33.0	48.5	48.5	8.8	54.7
Queue Delay		37.4	0.0	6.4	0.0	0.0	0.0	0.0
Total Delay		79.0	85.0	39.5	48.5	48.5	8.8	54.7
LOS		E	F	D	D	D	A	D
Approach Delay		79.0		40.6		33.7		54.7
Approach LOS		E		D		C		D

Intersection Summary	
Cycle Length: 159	
Actuated Cycle Length: 147.8	
Natural Cycle: 80	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 55.1	Intersection LOS: E
Intersection Capacity Utilization 58.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1271	63	44	1671	37	178	17	115	13	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5049		1770	5069		1681	1699	1583		3376	
Flt Permitted		0.93		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4704		1770	5069		1681	1699	1583		3376	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1382	68	48	1816	40	193	18	125	14	5	2
RTOR Reduction (vph)	0	4	0	0	2	0	0	0	94	0	2	0
Lane Group Flow (vph)	0	1450	0	48	1854	0	104	107	31	0	19	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		59.5		7.2	72.7		37.2	37.2	37.2		21.1	
Effective Green, g (s)		59.5		7.2	72.7		37.2	37.2	37.2		21.1	
Actuated g/C Ratio		0.40		0.05	0.49		0.25	0.25	0.25		0.14	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1878		86	2473		420	424	395		478	
v/s Ratio Prot				0.03	c0.37		0.06	c0.06			c0.01	
v/s Ratio Perm		0.31							0.02			
v/c Ratio		0.77		0.56	0.75		0.25	0.25	0.08		0.04	
Uniform Delay, d1		38.9		69.3	30.8		44.7	44.8	42.8		55.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		2.0		7.6	1.3		1.4	1.4	0.4		0.2	
Delay (s)		40.9		77.0	32.1		46.1	46.2	43.2		55.4	
Level of Service		D		E	C		D	D	D		E	
Approach Delay (s)		40.9			33.2			45.0			55.4	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	149.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	49	70	241	69	12	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	53	76	262	75	13	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	402	299			337	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	402	299			337	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	90			99	
cM capacity (veh/h)	598	740			1222	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	129	337	89
Volume Left	53	0	13
Volume Right	76	75	0
cSH	674	1700	1222
Volume to Capacity	0.19	0.20	0.01
Queue Length 95th (ft)	18	0	1
Control Delay (s)	11.6	0.0	1.2
Lane LOS	B		A
Approach Delay (s)	11.6	0.0	1.2
Approach LOS	B		

Intersection Summary			
Average Delay	2.9		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	AM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Background AM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1282	4	48	1448	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1393	4	52	1573	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			59			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	64	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		52			64			
C (m) (veh/h)		485			389			
v/c		0.11			0.16			
95% queue length		0.36			0.59			
Control Delay (s/veh)		13.3			16.1			
LOS		B			C			
Approach Delay (s/veh)	--	--	16.1					
Approach LOS	--	--	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1282	4	48	1448	0	0	59	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1286	0	48	1448	0	0	59	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	1.00	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5173	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	29.8	0.0	3.2	33.6		0.0	4.4		0.0
Adj Reference Time (s)	33.8	0.0	8.0	37.6		0.0	8.4		0.0
Permitted Option									
Adj Saturation A (vph)	1724		120	1725	0			0	
Reference Time A (s)	29.8		47.9	33.6	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	29.8			47.9					
Adj Reference Time (s)	33.8			51.9					
Split Option									
Ref Time Combined (s)	29.8		3.2	33.6	0.0			0.0	
Ref Time Seperate (s)	29.7		3.2	33.6	0.0			0.0	
Reference Time (s)	29.8		33.6	33.6	0.0			0.0	
Adj Reference Time (s)	33.8		37.6	37.6	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	41.8	NA	NA	
Permitted Option (s)	51.9	Err	Err	
Split Option (s)	71.4	0.0	0.0	
Minimum (s)	41.8	0.0	0.0	41.8

Right Turns	NBR2
Adj Reference Time (s)	8.4
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	33.8
Combined (s)	42.2

Intersection Summary			
Intersection Capacity Utilization	35.2%	ICU Level of Service	A

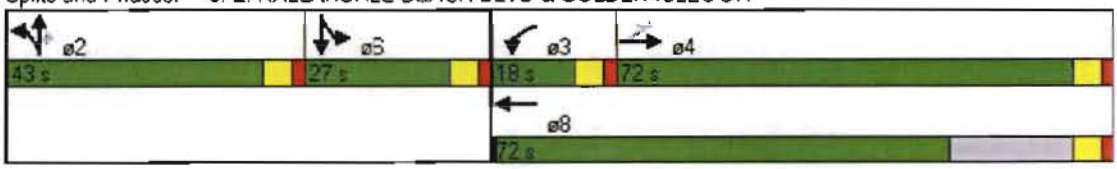
Reference Times and Phasing Options do not represent an optimized timing plan.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	2	2047	119	1677	142	18	55	13
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	72.0	72.0	18.0	72.0	43.0	43.0	43.0	27.0
Total Split (%)	45.0%	45.0%	11.3%	45.0%	26.9%	26.9%	26.9%	16.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		66.0	12.0	84.0	37.0	37.0	37.0	21.0
Actuated g/C Ratio		0.41	0.08	0.52	0.23	0.23	0.23	0.13
v/c Ratio		1.22	0.97	0.71	0.22	0.22	0.15	0.23
Control Delay		144.9	141.9	30.4	51.7	51.7	11.4	60.1
Queue Delay		244.4	0.0	75.7	0.0	0.0	0.0	0.0
Total Delay		389.2	141.9	106.2	51.7	51.7	11.4	60.1
LOS		F	F	F	D	D	B	E
Approach Delay		389.2		108.5		41.4		60.1
Approach LOS		F		F		D		E

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 120
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.22
Intersection Signal Delay: 245.7 — Intersection LOS: F
Intersection Capacity Utilization 102.4% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	2047	146	119	1677	51	142	18	55	74	13	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (prot)		5034		1770	5063		1681	1704	1583		3359	
Flt Permitted		0.94		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (perm)		4722		1770	5063		1681	1704	1583		3359	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2225	159	129	1823	55	154	20	60	80	14	10
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	46	0	5	0
Lane Group Flow (vph)	0	2381	0	129	1876	0	86	88	14	0	99	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		66.0		12.0	84.0		37.0	37.0	37.0		21.0	
Effective Green, g (s)		66.0		12.0	84.0		37.0	37.0	37.0		21.0	
Actuated g/C Ratio		0.41		0.08	0.52		0.23	0.23	0.23		0.13	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1948		133	2658		389	394	366		441	
v/s Ratio Prot				c0.07	0.37		0.05	c0.05			c0.03	
v/s Ratio Perm		c0.50							0.01			
v/c Ratio		1.22		0.97	0.71		0.22	0.22	0.04		0.22	
Uniform Delay, d1		47.0		73.8	28.7		49.8	49.9	47.7		62.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		104.8		67.9	0.9		1.3	1.3	0.2		1.2	
Delay (s)		151.8		141.7	29.5		51.1	51.2	47.9		63.4	
Level of Service		F		F	C		D	D	D		E	
Approach Delay (s)		151.8			36.8			50.3			63.4	
Approach LOS		F			D			D			E	

Intersection Summary			
HCM Average Control Delay	96.0	HCM Level of Service	F
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	67	108	116	56	44	219
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	73	117	126	61	48	238
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	490	157			187	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	490	157			187	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	86	87			97	
cM capacity (veh/h)	519	889			1387	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	190	187	286
Volume Left	73	0	48
Volume Right	117	61	0
cSH	698	1700	1387
Volume to Capacity	0.27	0.11	0.03
Queue Length 95th (ft)	28	0	3
Control Delay (s)	12.1	0.0	1.5
Lane LOS	B		A
Approach Delay (s)	12.1	0.0	1.5
Approach LOS	B		

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	PM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Background PM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1824	7	76	1605	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1982	7	82	1744	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			53			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	57	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		82			57			
C (m) (veh/h)		286			248			
v/c		0.29			0.23			
95% queue length		1.19			0.89			
Control Delay (s/veh)		22.6			23.8			
LOS		C			C			
Approach Delay (s/veh)	--	--	23.8					
Approach LOS	--	--	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1824	7	76	1605	0	0	53	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1831	0	76	1605	0	0	53	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	1.00	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5173	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	42.5	0.0	5.1	37.2		0.0	3.9		0.0
Adj Reference Time (s)	46.5	0.0	9.1	41.2		0.0	8.0		0.0
Permitted Option									
Adj Saturation A (vph)	1724		120	1725	0			0	
Reference Time A (s)	42.5		75.8	37.2	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	42.5			75.8					
Adj Reference Time (s)	46.5			79.8					
Split Option									
Ref Time Combined (s)	42.5		5.1	37.2	0.0			0.0	
Ref Time Seperate (s)	42.3		5.1	37.2	0.0			0.0	
Reference Time (s)	42.5		37.2	37.2	0.0			0.0	
Adj Reference Time (s)	46.5		41.2	41.2	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	55.5	NA	NA	
Permitted Option (s)	79.8	Err	Err	
Split Option (s)	87.7	0.0	0.0	
Minimum (s)	55.5	0.0	0.0	55.5

Right Turns	NBR2
Adj Reference Time (s)	8.0
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	46.5
Combined (s)	54.5

Intersection Summary			
Intersection Capacity Utilization	46.3%	ICU Level of Service	A

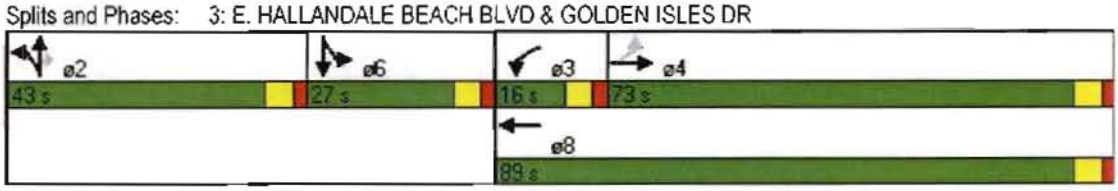
Reference Times and Phasing Options do not represent an optimized timing plan.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	4	1351	44	1671	263	18	123	5
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	73.0	73.0	16.0	89.0	43.0	43.0	43.0	27.0
Total Split (%)	45.9%	45.9%	10.1%	56.0%	27.0%	27.0%	27.0%	17.0%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		62.1	8.6	74.1	37.2	37.2	37.2	21.1
Actuated g/C Ratio		0.41	0.06	0.49	0.25	0.25	0.25	0.14
v/c Ratio		0.79	0.48	0.74	0.37	0.37	0.27	0.05
Control Delay		42.3	86.7	32.3	52.0	52.0	8.7	55.9
Queue Delay		93.2	0.0	21.0	0.0	0.0	0.0	0.0
Total Delay		135.5	86.7	53.3	52.0	52.0	8.7	55.9
LOS		F	F	D	D	D	A	E
Approach Delay		135.5		54.1		38.8		55.9
Approach LOS		F		D		D		E

Intersection Summary

Cycle Length: 159
Actuated Cycle Length: 150.5
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 84.5 — Intersection LOS: F
Intersection Capacity Utilization 61.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1351	63	44	1671	37	263	18	123	14	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5051		1770	5069		1681	1696	1583		3376	
Flt Permitted		0.93		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4708		1770	5069		1681	1696	1583		3376	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1468	68	48	1816	40	286	20	134	15	5	2
RTOR Reduction (vph)	0	3	0	0	2	0	0	0	101	0	2	0
Lane Group Flow (vph)	0	1537	0	48	1854	0	152	154	33	0	20	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		62.1		7.3	75.4		37.2	37.2	37.2		21.1	
Effective Green, g (s)		62.1		7.3	75.4		37.2	37.2	37.2		21.1	
Actuated g/C Ratio		0.41		0.05	0.50		0.25	0.25	0.25		0.14	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1927		85	2519		412	416	388		470	
v/s Ratio Prot				0.03	c0.37		0.09	c0.09			c0.01	
v/s Ratio Perm		c0.33							0.02			
v/c Ratio		0.80		0.56	0.74		0.37	0.37	0.08		0.04	
Uniform Delay, d1		39.3		70.6	30.3		47.5	47.5	44.1		56.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		2.4		8.3	1.1		2.5	2.5	0.4		0.2	
Delay (s)		41.7		79.0	31.4		50.0	50.0	44.6		56.7	
Level of Service		D		E	C		D	D	D		E	
Approach Delay (s)		41.7			32.6			48.4			56.7	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM Average Control Delay	38.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	151.7	Sum of lost time (s)	24.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	50	160	243	69	12	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	174	264	75	13	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	404	302			339	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	404	302			339	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	76			99	
cM capacity (veh/h)	596	738			1220	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	228	339	89
Volume Left	54	0	13
Volume Right	174	75	0
cSH	698	1700	1220
Volume to Capacity	0.33	0.20	0.01
Queue Length 95th (ft)	36	0	1
Control Delay (s)	12.6	0.0	1.2
Lane LOS	B		A
Approach Delay (s)	12.6	0.0	1.2
Approach LOS	B		

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co	
Date Performed	8/25/2011
Analysis Time Period	AM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Future Total AM

Project Description: Beachwalk

East/West Street: Hallandale Beach Blvd — North/South Street: 26 Avenue

Intersection Orientation: East-West — Study Period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1282	96	72	1448	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1393	104	78	1573	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	64	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		78			64			
C (m) (veh/h)		444			389			
v/c		0.18			0.16			
95% queue length		0.64			0.59			
Control Delay (s/veh)		14.8			16.1			
LOS		B			C			
Approach Delay (s/veh)	--	--	16.1					
Approach LOS	--	--	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1282	96	72	1448	0	0	83	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1378	0	72	1448	0	0	83	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.99	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5122	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	32.3	0.0	4.8	33.6		0.0	6.2		0.0
Adj Reference Time (s)	36.3	0.0	8.8	37.6		0.0	10.2		0.0
Permitted Option									
Adj Saturation A (vph)	1707		120	1725	0			0	
Reference Time A (s)	32.3		71.8	33.6	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	32.3			71.8					
Adj Reference Time (s)	36.3			75.8					
Split Option									
Ref Time Combined (s)	32.3		4.8	33.6	0.0			0.0	
Ref Time Seperate (s)	30.0		4.8	33.6	0.0			0.0	
Reference Time (s)	32.3		33.6	33.6	0.0			0.0	
Adj Reference Time (s)	36.3		37.6	37.6	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	45.1	NA	NA	
Permitted Option (s)	75.8	Err	Err	
Split Option (s)	73.9	0.0	0.0	
Minimum (s)	45.1	0.0	0.0	45.1

Right Turns	NBR2
Adj Reference Time (s)	10.2
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	36.3
Combined (s)	46.5

Intersection Summary			
Intersection Capacity Utilization	38.7%	ICU Level of Service	A

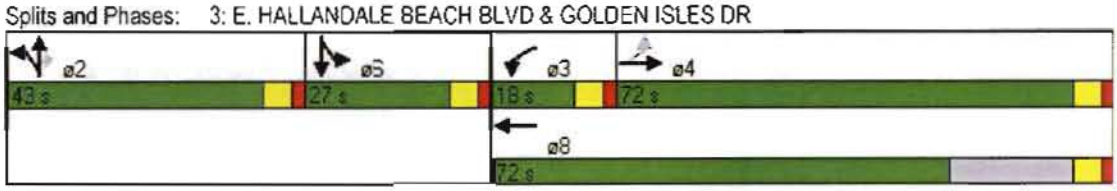
Reference Times and Phasing Options do not represent an optimized timing plan.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	2	2123	119	1677	230	19	66	13
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	72.0	72.0	18.0	72.0	43.0	43.0	43.0	27.0
Total Split (%)	45.0%	45.0%	11.3%	45.0%	26.9%	26.9%	26.9%	16.9%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		66.0	12.0	84.0	37.0	37.0	37.0	21.0
Actuated g/C Ratio		0.41	0.08	0.52	0.23	0.23	0.23	0.13
v/c Ratio		1.26	0.97	0.71	0.35	0.35	0.17	0.24
Control Delay		162.4	141.9	30.4	54.5	54.4	10.7	60.3
Queue Delay		239.9	0.0	75.7	0.0	0.0	0.0	0.0
Total Delay		402.3	141.9	106.2	54.5	54.4	10.7	60.3
LOS		F	F	F	D	D	B	E
Approach Delay		402.3		108.5		45.3		60.3
Approach LOS		F		F		D		E

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 130
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.26
Intersection Signal Delay: 250.3 — Intersection LOS: F
Intersection Capacity Utilization 106.4% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	2123	146	119	1677	51	230	19	66	75	13	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (prot)		5036		1770	5063		1681	1698	1583		3359	
Flt Permitted		0.94		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (perm)		4724		1770	5063		1681	1698	1583		3359	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2308	159	129	1823	55	250	21	72	82	14	10
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	55	0	5	0
Lane Group Flow (vph)	0	2464	0	129	1876	0	135	136	17	0	101	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		66.0		12.0	84.0		37.0	37.0	37.0		21.0	
Effective Green, g (s)		66.0		12.0	84.0		37.0	37.0	37.0		21.0	
Actuated g/C Ratio		0.41		0.08	0.52		0.23	0.23	0.23		0.13	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		1949		133	2658		389	393	366		441	
v/s Ratio Prot				c0.07	0.37		c0.08	0.08			c0.03	
v/s Ratio Perm		c0.52							0.01			
v/c Ratio		1.26		0.97	0.71		0.35	0.35	0.05		0.23	
Uniform Delay, d1		47.0		73.8	28.7		51.4	51.4	47.8		62.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		123.2		67.9	0.9		2.4	2.4	0.2		1.2	
Delay (s)		170.2		141.7	29.5		53.8	53.8	48.0		63.5	
Level of Service		F		F	C		D	D	D		E	
Approach Delay (s)		170.2			36.8			52.6			63.5	
Approach LOS		F			D			D			E	

Intersection Summary			
HCM Average Control Delay	105.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	69	205	118	56	44	220
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	223	128	61	48	239
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	493	159			189	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	493	159			189	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	85	75			97	
cM capacity (veh/h)	516	887			1385	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	298	189	287
Volume Left	75	0	48
Volume Right	223	61	0
cSH	751	1700	1385
Volume to Capacity	0.40	0.11	0.03
Queue Length 95th (ft)	48	0	3
Control Delay (s)	12.9	0.0	1.5
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	1.5
Approach LOS	B		

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	PM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Future Total PM

Project Description *Beachwalk*

East/West Street: *Hallandale Beach Blvd* | North/South Street: *26 Avenue*

Intersection Orientation: *East-West* | Study Period (hrs): *1.00*

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1824	93	107	1605	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1982	101	116	1744	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			83			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	90	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		116			90			
C (m) (veh/h)		262			248			
v/c		0.44			0.36			
95% queue length		2.31			1.67			
Control Delay (s/veh)		29.5			27.7			
LOS		D			D			
Approach Delay (s/veh)	--	--	27.7					
Approach LOS	--	--	D					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1824	93	107	1605	0	0	83	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1917	0	107	1605	0	0	83	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.99	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5138	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	44.8	0.0	7.1	37.2		0.0	6.2		0.0
Adj Reference Time (s)	48.8	0.0	11.1	41.2		0.0	10.2		0.0
Permitted Option									
Adj Saturation A (vph)	1713		120	1725	0			0	
Reference Time A (s)	44.8		106.7	37.2	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	44.8			106.7					
Adj Reference Time (s)	48.8			110.7					
Split Option									
Ref Time Combined (s)	44.8		7.1	37.2	0.0			0.0	
Ref Time Seperate (s)	42.6		7.1	37.2	0.0			0.0	
Reference Time (s)	44.8		37.2	37.2	0.0			0.0	
Adj Reference Time (s)	48.8		41.2	41.2	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	59.9	NA	NA	
Permitted Option (s)	110.7	Err	Err	
Split Option (s)	90.0	0.0	0.0	
Minimum (s)	59.9	0.0	0.0	59.9

Right Turns	NBR2
Adj Reference Time (s)	10.2
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	48.8
Combined (s)	58.9

Intersection Summary			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A

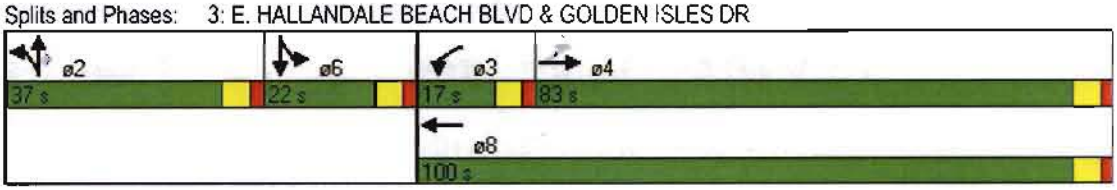
Reference Times and Phasing Options do not represent an optimized timing plan.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	4	1351	44	1671	263	18	123	5
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	83.0	83.0	17.0	100.0	37.0	37.0	37.0	22.0
Total Split (%)	52.2%	52.2%	10.7%	62.9%	23.3%	23.3%	23.3%	13.8%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		60.2	8.8	72.3	31.4	31.4	31.4	16.2
Actuated g/C Ratio		0.44	0.06	0.52	0.23	0.23	0.23	0.12
v/c Ratio		0.75	0.42	0.70	0.40	0.40	0.29	0.06
Control Delay		35.2	77.9	25.6	52.4	52.4	9.5	56.2
Queue Delay		1.5	0.0	0.6	0.0	0.0	0.0	0.0
Total Delay		36.8	77.9	26.2	52.4	52.4	9.5	56.2
LOS		D	E	C	D	D	A	E
Approach Delay		36.8		27.5		39.3		56.3
Approach LOS		D		C		D		E

Intersection Summary

Cycle Length: 159
Actuated Cycle Length: 138
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 32.6 — Intersection LOS: C
Intersection Capacity Utilization 61.0% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	4	1351	63	44	1671	37	263	18	123	14	5	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (prot)		5051		1770	5069		1681	1696	1583		3376	
Flt Permitted		0.93		0.95	1.00		0.95	0.96	1.00		0.97	
Satd. Flow (perm)		4709		1770	5069		1681	1696	1583		3376	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	1468	68	48	1816	40	286	20	134	15	5	2
RTOR Reduction (vph)	0	3	0	0	1	0	0	0	104	0	2	0
Lane Group Flow (vph)	0	1537	0	48	1855	0	152	154	30	0	20	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		60.2		7.4	73.6		31.4	31.4	31.4		16.2	
Effective Green, g (s)		60.2		7.4	73.6		31.4	31.4	31.4		16.2	
Actuated g/C Ratio		0.43		0.05	0.53		0.23	0.23	0.23		0.12	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		2037		94	2680		379	383	357		393	
v/s Ratio Prot				0.03	c0.37		0.09	c0.09			c0.01	
v/s Ratio Perm		c0.33							0.02			
v/c Ratio		0.75		0.51	0.69		0.40	0.40	0.08		0.05	
Uniform Delay, d1		33.3		64.1	24.4		45.9	45.9	42.6		54.7	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		1.6		4.6	0.8		3.1	3.1	0.5		0.2	
Delay (s)		34.9		68.8	25.2		49.0	49.0	43.0		54.9	
Level of Service		C		E	C		D	D	D		D	
Approach Delay (s)		34.9			26.3			47.2			54.9	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	139.2	Sum of lost time (s)	24.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	50	160	243	69	12	70
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	174	264	75	13	76
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	404	302			339	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	404	302			339	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	76			99	
cM capacity (veh/h)	596	738			1220	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	228	339	89
Volume Left	54	0	13
Volume Right	174	75	0
cSH	698	1700	1220
Volume to Capacity	0.33	0.20	0.01
Queue Length 95th (ft)	36	0	1
Control Delay (s)	12.6	0.0	1.2
Lane LOS	B		A
Approach Delay (s)	12.6	0.0	1.2
Approach LOS	B		

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information

Analyst	CGA
Agency/Co.	
Date Performed	8/25/2011
Analysis Time Period	AM Peak

Site Information

Intersection	Hallandale Bch Blvd at 26 Ave
Jurisdiction	Hallandale Beach, FL
Analysis Year	Future Total AM

Project Description: Beachwalk

East/West Street: Hallandale Beach Blvd | North/South Street: 26 Avenue

Intersection Orientation: East-West | Study Period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1282	96	72	1448	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1393	104	78	1573	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)						
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	64	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		78			64			
C (m) (veh/h)		444			389			
v/c		0.18			0.16			
95% queue length		0.64			0.59			
Control Delay (s/veh)		14.8			16.1			
LOS		B			C			
Approach Delay (s/veh)	--	--	16.1					
Approach LOS	--	--	C					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1282	96	72	1448	0	0	83	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1378	0	72	1448	0	0	83	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.99	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5122	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	32.3	0.0	4.8	33.6		0.0	6.2		0.0
Adj Reference Time (s)	36.3	0.0	8.8	37.6		0.0	10.2		0.0
Permitted Option									
Adj Saturation A (vph)	1707		120	1725	0			0	
Reference Time A (s)	32.3		71.8	33.6	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	32.3			71.8					
Adj Reference Time (s)	36.3			75.8					
Split Option									
Ref Time Combined (s)	32.3		4.8	33.6	0.0			0.0	
Ref Time Seperate (s)	30.0		4.8	33.6	0.0			0.0	
Reference Time (s)	32.3		33.6	33.6	0.0			0.0	
Adj Reference Time (s)	36.3		37.6	37.6	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	45.1	NA	NA	
Permitted Option (s)	75.8	Err	Err	
Split Option (s)	73.9	0.0	0.0	
Minimum (s)	45.1	0.0	0.0	45.1

Right Turns	NBR2
Adj Reference Time (s)	10.2
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	36.3
Combined (s)	46.5

Intersection Summary			
Intersection Capacity Utilization	38.7%	ICU Level of Service	A

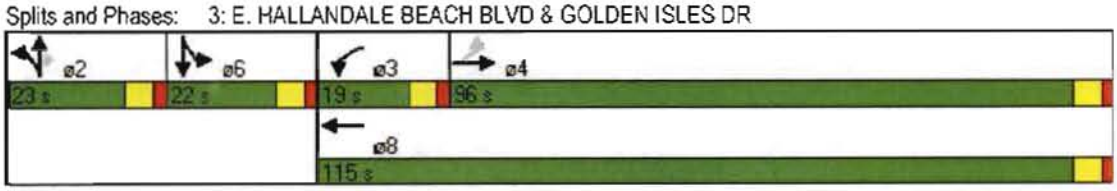
Reference Times and Phasing Options do not represent an optimized timing plan.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBT
Lane Configurations								
Volume (vph)	2	2123	119	1677	230	19	66	13
Turn Type	Perm		Prot		Split		Perm	
Protected Phases		4	3	8	2	2		6
Permitted Phases	4						2	
Detector Phase	4	4	3	8	2	2	2	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	10.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	96.0	96.0	19.0	115.0	23.0	23.0	23.0	22.0
Total Split (%)	60.0%	60.0%	11.9%	71.9%	14.4%	14.4%	14.4%	13.8%
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	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	None	None	None	None	Max	Max	Max	Max
Act Effct Green (s)		90.0	13.0	109.0	17.0	17.0	17.0	16.0
Actuated g/C Ratio		0.56	0.08	0.68	0.11	0.11	0.11	0.10
v/c Ratio		0.93	0.90	0.54	0.75	0.76	0.31	0.31
Control Delay		39.3	122.6	13.6	94.6	94.6	16.8	66.4
Queue Delay		180.3	0.0	7.1	0.0	0.0	0.0	0.0
Total Delay		219.6	122.6	20.6	94.6	94.6	16.8	66.4
LOS		F	F	C	F	F	B	E
Approach Delay		219.6		27.2		78.3		66.4
Approach LOS		F		C		E		E

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Natural Cycle: 130
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 128.0 — Intersection LOS: F
Intersection Capacity Utilization 106.4% — ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 3: E. HALLANDALE BEACH BLVD & GOLDEN ISLES DR



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	2123	146	119	1677	51	230	19	66	75	13	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Lane Util. Factor		0.91		1.00	0.91		0.95	0.95	1.00		0.95	
Frt		0.99		1.00	1.00		1.00	1.00	0.85		0.99	
Flt Protected		1.00		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (prot)		5036		1770	5063		1681	1698	1583		3359	
Flt Permitted		0.94		0.95	1.00		0.95	0.96	1.00		0.96	
Satd. Flow (perm)		4725		1770	5063		1681	1698	1583		3359	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	2308	159	129	1823	55	250	21	72	82	14	10
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	64	0	5	0
Lane Group Flow (vph)	0	2464	0	129	1876	0	135	136	8	0	102	0
Turn Type	Perm			Prot			Split		Perm	Split		
Protected Phases		4		3	8		2	2		6	6	
Permitted Phases	4								2			
Actuated Green, G (s)		90.0		13.0	109.0		17.0	17.0	17.0		16.0	
Effective Green, g (s)		90.0		13.0	109.0		17.0	17.0	17.0		16.0	
Actuated g/C Ratio		0.56		0.08	0.68		0.11	0.11	0.11		0.10	
Clearance Time (s)		6.0		6.0	6.0		6.0	6.0	6.0		6.0	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		2658		144	3449		179	180	168		336	
v/s Ratio Prot				c0.07	0.37		c0.08	0.08			c0.03	
v/s Ratio Perm		c0.52							0.00			
v/c Ratio		0.93		0.90	0.54		0.75	0.76	0.05		0.30	
Uniform Delay, d1		32.0		72.8	12.9		69.5	69.5	64.2		66.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		6.3		45.1	0.2		25.1	25.2	0.5		2.3	
Delay (s)		38.3		118.0	13.1		94.6	94.6	64.7		69.1	
Level of Service		D		F	B		F	F	E		E	
Approach Delay (s)		38.3			19.8			88.3			69.1	
Approach LOS		D			B			F			E	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	106.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	69	205	118	56	44	220
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	75	223	128	61	48	239
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						345
pX, platoon unblocked						
vC, conflicting volume	493	159			189	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	493	159			189	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	85	75			97	
cM capacity (veh/h)	516	887			1385	

Direction, Lane #	WB 1	NB 1	SB 1
Volume Total	298	189	287
Volume Left	75	0	48
Volume Right	223	61	0
cSH	751	1700	1385
Volume to Capacity	0.40	0.11	0.03
Queue Length 95th (ft)	48	0	3
Control Delay (s)	12.9	0.0	1.5
Lane LOS	B		A
Approach Delay (s)	12.9	0.0	1.5
Approach LOS	B		

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	50.1%	ICU Level of Service	A
Analysis Period (min)	15		

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	CGA	Intersection	Hallandale Bch Blvd at 26 Ave
Agency/Co.		Jurisdiction	Hallandale Beach, FL
Date Performed	8/25/2011	Analysis Year	Future Total PM
Analysis Time Period	PM Peak		

Project Description: Beachwalk

East/West Street: Hallandale Beach Blvd | North/South Street: 26 Avenue

Intersection Orientation: East-West | Study Period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		1824	93	107	1605	
Peak-Hour Factor, PHF	1.00	0.92	0.92	0.92	0.92	1.00
Hourly Flow Rate, HFR (veh/h)	0	1982	101	116	1744	0
Percent Heavy Vehicles	0	--	--	2	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	2	1	1	2	0
Configuration		T	R	L	T	
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)			83			
Peak-Hour Factor, PHF	1.00	1.00	0.92	1.00	1.00	1.00
Hourly Flow Rate, HFR (veh/h)	0	0	90	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	1	0	0	0
Configuration			R			

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L			R			
v (veh/h)		116			90			
C (m) (veh/h)		262			248			
v/c		0.44			0.36			
95% queue length		2.31			1.67			
Control Delay (s/veh)		29.5			27.7			
LOS		D			D			
Approach Delay (s/veh)	--	--	27.7					
Approach LOS	--	--	D					

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Movement	EBT	EBR	WBL	WBT	NBL	NBR	NBR2	NWL	NWR
Lane Configurations									
Volume (vph)	1824	93	107	1605	0	0	83	0	0
Pedestrians									
Ped Button									
Pedestrian Timing (s)									
Free Right		No				No	No		No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120								
Volume Combined (vph)	1917	0	107	1605	0	0	83	0	0
Lane Utilization Factor	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.99	0.85	0.95	1.00	0.95	0.85	0.85	0.95	0.85
Saturated Flow (vph)	5138	0	1805	5176	0	0	1615	0	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00	0.00			0.00	
Protected Option Allowed	Yes			Yes	No			No	
Reference Time (s)	44.8	0.0	7.1	37.2		0.0	6.2		0.0
Adj Reference Time (s)	48.8	0.0	11.1	41.2		0.0	10.2		0.0
Permitted Option									
Adj Saturation A (vph)	1713		120	1725	0			0	
Reference Time A (s)	44.8		106.7	37.2	0.0			0.0	
Adj Saturation B (vph	NA		NA	NA	NA			NA	
Reference Time B (s)	NA		NA	NA	NA			NA	
Reference Time (s)	44.8			106.7					
Adj Reference Time (s)	48.8			110.7					
Split Option									
Ref Time Combined (s)	44.8		7.1	37.2	0.0			0.0	
Ref Time Seperate (s)	42.6		7.1	37.2	0.0			0.0	
Reference Time (s)	44.8		37.2	37.2	0.0			0.0	
Adj Reference Time (s)	48.8		41.2	41.2	0.0			0.0	

Summary	EB WB	NB	NW	Combined
Protected Option (s)	59.9	NA	NA	
Permitted Option (s)	110.7	Err	Err	
Split Option (s)	90.0	0.0	0.0	
Minimum (s)	59.9	0.0	0.0	59.9

Right Turns	NBR2
Adj Reference Time (s)	10.2
Cross Thru Ref Time (s)	0.0
Oncoming Left Ref Time (s)	48.8
Combined (s)	58.9

Intersection Summary			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.