



*Traffic Impact Analysis
for Submittal to the
City of Sunrise*

BAPTIST HEALTH SOUTH FLORIDA SUNRISE HOSPITAL SUNRISE, FLORIDA

City of Sunrise
Community Development Department

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February 2024
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Traffic Impact Analysis
for Submittal to
the City of Sunrise

BAPTIST HEALTH SOUTH FLORIDA
SUNRISE HOSPITAL
SUNRISE, FLORIDA

Prepared for:

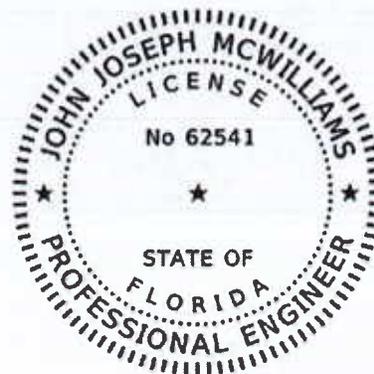
Baptist Health South Florida, Inc.

Prepared by:

Kimley-Horn and Associates, Inc.

Kimley»»Horn

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February 2024
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This item has been digitally signed and sealed by John J. McWilliams, P.E. on the date adjacent to the seal using a SHA authentication code.

John J. McWillia
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Digitally signed by John J. McWilliams Date: 2024.02.27 15:09:20 -05'00'

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EXECUTIVE SUMMARY

Baptist Health South Florida, Inc. is proposing to develop the property located at 1240 West Oakland Park Boulevard in Sunrise, Florida. The proposed development consists of a 100-bed, 367,000 (+/-) square foot, 675-employee hospital campus. The development is expected to be operational in year 2029.

Access to the proposed development will be provided via one (1) full access signalized driveway just west of the intersection of West Oakland Park Boulevard and North Flamingo Road. Note the exiting vehicles destined for West Oakland Park Boulevard (eastbound) will perform a left-turn at this driveway, while exiting vehicles destined for North Flamingo Road (southbound) will perform a right-turn and a subsequent westbound u-turn along West Oakland Park Boulevard to leave the site. Additionally, a secondary access point primarily for emergency/delivery vehicles will be provided (right-in/right-out driveway) east of the SR 869/Sawgrass Expressway northbound On-Ramp.

Trip generation for the proposed development was calculated using rates and/or equations contained in the Institute of Transportation Engineers' (ITE's) *Trip Generation Manual*, 11th Edition. The project is expected to generate 290 net new weekday A.M. peak hour trips and 227 net new weekday P.M. peak hour trips.

The results of the intersection capacity analysis indicate that the study intersections are expected to operate at adopted level of service (LOS D) or better during the A.M. and P.M. peak hours under all analysis.

An entry gate analysis was performed for the proposed gate within the parking garage restricting a portion of the ground floor parking for physicians. Less than one (1) vehicle at the entry gate during the A.M. and P.M. peak hours. Therefore, vehicle queues are expected to be accommodated on-site without extending onto West Oakland Park Boulevard.

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INTRODUCTION

Baptist Health South Florida, Inc. is proposing to develop the property located at 1240 West Oakland Park Boulevard in Sunrise, Florida. The proposed development consists of a 100-bed, 367,000 (+/-) square foot, 675-employee hospital campus. The development is expected to be operational in year 2029. A project location map is provided as Figure 1. A conceptual site plan is included in Appendix A. Note the site plan included in Appendix A is for informational purposes only. Please refer to the site plan submittal for the updated site plan.

Kimley-Horn and Associates, Inc. has completed this traffic impact analysis for submittal to the City of Sunrise. Methodology correspondence detailing the traffic study requirements are included in Appendix B. The purpose of the study is to assess the proposed development's impact on the surrounding transportation network. This report summarizes the data collection, project trip generation, trip distribution and assignment, capacity analysis, and entry gate analysis.



Figure 1
 Project Location Map
 Baptist Health South Florida – Sunrise Hospital
 Sunrise, Florida

EXISTING TRAFFIC

A.M. peak period (7:00 A.M. to 9:00 A.M.) and P.M. peak period (4:00 P.M. to 6:00 P.M.) turning movement counts were collected on May 25, 2022 (Wednesday) at the following intersections:

- West Oakland Park Boulevard and North Flamingo Road
- West Oakland Park Boulevard and NW 120th Way
- West Oakland Park Boulevard and SR 869/Sawgrass Expressway Ramps
- North Flamingo Road and NW 136th Avenue/Panther Parkway

All traffic volumes were collected in 15-minute intervals and the peak hour was determined for each intersection. Turning movement counts also included pedestrian and bicycle data. The appropriate Florida Department of Transportation (FDOT) peak season conversion factor (PSCF) of 1.04 was applied to the data collected.

The turning movement counts, FDOT peak season factor category reports, and signal timing data are included in Appendix C. Figure 2 presents the existing turning movement volumes at the study intersections during the A.M. and P.M. peak hours.



Legend
 Study Roadway
 Study Intersection
 XX A.M. Peak Hour Traffic
 (XX) P.M. Peak Hour Traffic

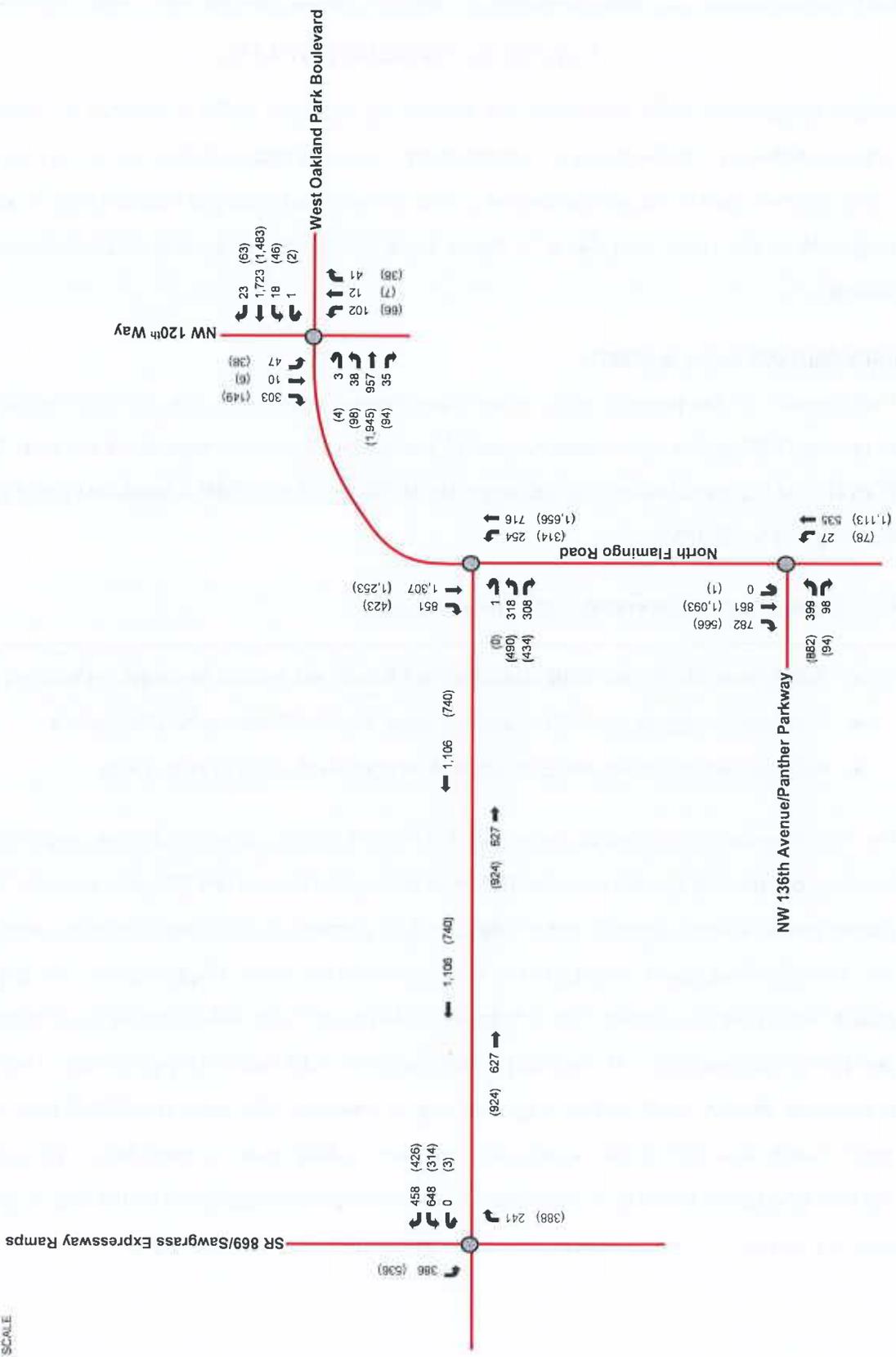


Figure 2
 Existing Peak Hour Traffic
 Baptist Health South Florida - Sunrise Hospital
 Sunrise, Florida

FUTURE BACKGROUND TRAFFIC

Future background traffic conditions are defined as expected traffic conditions on the roadway network in the year 2029 without the construction of the proposed development. Future background traffic volumes used in the analysis are the sum of the existing traffic and additional traffic generated by growth in the study area. Refer to Figure 3 for the future background 2029 peak hour traffic volumes.

BACKGROUND AREA GROWTH

Traffic growth on the transportation network was determined based upon (a) historic growth trends at nearby FDOT traffic count stations and (b) traffic volume comparisons from the year 2015 and 2045 Florida Standard Urban Transportation Model Structure (FSUTMS) – Southeast Florida Regional Planning Model (SERPM).

FDOT count stations referenced in this analysis include:

- FDOT count station no. 9096: Oakland Park Boulevard, east of Sawgrass Expressway
- FDOT count station no. 9177: Flamingo Road, south of Oakland Park Boulevard
- FDOT count station no. 9415: Oakland Park Boulevard, west of Hiatus Road

The historic growth rate analysis, based on FDOT count stations, examined linear, exponential, and decaying exponential growth rates for the most recent five (5) and ten (10) year periods. The linear growth trend yielded a growth rate of negative 8.67 percent (-8.67%) over the most recent five (5) year period and negative 3.73 percent (-3.73%) over the most recent 10-year period. The exponential growth trend yielded a growth rate of negative 10.44 percent (-10.44%) over the most recent five (5) year period and negative 4.36 percent (-4.36%) over the most recent 10-year period. The decaying exponential growth trend yielded a growth rate of negative 9.02 percent (-9.02%) over the most recent five (5) year period and negative 4.60 percent (-4.60%) over the most recent 10-year period. The calculated growth rate with the highest R² value was determined based on the five (5) year linear growth trend which yielded a growth rate of negative 8.67 percent (-8.67%).

Based on the forecasted volumes obtained from the 2015 and 2045 FSUTMS SERPM, an annual growth rate of 0.24 percent (0.24%) was calculated in the vicinity of the development.

To provide for a conservative analysis, a minimum growth rate of 0.5 percent (0.5%) was applied to existing traffic volumes compounded annually to develop future 2029 volumes. The worksheets used to analyze the historical growth trends along with the FSUTMS transportation model outputs are contained in Appendix D.



NOT TO SCALE

Legend

- Study Roadway
- Study Intersection
- A.M. Peak Hour Traffic
- P.M. Peak Hour Traffic

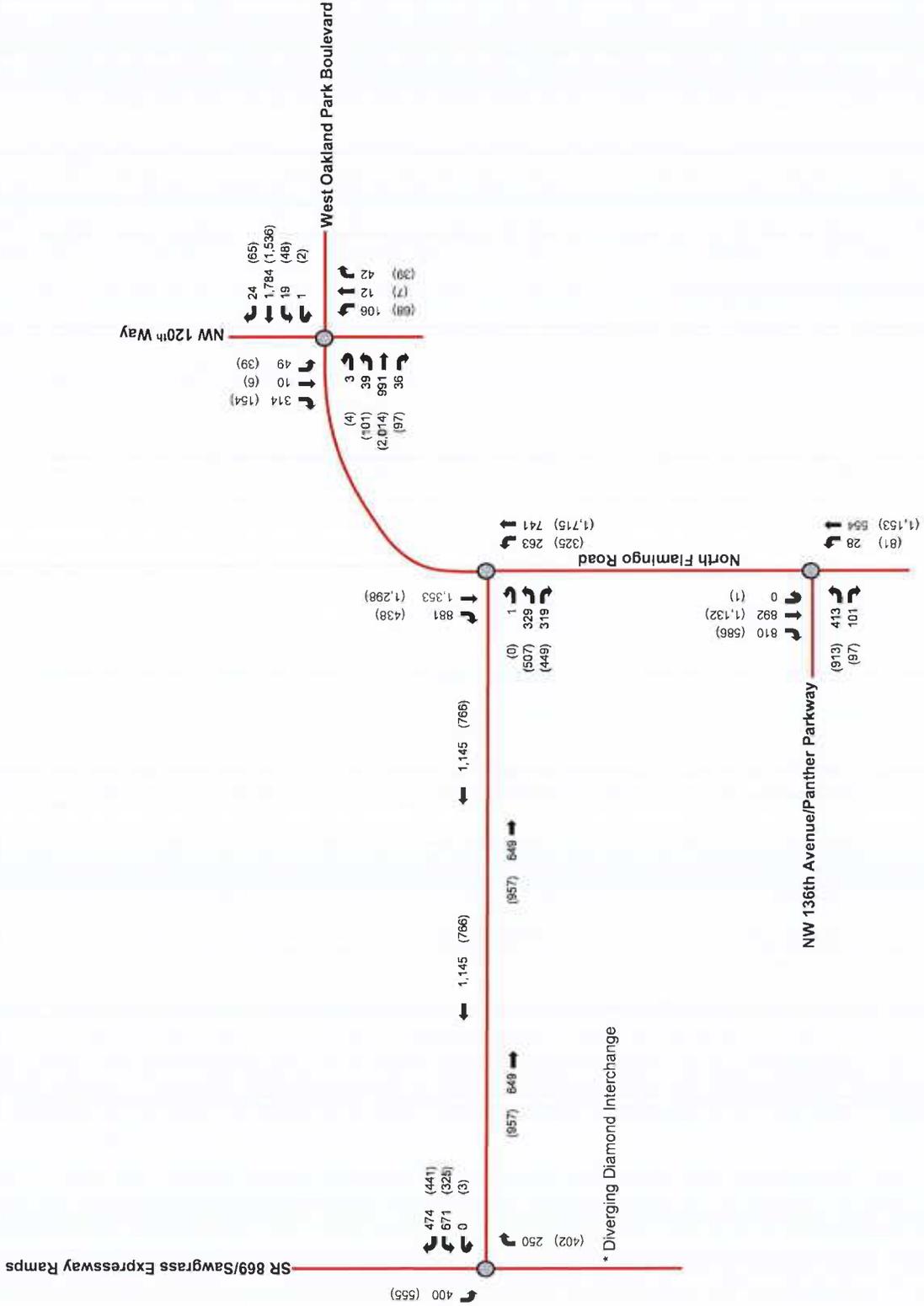


Figure 3
Future Background Peak Hour Traffic
Baptist Health South Florida - Sunrise Hospital
Sunrise, Florida

PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project and the distribution and assignment of that traffic over the study roadway network.

EXISTING AND PROPOSED LAND USES

The site is currently vacant. The proposed development consists of a 100-bed, 367,000 square foot hospital.

PROJECT ACCESS

Access to the proposed development will be provided via one (1) full access signalized driveway just west of the intersection of West Oakland Park Boulevard and North Flamingo Road. Note the exiting vehicles destined for West Oakland Park Boulevard (eastbound) will perform a left-turn at this driveway, while exiting vehicles destined for North Flamingo Road (southbound) will perform a right-turn and a subsequent westbound u-turn along West Oakland Park Boulevard to leave the site. Additionally, a secondary access point primarily for emergency/delivery vehicles will be provided (right-in/right-out driveway) east of the SR 869/Sawgrass Expressway northbound On-Ramp.

TRIP GENERATION

Trip generation calculations for the proposed development were performed using rates and/or equations contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The trip generation for the proposed development was determined using ITE Land Use Code (LUC) 610 (Hospital), based on the number of employees, consistent with the approved methodology.

NET NEW PROJECT TRIPS

As shown in Table 1, the project is expected to generate 290 weekday A.M. peak hour vehicular trips and 227 weekday P.M. peak hour trips. Detailed trip generation information is included in Appendix E.

Table 1: Trip Generation				
A.M. Peak Hour (P.M. Peak Hour)				
Future Land Use (ITE Code)	Scale	Entering Trips	Entering Trips	Net New External Trips
Hospital (610)	675 employees	209 (68)	81 (159)	290 (227)

TRIP DISTRIBUTION AND ASSIGNMENT

The likely distribution of project traffic was forecast for the trips expected to be generated by the proposed development. The trip distribution was determined using a selected zone analysis for the appropriate Traffic Analysis Zone (TAZ) in the Southeast Florida Regional Planning Model (SERPM). Adjustments to the traffic distribution will be made to account for project trips utilizing the local roadway network as a result of the site's access management restrictions and based on actual turning movement counts collected at study area intersections.

Figure 4 and Figure 5 detail the project's trip distribution and assignment for the A.M. and P.M. peak hours. Detailed distribution calculations are contained in Appendix F.



NOT TO SCALE

Legend

-  Study Roadway
-  Study Intersection
-  XX% Entering Trip Distribution
-  (XX%) Exiting Trip Distribution

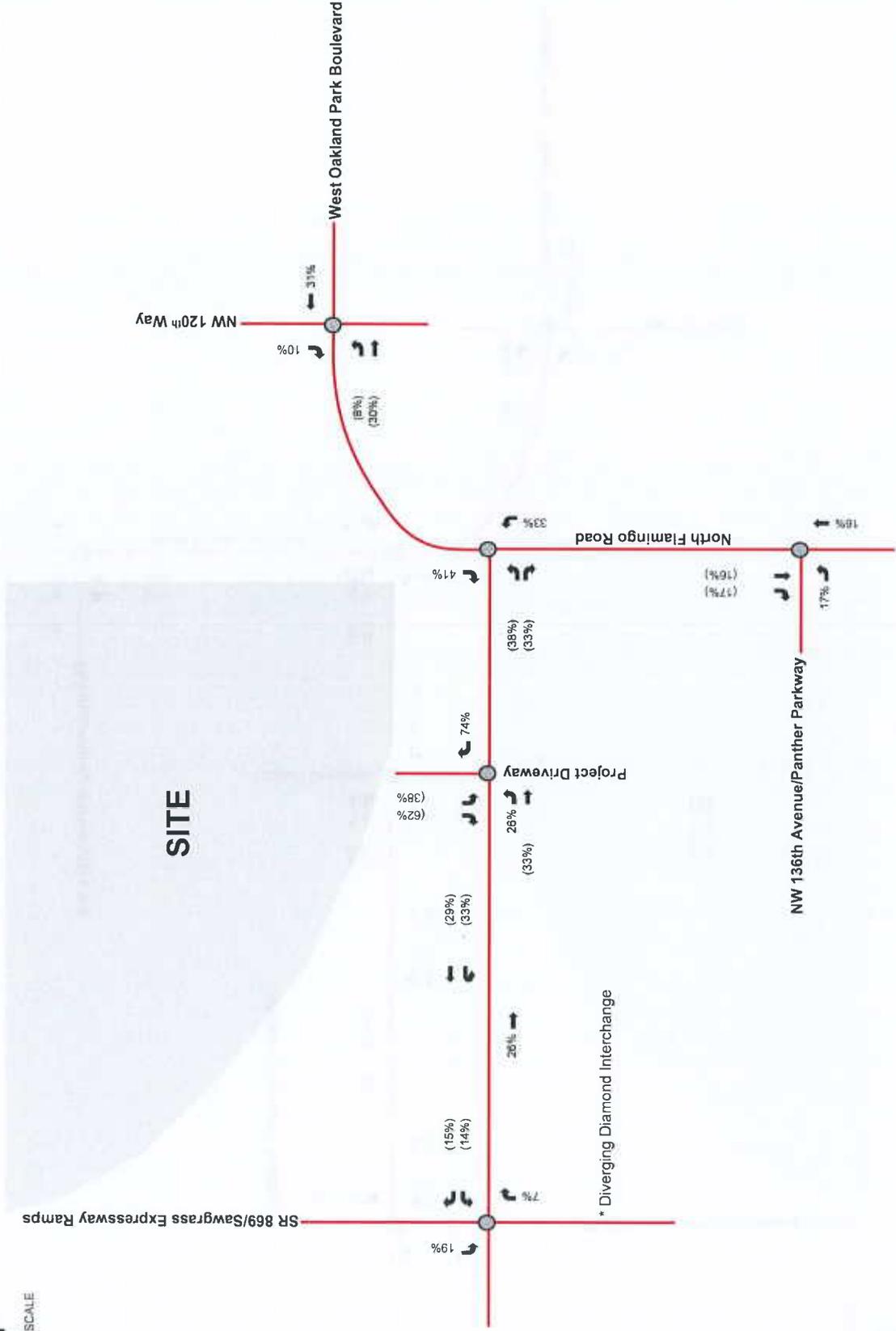


Figure 4
Peak Hour Project Trip Distribution
Baptish Health South Florida - Sunrise Hospital
Sunrise, Florida



NOT TO SCALE

Legend

- Study Roadway
- Study Intersection
- XX A.M. Peak Hour Traffic
- (XX) P.M. Peak Hour Traffic

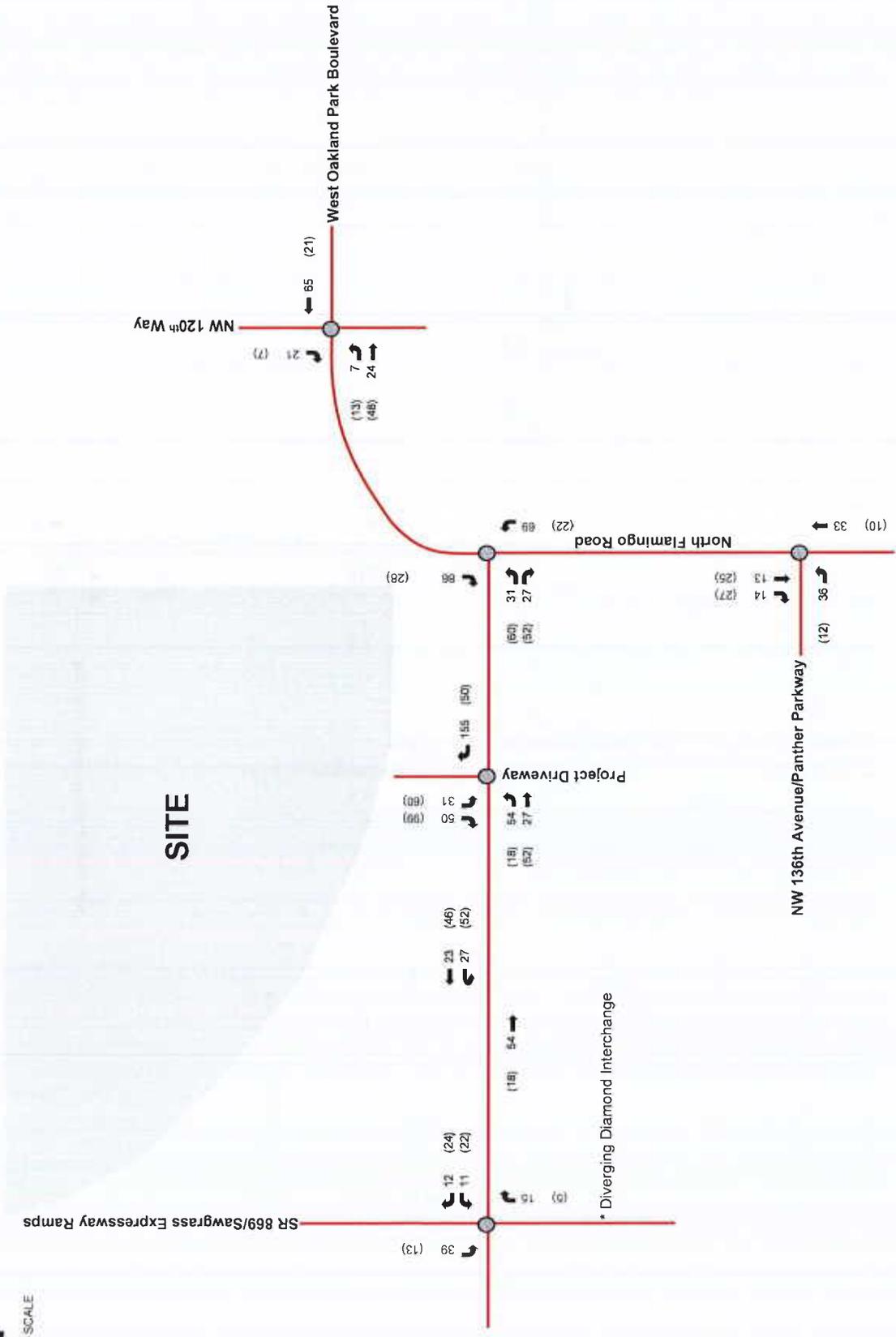


Figure 5
 Peak Hour Project Trip Assignment
 Baptist Health South Florida - Sunrise Hospital
 Sunrise, Florida

FUTURE TOTAL TRAFFIC

Future total traffic conditions are defined as the expected traffic conditions in the year 2029 after the opening of the project. Total traffic volumes considered in the analysis for this project are the sum of the background traffic volumes and the expected project traffic volumes. Figure 6 presents the future total turning movement volumes at the study intersections during the weekday A.M. and P.M. peak hours. Volume Development worksheets for the study intersections are included in Appendix G.



NOT TO SCALE

Legend

- Study Roadway
- Study Intersection
- XX A.M. Peak Hour Traffic
- (XX) P.M. Peak Hour Traffic

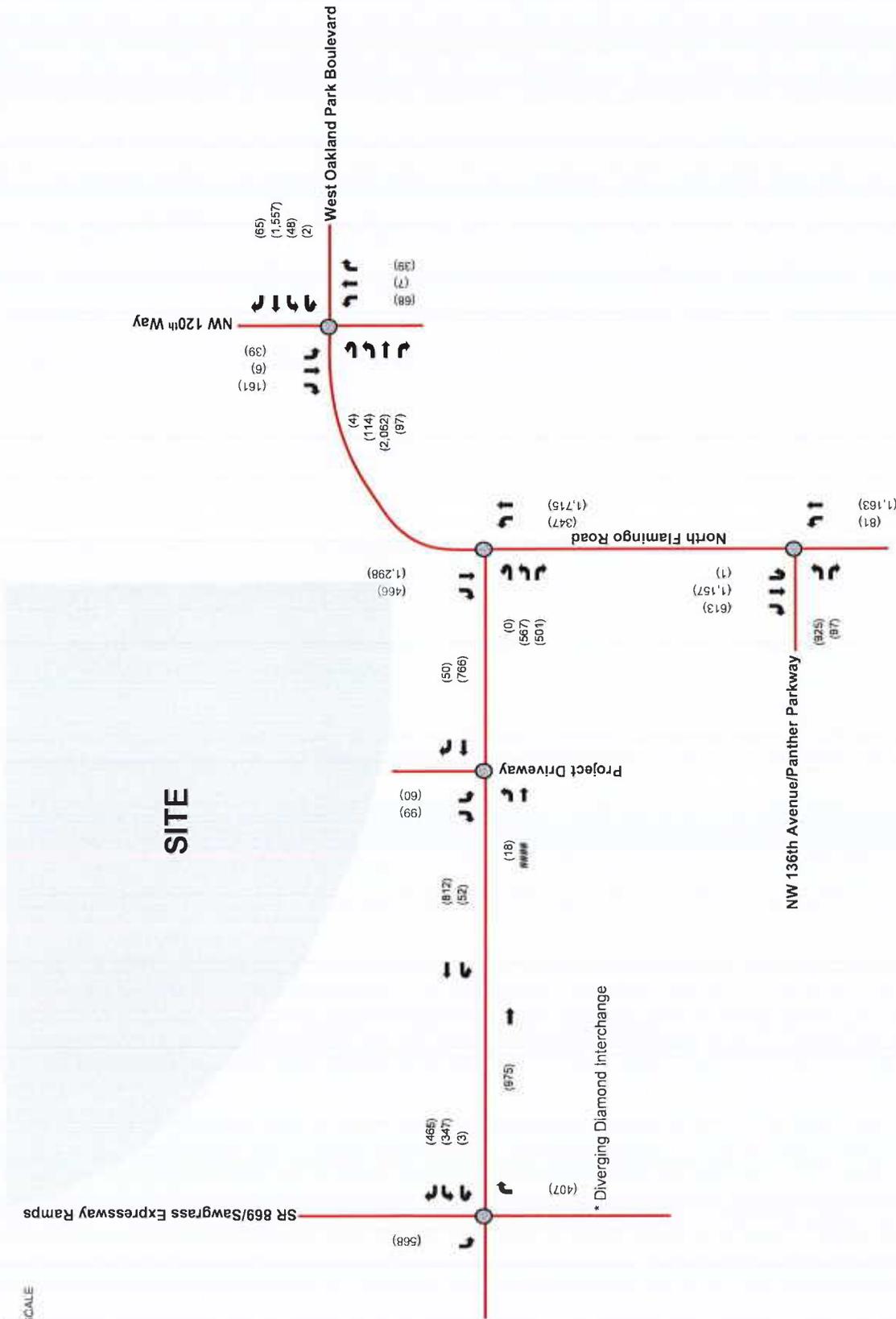


Figure 6
Future Total Peak Hour Traffic
Baptish Health South Florida - Sunrise Hospital
Sunrise, Florida

INTERSECTION CAPACITY ANALYSIS

The study area intersection operating conditions were analyzed for three (3) scenarios (existing conditions, future background conditions, and future total conditions) using Trafficware's *SYNCHRO* software, which applies methodologies outlined in the Transportation Research Board's (TRB's) *Highway Capacity Manual* (HCM) 2000 Edition. Synchro worksheets for the study intersections are included in Appendix H.

It should be noted that Florida's Turnpike Enterprise (FTE) has programmed improvements along this segment to West Oakland Park Boulevard. Baptist Health South Florida, in cooperation with the City of Sunrise, has been coordinating with FTE to modify the proposed improvement design to accommodate signalized access to the site as part of FTE's project. Those improvements have been accounted for in the future total conditions' capacity analysis.

A summary of the intersection analyses for the A.M. and P.M. hour is presented in Table 2 and 3. As Tables 2 and 3 indicate, the study intersections are expected to operate at adopted level of service (LOS D) or better during the A.M. and P.M. peak hours under all analysis scenarios.

Table 2: A.M. Peak Hour Intersection Capacity Analysis						
Intersection	Traffic Control	Overall LOS/Delay	Approach LOS/Delay			
			EB	WB	NB	SB
Existing Conditions (Future Background Conditions) [Future Total Conditions]						
West Oakland Park Boulevard and North Flamingo Road	Signalized ⁽²⁾	D/44.6 sec (D/49.4 sec) [D/46.1 sec]	E/55.6 sec (E/58.1 sec) [D/51.0 sec]	⁽⁴⁾	C/26.8 sec (C/26.7 sec) [C/22.5 sec]	D/49.3 sec (E/57.1 sec) [E/55.5 sec]
West Oakland Park Boulevard and NW 120 th Way	Signalized ⁽²⁾	D/36.2 sec (D/37.1 sec) [C/21.2 sec]	C/28.0 sec (C/29.5 sec) [A/9.7 sec]	D/43.4 sec (D/44.1 sec) [B/11.4 sec]	D/43.0 sec (D/43.8 sec) [D/42.2 sec]	C/21.9 sec (C/21.8 sec) [F/92.1 sec]
West Oakland Park Boulevard and SR 869/Sawgrass Expressway Ramps	Signalized ⁽²⁾	A/8.9 sec (C/24.7 sec) [C/27.0 sec]	⁽⁴⁾	A/8.3 sec (A/5.1 sec) [A/8.6 sec]	⁽¹⁾ (A/4.1 sec) [A/4.6 sec]	A/9.9 sec (E/70.4 sec) [E/69.3 sec]
North Flamingo Road and NW 136 th Avenue/Panther Parkway	Signalized ⁽²⁾	C/20.8 sec (D/36.8 sec) [C/24.2 sec]	E/65.7 sec (E/65.6 sec) [E/64.9 sec]	⁽⁴⁾	A/7.9 sec (A/8.1 sec) [A/8.4 sec]	B/11.6 sec (D/37.9 sec) [B/16.9 sec]
West Oakland Park Boulevard and Project Driveway	Signalized ⁽²⁾	⁽³⁾ (⁽³⁾) [B/10.3 sec]	⁽³⁾ (⁽³⁾) [E/75.0 sec]	⁽³⁾ (⁽³⁾) [A/4.3 sec]	⁽⁴⁾	⁽³⁾ (⁽³⁾) [E/63.2 sec]

Notes: (1) Approach operates under free-flow conditions. LOS is not defined.
 (2) Intersection cannot be analyzed in HCM 6th or HCM 2010 Edition. Therefore, HCM 2000 was used.
 (3) Intersection does not exist under existing and future background conditions.
 (4) Approach does not exist.

Table 3: P.M. Peak Hour Intersection Capacity Analysis						
Intersection	Traffic Control	Overall LOS/Delay	Approach LOS/Delay			
			EB	WB	NB	SB
Existing Conditions (Future Background Conditions) [Future Total Conditions]						
West Oakland Park Boulevard and North Flamingo Road	Signalized ⁽²⁾	D/47.2 sec (C/24.5 sec) [C/29.6 sec]	D/53.1 sec (D/52.7 sec) [E/54.1 sec]	⁽⁴⁾	C/20.8 sec (C/21.6 sec) [B/16.1 sec]	E/75.0 sec (B/12.5 sec) [C/30.6 sec]
West Oakland Park Boulevard and NW 120 th Way	Signalized ⁽²⁾	D/43.3 sec (D/51.4 sec) [B/13.6 sec]	D/46.7 sec (E/63.8 sec) [B/11.2 sec]	D/39.5 sec (D/38.9 sec) [A/9.3 sec]	E/76.0 sec (D/42.1 sec) [D/48.8 sec]	C/20.1 sec (C/23.0 sec) [E/55.9 sec]
West Oakland Park Boulevard and SR 869/Sawgrass Expressway Ramps	Signalized ⁽²⁾	B/10.9 sec (C/32.1 sec) [C/33.0 sec]	⁽⁴⁾	B/11.5 sec (A/6.5 sec) [B/11.5 sec]	⁽¹⁾ (A/6.4 sec) [A/6.6 sec]	B/10.5 sec (E/65.7 sec) [E/65.1 sec]
North Flamingo Road and NW 136 th Avenue/Panther Parkway	Signalized ⁽²⁾	C/29.8 sec (C/31.6 sec) [C/30.1 sec]	E/60.8 sec (E/60.2 sec) [E/60.0 sec]	⁽⁴⁾	B/15.3 sec (B/15.9 sec) [B/16.1 sec]	C/22.0 sec (C/26.1 sec) [B/22.8 sec]
West Oakland Park Boulevard and Project Driveway	Signalized ⁽²⁾	⁽³⁾ (⁽³⁾) [B/15.2 sec]	⁽³⁾ (⁽³⁾) [E/59.5 sec]	⁽³⁾ (⁽³⁾) [A/4.2 sec]	⁽⁴⁾	⁽³⁾ (⁽³⁾) [E/66.9 sec]

Notes: (1) Approach operates under free-flow conditions. LOS is not defined.
 (2) Intersection cannot be analyzed in HCM 6th or HCM 2010 Edition. Therefore, HCM 2000 was used.
 (3) Intersection does not exist under existing and future background conditions.
 (4) Approach does not exist.

ENTRY GATE ANALYSIS

A 95th percentile queue entry gate analysis for the proposed gate restricting a portion of the parking within the ground floor of the parking garage using the methodology outlined in ITE’s *Transportation and Land Development*, 1988 was performed.

The proposed entry gate at the provide one (1) physicians-only lane within the ground floor of the parking garage. To estimate the entry gate volume, it was assumed that 6 percent (6%) of trips generated by the proposed development will utilize the proposed entry gate consistent with the proportion of parking spaces within the gated area to the overall parking supply . Vehicles entering the physician-only lane in the parking garage will gain access via proximity card reader. It was assumed that the average service rate will be approximately 600 vehicles per hour (6.0 seconds per vehicle) for employees based on processing times for proximity card reader provided in *Parking Structures: Planning, Design, Construction, Maintenance, and Repair*, 2001. Guests will not utilize the proposed entry gate as parking spaces are available prior to the entry gate and throughout the parking garage. As Table 5 indicates, the proposed development is expected to result in a queue of less than one (1) vehicle at the entry gates during the A.M. and P.M. peak hours. Detailed entry gate calculations are included in Appendix I.

Table 4: Peak Hour Entry Gate Queuing Analysis			
A.M. Peak Hour (P.M. Peak Hour)			
Entry Lane	Entering Volumes (vph)	Service Rates (minutes/vehicle)	95 th Percentile Queue Including Service Position
Employee-Only Lane	13 (4)	0.100	< 1 vehicle (< 1 vehicle)

CONCLUSION

Baptist Health South Florida, Inc. is proposing to develop the property located at 1240 West Oakland Park Boulevard in Sunrise, Florida. The proposed development consists of a 100-bed, 367,000 (+/-) square foot, 675-employee hospital campus. The development is expected to be operational in year 2029.

Access to the proposed development will be provided via one (1) full access signalized driveway just west of the intersection of West Oakland Park Boulevard and North Flamingo Road. Note the exiting vehicles destined for West Oakland Park Boulevard (eastbound) will perform a left-turn at this driveway, while exiting vehicles destined for North Flamingo Road (southbound) will perform a right-turn and a subsequent westbound u-turn along West Oakland Park Boulevard to leave the site. Additionally, a secondary access point primarily for emergency/delivery vehicles will be provided (right-in/right-out driveway) east of the SR 869/Sawgrass Expressway northbound On-Ramp.

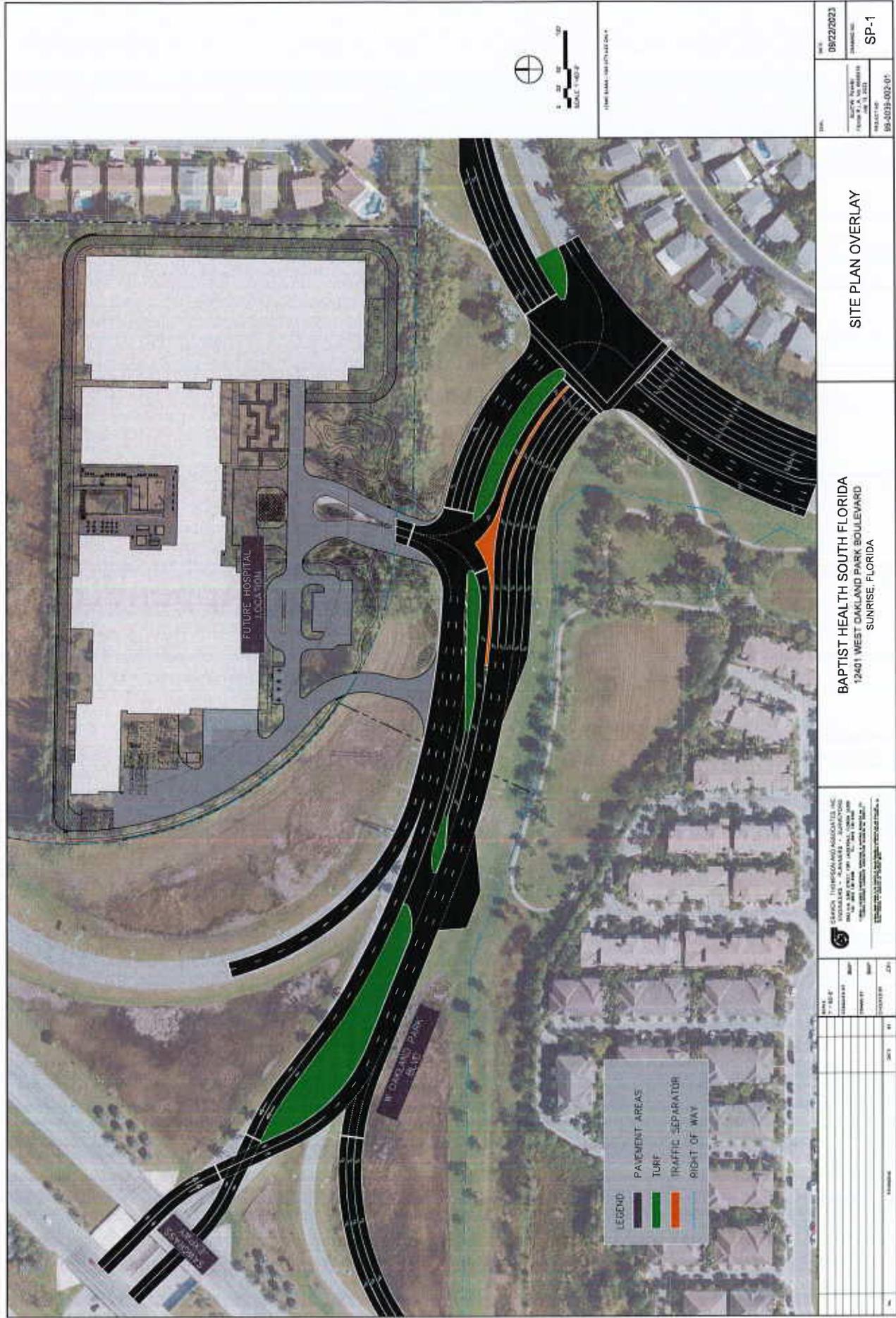
Trip generation for the proposed development was calculated using rates and/or equations contained in the Institute of Transportation Engineers' (ITE's) *Trip Generation Manual*, 11th Edition. The project is expected to generate 290 net new weekday A.M. peak hour trips and 227 net new weekday P.M. peak hour trips.

The results of the intersection capacity analysis indicate that the study intersections are expected to operate at adopted level of service (LOS D) or better during the A.M. and P.M. peak hours under all analysis.

An entry gate analysis was performed for the proposed gate within the parking garage restricting a portion of the ground floor parking for physicians. Less than one (1) vehicle at the entry gate during the A.M. and P.M. peak hours. Therefore, vehicle queues are expected to be accommodated on-site without extending onto West Oakland Park Boulevard.

Appendix A
Site Plan

Note this site plan is for informational purposes only. Please refer to the site plan submittal for the updated site plan.



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Appendix B

Methodology Correspondence

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MEMORANDUM

To: Matthue Goldstein
Planning and Zoning Manager
City of Sunrise

From: John J. McWilliams, P.E. 

Cc: Ivette Carcas – Baptist Health South Florida
Janna Lhota, Esq. – Holland+Knight

Date: September 21, 2023

**Subj: Baptist Health South Florida - Sunrise Hospital
12401 West Oakland Park Boulevard
Traffic Impact Study Methodology**

The purpose of this memorandum is to summarize the traffic impact study methodology for the development of a new 100-bed, 382,600 s.f. (+/-) hospital located at 1240 West Oakland Park Boulevard in Sunrise, Florida. The campus is expected to have 675 (+/-) full time equivalent employees and the site is currently vacant. The project is expected to be completed and opened by year 2027. A conceptual site access plan is provided in Attachment A. Note the site access plan reflects improvements along West Oakland Park Boulevard adjacent to the site programmed by Florida's Turnpike Enterprise. These improvements are expected to be completed at the approximately the same time as project buildout. The following sections summarize our proposed methodology.

TRIP GENERATION

Trip generation calculations for the proposed development were performed using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 11th Edition. The trip generation for the existing land use was determined using ITE Land Use Code (LUC) 610 – Hospital utilizing the number of employees as the trip generation variable.

The US Census *Means of Transportation to Work* data was reviewed for the census tract in which the development is located. A multimodal factor of 1.4 percent (1.4%) was identified for the tract consistent with its lack of current development. However, it is expected that a portion of employees and visitors will choose to walk, bike, or use public transit to and from the proposed development. West Oakland Park Boulevard, in the vicinity of the site, is currently served by Broward County Transit Route 72 and Sunrise Community Shuttle Route 6. To provide for a conservative analysis, a multimodal factor was not applied to the trip generation estimates.

The project is expected to generate 290 new weekday A.M. peak hour vehicular trips and 227 new weekday P.M. peak hour vehicular trips. Trip generation calculations may be revised based on updates to the development program and/or site plan modifications. Detailed trip generation calculations and US Census *Means of Transportation to Work* data are included in Attachment B.

STUDY AREA

Based on the proposed development plan, the following intersections, in addition to the project driveways, are proposed to be analyzed:

1. West Oakland Park Boulevard at North Flamingo Road
2. West Oakland Park Boulevard at NW 120th Way
3. West Oakland Park Boulevard at SR 869/Sawgrass Expressway Ramps
4. North Flamingo Road at NW 136th Avenue/Panther Parkway

It should be noted that Florida's Turnpike Enterprise, in conjunction with the proposed development, is proposing improvements along West Oakland Park Boulevard at the intersections of SR 869/Sawgrass Expressway and at North Flamingo Road. These improvements will be accounted for in the future no-build and build conditions as they expected to be constructed/completed near the time of project completion.

DATA COLLECTION

Turning movement counts will be collected on a typical weekday (Tuesday, Wednesday, or Thursday) during the A.M. (7:00 to 9:00 A.M.) and P.M. (4:00 to 6:00 P.M.) peak periods at all study intersections. Turning movement counts will be collected in 15-minute intervals during the two (2) peak periods and will include pedestrians and bicyclists. All traffic counts will be adjusted to peak season conditions using the appropriate FDOT peak season category factors. Traffic signal timing information will be obtained from the Broward County Traffic Engineering Division. All traffic data collected will be provided in the appendix of the traffic impact study.

TRIP DISTRIBUTION

Trip distribution will be determined using a select zone analysis for the appropriate Traffic Analysis Zone (TAZ) in the Florida Standard Urban Transportation Model Structure (FSUTMS) Southeast Florida Regional Planning Model (SERPM). Adjustments to the traffic distribution will be made to account for project trips utilizing the local roadway network and based on turning movement counts collected at study area intersections. The traffic impact study will assume a full access median opening at the site's main entrance.

BACKGROUND GROWTH RATE/MAJOR COMMITTED DEVELOPMENT

A background growth rate will be calculated based on historical growth trends at nearby FDOT traffic count stations. Additionally, growth rates based on the FSUTMS SERPM 2015 and 2045 model network volumes will be examined. The higher of the two (2) growth rates will be used in the analysis. Note that a minimum growth rate of 0.5 percent (0.5%) will be used for analysis. Documentation will be provided in the Appendix of the traffic impact study.

The City's review of this document will determine any committed projects to include in background conditions. The City will provide the corresponding approved traffic study for any committed projects identified.

CAPACITY ANALYSIS

Capacity analyses will be conducted for the A.M. and P.M. peak hours at the study intersections. Intersection analyses will be performed using *Synchro* traffic engineering analysis software which

applies the Transportation Research Board's (TRB's), *Highway Capacity Manual (HCM) 2000* and 6th Edition methodologies. Capacity analyses will be conducted for three (3) scenarios: existing, future build-out without project (future background conditions), and future build-out with project (future total conditions). The following figures will be included for the study intersections:

- Existing conditions
- Future background traffic conditions (with growth rate and committed development traffic)
- Trip distribution
- Trip assignment
- Future total traffic conditions (with project)

GARAGE ENTRY GATE OPERATIONS ANALYSIS

If gates are proposed at the entry to the parking garage, a 95th percentile entry gate queue analysis will be prepared. The entry gate queuing analysis will be prepared for the weekday A.M. and P.M. peak hours. Entry gate queuing analysis will be conducted consistent with the procedures outlined in ITE's *Transportation and Land Development*, 1988 and/or *Parking Structures 3rd Edition: Planning, Design, Construction, Maintenance, and Repair*, 2001.

DOCUMENTATION

The results of the traffic analysis will be summarized in a report. The report will include supporting documents including signal timings, lane geometry, and software output sheets. The report will also include text and graphics necessary to summarize the assumptions and analysis.

K:\FTL_TPTO\043106012 - Baptist Sunrise Hospital\Correspondence\05 XX 22 Goldstein Traffic Impact Study Methodology Memo.docx

METHODOLOGY

Attachment A

Conceptual Site Access Plan



DATE: 08/22/2023
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT NO: 89-0038-002-01
 SHEET NO: SP-1

SITE PLAN OVERLAY

BAPTIST HEALTH SOUTH FLORIDA
 12401 WEST OAKLAND PARK BOULEVARD
 SUNRISE, FLORIDA

FOR THE RECORD, THE ENGINEER HAS CONDUCTED VISUAL INSPECTIONS OF THE PROJECT SITE AND HAS FOUND THE PROJECT TO BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS AND ORDINANCES. THE ENGINEER'S RESPONSIBILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT AS SHOWN ON THESE PLANS.

- LEGEND**
- PAVEMENT AREAS
 - TURF
 - TRAFFIC SEPARATOR
 - RIGHT OF WAY

NO.	DATE	DESCRIPTION
1	08/22/2023	ISSUED FOR PERMIT

METHODOLOGY

Attachment B

Two Generation Calculations

Hospital (610)

Vehicle Trip Ends vs: Employees
 On a: Weekday,
 Peak Hour of Adjacent Street Traffic,
 One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 16

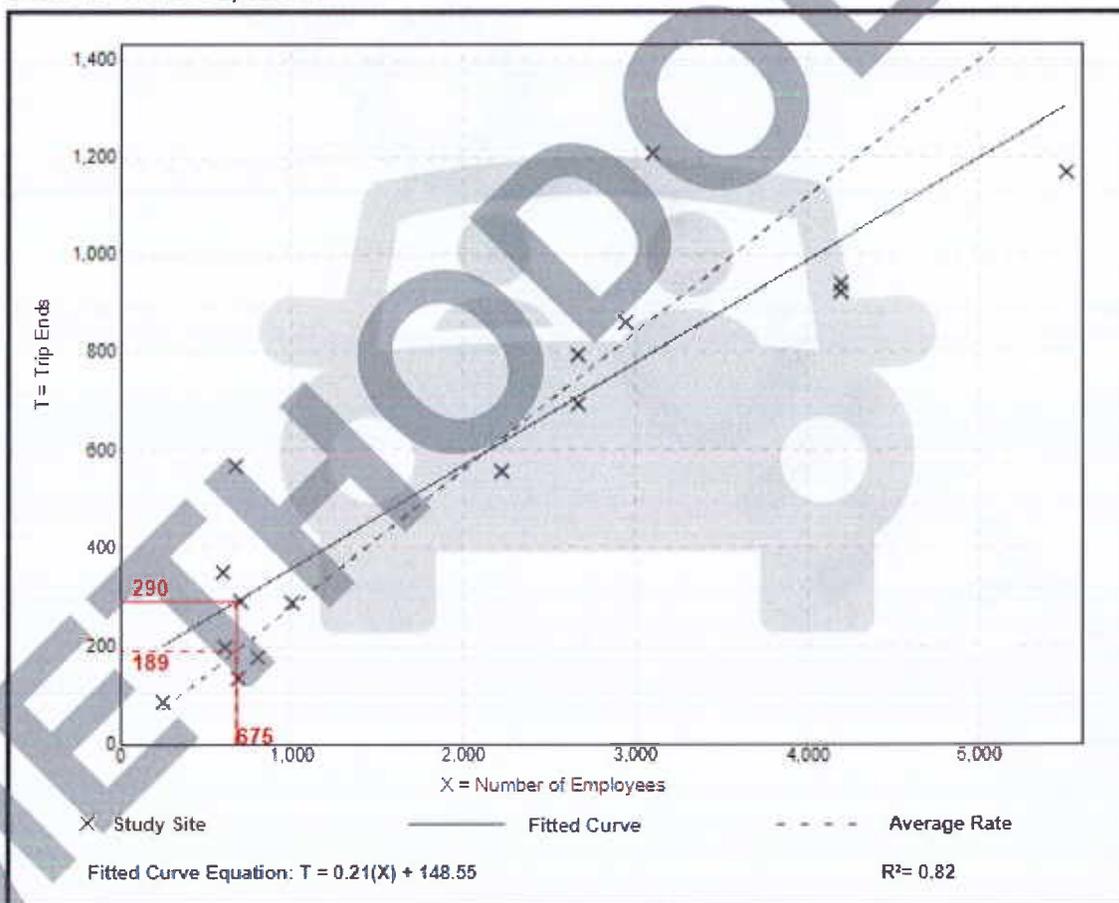
Avg. Num. of Employees: 2049

Directional Distribution: 72% entering, 28% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.28	0.20 - 0.85	0.11

Data Plot and Equation



Hospital (610)

Vehicle Trip Ends vs: Employees

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 13

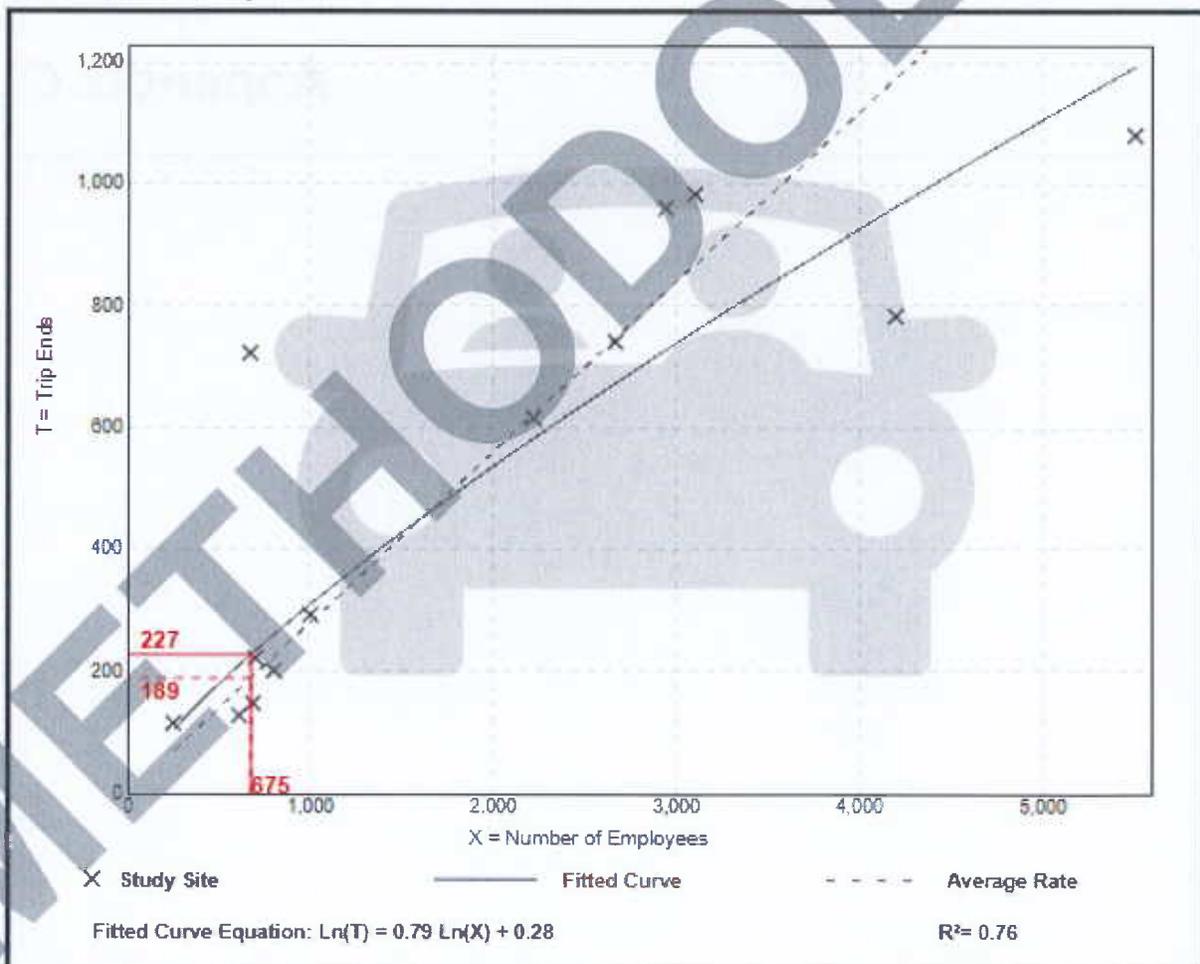
Avg. Num. of Employees: 1949

Directional Distribution: 30% entering, 70% exiting.

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.28	0.19 - 1.08	0.15

Data Plot and Equation



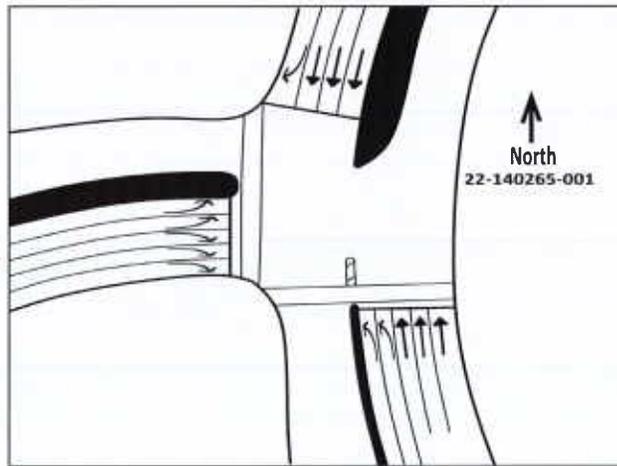
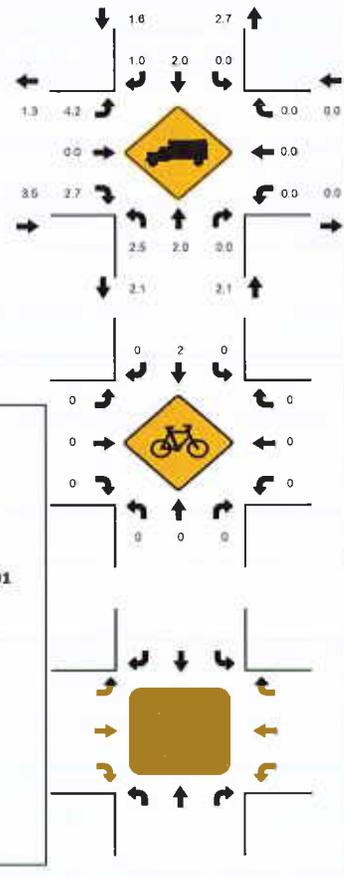
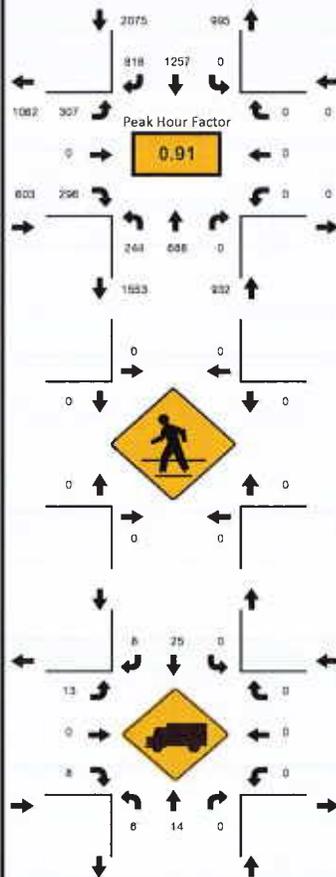
Appendix C

Traffic Data

LOCATION: SR 816/W Oakland Park Blvd/N Flamingo Rd & SR 816/W Oakland Park Blvd
 CITY/STATE: Sunrise, FL

PROJECT ID: 22-140265-001
 DATE: Wed, May 25, 2022

Peak-Hour: 07:15 AM - 08:15 AM
 Peak 15-Minute: 07:45 AM - 08:00 AM

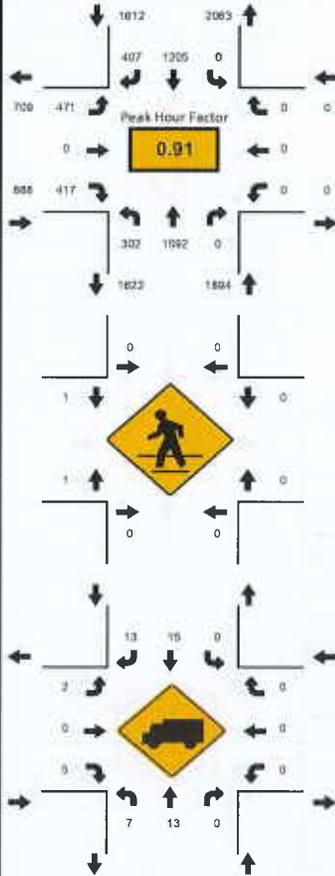


15-Min Count Period Beginning At	6W Oakland Park Blvd/N Flamin					6W Oakland Park Blvd/N Flamin					SR 816/W Oakland Park Blvd					SR 816/W Oakland Park Blvd					Total	Hourly Total
	Northbound					Southbound					Eastbound					Westbound						
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	45	128	0	0		0	288	181	0		47	0	38	0		0	0	0	0		727	3488
07:15 AM	54	119	0	0		0	300	207	0		59	0	74	1		0	0	0	0		814	3610
07:30 AM	69	169	0	0		0	332	232	0		82	0	73	0		0	0	0	0		957	3587
07:45 AM	87	207	0	0		0	351	200	0		88	0	75	0		0	0	0	0		999	3354
08:00 AM	54	163	0	0		0	274	179	0		77	0	74	0		0	0	0	0		851	3221
08:15 AM	58	169	0	0		0	279	140	0		82	0	63	0		0	0	0	0		791	2370
08:30 AM	36	153	0	0		0	257	133	0		81	0	64	0		0	0	0	0		724	1579
08:45 AM	59	173	0	0		0	346	141	0		64	0	72	0		0	0	0	0		855	855
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	276	828	0	0		0	1404	926	0		352	0	300	4		0	0	0	0		4092	
Heavy Trucks	16	28	0	0		0	28	20	0		20	0	16	0		0	0	0	0		128	
Pedestrians	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	
Bicycles	0	0	0	0		0	4	0	0		0	0	0	0		0	0	0	0		4	
Buses Stopped Buses	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	

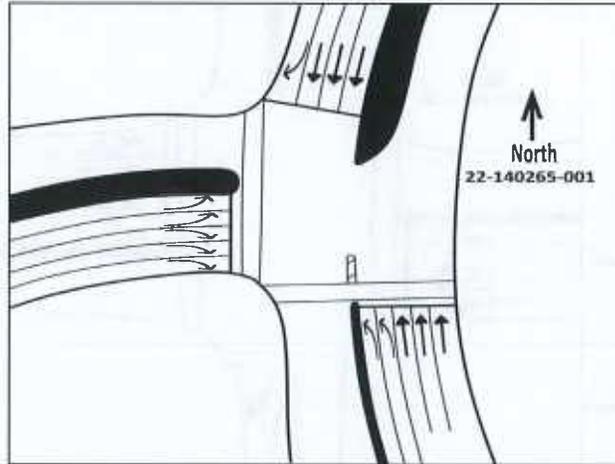
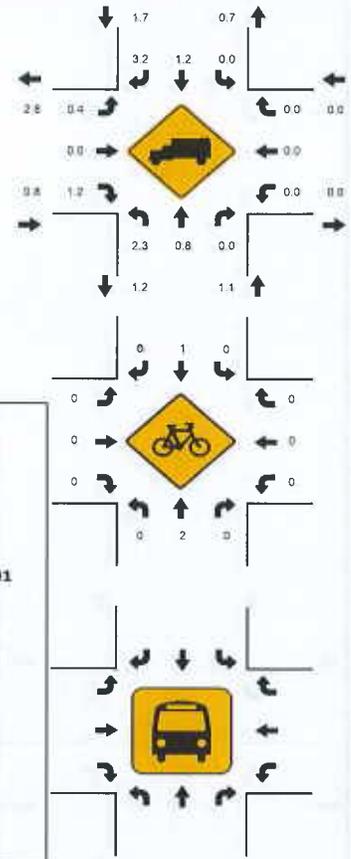
LOCATION: SR 816/W Oakland Park Blvd/N Flamingo Rd & SR 816/W Oakland Park Blvd
 CITY/STATE: Sunrise, FL

PROJECT ID: 22-140265-001
 DATE: Wed, May 25, 2022

Peak-Hour: 05:00 PM - 06:00 PM
 Peak 15-Minute: 05:15 PM - 05:30 PM



National Data & Surveying Services

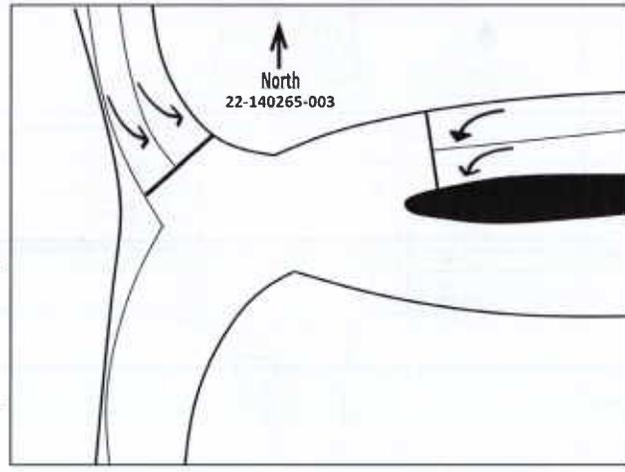
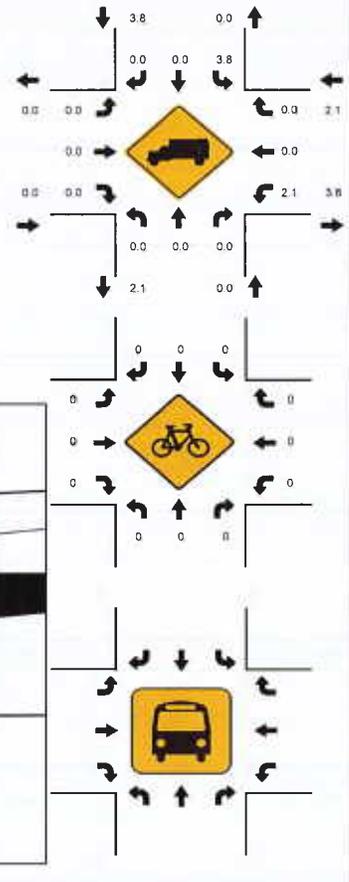
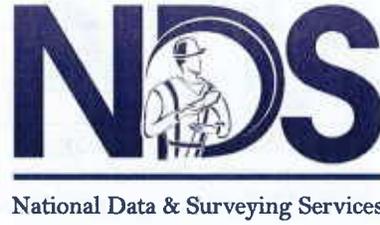
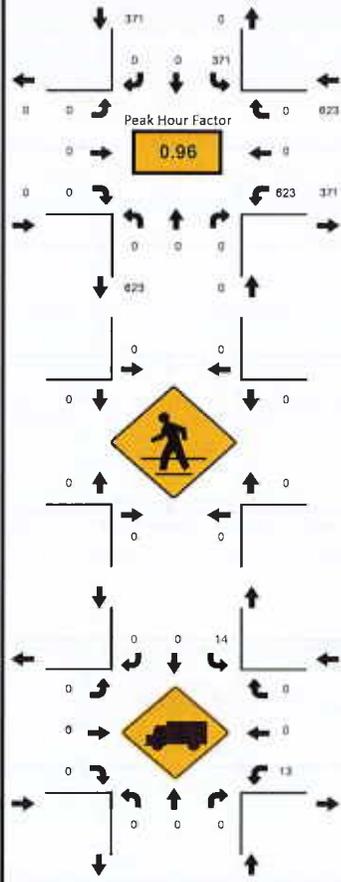


15-Min Count Period Beginning At	6W Oakland Park Blvd/N Flamin					6W Oakland Park Blvd/N Flamin					SR 816/W Oakland Park Blvd Eastbound					SR 816/W Oakland Park Blvd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	56	324	0	0		0	276	110	0		82	0	63	0		0	0	0	0		911	3853
04:15 PM	84	375	0	0		0	220	87	0		103	0	82	0		0	0	0	0		931	4021
04:30 PM	53	332	0	0		0	324	89	0		109	0	98	0		0	0	0	0		1003	4296
04:45 PM	83	345	0	0		0	294	85	0		101	0	100	0		0	0	0	0		1008	4367
05:00 PM	95	393	0	0		0	283	100	0		103	0	105	0		0	0	0	0		1079	4394
05:15 PM	70	440	0	0		0	341	134	0		109	0	132	0		0	0	0	0		1208	3315
05:30 PM	77	407	0	0		0	266	79	0		143	0	102	0		0	0	0	0		1074	2109
05:45 PM	80	352	0	0		0	315	94	0		116	0	98	0		0	0	0	0		1035	1035
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	380	1760	0	0		0	1364	536	0		572	0	448	0		0	0	0	0			5060
Heavy Trucks	12	20	0	0		0	20	20	0		4	0	12	0		0	0	0	0		88	
Pedestrians	0	0	0	0		0	0	0	0		4	0	0	0		0	0	0	0		4	
Bicycles	0	8	0	0		0	4	0	0		0	0	0	0		0	0	0	0		12	
Buses																						
Stopped Buses																						

LOCATION: SR 869/Sawgrass Expy SB Ramps & SR 816/W Oakland Park Blvd
 CITY/STATE: Sunrise, FL

PROJECT ID: 22-140265-003
 DATE: Wed, May 25, 2022

Peak-Hour: 07:15 AM - 08:15 AM
 Peak 15-Minute: 07:30 AM - 07:45 AM

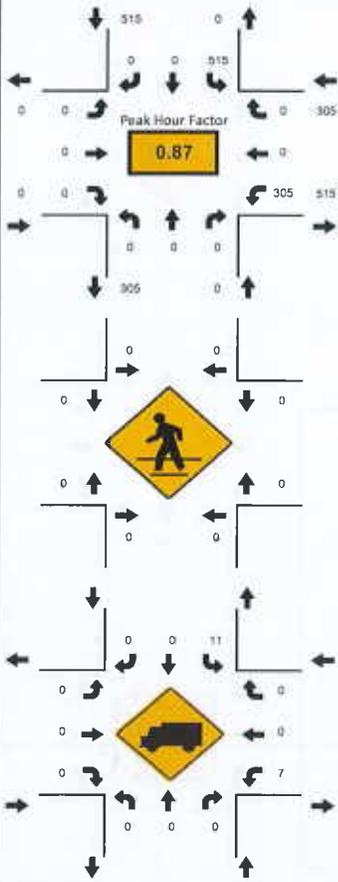


15-Min Count Period Beginning At	SR 869/Sawgrass Expy SB Ramps Northbound					SR 869/Sawgrass Expy SB Ramps Southbound					SR 816/W Oakland Park Blvd Eastbound					SR 816/W Oakland Park Blvd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	0	0	0	0	0	49	0	0	0	0	0	0	0	0	0	131	0	0	0	0	180	942
07:15 AM	0	0	0	0	0	66	0	0	0	0	0	0	0	0	0	152	0	0	0	0	248	994
07:30 AM	0	0	0	0	0	87	0	0	0	0	0	0	0	0	0	171	0	0	0	0	258	929
07:45 AM	0	0	0	0	0	95	0	0	0	0	0	0	0	0	0	161	0	0	0	0	256	851
08:00 AM	0	0	0	0	0	93	0	0	0	0	0	0	0	0	0	139	0	0	0	0	232	797
08:15 AM	0	0	0	0	0	81	0	0	0	0	0	0	0	0	0	102	0	0	0	0	183	565
08:30 AM	0	0	0	0	0	76	0	0	0	0	0	0	0	0	0	104	0	0	0	0	180	382
08:45 AM	0	0	0	0	0	90	0	0	0	0	0	0	0	0	0	112	0	0	0	0	202	202
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	0	0	0	0	0	384	0	0	0	0	0	0	0	0	0	684	0	0	0	0	1068	
Heavy Trucks	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	24	0	0	0	0	52	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses: Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

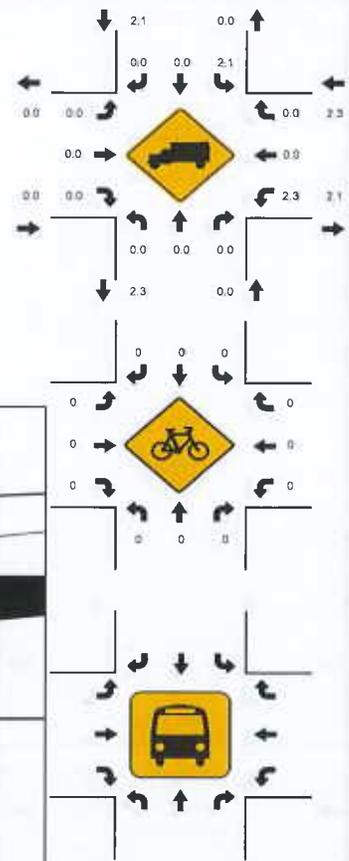
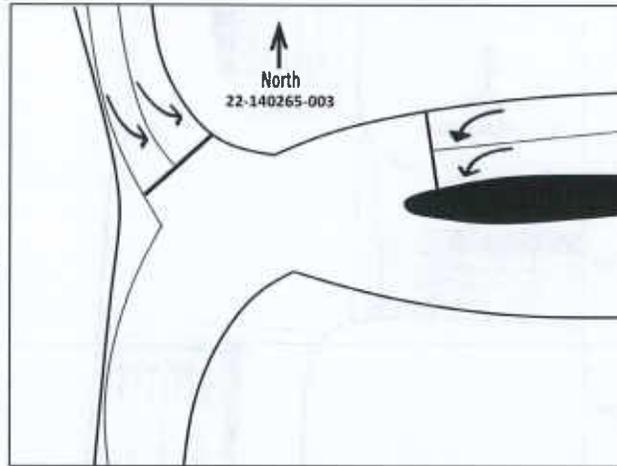
LOCATION: SR 869/Sawgrass Expy SB Ramps & SR 816/W Oakland Park Blvd
 CITY/STATE: Sunrise, FL

PROJECT ID: 22-140265-003
 DATE: Wed, May 25, 2022

Peak-Hour: 04:30 PM - 05:30 PM
 Peak 15-Minute: 05:15 PM - 05:30 PM



National Data & Surveying Services



15-Min Count Period Beginning At	SR 869/Sawgrass Expy SB Ramps Northbound					SR 869/Sawgrass Expy SB Ramps Southbound					SR 816/W Oakland Park Blvd Eastbound					SR 816/W Oakland Park Blvd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	0	0	0	0	73	0	0	0	0	0	0	0	0	0	73	0	0	0	0	146	675
04:15 PM	0	0	0	0	0	102	0	0	0	0	0	0	0	0	0	48	0	0	0	0	150	734
04:30 PM	0	0	0	0	0	118	0	0	0	0	0	0	0	0	0	74	0	0	0	0	192	820
04:45 PM	0	0	0	0	0	125	0	0	0	0	0	0	0	0	0	62	0	0	0	0	187	813
05:00 PM	0	0	0	0	0	120	0	0	0	0	0	0	0	0	0	77	0	0	0	0	205	817
05:15 PM	0	0	0	0	0	144	0	0	0	0	0	0	0	0	0	85	0	0	3	0	236	612
05:30 PM	0	0	0	0	0	128	0	0	0	0	0	0	0	0	0	57	0	0	0	0	185	376
05:45 PM	0	0	0	0	0	114	0	0	0	0	0	0	0	0	0	77	0	0	0	0	191	191
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total	
All Vehicles	0	0	0	0	0	576	0	0	0	0	0	0	0	0	0	356	0	0	12	0		
Heavy Trucks	0	0	0	0	0	20	0	0	0	0	0	0	0	0	0	8	0	0	0	0	28	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Peak Season Category Report

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8630 WEST-W OF US441

MOCF: 0.97
 PSCF

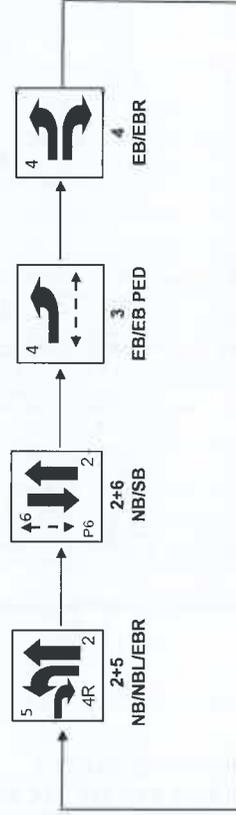
WEEK	DATES	SF	PSCF
1	01/01/2022 - 01/01/2022	0.99	1.02
2	01/02/2022 - 01/08/2022	1.01	1.04
3	01/09/2022 - 01/15/2022	1.02	1.05
4	01/16/2022 - 01/22/2022	1.01	1.04
5	01/23/2022 - 01/29/2022	1.00	1.03
6	01/30/2022 - 02/05/2022	0.98	1.01
* 7	02/06/2022 - 02/12/2022	0.97	1.00
* 8	02/13/2022 - 02/19/2022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

* PEAK SEASON

Signal Timings

Sequence of Operation for (1435) Oakland Park Boulevard and Flamingo Road

Sunrise MOD 11 and UP



EBR (4R) - OVERLAPPED WITH PH. 4 AND PH. 5
← - - → PEDESTRIAN CROSSWALK



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1435	Initial Operation Date	12/20/88
Controller Type	2070 LN	System Number	1435
Modification Number	11	Modification Date	1/27/2021
Drawing/Project No		FPL Grid Number	86583004705
Intersection	OAKLAND PARK BOULEVARD and FLAMINGO ROAD		
Municipality	SUNRISE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number		2	P4	4R,7	5,4R	6		
Direction		NB	E/W	EB	NBL	SB		
Initial Green(MIN)		10		6	6	10		
Vehicle Ext.(GAP)		3.0		2.0	2.0	3.0		
Maximum Green I		50		30	20	50		
Maximum Green II								
Yellow Clearance		4.5	4.0	4.0	4.5	4.5		
All Red Clearance		2.0		2.0	3.0	3.0		
Phase Recall		MIN	OFF	OFF	OFF	MIN		
Detector Delay				20-RT				
Walk			7 + A			7 + A		
Pedestrian Clearance			25			33		
Permissive					DUAL			
Flash Operation		YELLOW	(DARK)	RED	RED	YELLOW		

Attachment

NOTES:

1. EASTBOUND RIGHT OVERLAPPED WITH PHASE 4 & PHASE 5.
2. MOD. 11 INSTALLED PHASE 3 AND 6 PEDESTRIAN PHASE VIA FDOT PROJECT FPID# 429569-5-62-02 AND UPDATES PHASE 3 AND 6 WALK VALUES AND PEDESTRIAN CLEARANCE VALUES PER CURRENT STANDARDS.

Submitted By _____

Approved By _____

Station : 1435 - Oakland Park Blvd & Flamingo Rd (Standard File)

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Walk			7			7										
Ped Clearance			25			33										
Min Green		10		6	6	10										
Gap Ext		3		2	2	3										
Max1		50		30	20	50										
Max2																
Yellow Clr		4.5	4	4	4.5	4.5			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr		2	2	2	3	3			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit		120		60	50	90										
Dynamic Max Step		70		30	30	40										
Enable		ON	ON	ON	ON	ON										
Auto Flash Entry				ON												
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON							
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON							
Guar Passage																
Rest In Walk						ON										
Cond Service																
Add Init Calc																

Preemption

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

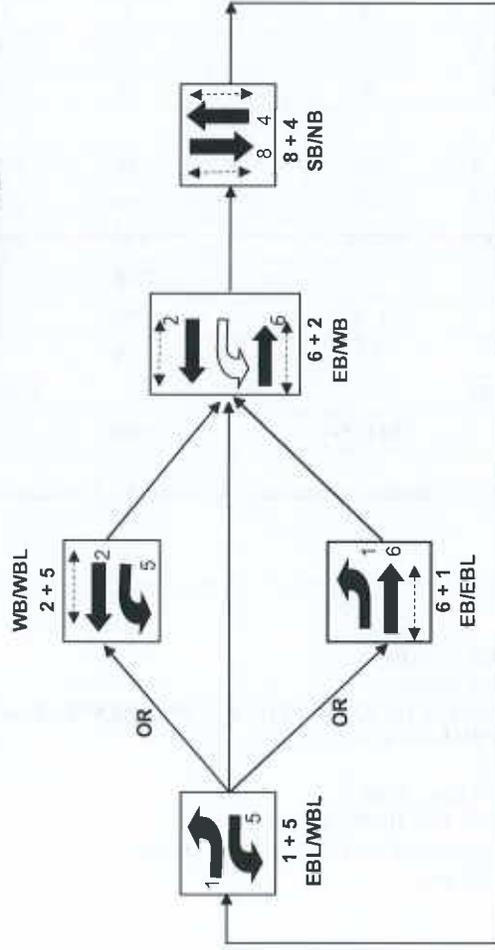
Preempt LP

Channel	1	2	3	4
Min				
Max	200		200	
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt	ON		ON	
No Skip				
Priority P1	6		2	
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Sequence of Operation

Oakland Park Blvd and NW 120 Way (1488), Sunrise

Modification #3





BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1488	Initial Operation Date	4/14/93
Controller Type	2070 LN	System Number	1488
Modification Number	9	Modification Date	08/06/2015
Drawing/Project No	803	FPL Grid Number	86583314402
Intersection	OAKLAND PARK BOULEVARD and NW 120 WAY		
Municipality	SUNRISE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2		4	5	6		8
Direction	EBL	WB		NB	WBL	EB		SB
Initial Green(MIN)	5	12		6	4	12		6
Vehicle Ext.(GAP)	1.5	3.0		2.0	1.5	3.0		2.0
Maximum Green I	25	50		25	12	50		25
Maximum Green II								
Yellow Clearance	5.0	5.0		4.0	5.0	5.0		4.0
All Red Clearance	2.0	2.0		2.0	2.0	2.0		2.0
Phase Recall	LOCK	MIN		OFF	OFF	MIN		OFF
Detector Delay				20-RT				20-RT
Walk		7+A		7+A		7+A		7+A
Pedestrian Clearance		25		38		25		33
Permissive	NO				5 SECT			
Flash Operation		YELLOW		RED		YELLOW		RED

Attachment

NOTES:

1. DUAL ENTRY HARDWIRED NORTH/SOUTH.
2. FLASH OPERATION: 0000-0600, 7 DAYS.
3. ANTI-BACKDOWN WITH RED REVERT: CALL ON PHASE 1 IN ABSENCE OF 4+8 ACTIVATES 4.0 SECOND RED REVERT, THEN PHASES 1+6.
- PHASES 2+6 ON---->OMIT PHASE 5.
4. DETECTOR LOCK ENABLED, PHASE 1 (EBL).
5. AUDIBLE PEDESTRIAN SIGNALS: E/W BEEP, N/S TONE.
6. MOD 9 UPDATES YELLOW CLEARANCE VALUES ON PHASES 1, 2, 5 & 6 PER CURRENT BCTED STANDARDS.

Submitted By _____

Approved By _____

Station : 1488 - Oakland Park Blvd & NW 120 Way (Standard File)

Phase	1 (EL)	2 (WT)	3	4 (NT)	5 (WL)	6 (ET)	7	8 (ST)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		25		38		25		33								
Min Green	5	12		6	4	12		6								
Gap Ext	1.5	3		2	1.5	3		2								
Max1	25	50		25	12	50		25								
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert		4				4										
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON		ON	ON	ON		ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call	ON								ON							
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON							
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																

Preemption

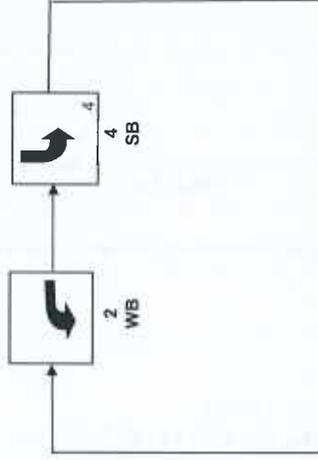
Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash					ON	ON
Override Higher Preempt					ON	ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8	8	8	8
Max Presence	180	180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

Preempt LP

Channel	1	2	3	4
Min				
Max		200		200
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt		ON		ON
No Skip				
Priority P1		2		6
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Sequence of Operation for (1434) Oakland Park Blvd and Sawgrass Expressway (SB)

Sunrise





BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1434	Initial Operation Date	11/10/98
Controller Type	2070 LN	System Number	
Modification Number	3	Modification Date	06/10/2020
Drawing/Project No		FPL Grid Number	
Intersection	OAKLAND PARK BOULEVARD and SAWGRASS EXPRESSWAY (SB)		
Municipality	SUNRISE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number		2		8				
Direction		WB		SB				
Initial Green(MIN)		10		5				
Vehicle Ext.(GAP)		2.0		2.0				
Maximum Green I		30		20				
Maximum Green II								
Yellow Clearance		4.0		4.0				
All Red Clearance		2.0		2.0				
Phase Recall		MIN		OFF				
Detector Delay								
Walk								
Pedestrian Clearance								
Permissive								
Flash Operation		YELLOW		RED				

Attachment

NOTES:

1. FLASH OPERATION: 2300 - 0600, 7 DAYS.
2. MOD. 3 UPDATES ALL RED CLEARANCE VALUES.

Submitted By _____

Approved By _____

Station : 1434 - Oakland Park Blvd & Sawgrass Expressway (Standard File)

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

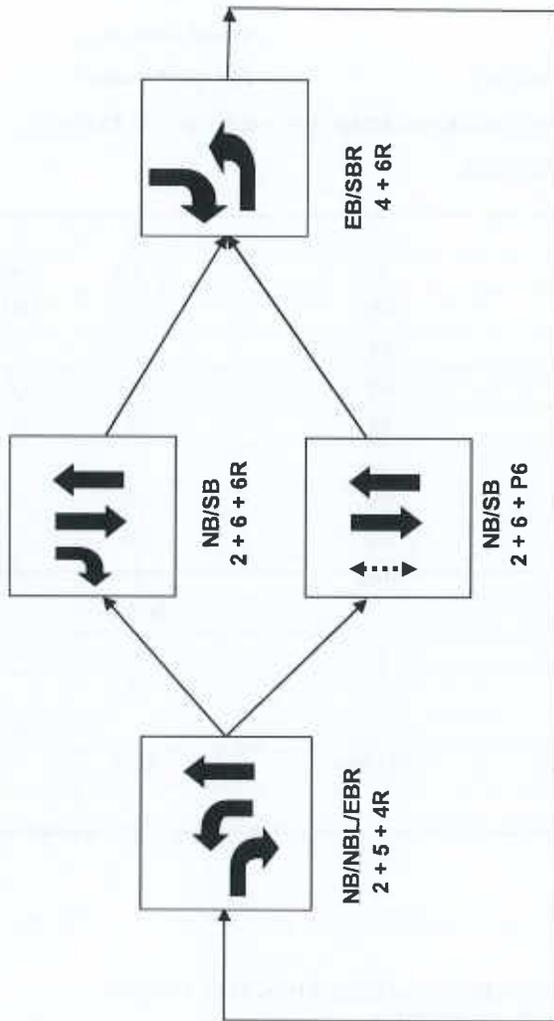
Preemption

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

Preempt LP

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

Sequence of Operation
Flamingo Road (SR 823) and NW 136 Avenue (2355)
MOD. 11 AND HIGHER





BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	2355	Initial Operation Date	3/14/90
Controller Type	2070 LN	System Number	2355
Modification Number	11	Modification Date	07/18/2017
Drawing/Project No	ARENA	FPL Grid Number	86582008804
Intersection	FLAMINGO ROAD (SR 823) and NW 136 AVENUE		
Municipality	SUNRISE		

Controller Phase	1	2	3	4	5	6	7	8
Face Number		2		4, 6R	5, 4R	6, 6R*		
Direction		NB		EB	NBL	SB		
Initial Green(MIN)		12		6	5	12		
Vehicle Ext.(GAP)		3.0		2.0	1.5	3.0		
Maximum Green I		50		25	20	50		
Maximum Green II								
Yellow Clearance		5.0		5.0	4.5	5.0		
All Red Clearance		2.0		2.0	2.0	2.0		
Phase Recall		MIN		OFF	OFF	MIN		
Detector Delay				20-RT				
Walk				7		7		
Pedestrian Clearance				33		33		
Permissive					NO			
Flash Operation		YELLOW		RED		YELLOW		
						NOTE 1		

Attachment

NOTES:

1. SBR (6R) OVERLAPPED WITH SB (6), OMITTED WHEN P6 IS ACTIVE.
2. PHOTO ENFORCEMENT, CITY OF SUNRISE.
3. MOD. 11 UPDATE SIGNAL TIMING FOR SBR AND NBL SIGNAL MODIFICATION (WOIT2017071110).

Submitted By _____

Approved By _____

Station : 2355 - Flamingo Rd & NW 136 Ave (Standard File)

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		(NT)		(ET)	(NL)	(ST)										
Walk				7		7										
Ped Clearance				33		33										
Min Green		12		6	5	12										
Gap Ext		3		2	1.5	3										
Max1		50		25	20	50										
Max2																
Yellow Clr		5		5	4.5	5			3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr		2		2	2	2			1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit					40											
Dynamic Max Step					28											
Enable		ON		ON	ON	ON										
Auto Flash Entry				ON												
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON							
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON							
Guar Passage																
Rest In Walk																
Cond Service																
Add Init Calc																

Preemption

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

Preempt LP

Channel	1	2	3	4
Min				
Max				200
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				ON
No Skip				
Priority P1				-4
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Appendix D

Growth Rate Calculations

FDOT Historic Growth Trends

FDOT Growth Rate Summary

Station Number	Location	Historic Growth- Linear			Historic Growth- Exponential			Historic Growth- Decaying Exponential		
		5-year	10-year	R-squared	5-year	10-year	R-squared	5-year	10-year	R-squared
9006	Oakland Park Boulevard – East of Sawgrass Expressway	-7.41%	-6.16%	40.53%	-8.65%	-8.73%	80.40%	-7.47%	-7.74%	81.23%
9177	Fleming Road – South of Oakland Park Boulevard	-10.61%	-2.70%	36.17%	-13.34%	-3.53%	78.29%	-11.34%	-2.04%	15.53%
9415	Oakland Park Boulevard – West of Hallis Road	-8.99%	-2.34%	49.77%	-9.33%	-2.83%	48.60%	-8.25%	-2.04%	28.63%
	Total	-8.87%	-3.73%	42.16%	-10.44%	-4.36%	45.57%	-9.02%	-7.48%	35.13%

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9096 - OAKLAND PARK BLVD., E OF SAWGRASS EXPRESSWAY

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	12900	S				
2021	12900	F				
2020	13100	C				
2019	18300	T				
2018	18100	S				
2017	17900	F				
2016	17500	C				
2015	18500	C				
2014	16400	C				
2013	40500	T				
2012	40000	S				
2011	39500	F				
2010	38500	C				
2009	11500	F				
2008	11500	C				
2007	12000	C				

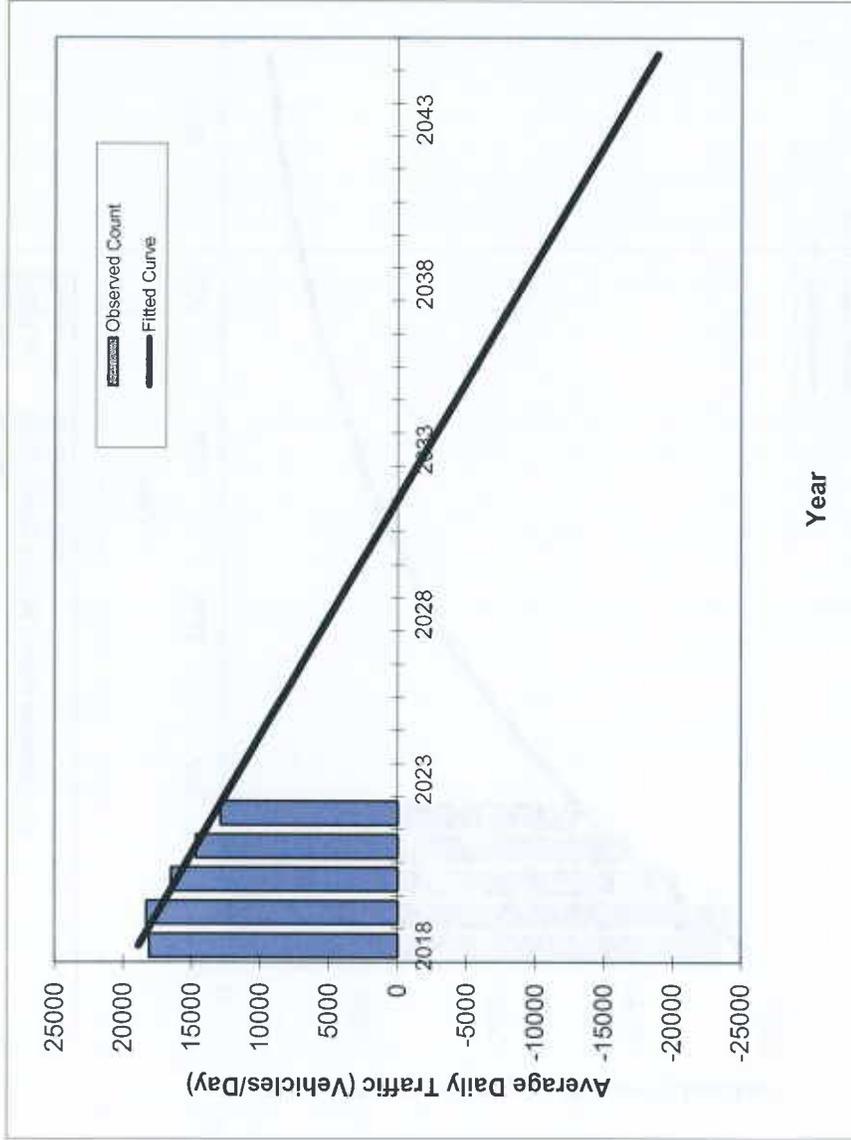
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends

Oakland Park Boulevard -- East of Sawgrass Expressway

County:	Broward (86)
Station #:	9096
Highway:	Oakland Park Boulevard

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2018	18100	18900
2019	18300	17500
2020	16500	16100
2021	14700	14700
2022	12900	13300



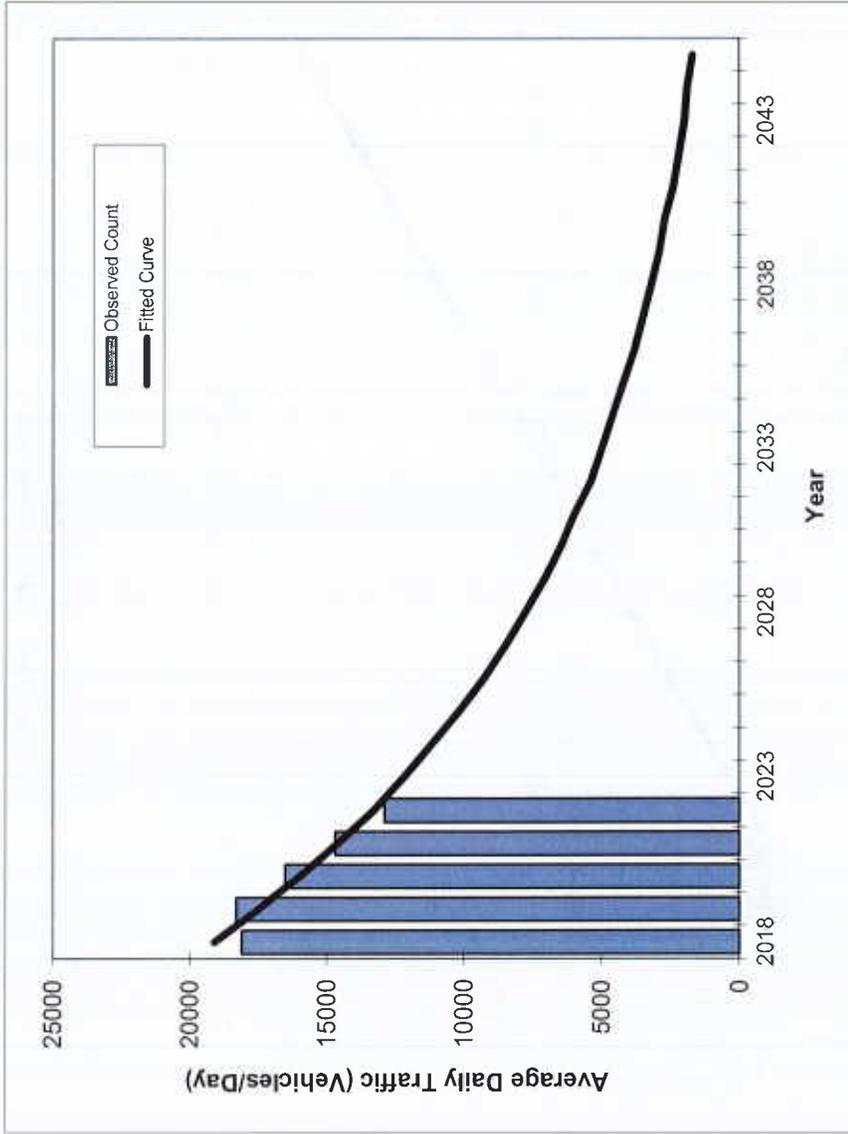
Trend R-squared: 92.45%
Trend Annual Historic Growth Rate: -7.41%
Printed: 7-Dec-23
Straight Line Growth Option

* Axle-Adjusted

Traffic Trends

Oakland Park Boulevard -- East of Sawgrass Expressway

County: Broward (86)
 Station #: 9096
 Highway: Oakland Park Boulevard



Trend R-squared: 91.60%
 Compounded Annual Historic Growth Rate: -8.65%
 Printed: 7-Dec-23
Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2018	18100	19100
2019	18300	17500
2020	16500	16000
2021	14700	14600
2022	12900	13300

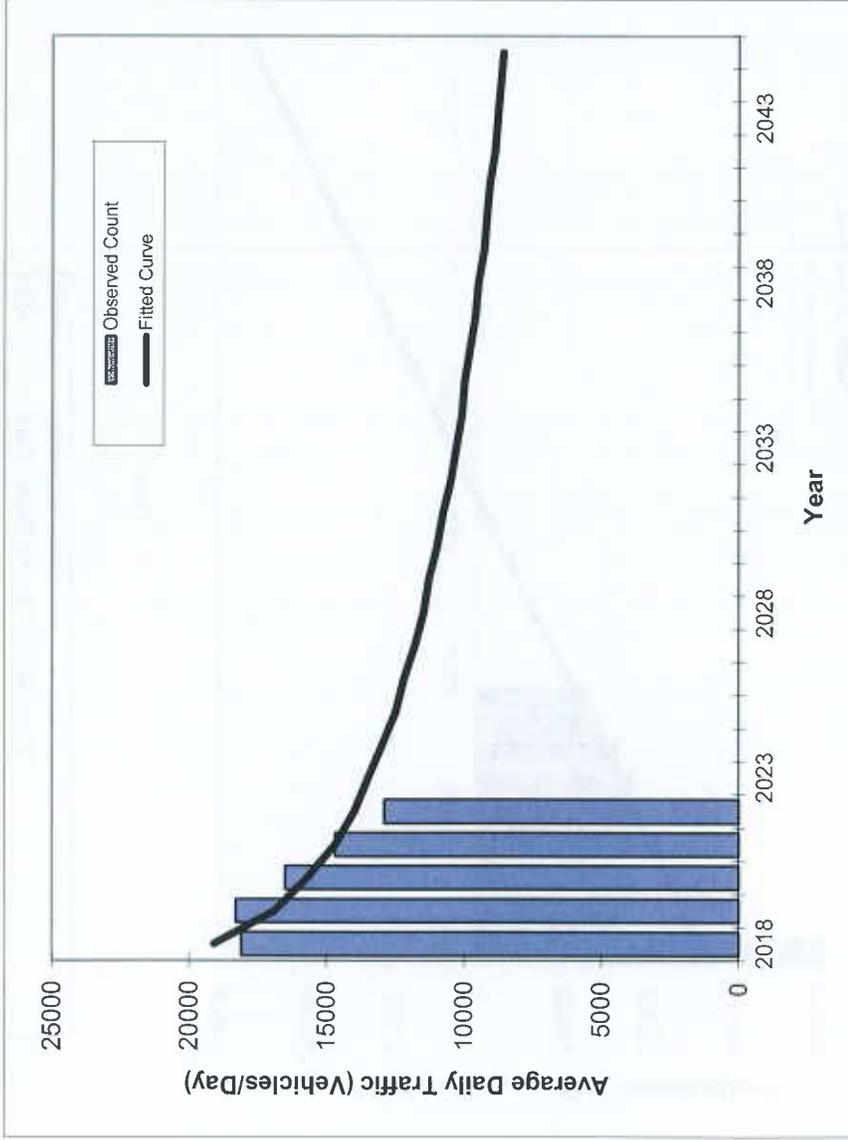
*Axle-Adjusted

Traffic Trends

Oakland Park Boulevard -- East of Sawgrass Expressway

County:	Broward (86)
Station #:	9096
Highway:	Oakland Park Boulevard

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2018	18100	19100
2019	18300	16900
2020	16500	15700
2021	14700	14700
2022	12900	14000



Trend R-squared: 76.74%
 Compounded Annual Historic Growth Rate: -7.47%
 Printed: 7-Dec-23
Decaying Exponential Growth Option

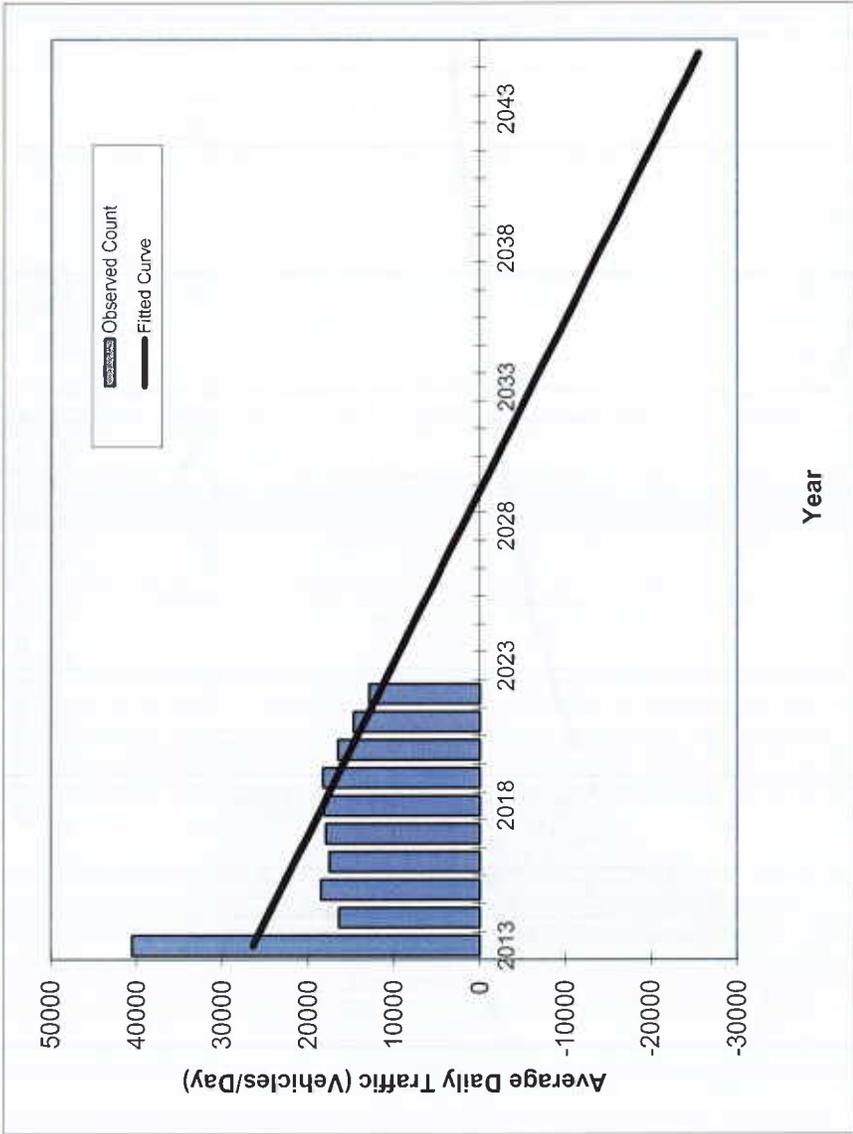
*Axle-Adjusted

Traffic Trends

Oakland Park Boulevard -- East of Sawgrass Expressway

County:	Broward (86)
Station #:	9096
Highway:	Oakland Park Boulevard

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	40500	26400
2014	16400	24800
2015	18500	23200
2016	17500	21600
2017	17900	19900
2018	18100	18300
2019	18300	16700
2020	16500	15100
2021	14700	13500
2022	12900	11800



Trend R-squared: 40.53%
 Trend Annual Historic Growth Rate: -6.14%
 Printed: 7-Dec-23

Straight Line Growth Option

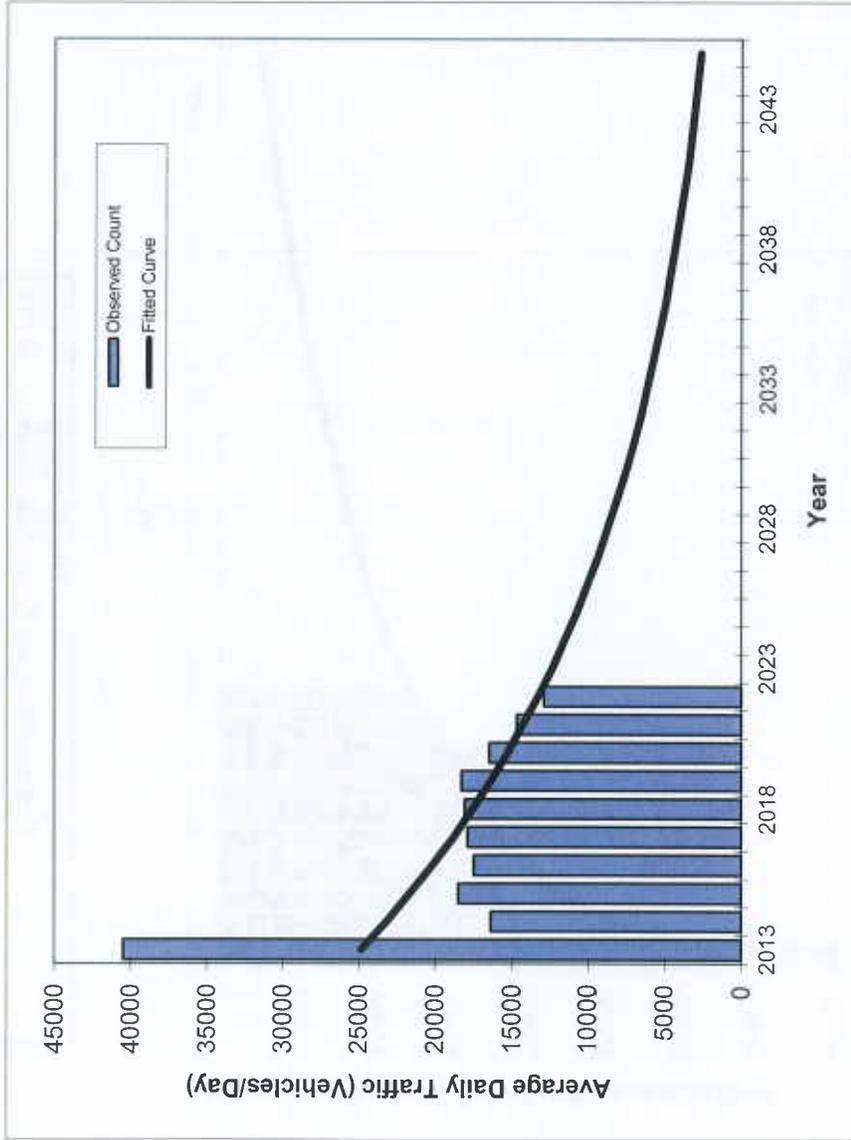
*Axle-Adjusted

Traffic Trends

Oakland Park Boulevard -- East of Sawgrass Expressway

County:	Broward (86)
Station #:	9096
Highway:	Oakland Park Boulevard

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	40500	24900
2014	16400	23200
2015	18500	21700
2016	17500	20200
2017	17900	18800
2018	18100	17600
2019	18300	16400
2020	16500	15300
2021	14700	14300
2022	12900	13300



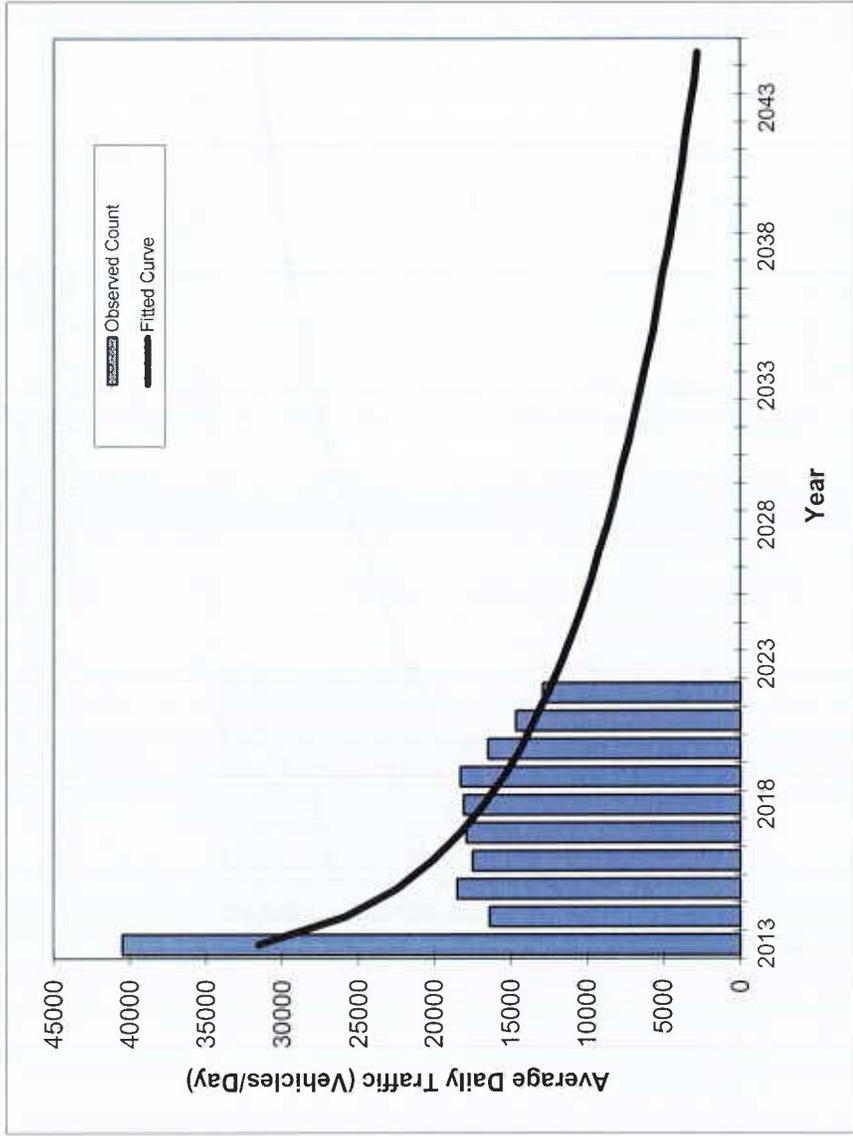
Trend R-squared: 48.40%
 Compounded Annual Historic Growth Rate: -6.73%
 Printed: 7-Dec-23
Exponential Growth Option

*Axle-Adjusted

Traffic Trends

Oakland Park Boulevard -- East of Sawgrass Expressway

County:	Broward (86)
Station #:	9096
Highway:	Oakland Park Boulevard



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	40500	31600
2014	16400	25900
2015	18500	22500
2016	17500	20200
2017	17900	18300
2018	18100	16800
2019	18300	15500
2020	16500	14400
2021	14700	13500
2022	12900	12600

*Axle-Adjusted

Trend R-squared:	61.23%
Compounded Annual Historic Growth Rate:	-9.71%
Printed:	7-Dec-23

Decaying Exponential Growth Option

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9177 - FLAMINGO RD., S OF OAKLAND PARK BLVD.

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	31000	N 15500	S 15500	9.00	53.80	5.40
2021	31000	N 15500	S 15500	9.00	54.00	14.30
2020	31000	N 15500	S 15500	9.00	55.10	8.80
2019	54500	N 28000	S 26500	9.00	56.00	5.50
2018	53500	N 27500	S 26000	9.00	56.30	6.00
2017	52500	N 27000	S 25500	9.00	57.10	3.90
2016	51500	N 26500	S 25000	9.00	56.10	3.90
2015	50500	N 26000	S 24500	9.00	56.20	3.90
2014	49500	X		9.00	56.80	7.40
2013	48500	X	0	9.00	56.20	7.60
2012	48000	T	0	9.00	57.00	5.90
2011	47500	S	0	9.00	59.10	6.30
2010	46500	F	S 24000	9.60	57.92	9.30
2009	45500	C	S 23500	9.71	58.42	5.30
2008	49000	C	S 26500	9.67	56.67	6.50
2007	47500	C	S 24500	10.19	60.63	4.80

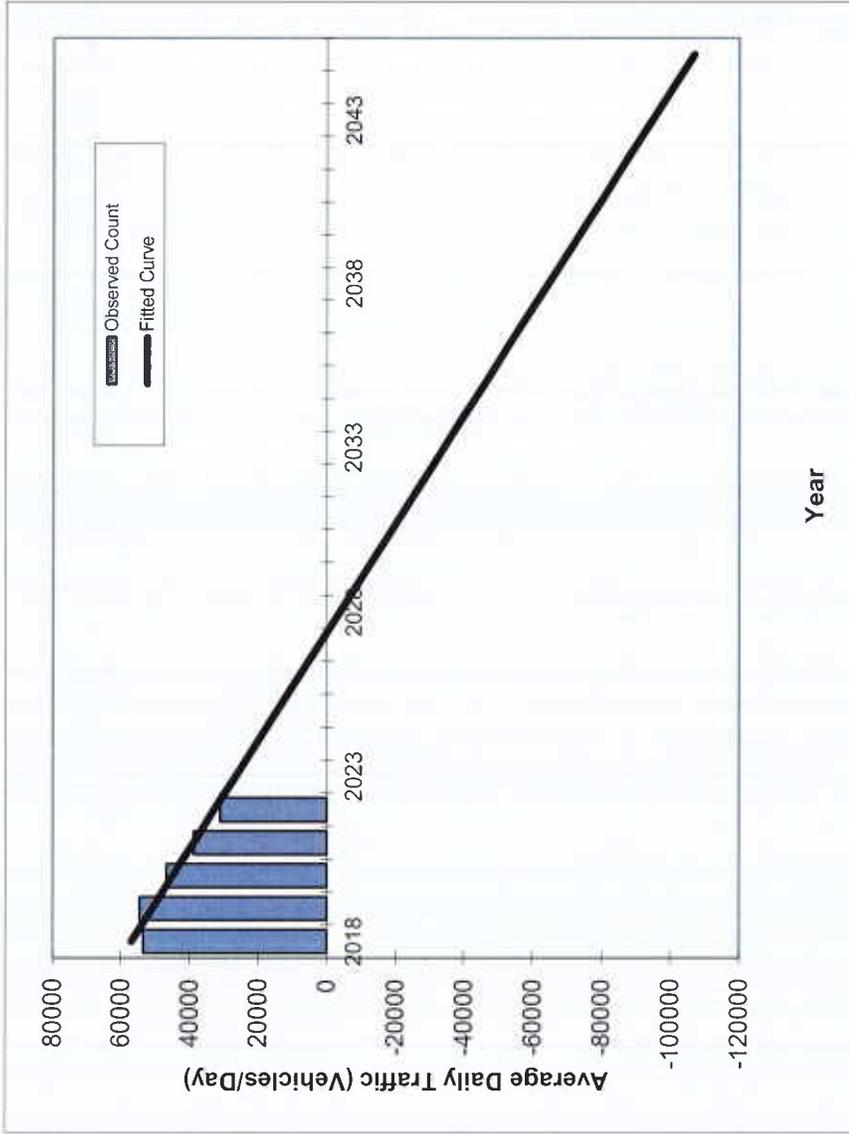
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
 *K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends

FLAMINGO ROAD -- South of Oakland Park Boulevard

County:	Broward (86)
Station #:	9177
Highway:	FLAMINGO ROAD

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2018	53500	57000
2019	54500	51000
2020	46700	44900
2021	38800	38800
2022	31000	32800



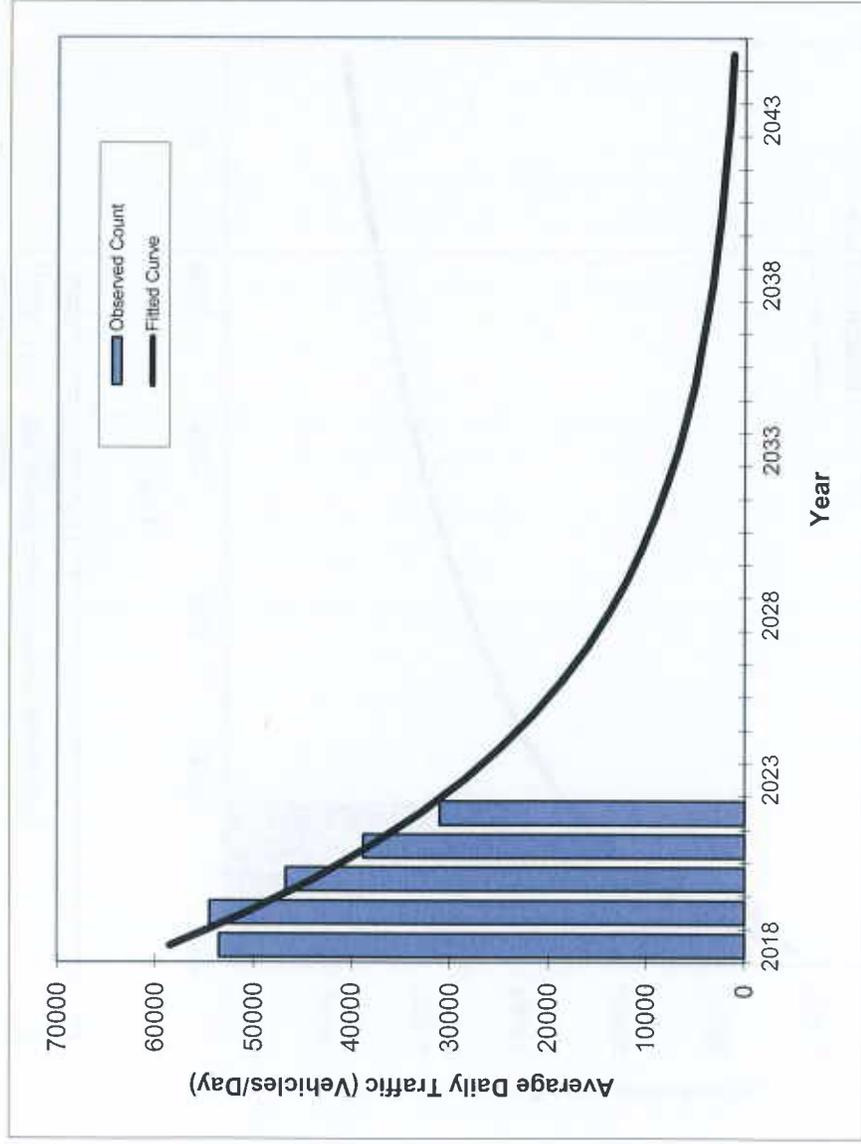
Trend R-squared: 92.16%
 Trend Annual Historic Growth Rate: -10.61%
 Printed: 7-Dec-23
Straight Line Growth Option

*Axle-Adjusted

Traffic Trends

FLAMINGO ROAD -- South of Oakland Park Boulevard

County: Broward (86)
 Station #: 9177
 Highway: FLAMINGO ROAD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2018	53500	58500
2019	54500	50700
2020	46700	43900
2021	38800	38100
2022	31000	33000

Trend R-squared: 90.62%
 Compounded Annual Historic Growth Rate: -13.34%
 Printed: 7-Dec-23
Exponential Growth Option

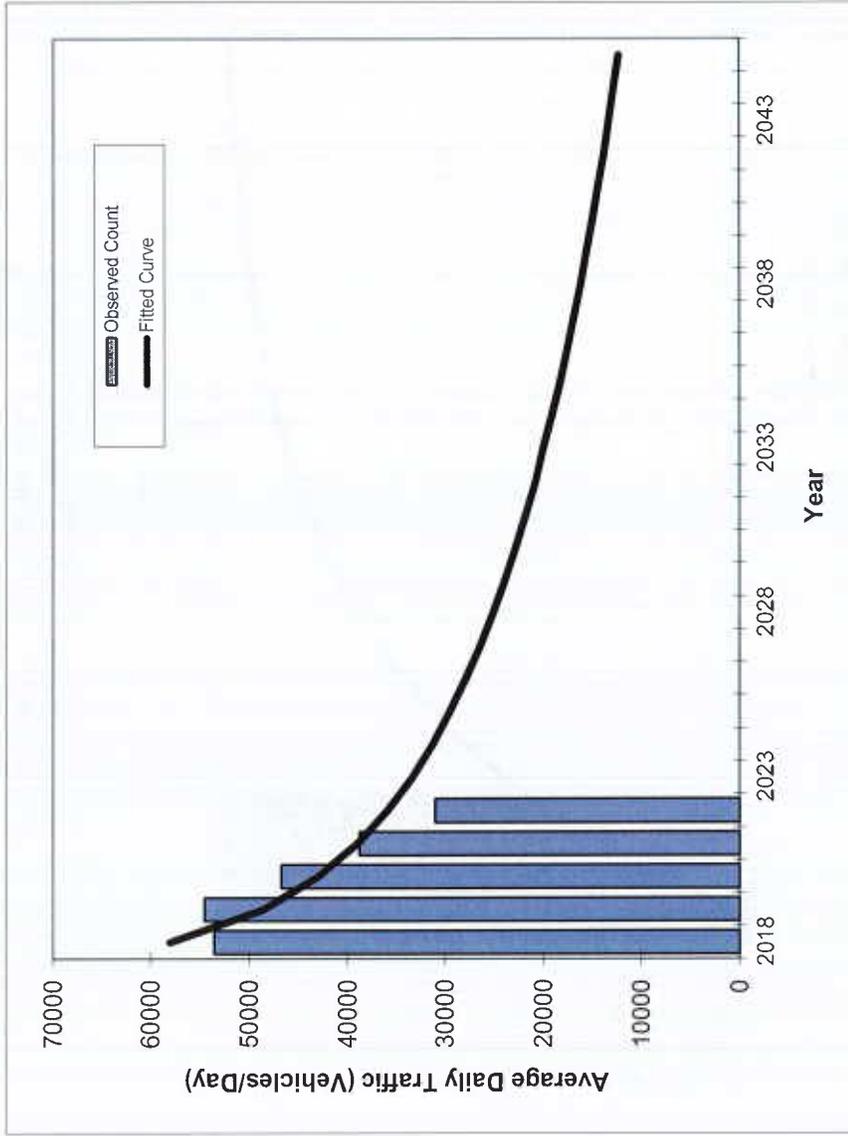
*Axle-Adjusted

Traffic Trends

FLAMINGO ROAD -- South of Oakland Park Boulevard

County:	Broward (86)
Station #:	9177
Highway:	FLAMINGO ROAD

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2018	53500	58100
2019	54500	48500
2020	46700	43000
2021	38800	39000
2022	31000	35900



Trend R-squared: 76.28%
 Compounded Annual Historic Growth Rate: -11.34%
 Printed: 7-Dec-23

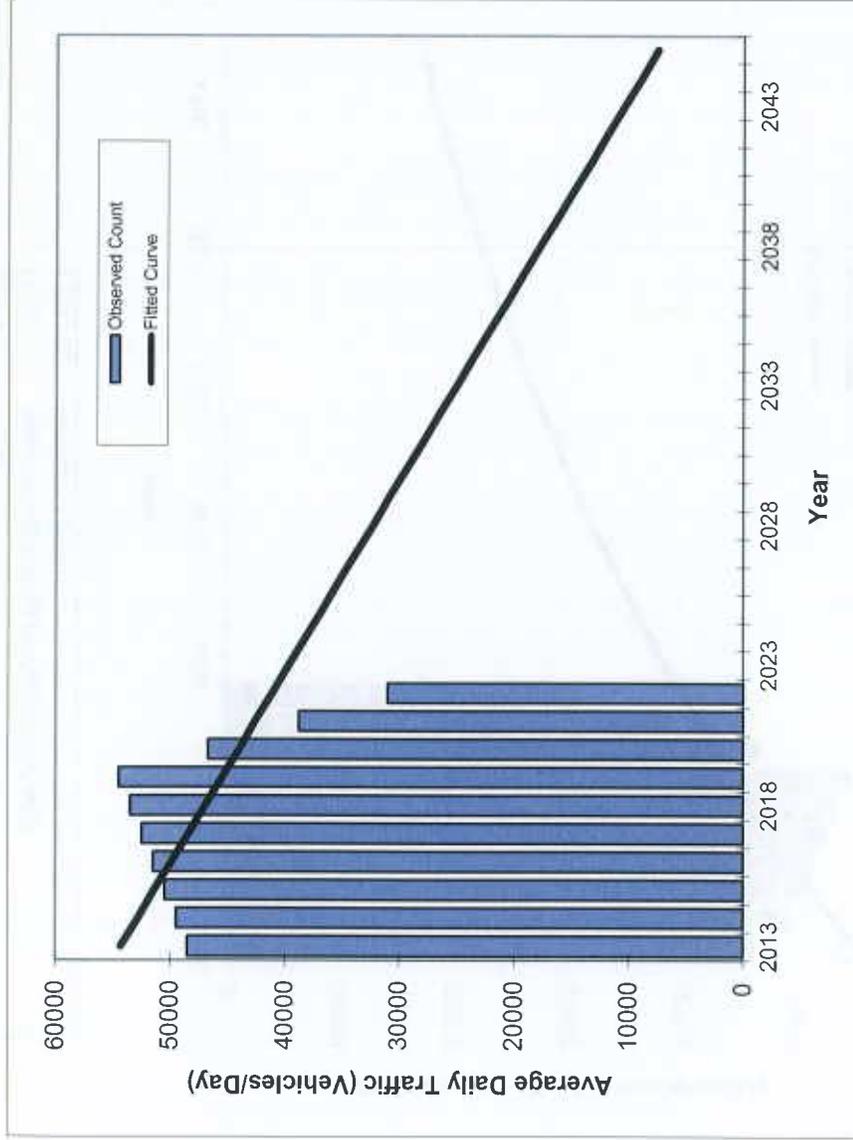
Decaying Exponential Growth Option

*Axle-Adjusted

Traffic Trends

FLAMINGO ROAD -- South of Oakland Park Boulevard

County: Broward (86)
 Station #: 9177
 Highway: FLAMINGO ROAD



Trend R-squared: 36.17%
 Trend Annual Historic Growth Rate: -2.70%
 Printed: 7-Dec-23
Straight Line Growth Option

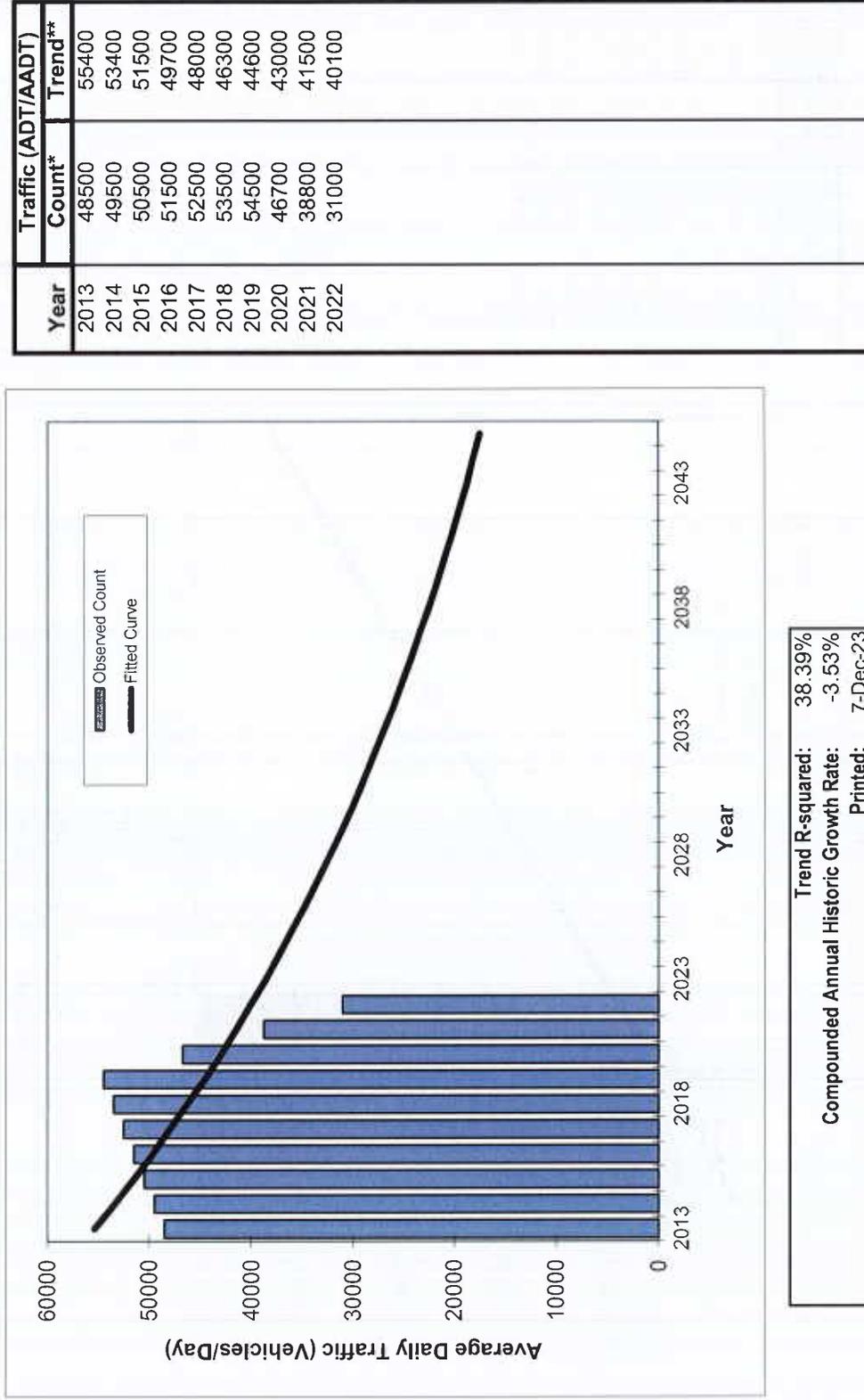
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	48500	54300
2014	49500	52800
2015	50500	51400
2016	51500	49900
2017	52500	48400
2018	53500	47000
2019	54500	45500
2020	46700	44000
2021	38800	42600
2022	31000	41100

*Axle-Adjusted

Traffic Trends

FLAMINGO ROAD -- South of Oakland Park Boulevard

County: Broward (86)
 Station #: 9177
 Highway: FLAMINGO ROAD



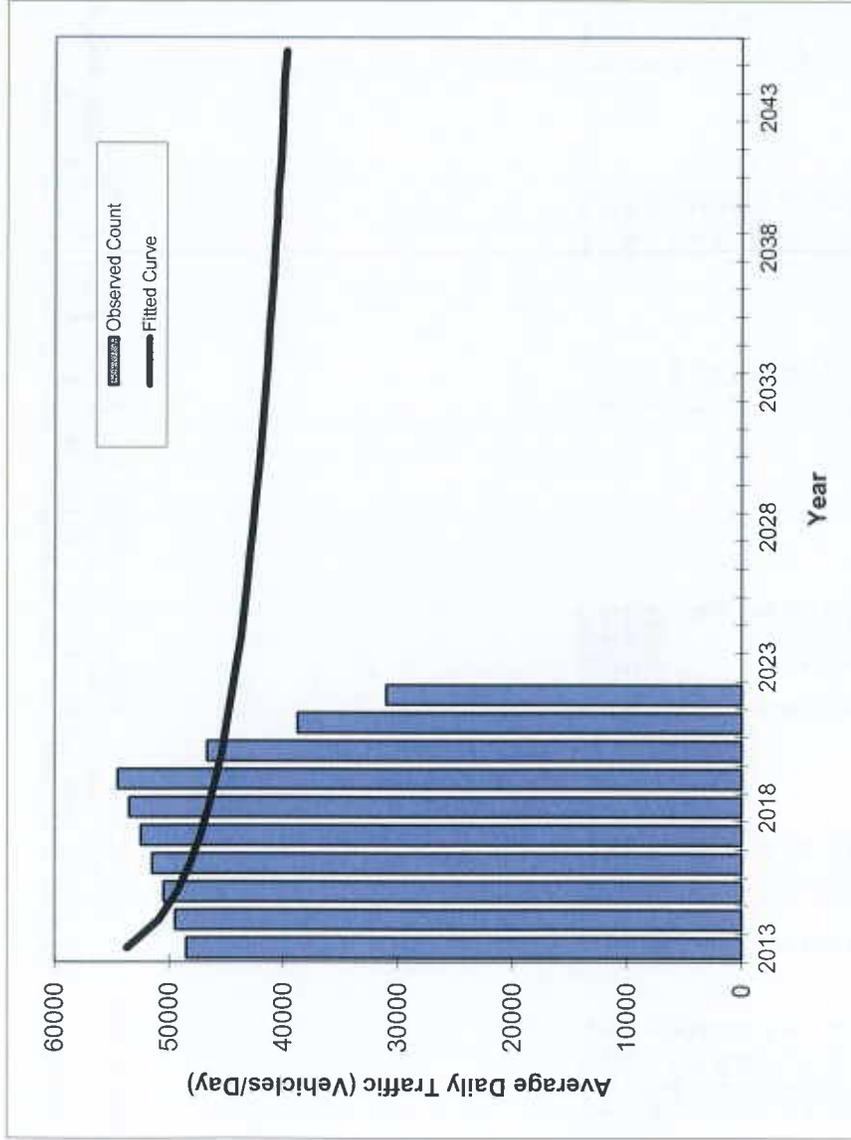
Trend R-squared: 38.39%
 Compounded Annual Historic Growth Rate: -3.53%
 Printed: 7-Dec-23
Exponential Growth Option

*Axle-Adjusted

Traffic Trends

FLAMINGO ROAD -- South of Oakland Park Boulevard

County:	Broward (86)
Station #:	9177
Highway:	FLAMINGO ROAD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	48500	53700
2014	49500	50900
2015	50500	49300
2016	51500	48200
2017	52500	47300
2018	53500	46600
2019	54500	46000
2020	46700	45400
2021	38800	45000
2022	31000	44600

Trend R-squared: 15.53%
 Compounded Annual Historic Growth Rate: -2.04%
 Printed: 7-Dec-23

Decaying Exponential Growth Option

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2022 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9415 - OAKLAND PARK BLVD, W OF HIATUS ROAD

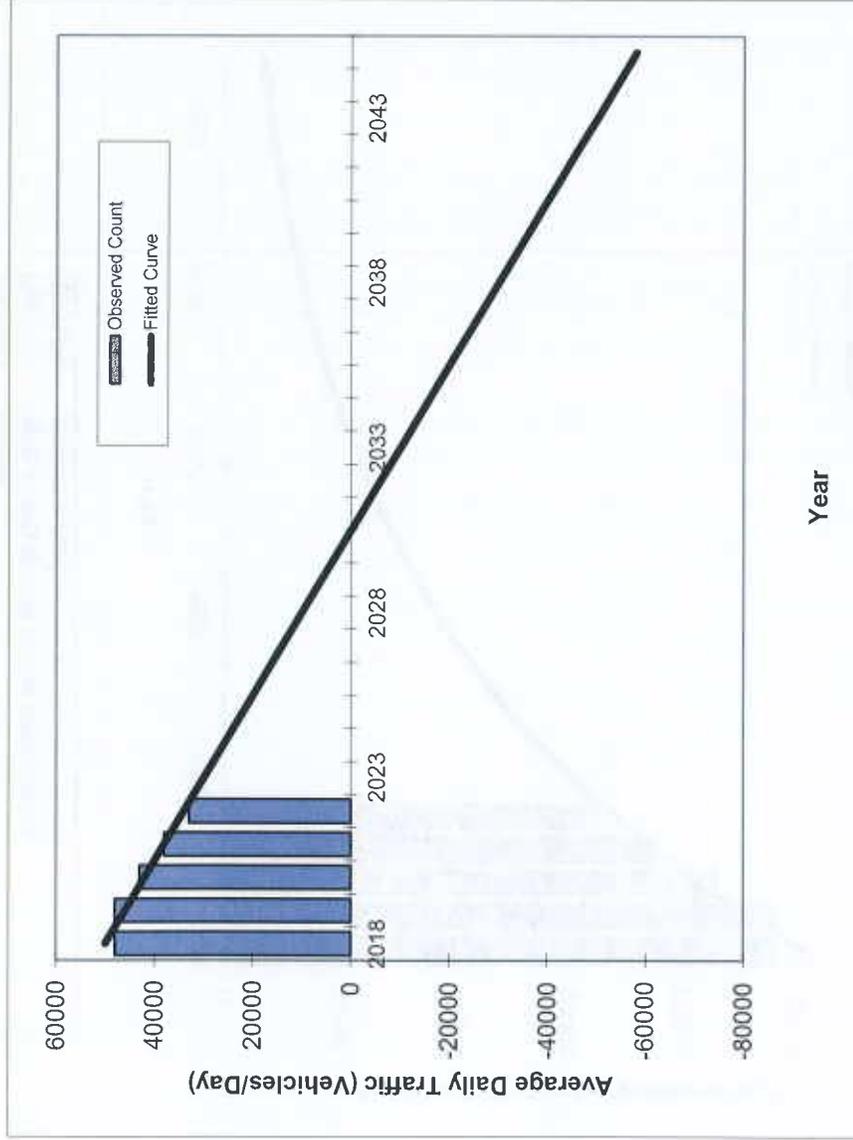
YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	33000	S				
2021	33000	F				
2020	33000	C				
2019	48000	R				
2018	48000	T				
2017	47000	S				
2016	46000	F				
2015	45000	C				
2014	47500	X				
2013	46500	X				
2012	46000	T				
2011	45500	S				
2010	44500	F				
2009	43500	C				
2008	42000	C				
2007	44000	C				

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

Traffic Trends

Oakland Park Boulevard -- West of Hiatus Road

County:	Broward (86)
Station #:	9415
Highway:	Oakland Park Boulevard



Trend R-squared: 94.12%
Trend Annual Historic Growth Rate: -8.00%
Printed: 7-Dec-23

Straight Line Growth Option

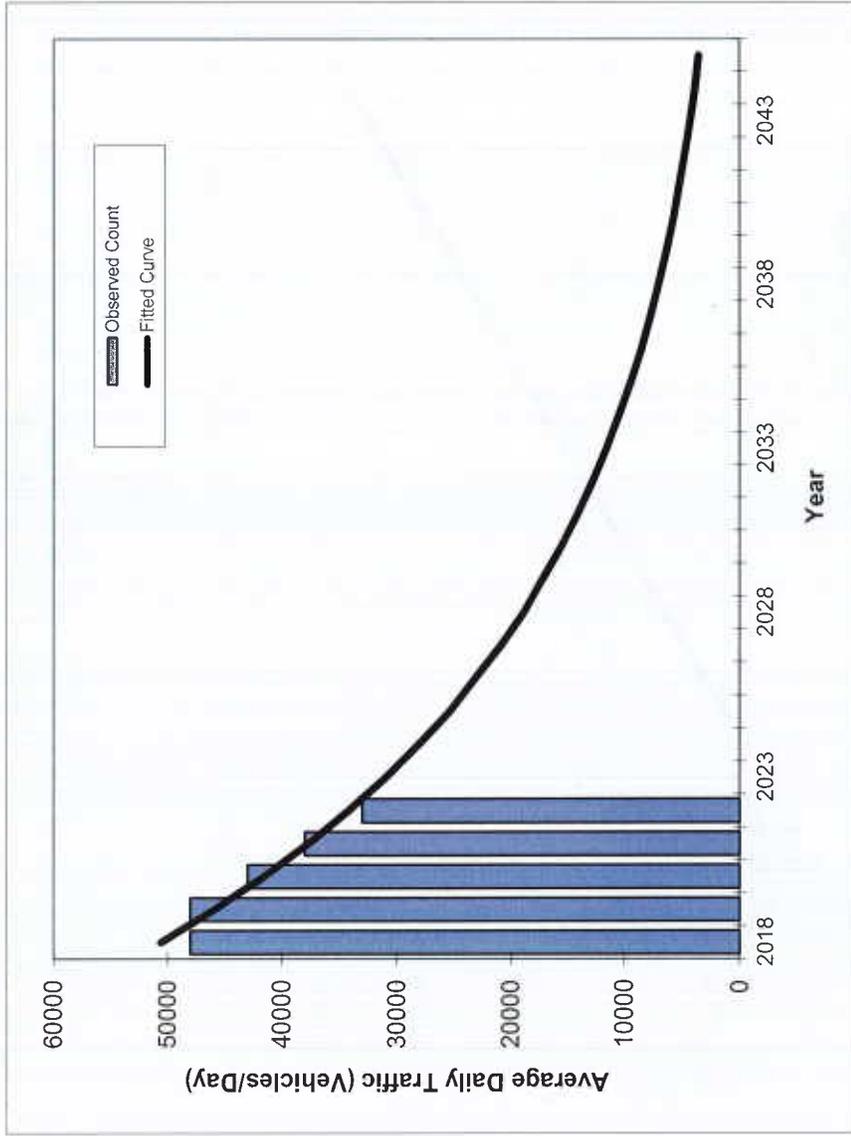
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2018	48000	50000
2019	48000	46000
2020	43000	42000
2021	38000	38000
2022	33000	34000

*Axle-Adjusted

Traffic Trends

Oakland Park Boulevard -- West of Hiatus Road

County:	Broward (86)
Station #:	9415
Highway:	Oakland Park Boulevard



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2018	48000	50600
2019	48000	45900
2020	43000	41600
2021	38000	37700
2022	33000	34200

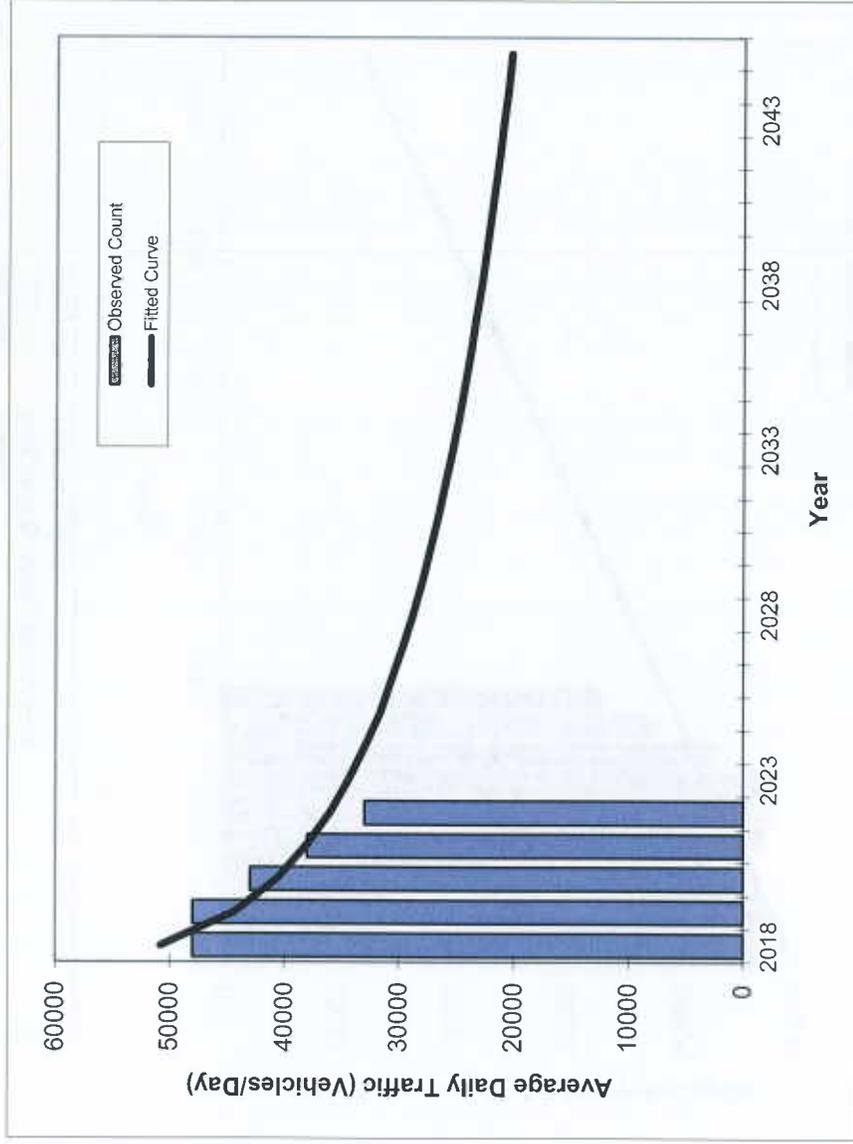
*Axle-Adjusted

Trend R-squared: 93.02%
 Compounded Annual Historic Growth Rate: -9.33%
 Printed: 7-Dec-23
Exponential Growth Option

Traffic Trends

Oakland Park Boulevard -- West of Hiatus Road

County: Broward (86)
 Station #: 9415
 Highway: Oakland Park Boulevard



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2018	48000	50800
2019	48000	44400
2020	43000	40700
2021	38000	38100
2022	33000	36000

Trend R-squared: 79.46%
 Compounded Annual Historic Growth Rate: -8.25%
 Printed: 7-Dec-23
Decaying Exponential Growth Option

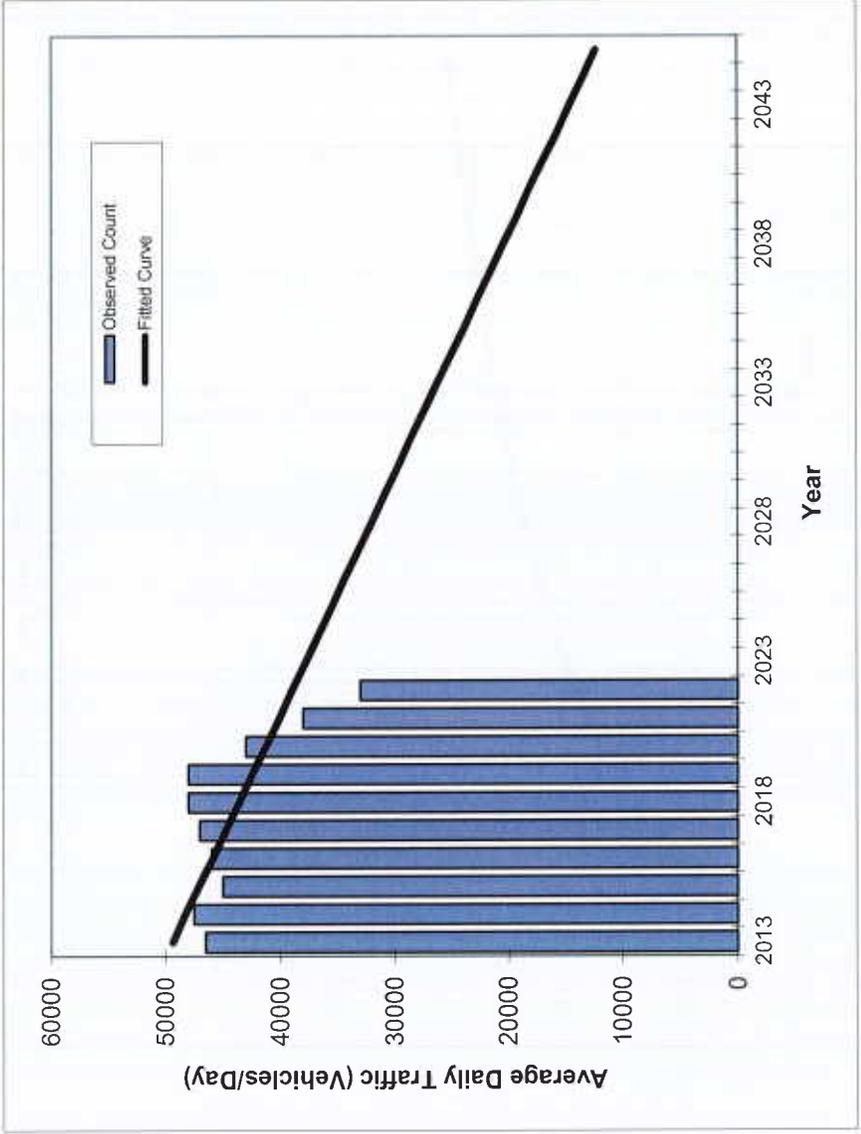
*Axle-Adjusted

Traffic Trends

Oakland Park Boulevard -- West of Hiatus Road

County:	Broward (86)
Station #:	9415
Highway:	Oakland Park Boulevard

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	46500	49400
2014	47500	48300
2015	45000	47100
2016	46000	45900
2017	47000	44800
2018	48000	43600
2019	48000	42500
2020	43000	41300
2021	38000	40100
2022	33000	39000



Trend R-squared: 49.77%
Trend Annual Historic Growth Rate: -2.34%
Printed: 7-Dec-23

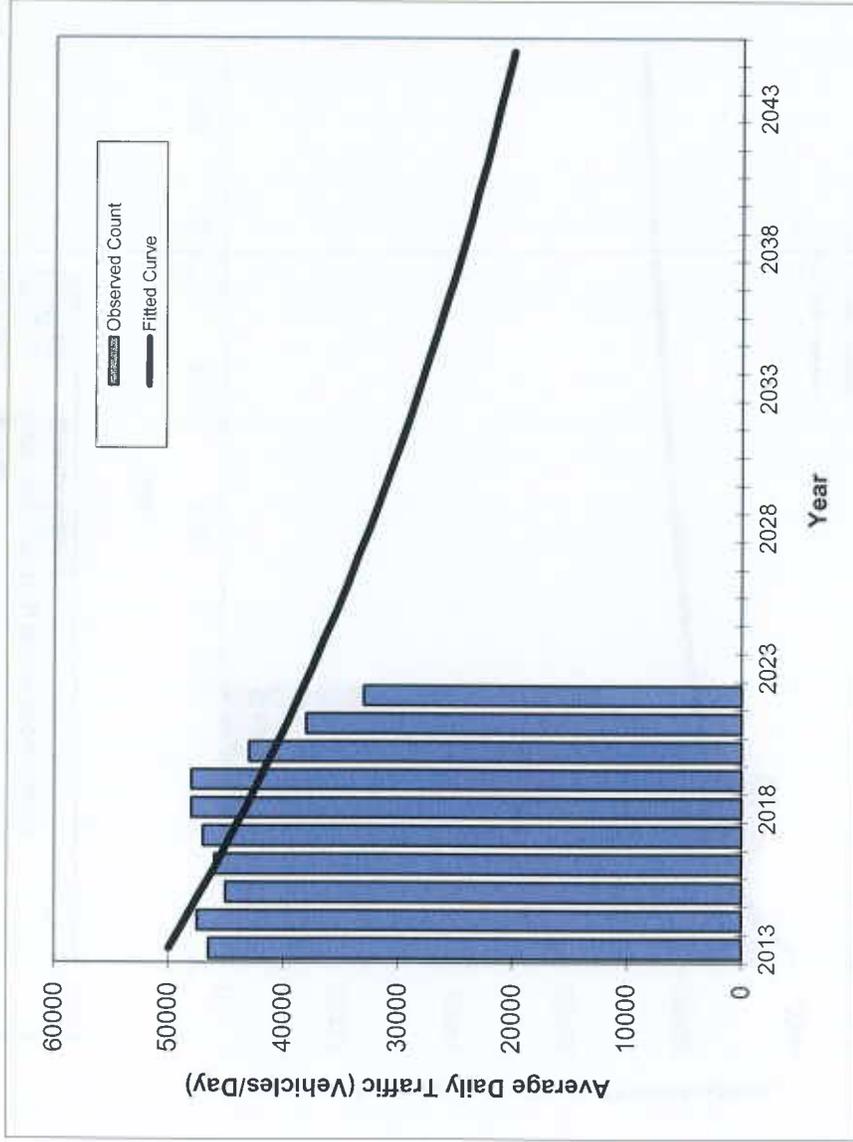
Straight Line Growth Option

*Axle-Adjusted

Traffic Trends

Oakland Park Boulevard -- West of Hiatus Road

County: Broward (86)
 Station #: 9415
 Highway: Oakland Park Boulevard



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	46500	50000
2014	47500	48600
2015	45000	47200
2016	46000	45800
2017	47000	44600
2018	48000	43300
2019	48000	42100
2020	43000	40900
2021	38000	39700
2022	33000	38600

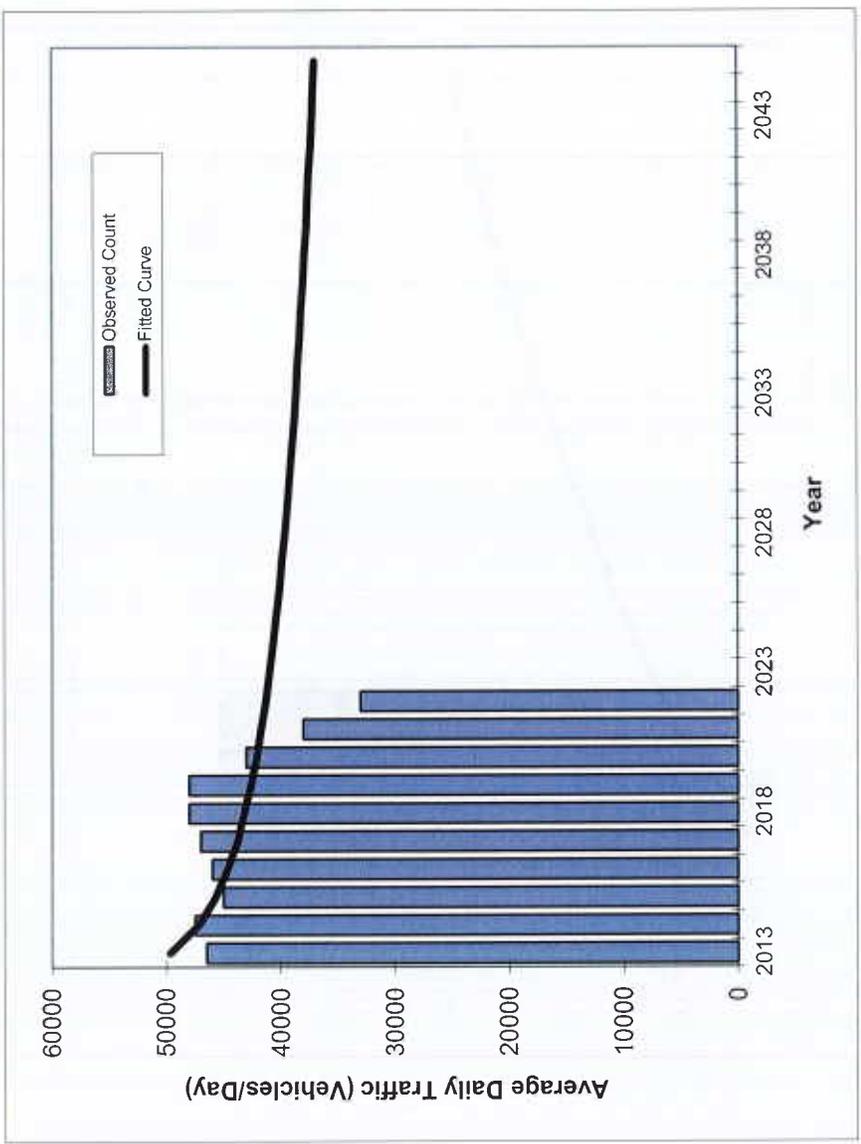
Trend R-squared: 49.92%
 Compounded Annual Historic Growth Rate: -2.83%
 Printed: 7-Dec-23
Exponential Growth Option

*Axle-Adjusted

Traffic Trends

Oakland Park Boulevard -- West of Hiatus Road

County: Broward (86)
 Station #: 9415
 Highway: Oakland Park Boulevard



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2013	46500	49700
2014	47500	47200
2015	45000	45700
2016	46000	44700
2017	47000	43800
2018	48000	43200
2019	48000	42600
2020	43000	42100
2021	38000	41700
2022	33000	41300

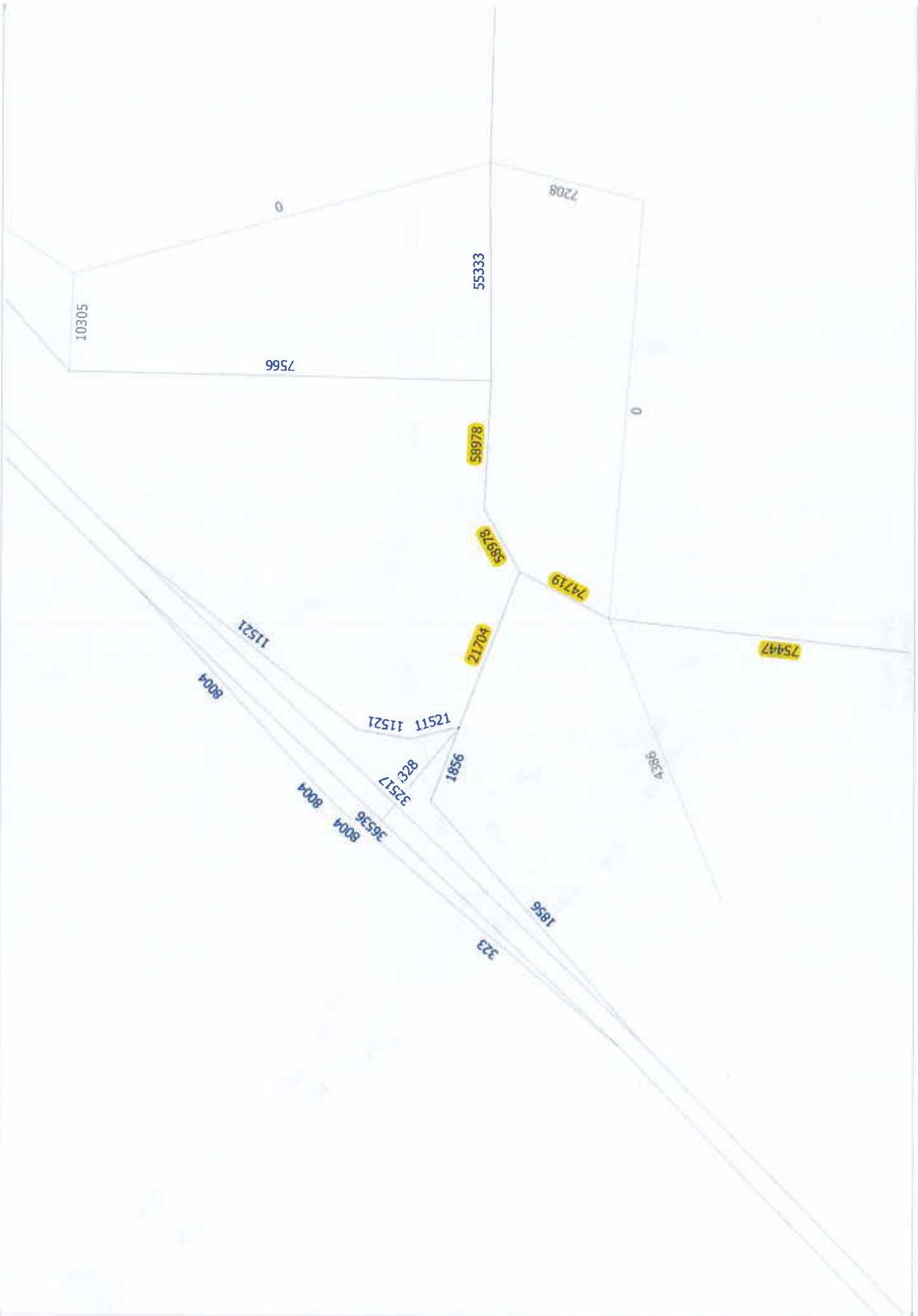
*Axle-Adjusted

Trend R-squared: 28.63%
 Compounded Annual Historic Growth Rate: -2.04%
 Printed: 7-Dec-23
Decaying Exponential Growth Option

Rank	URL	Page Title	Page Content	Page Length	Page Weight
1	http://www.example.com	Example Page 1	Content of Example Page 1	1000	1.0
2	http://www.example.com	Example Page 2	Content of Example Page 2	1000	1.0
3	http://www.example.com	Example Page 3	Content of Example Page 3	1000	1.0
4	http://www.example.com	Example Page 4	Content of Example Page 4	1000	1.0
5	http://www.example.com	Example Page 5	Content of Example Page 5	1000	1.0

SERPM Analysis

SERPM Growth Rate Summary					
Street Name	2015	2045	Difference	Growth Rate	Annual Growth Rate
West Oakland Park Boulevard	21,704	27,063	5,359	24.69%	0.82%
West Oakland Park Boulevard	58,978	58,425	-553	-0.94%	-0.03%
	58,978	58,425	-553	-0.94%	-0.03%
North Flamingo Road	74,719	82,457	7,738	10.36%	0.35%
	75,447	83,941	8,494	11.26%	0.38%
Total	289,826	310,311	20,485	7.07%	0.24%



Appendix E

Trip Generation

PROPOSED WEEKDAY AM PEAK HOUR TRIP GENERATION

ITE Land Use Code	ITE TRIP GENERATION CHARACTERISTICS				DIRECTIONAL DISTRIBUTION		BASELINE TRIPS			MULTIMODAL REDUCTION			GROSS TRIPS			INTERNAL CAPTURE			EXTERNAL VEHICLE TRIPS			PASS-BY CAPTURE			NET NEW EXTERNAL TRIPS		
	Land Use	ITE Code	ITE Edition	Scale	In	Out	In	Out	Total	Percent	Trips	Percent	In	Out	Total	Percent	Trips	In	Out	Total	Percent	Trips	In	Out	Total		
	Office	11	610	675	EMP	72%	28%	209	81	290	0.0%	0	209	81	290	0.0%	0	209	81	290	0.0%	0	209	81	290		
1	Hospital																										
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											
13																											
14																											
15																											
ITE Land Use Code									209	81	290	0.0%	0	209	81	290	0.0%	0	209	81	290	0.0%	0	209	81	290	
Rate of Equation									Y=0.21*(X) ^{1.4855}																		
B10																											

PROPOSED WEEKDAY PM PEAK HOUR TRIP GENERATION

ITE Land Use Code	ITE TRIP GENERATION CHARACTERISTICS				DIRECTIONAL DISTRIBUTION		BASELINE TRIPS			MULTIMODAL REDUCTION			GROSS TRIPS			INTERNAL CAPTURE			EXTERNAL VEHICLE TRIPS			PASS-BY CAPTURE			NET NEW EXTERNAL TRIPS		
	Land Use	ITE Code	ITE Edition	Scale	In	Out	In	Out	Total	Percent	Trips	Percent	In	Out	Total	Percent	Trips	In	Out	Total	Percent	Trips	In	Out	Total		
	Office	11	610	675	EMP	30%	70%	68	159	227	0.0%	0	68	159	227	0.0%	0	68	159	227	0.0%	0	68	159	227		
1	Hospital																										
2																											
3																											
4																											
5																											
6																											
7																											
8																											
9																											
10																											
11																											
12																											
13																											
14																											
15																											
ITE Land Use Code									68	159	227	0.0%	0	68	159	227	0.0%	0	68	159	227	0.0%	0	68	159	227	
Rate of Equation									LN(Y) = 0.76*(LN(X))+0.28																		
B10																											

Appendix F

Trip Distribution

Table 1

Baptist Sunrise
SERPM 8.521
2045



Volume Development Worksheets

Appendix G

Volume Development Worksheets

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: West Oakland Park Boulevard and North Flamingo Road
COUNT DATE: May 25, 2022
AM PEAK HOUR FACTOR: 0.91
PM PEAK HOUR FACTOR: 0.91

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements		1	308	0	296		0	0	0		244	888	0		0	1,257	818		
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04		
AM EXISTING CONDITIONS		1	318	0	308		0	0	0		254	716	0		0	1,307	851		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements		0	471	0	417		0	0	0		302	1,502	0		0	1,205	407		
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04		
PM EXISTING CONDITIONS		0	490	0	434		0	0	0		314	1,658	0		0	1,253	423		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC		0	0	0	0		0	0	0		0	0	0		0	0	0		
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%		
AM BACKGROUND TRAFFIC GROWTH		0	11	0	11		0	0	0		8	25	0		0	46	30		
AM NON-PROJECT TRAFFIC		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC		1	329	0	319		0	0	0		263	741	0		0	1,353	881		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC		0	0	0	0		0	0	0		0	0	0		0	0	0		
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%		
PM BACKGROUND TRAFFIC GROWTH		0	17	0	15		0	0	0		11	59	0		0	45	15		
PM NON-PROJECT TRAFFIC		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC		0	607	0	449		0	0	0		325	1,715	0		0	1,298	438		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering											33.0%							41.0%
	Exiting		38.0%		33.0%														
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering											33.0%							41.0%
	Exiting		38.0%		33.0%														
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
Net New			31		27							69							86
AM TOTAL PROJECT TRAFFIC		0	31	0	27		0	0	0		69	0	0		0	0	0	86	
AM TOTAL TRAFFIC		1	360	0	346		0	0	0		332	741	0		0	1,353	967		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
Net New			60		52							22							28
PM TOTAL PROJECT TRAFFIC		0	60	0	52		0	0	0		22	0	0		0	0	0	28	
PM TOTAL TRAFFIC		0	567	0	501		0	0	0		347	1,715	0		0	1,298	466		

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: West Oakland Park Boulevard and NW 120th Way
 COUNT DATE: May 25, 2022
 AM PEAK HOUR FACTOR: 0.90
 PM PEAK HOUR FACTOR: 0.89

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements		3	37	920	34	1	17	1,657	22		98	12	39		45	10	291		
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04		
AM EXISTING CONDITIONS		3	38	957	36	1	18	1,723	23		102	12	41		47	10	303		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements		4	94	1,870	90	2	44	1,428	61		63	7	37		37	8	143		
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04		
PM EXISTING CONDITIONS		4	98	1,945	94	2	46	1,483	63		66	7	38		38	8	149		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0		0	0	0		0	0	0		
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%		
AM BACKGROUND TRAFFIC GROWTH		0	1	34	1	0	1	61	1		4	0	1		2	0	11		
AM NON-PROJECT TRAFFIC		3	39	991	37	1	19	1,784	24		106	12	42		49	10	314		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0		0	0	0		0	0	0		
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%		
PM BACKGROUND TRAFFIC GROWTH		0	3	69	3	0	2	53	2		2	0	1		1	0	5		
PM NON-PROJECT TRAFFIC		4	101	2,014	97	2	48	1,536	65		68	7	39		39	8	154		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering								31.0%										10.0%
	Exiting		8.0%	30.0%															
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering								31.0%										10.0%
	Exiting		8.0%	30.0%															
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New		7	24					65										21
AM TOTAL PROJECT TRAFFIC			0	7	24	0	0	0	65	0		0	0	0		0	0	0	21
AM TOTAL TRAFFIC			3	46	1,015	36	1	19	1,849	24		106	12	42		49	10	336	
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New		13	48					21										7
PM TOTAL PROJECT TRAFFIC			0	13	48	0	0	0	21	0		0	0	0		0	0	0	7
PM TOTAL TRAFFIC			4	114	2,062	97	2	48	1,557	65		68	7	39		39	8	161	

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: West Oakland Park Boulevard and SR 869/Sawgrass Expressway Ramps
COUNT DATE: May 25, 2022
AM PEAK HOUR FACTOR: 0.96
PM PEAK HOUR FACTOR: 0.87

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements			0	0	0	0	623	0	440		0	0	232		371	0	0		
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04		
AM EXISTING CONDITIONS			0	0	0	0	648	0	458		0	0	241		386	0	0		
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements			0	0	0	3	302	0	410		0	0	373		515	0	0		
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04		
PM EXISTING CONDITIONS			0	0	0	3	314	0	426		0	0	388		536	0	0		
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC			0	0	0	0	0	0	0		0	0	0		0	0	0		
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%		
AM BACKGROUND TRAFFIC GROWTH			0	0	0	0	23	0	18		0	0	9		14	0	0		
AM NON-PROJECT TRAFFIC			0	0	0	0	671	0	474		0	0	250		400	0	0		
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC			0	0	0	0	0	0	0		0	0	0		0	0	0		
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%		
PM BACKGROUND TRAFFIC GROWTH			0	0	0	0	11	0	15		0	0	14		19	0	0		
PM NON-PROJECT TRAFFIC			0	0	0	3	326	0	441		0	0	402		555	0	0		
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering												7.0%		19.0%				
	Exiting							14.0%		15.0%									
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering												7.0%		19.0%				
	Exiting							14.0%		15.0%									
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New							11		12				15		39			
AM TOTAL PROJECT TRAFFIC			0	0	0	0	0	11	0	12		0	0	15		39	0	0	
AM TOTAL TRAFFIC			0	0	0	0	682	0	486		0	0	265		439	0	0		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New							22		24				5		13			
PM TOTAL PROJECT TRAFFIC			0	0	0	0	0	22	0	24		0	0	5		13	0	0	
PM TOTAL TRAFFIC			0	0	0	3	347	0	465		0	0	407		568	0	0		

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: North Flamingo Road and NW 136th Avenue/Panther Parkway
 COUNT DATE: May 25, 2022
 AM PEAK HOUR FACTOR: 0.86
 PM PEAK HOUR FACTOR: 0.95

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
AM Raw Turning Movements		384	0	94	0	0	0	0	0	26	514	0	0	0	828	752			
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04		
AM EXISTING CONDITIONS		399	0	98	0	0	0	0	0	27	535	0	0	0	861	782			
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
PM Raw Turning Movements		848	0	90	0	0	0	0	0	75	1,070	0	1	0	1,051	544			
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04		
PM EXISTING CONDITIONS		882	0	94	0	0	0	0	0	78	1,113	0	1	0	1,093	566			
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%		
AM BACKGROUND TRAFFIC GROWTH		14	0	3	0	0	0	0	0	1	19	0	0	0	31	28			
AM NON-PROJECT TRAFFIC		413	0	101	0	0	0	0	0	28	554	0	0	0	892	810			
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7		
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%		
PM BACKGROUND TRAFFIC GROWTH		31	0	3	0	0	0	0	0	3	40	0	0	0	39	20			
PM NON-PROJECT TRAFFIC		913	0	97	0	0	0	0	0	81	1,153	0	1	0	1,132	586			
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering		17.0%										16.0%					16.0%	17.0%
	Exiting																		
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Pass-By Distribution	Entering																		
	Exiting																		
Valet Distribution	Entering																		
	Exiting																		
Net New Distribution	Entering		17.0%										16.0%					16.0%	17.0%
	Exiting																		
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
AM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New		36										33				13	14	
AM TOTAL PROJECT TRAFFIC			36	0	0			0	0	0		0	33	0	0	0	13	14	
AM TOTAL TRAFFIC			449	0	101			0	0	0		28	587	0	0	0	905	824	
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
PM TRAFFIC DIVERSIONS																			
Project Trips	Pass - By																		
	Valet																		
	Net New		12										10				25	27	
PM TOTAL PROJECT TRAFFIC			12	0	0			0	0	0		0	10	0	0	0	25	27	
PM TOTAL TRAFFIC			925	0	97			0	0	0		81	1,163	0	1	0	1,157	613	

TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: West Oakland Park Boulevard and Project Driveway
COUNT DATE: May 25, 2022
AM PEAK HOUR FACTOR: 0.93
PM PEAK HOUR FACTOR: 0.93

"AM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR			
AM Raw Turning Movements			0	603	0	0	0	1,063	0	0	0	0	0	0	0	0	0			
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04			
AM EXISTING CONDITIONS			0	627	0	0	0	1,196	0	0	0	0	0	0	0	0	0			
"PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR			
PM Raw Turning Movements			0	888	0	0	0	712	0	0	0	0	0	0	0	0	0			
Peak Season Correction Factor		1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04			
PM EXISTING CONDITIONS			0	924	0	0	0	740	0	0	0	0	0	0	0	0	0			
"AM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR			
TOTAL "VESTED" TRAFFIC			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%			
AM BACKGROUND TRAFFIC GROWTH			0	22	0	0	0	39	0	0	0	0	0	0	0	0	0			
AM NON-PROJECT TRAFFIC			0	649	0	0	0	1,145	0	0	0	0	0	0	0	0	0			
"PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR			
TOTAL "VESTED" TRAFFIC			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Years To Buildout		7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
Yearly Growth Rate		0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%			
PM BACKGROUND TRAFFIC GROWTH			0	33	0	0	0	28	0	0	0	0	0	0	0	0	0			
PM NON-PROJECT TRAFFIC			0	957	0	0	0	766	0	0	0	0	0	0	0	0	0			
"AM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Pass-By Distribution	Entering																			
	Exiting																			
Valet Distribution	Entering																			
	Exiting																			
Net New Distribution	Entering		26.0%							74.0%						38.0%		62.0%		
	Exiting			33.0%																
"PM PROJECT DISTRIBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
Pass-By Distribution	Entering																			
	Exiting																			
Valet Distribution	Entering																			
	Exiting																			
Net New Distribution	Entering		26.0%							74.0%						38.0%		62.0%		
	Exiting			33.0%																
"AM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
AM TRAFFIC DIVERSIONS																				
Project Trips	Pass - By																			
	Valet																			
Net New			54	27						155					31		50			
AM TOTAL PROJECT TRAFFIC			54	27	0			0	0	155		0	0	0	31	0	50			
AM TOTAL TRAFFIC			54	676	0			0	0	1,145	155		0	0	0	31	0	50		
"PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	
PM TRAFFIC DIVERSIONS																				
Project Trips	Pass - By																			
	Valet																			
Net New			18	52						50					60		99			
PM TOTAL PROJECT TRAFFIC			18	52	0			0	0	50		0	0	0	60	0	99			
PM TOTAL TRAFFIC			18	1,009	0			0	0	766	50		0	0	0	60	0	99		

Appendix H

Intersection Capacity Analysis Worksheets

Existing A.M.

Timings
1: North Flamingo Road & West Oakland Park Boulevard

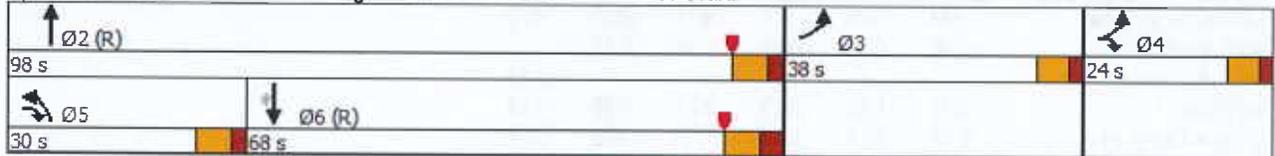
Existing Conditions
A.M. Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3	Ø4
Lane Configurations								
Traffic Volume (vph)	319	308	254	716	1307	851		
Future Volume (vph)	319	308	254	716	1307	851		
Turn Type	Prot	pt+ov	Prot	NA	NA	Perm		
Protected Phases	3 4	4 5	5	2	6		3	4
Permitted Phases						6		
Detector Phase	3 4	4 5	5	2	6	6		
Switch Phase								
Minimum Initial (s)			6.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)			12.5	16.5	47.5	47.5	38.0	12.0
Total Split (s)			30.0	98.0	68.0	68.0	38.0	24.0
Total Split (%)			18.8%	61.3%	42.5%	42.5%	24%	15%
Yellow Time (s)			4.5	4.5	4.5	4.5	4.0	4.0
All-Red Time (s)			2.0	2.0	3.0	3.0	2.0	2.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	7.5	7.5		
Lead/Lag			Lead		Lag	Lag		
Lead-Lag Optimize?			Yes		Yes	Yes		
Recall Mode			None	C-Min	C-Min	C-Min	None	None

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 15 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Splits and Phases: 1: North Flamingo Road & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 1: North Flamingo Road & West Oakland Park Boulevard

Existing Conditions
 A.M. Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	319	308	254	716	1307	851
Future Volume (vph)	319	308	254	716	1307	851
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.5	6.5	7.5	7.5
Lane Util. Factor	0.97	0.76	0.97	0.91	0.91	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	3610	3433	5085	5085	1543
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3433	3610	3433	5085	5085	1543
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	351	338	279	787	1436	935
RTOR Reduction (vph)	0	275	0	0	0	333
Lane Group Flow (vph)	351	63	279	787	1436	602
Confl. Peds. (#/hr)			2			2
Confl. Bikes (#/hr)						2
Turn Type	Prot	pt+ov	Prot	NA	NA	Perm
Protected Phases	3 4	4 5	5	2	6	
Permitted Phases						6
Actuated Green, G (s)	31.9	30.0	17.3	115.6	90.8	90.8
Effective Green, g (s)	31.9	30.0	17.3	115.6	90.8	90.8
Actuated g/C Ratio	0.20	0.19	0.11	0.72	0.57	0.57
Clearance Time (s)			6.5	6.5	7.5	7.5
Vehicle Extension (s)			2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	684	676	371	3673	2885	875
v/s Ratio Prot	c0.10	0.02	c0.08	0.15	0.28	
v/s Ratio Perm						c0.39
v/c Ratio	0.51	0.09	0.75	0.21	0.50	0.69
Uniform Delay, d1	57.1	53.8	69.3	7.3	20.9	24.5
Progression Factor	1.00	1.00	0.80	1.89	0.70	4.04
Incremental Delay, d2	0.3	0.0	7.3	0.1	0.4	2.9
Delay (s)	57.4	53.8	63.1	13.9	15.0	102.1
Level of Service	E	D	E	B	B	F
Approach Delay (s)	55.6			26.8	49.3	
Approach LOS	E			C	D	
Intersection Summary						
HCM 2000 Control Delay			44.6		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.68			
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	26.0
Intersection Capacity Utilization			71.8%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Timings
2: NW 120th Way & West Oakland Park Boulevard

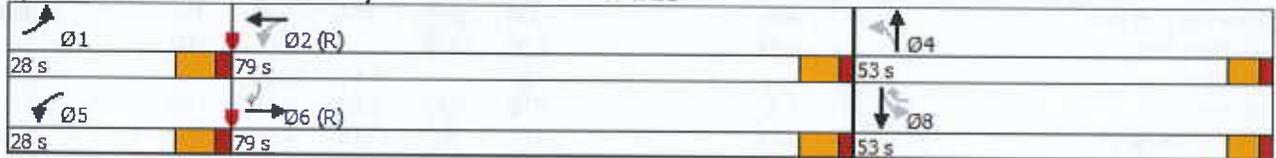
Existing Conditions
A.M. Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	38	957	18	1723	23	102	12	47	10	303
Future Volume (vph)	38	957	18	1723	23	102	12	47	10	303
Turn Type	Prot	NA	pm+pt	NA	custom	Perm	NA	Perm	NA	custom
Protected Phases	1	6	5	2			4		8	
Permitted Phases			2		8	4		8		6
Detector Phase	1	6	5	2	8	4	4	8	8	6
Switch Phase										
Minimum Initial (s)	5.0	12.0	4.0	12.0	6.0	6.0	6.0	6.0	6.0	12.0
Minimum Split (s)	12.0	39.0	11.0	39.0	46.0	51.0	51.0	46.0	46.0	39.0
Total Split (s)	28.0	79.0	28.0	79.0	53.0	53.0	53.0	53.0	53.0	79.0
Total Split (%)	17.5%	49.4%	17.5%	49.4%	33.1%	33.1%	33.1%	33.1%	33.1%	49.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	5.0
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)	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag						Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes
Recall Mode	None	C-Min	None	C-Min	None	Max	Max	None	None	C-Min

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 97 (61%), Referenced to phase 2:WBTL and 6:EBT, Start of Green
 Natural Cycle: 105
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NW 120th Way & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Existing Conditions
 A.M. Peak Hour

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↑↑↑		1	↔	↑↑↑	↗	↖	↑	↗	↖
Traffic Volume (vph)	3	38	957	35	1	18	1723	23	102	12	41	47
Future Volume (vph)	3	38	957	35	1	18	1723	23	102	12	41	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0			7.0	7.0	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		1.00
Frbp, ped/bikes		1.00	1.00			1.00	1.00	0.98	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		1.00
Frt		1.00	0.99			1.00	1.00	0.85	1.00	0.88		1.00
Flt Protected		0.95	1.00			0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1769	5054			1769	5085	1545	1770	1645		1770
Flt Permitted		0.19	1.00			0.25	1.00	1.00	0.75	1.00		0.72
Satd. Flow (perm)		355	5054			459	5085	1545	1398	1645		1338
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	42	1063	39	1	20	1914	26	113	13	46	52
RTOR Reduction (vph)	0	0	2	0	0	0	0	18	0	32	0	0
Lane Group Flow (vph)	0	45	1100	0	0	21	1914	8	113	27	0	52
Confl. Peds. (#/hr)		1		1		1		1				
Confl. Bikes (#/hr)				1				2				
Turn Type		Prot	NA			pm+pt	NA	custom	Perm	NA		Perm
Protected Phases		1	6			5	2			4		
Permitted Phases						2		8	4			8
Actuated Green, G (s)		21.0	89.1			74.3	71.2	47.8	47.8	47.8		47.8
Effective Green, g (s)		21.0	89.1			74.3	71.2	47.8	47.8	47.8		47.8
Actuated g/C Ratio		0.13	0.56			0.46	0.45	0.30	0.30	0.30		0.30
Clearance Time (s)		7.0	7.0			7.0	7.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)		1.5	3.0			1.5	3.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		46	2814			238	2262	461	417	491		399
v/s Ratio Prot			0.22			0.00	c0.38			0.02		
v/s Ratio Perm		c0.13				0.04		0.01	c0.08			0.04
v/c Ratio		0.98	0.39			0.09	0.85	0.02	0.27	0.05		0.13
Uniform Delay, d1		69.3	20.1			23.2	39.5	39.5	42.8	40.0		40.9
Progression Factor		1.00	1.04			1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		121.5	0.4			0.1	4.1	0.0	1.6	0.2		0.1
Delay (s)		190.7	21.4			23.3	43.7	39.5	44.4	40.2		41.0
Level of Service		F	C			C	D	D	D	D		D
Approach Delay (s)			28.0				43.4			43.0		
Approach LOS			C				D			D		
Intersection Summary												
HCM 2000 Control Delay			36.2			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			160.0			Sum of lost time (s)				20.0		
Intersection Capacity Utilization			75.2%			ICU Level of Service				D		
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Existing Conditions
 A.M. Peak Hour

Movement	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	10	303
Future Volume (vph)	10	303
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	7.0
Lane Util. Factor	1.00	1.00
Frbp, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1863	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1863	1583
Peak-hour factor, PHF	0.90	0.90
Adj. Flow (vph)	11	337
RTOR Reduction (vph)	0	149
Lane Group Flow (vph)	11	188
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Turn Type	NA	custom
Protected Phases	8	
Permitted Phases		6
Actuated Green, G (s)	47.8	89.1
Effective Green, g (s)	47.8	89.1
Actuated g/C Ratio	0.30	0.56
Clearance Time (s)	6.0	7.0
Vehicle Extension (s)	2.0	3.0
Lane Grp Cap (vph)	556	881
v/s Ratio Prot	0.01	
v/s Ratio Perm		0.12
v/c Ratio	0.02	0.21
Uniform Delay, d1	39.6	17.8
Progression Factor	1.00	1.00
Incremental Delay, d2	0.0	0.6
Delay (s)	39.6	18.4
Level of Service	D	B
Approach Delay (s)	21.9	
Approach LOS	C	
Intersection Summary		

Timings

Existing Conditions

3: West Oakland Park Boulevard & SR 869/Sawgrass Expressway Ramps

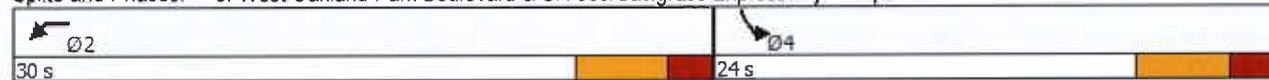
A.M. Peak Hour

Lane Group	WBL	SBL
Lane Configurations	 	
Traffic Volume (vph)	648	386
Future Volume (vph)	648	386
Turn Type	Prot	Prot
Protected Phases	2	4
Permitted Phases		
Detector Phase	2	4
Switch Phase		
Minimum Initial (s)	10.0	5.0
Minimum Split (s)	16.0	11.0
Total Split (s)	30.0	24.0
Total Split (%)	55.6%	44.4%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	Min	None

Intersection Summary

Cycle Length: 54
 Actuated Cycle Length: 31.7
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord

Splits and Phases: 3: West Oakland Park Boulevard & SR 869/Sawgrass Expressway Ramps



HCM Signalized Intersection Capacity Analysis

Existing Conditions

3: West Oakland Park Boulevard & SR 869/Sawgrass Expressway Ramps

A.M. Peak Hour

						
Movement	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	648	0	386	0	0	0
Future Volume (vph)	648	0	386	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0			
Lane Util. Factor	0.97		0.97			
Frt	1.00		1.00			
Flt Protected	0.95		0.95			
Satd. Flow (prot)	3433		3433			
Flt Permitted	0.95		0.95			
Satd. Flow (perm)	3433		3433			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.92	0.92
Adj. Flow (vph)	675	0	402	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	675	0	402	0	0	0
Turn Type	Prot		Prot			
Protected Phases	2		4			
Permitted Phases						
Actuated Green, G (s)	11.4		8.2			
Effective Green, g (s)	11.4		8.2			
Actuated g/C Ratio	0.36		0.26			
Clearance Time (s)	6.0		6.0			
Vehicle Extension (s)	2.0		2.0			
Lane Grp Cap (vph)	1238		890			
v/s Ratio Prot	c0.20		c0.12			
v/s Ratio Perm						
v/c Ratio	0.55		0.45			
Uniform Delay, d1	8.0		9.8			
Progression Factor	1.00		1.00			
Incremental Delay, d2	0.3		0.1			
Delay (s)	8.3		9.9			
Level of Service	A		A			
Approach Delay (s)	8.3		9.9		0.0	
Approach LOS	A		A		A	
Intersection Summary						
HCM 2000 Control Delay			8.9		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.51			
Actuated Cycle Length (s)			31.6		Sum of lost time (s)	12.0
Intersection Capacity Utilization			39.5%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Timings

Existing Conditions

4: North Flamingo Road & NW 136th Avenue/Panther Parkway

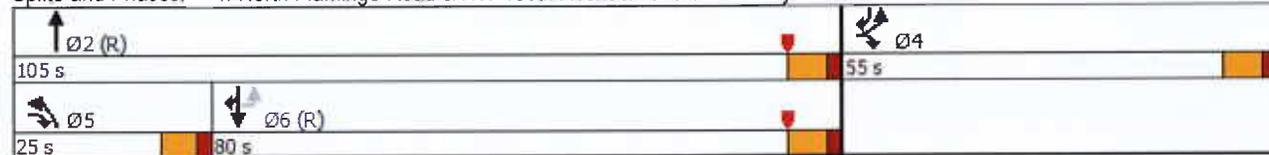
A.M. Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	399	98	27	535	861	782
Future Volume (vph)	399	98	27	535	861	782
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	6.0		5.0	12.0	12.0	
Minimum Split (s)	47.0		11.5	19.0	47.0	
Total Split (s)	55.0		25.0	105.0	80.0	
Total Split (%)	34.4%		15.6%	65.6%	50.0%	
Yellow Time (s)	5.0		4.5	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	7.0		6.5	7.0	7.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 131 (82%), Referenced to phase 2:NBT and 6:SBTU, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Splits and Phases: 4: North Flamingo Road & NW 136th Avenue/Panther Parkway



HCM Signalized Intersection Capacity Analysis
 4: North Flamingo Road & NW 136th Avenue/Panther Parkway

Existing Conditions
 A.M. Peak Hour

							
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	399	98	27	535	0	861	782
Future Volume (vph)	399	98	27	535	0	861	782
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	7.0		7.0	7.0
Lane Util. Factor	0.94	1.00	1.00	0.91		0.91	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Fipb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00
Satd. Flow (prot)	4942	1568	1752	5036		5036	2760
Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00
Satd. Flow (perm)	4942	1568	1752	5036		5036	2760
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	464	114	31	622	0	1001	909
RTOR Reduction (vph)	0	44	0	0	0	0	116
Lane Group Flow (vph)	464	70	31	622	0	1001	793
Confl. Peds. (#/hr)		4	1				1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	pt+ov	Prot	NA	Perm	NA	pt+ov
Protected Phases	4	4 5	5	2		6	6 4
Permitted Phases					6		
Actuated Green, G (s)	21.2	35.2	7.0	124.8		111.3	139.5
Effective Green, g (s)	21.2	35.2	7.0	124.8		111.3	139.5
Actuated g/C Ratio	0.13	0.22	0.04	0.78		0.70	0.87
Clearance Time (s)	7.0		6.5	7.0		7.0	
Vehicle Extension (s)	2.0		1.5	3.0		3.0	
Lane Grp Cap (vph)	654	344	76	3928		3503	2406
v/s Ratio Prot	c0.09	0.04	c0.02	0.12		0.20	c0.29
v/s Ratio Perm							
v/c Ratio	0.71	0.20	0.41	0.16		0.29	0.33
Uniform Delay, d1	66.5	50.9	74.5	4.4		9.3	1.8
Progression Factor	1.00	1.00	1.00	1.00		0.39	10.88
Incremental Delay, d2	2.9	0.1	1.3	0.1		0.2	0.0
Delay (s)	69.3	51.0	75.8	4.5		3.8	20.1
Level of Service	E	D	E	A		A	C
Approach Delay (s)	65.7			7.9		11.6	
Approach LOS	E			A		B	
Intersection Summary							
HCM 2000 Control Delay			20.8		HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio			0.40				
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	20.5	
Intersection Capacity Utilization			55.8%		ICU Level of Service		B
Analysis Period (min)			15				
c Critical Lane Group							

Future Background A.M.

Timings
1: North Flamingo Road & West Oakland Park Boulevard

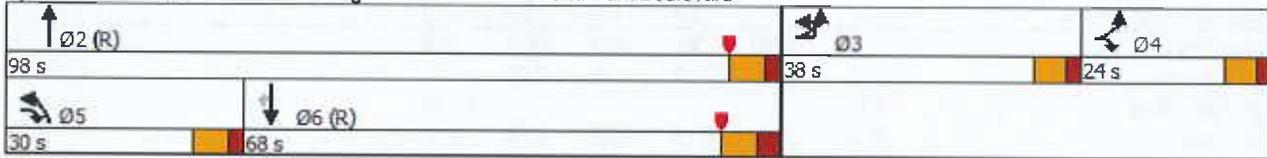
Future Background Conditions
A.M. Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø3	Ø4
Lane Configurations								
Traffic Volume (vph)	329	319	263	741	1353	881		
Future Volume (vph)	329	319	263	741	1353	881		
Turn Type	Prot	pt+ov	Prot	NA	NA	Perm		
Protected Phases	3 4	4 5	5	2	6		3	4
Permitted Phases						6		
Detector Phase	3 4	4 5	5	2	6	6		
Switch Phase								
Minimum Initial (s)			6.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)			12.5	16.5	47.5	47.5	38.0	12.0
Total Split (s)			30.0	98.0	68.0	68.0	38.0	24.0
Total Split (%)			18.8%	61.3%	42.5%	42.5%	24%	15%
Yellow Time (s)			4.5	4.5	4.5	4.5	4.0	4.0
All-Red Time (s)			2.0	2.0	3.0	3.0	2.0	2.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	7.5	7.5		
Lead/Lag			Lead		Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes		Yes	Yes	Yes	Yes
Recall Mode			None	C-Min	C-Min	C-Min	None	None

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 15 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Splits and Phases: 1: North Flamingo Road & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 1: North Flamingo Road & West Oakland Park Boulevard

Future Background Conditions
 A.M. Peak Hour

Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	1	329	319	263	741	1353	881
Future Volume (vph)	1	329	319	263	741	1353	881
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.5	6.5	7.5	7.5
Lane Util. Factor		0.97	0.76	0.97	0.91	0.91	1.00
Frbp, ped/bikes		1.00	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes		1.00	1.00	1.00	1.00	1.00	1.00
Frt		1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected		0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)		3433	3610	3433	5085	5085	1559
Flt Permitted		0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)		3433	3610	3433	5085	5085	1559
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	1	362	351	289	814	1487	968
RTOR Reduction (vph)	0	0	284	0	0	0	336
Lane Group Flow (vph)	0	363	67	289	814	1487	632
Confl. Peds. (#/hr)				2			2
Confl. Bikes (#/hr)							2
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%
Turn Type	Prot	Prot	pt+ov	Prot	NA	NA	Perm
Protected Phases	3	3 4	4 5	5	2	6	
Permitted Phases							6
Actuated Green, G (s)		26.5	30.5	17.8	115.0	89.7	89.7
Effective Green, g (s)		26.5	30.5	17.8	115.0	89.7	89.7
Actuated g/C Ratio		0.17	0.19	0.11	0.72	0.56	0.56
Clearance Time (s)				6.5	6.5	7.5	7.5
Vehicle Extension (s)				2.0	3.0	3.0	3.0
Lane Grp Cap (vph)		697	688	381	3654	2850	874
v/s Ratio Prot		c0.06	0.02	c0.08	0.16	0.29	
v/s Ratio Perm		0.04					c0.41
v/c Ratio		0.52	0.10	0.76	0.22	0.52	0.72
Uniform Delay, d1		62.3	53.4	69.0	7.5	21.8	26.0
Progression Factor		1.00	1.00	0.78	1.89	0.99	4.14
Incremental Delay, d2		0.3	0.0	7.4	0.1	0.4	3.3
Delay (s)		62.6	53.4	61.4	14.4	22.1	110.9
Level of Service		E	D	E	B	C	F
Approach Delay (s)		58.1			26.7	57.1	
Approach LOS		E			C	E	
Intersection Summary							
HCM 2000 Control Delay			49.4		HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio			0.71				
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	26.0	
Intersection Capacity Utilization			73.9%		ICU Level of Service		D
Analysis Period (min)			15				

Timings
2: NW 120th Way & West Oakland Park Boulevard

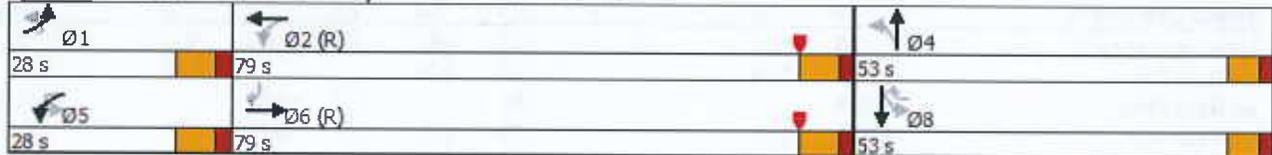
Future Background Conditions
A.M. Peak Hour

Lane Group	EBU	EBL	EBT	WBU	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	39	991	1	19	1784	24	106	12	49	10	314
Future Volume (vph)	3	39	991	1	19	1784	24	106	12	49	10	314
Turn Type	custom	Prot	NA	custom	pm+pt	NA	custom	Perm	NA	Perm	NA	custom
Protected Phases		1	6		5	2			4		8	
Permitted Phases	1			5	2		8	4		8		6
Detector Phase	1	1	6	5	5	2	8	4	4	8	8	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	12.0	4.0	4.0	12.0	6.0	6.0	6.0	6.0	6.0	12.0
Minimum Split (s)	12.0	12.0	39.0	11.0	11.0	39.0	46.0	51.0	51.0	46.0	46.0	39.0
Total Split (s)	28.0	28.0	79.0	28.0	28.0	79.0	53.0	53.0	53.0	53.0	53.0	79.0
Total Split (%)	17.5%	17.5%	49.4%	17.5%	17.5%	49.4%	33.1%	33.1%	33.1%	33.1%	33.1%	49.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	5.0
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	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)		7.0	7.0		7.0	7.0	6.0	6.0	6.0	6.0	6.0	7.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lag						Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						Yes
Recall Mode	None	None	C-Max	None	None	C-Max	None	Max	Max	None	None	C-Max

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 97 (61%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 105
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NW 120th Way & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
2: NW 120th Way & West Oakland Park Boulevard

Future Background Conditions
A.M. Peak Hour

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	3	39	991	36	1	19	1784	24	106	12	42	49
Future Volume (vph)	3	39	991	36	1	19	1784	24	106	12	42	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0			7.0	7.0	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		1.00
Frbp, ped/bikes		1.00	1.00			1.00	1.00	0.98	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		1.00
Frt		1.00	0.99			1.00	1.00	0.85	1.00	0.88		1.00
Flt Protected		0.95	1.00			0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1769	5054			1769	5085	1545	1770	1644		1770
Flt Permitted		0.19	1.00			0.24	1.00	1.00	0.75	1.00		0.72
Satd. Flow (perm)		355	5054			441	5085	1545	1398	1644		1337
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	43	1101	40	1	21	1982	27	118	13	47	54
RTOR Reduction (vph)	0	0	2	0	0	0	0	19	0	33	0	0
Lane Group Flow (vph)	0	46	1139	0	0	22	1982	8	118	27	0	54
Confl. Peds. (#/hr)		1		1		1		1				
Confl. Bikes (#/hr)				1				2				
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	custom	Prot	NA		custom	pm+pt	NA	custom	Perm	NA		Perm
Protected Phases		1	6			5	2			4		
Permitted Phases	1				5	2		8	4			8
Actuated Green, G (s)		21.0	89.9			75.1	72.0	47.0	47.0	47.0		47.0
Effective Green, g (s)		21.0	89.9			75.1	72.0	47.0	47.0	47.0		47.0
Actuated g/C Ratio		0.13	0.56			0.47	0.45	0.29	0.29	0.29		0.29
Clearance Time (s)		7.0	7.0			7.0	7.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)		1.5	3.0			1.5	3.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		46	2839			232	2288	453	410	482		392
v/s Ratio Prot			0.23			0.00	c0.39			0.02		
v/s Ratio Perm		c0.13				0.04		0.01	c0.08			0.04
v/c Ratio		1.00	0.40			0.09	0.87	0.02	0.29	0.06		0.14
Uniform Delay, d1		69.5	19.8			22.8	39.7	40.1	43.6	40.6		41.6
Progression Factor		1.17	1.09			1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		130.8	0.4			0.1	4.7	0.0	1.8	0.2		0.1
Delay (s)		211.8	22.1			22.9	44.4	40.1	45.4	40.8		41.6
Level of Service		F	C			C	D	D	D	D		D
Approach Delay (s)			29.5				44.1			43.8		
Approach LOS			C				D			D		
Intersection Summary												
HCM 2000 Control Delay			37.1			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.69									
Actuated Cycle Length (s)			160.0			Sum of lost time (s)				20.0		
Intersection Capacity Utilization			76.9%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Future Background Conditions
 A.M. Peak Hour

Movement	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	10	314
Future Volume (vph)	10	314
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	7.0
Lane Util. Factor	1.00	1.00
Frbp, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1863	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1863	1583
Peak-hour factor, PHF	0.90	0.90
Adj. Flow (vph)	11	349
RTOR Reduction (vph)	0	153
Lane Group Flow (vph)	11	196
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	custom
Protected Phases	8	
Permitted Phases		6
Actuated Green, G (s)	47.0	89.9
Effective Green, g (s)	47.0	89.9
Actuated g/C Ratio	0.29	0.56
Clearance Time (s)	6.0	7.0
Vehicle Extension (s)	2.0	3.0
Lane Grp Cap (vph)	547	889
v/s Ratio Prot	0.01	
v/s Ratio Perm		0.12
v/c Ratio	0.02	0.22
Uniform Delay, d1	40.1	17.5
Progression Factor	1.00	1.00
Incremental Delay, d2	0.0	0.6
Delay (s)	40.1	18.1
Level of Service	D	B
Approach Delay (s)	21.8	
Approach LOS	C	
Intersection Summary		

Timings

Future Background Conditions

3: NB Off-Ramp & West Oakland Park Boulevard

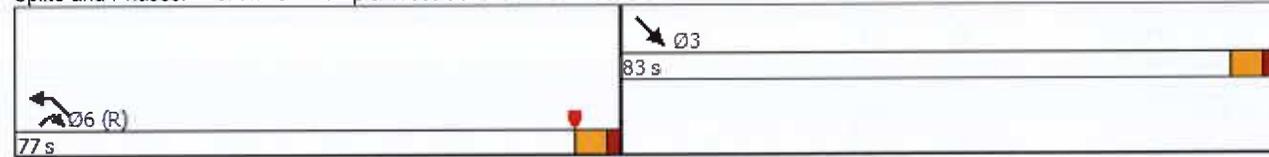
A.M. Peak Hour

Lane Group	SET	NWL	NER
Lane Configurations	↑↑	↖↗	↖↗↘
Traffic Volume (vph)	400	671	250
Future Volume (vph)	400	671	250
Turn Type	NA	Prot	Prot
Protected Phases	3	6	6
Permitted Phases			
Detector Phase	3	6	6
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.0	10.0	10.0
Total Split (s)	83.0	77.0	77.0
Total Split (%)	51.9%	48.1%	48.1%
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 77 (48%), Referenced to phase 6:NWL, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NB Off-Ramp & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 3: NB Off-Ramp & West Oakland Park Boulevard

Future Background Conditions
 A.M. Peak Hour

Movement	EBL	EBR	SET	SER	NWL	NWT	NEL	NER
Lane Configurations			↑↑		↑↑			↑↑↑
Traffic Volume (vph)	0	0	400	0	671	0	0	250
Future Volume (vph)	0	0	400	0	671	0	0	250
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	16	12	12	12	12	12
Total Lost time (s)			6.0		6.0			6.0
Lane Util. Factor			0.95		0.97			0.76
Frt			1.00		1.00			0.85
Flt Protected			1.00		0.95			1.00
Satd. Flow (prot)			3972		3400			3575
Flt Permitted			1.00		0.95			1.00
Satd. Flow (perm)			3972		3400			3575
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	421	0	706	0	0	263
RTOR Reduction (vph)	0	0	0	0	0	0	0	58
Lane Group Flow (vph)	0	0	421	0	706	0	0	205
Turn Type			NA		Prot			Prot
Protected Phases			3		6			6
Permitted Phases								
Actuated Green, G (s)			23.1		124.9			124.9
Effective Green, g (s)			23.1		124.9			124.9
Actuated g/C Ratio			0.14		0.78			0.78
Clearance Time (s)			6.0		6.0			6.0
Vehicle Extension (s)			3.0		3.0			3.0
Lane Grp Cap (vph)			573		2654			2790
v/s Ratio Prot			c0.11		c0.21			0.06
v/s Ratio Perm								
v/c Ratio			0.73		0.27			0.07
Uniform Delay, d1			65.5		4.9			4.1
Progression Factor			1.00		1.00			1.00
Incremental Delay, d2			4.9		0.2			0.1
Delay (s)			70.4		5.1			4.1
Level of Service			E		A			A
Approach Delay (s)	0.0		70.4			5.1	4.1	
Approach LOS	A		E			A	A	
Intersection Summary								
HCM 2000 Control Delay			24.7		HCM 2000 Level of Service			C
HCM 2000 Volume to Capacity ratio			0.34					
Actuated Cycle Length (s)			160.0		Sum of lost time (s)			12.0
Intersection Capacity Utilization			38.5%		ICU Level of Service			A
Analysis Period (min)			15					
c Critical Lane Group								

Timings

Future Background Conditions

4: North Flamingo Road & NW 136th Avenue/Panther Parkway

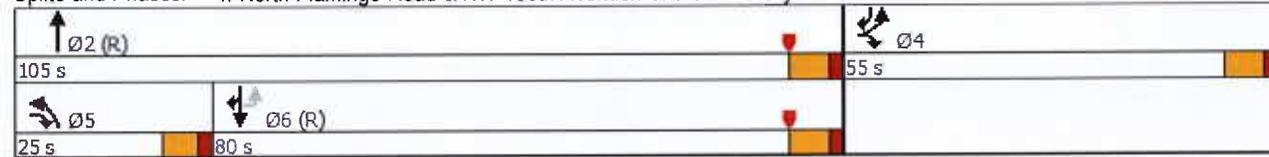
A.M. Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	  			  	  	 
Traffic Volume (vph)	413	101	28	554	892	810
Future Volume (vph)	413	101	28	554	892	810
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases		4				
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	6.0		5.0	12.0	12.0	
Minimum Split (s)	47.0		11.5	19.0	47.0	
Total Split (s)	55.0		25.0	105.0	80.0	
Total Split (%)	34.4%		15.6%	65.6%	50.0%	
Yellow Time (s)	5.0		4.5	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	7.0		6.5	7.0	7.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 131 (82%), Referenced to phase 2:NBT and 6:SBTU, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Splits and Phases: 4: North Flamingo Road & NW 136th Avenue/Panther Parkway



HCM Signalized Intersection Capacity Analysis

Future Background Conditions

4: North Flamingo Road & NW 136th Avenue/Panther Parkway

A.M. Peak Hour

							
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	413	101	28	554	0	892	810
Future Volume (vph)	413	101	28	554	0	892	810
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	7.0		7.0	7.0
Lane Util. Factor	0.94	1.00	1.00	0.91		0.91	0.88
Frb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00
Satd. Flow (prot)	4942	1568	1752	5036		5036	2760
Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00
Satd. Flow (perm)	4942	1568	1752	5036		5036	2760
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	480	117	33	644	0	1037	942
RTOR Reduction (vph)	0	40	0	0	0	0	122
Lane Group Flow (vph)	480	77	33	644	0	1037	820
Confl. Peds. (#/hr)		4	1				1
Turn Type	Prot	pt+ov	Prot	NA	Perm	NA	pt+ov
Protected Phases	4	4 5	5	2		6	6 4
Permitted Phases		4			6		
Actuated Green, G (s)	21.7	35.9	7.2	124.3		110.6	139.3
Effective Green, g (s)	21.7	35.9	7.2	124.3		110.6	139.3
Actuated g/C Ratio	0.14	0.22	0.05	0.78		0.69	0.87
Clearance Time (s)	7.0		6.5	7.0		7.0	
Vehicle Extension (s)	2.0		1.5	3.0		3.0	
Lane Grp Cap (vph)	670	351	78	3912		3481	2402
v/s Ratio Prot	c0.10	0.05	c0.02	0.13		0.21	c0.30
v/s Ratio Perm							
v/c Ratio	0.72	0.22	0.42	0.16		0.30	0.34
Uniform Delay, d1	66.2	50.6	74.4	4.6		9.6	1.9
Progression Factor	1.00	1.00	1.00	1.00		0.62	38.20
Incremental Delay, d2	3.0	0.1	1.3	0.1		0.2	0.0
Delay (s)	69.3	50.8	75.7	4.7		6.1	72.8
Level of Service	E	D	E	A		A	E
Approach Delay (s)	65.6			8.1		37.9	
Approach LOS	E			A		D	
Intersection Summary							
HCM 2000 Control Delay			36.8		HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio			0.41				
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	20.5	
Intersection Capacity Utilization			56.0%		ICU Level of Service	B	
Analysis Period (min)			15				
c Critical Lane Group							

Future Total A.M.

Timings
1: North Flamingo Road & West Oakland Park Boulevard

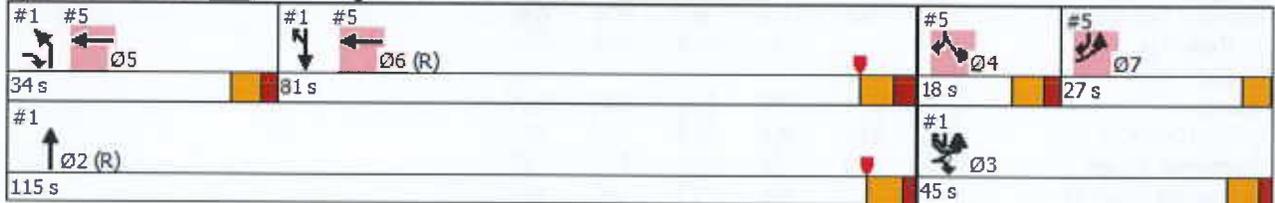
Future Total Conditions
A.M. Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBT	Ø4	Ø7
Lane Configurations							
Traffic Volume (vph)	360	346	332	741	1353		
Future Volume (vph)	360	346	332	741	1353		
Turn Type	Prot	custom	Prot	NA	NA		
Protected Phases	3!	3 5	5	2	6	4	7
Permitted Phases							
Detector Phase	3	3 5	5	2	6		
Switch Phase							
Minimum Initial (s)	6.0		6.0	10.0	10.0	6.0	4.0
Minimum Split (s)	38.0		12.0	16.5	61.0	12.0	8.0
Total Split (s)	45.0		34.0	115.0	81.0	18.0	27.0
Total Split (%)	28.1%		21.3%	71.9%	50.6%	11%	17%
Yellow Time (s)	4.0		4.0	4.5	4.5	4.0	3.5
All-Red Time (s)	2.0		2.0	2.0	3.0	2.0	0.5
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		
Total Lost Time (s)	6.0		6.0	6.5	7.5		
Lead/Lag			Lead		Lag	Lead	Lag
Lead-Lag Optimize?			Yes		Yes	Yes	Yes
Recall Mode	None		None	C-Min	C-Min	None	None

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 6:SBT and 2:NBT, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 ! Phase conflict between lane groups.

Splits and Phases: 1: North Flamingo Road & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 1: North Flamingo Road & West Oakland Park Boulevard

Future Total Conditions
 A.M. Peak Hour

										
Movement	EBU	EBL	EBR	NBL	NBT	SBT	SBR	SBR2	SEL	SER
Lane Configurations										
Traffic Volume (vph)	1	360	346	332	741	1353	967	0	0	0
Future Volume (vph)	1	360	346	332	741	1353	967	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0	6.0	6.0	6.5	7.5				
Lane Util. Factor		0.97	0.76	0.94	0.91	0.91				
Frbp, ped/bikes		1.00	1.00	1.00	1.00	1.00				
Fllp, ped/bikes		1.00	1.00	1.00	1.00	1.00				
Frt		1.00	0.85	1.00	1.00	0.94				
Flt Protected		0.95	1.00	0.95	1.00	1.00				
Satd. Flow (prot)		3400	3575	4942	4988	4694				
Flt Permitted		0.95	1.00	0.95	1.00	1.00				
Satd. Flow (perm)		3400	3575	4942	4988	4694				
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.95	0.95	0.95
Adj. Flow (vph)	1	396	380	365	814	1487	1063	0	0	0
RTOR Reduction (vph)	0	0	19	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	397	361	365	814	2550	0	0	0	0
Confl. Peds. (#/hr)				2				2		
Confl. Bikes (#/hr)								2		
Heavy Vehicles (%)	3%	3%	3%	3%	4%	4%	3%	3%	3%	3%
Turn Type	D.Pm	Prot	custom	Prot	NA	NA		pt+ov	Prot	
Protected Phases		3!	3 5	5	2	6		3 6	3!	
Permitted Phases	3									
Actuated Green, G (s)		26.4	59.9	27.5	121.1	86.6				
Effective Green, g (s)		26.4	59.9	27.5	121.1	86.6				
Actuated g/C Ratio		0.16	0.37	0.17	0.76	0.54				
Clearance Time (s)		6.0		6.0	6.5	7.5				
Vehicle Extension (s)		2.0		2.0	3.0	3.0				
Lane Grp Cap (vph)		561	1338	849	3775	2540				
v/s Ratio Prot			0.10	c0.07	0.16	c0.54				
v/s Ratio Perm		0.12								
v/c Ratio		0.71	0.27	0.43	0.22	1.24dr				
Uniform Delay, d1		63.2	34.8	59.2	5.7	36.7				
Progression Factor		1.00	1.00	0.76	2.17	1.00				
Incremental Delay, d2		3.3	0.0	0.1	0.1	18.8				
Delay (s)		66.5	34.9	45.0	12.4	55.5				
Level of Service		E	C	D	B	E				
Approach Delay (s)		51.0			22.5	55.5			0.0	
Approach LOS		D			C	E			A	
Intersection Summary										
HCM 2000 Control Delay			46.1		HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.86							
Actuated Cycle Length (s)			160.0		Sum of lost time (s)				23.5	
Intersection Capacity Utilization			80.8%		ICU Level of Service				D	
Analysis Period (min)			15							
dr Defacto Right Lane. Recode with 1 though lane as a right lane.										
! Phase conflict between lane groups.										
c Critical Lane Group										

Timings
2: NW 120th Way & West Oakland Park Boulevard

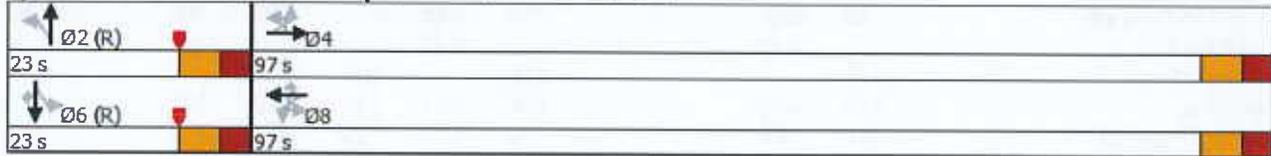
Future Total Conditions
A.M. Peak Hour

Lane Group	EBU	EBL	EBT	WBU	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	46	1015	1	19	1849	24	106	12	49	10	335
Future Volume (vph)	3	46	1015	1	19	1849	24	106	12	49	10	335
Turn Type	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases			4			8			2		6	
Permitted Phases	4	4		8	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	8	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	97.0	97.0	97.0	97.0	97.0	97.0	97.0	23.0	23.0	23.0	23.0	23.0
Total Split (%)	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	19.2%	19.2%	19.2%	19.2%	19.2%
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	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max						

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 11 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NW 120th Way & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Future Total Conditions
 A.M. Peak Hour

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations		↔	↑↑↑				↔	↑↑↑	↗	↖	↖	↗
Traffic Volume (vph)	3	46	1015	36	1	19	1849	24	106	12	42	49
Future Volume (vph)	3	46	1015	36	1	19	1849	24	106	12	42	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0			7.0	7.0	7.0	7.0	7.0		7.0
Lane Util. Factor		1.00	0.91			1.00	0.91	1.00	1.00	1.00		1.00
Frbp, ped/bikes		1.00	1.00			1.00	1.00	0.98	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		1.00
Frt		1.00	0.99			1.00	1.00	0.85	1.00	0.88		1.00
Flt Protected		0.95	1.00			0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1752	5006			1751	5036	1529	1752	1628		1752
Flt Permitted		0.07	1.00			0.21	1.00	1.00	0.75	1.00		0.72
Satd. Flow (perm)		120	5006			396	5036	1529	1384	1628		1324
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	3	51	1128	40	1	21	2054	27	118	13	47	54
RTOR Reduction (vph)	0	0	4	0	0	0	0	9	0	37	0	0
Lane Group Flow (vph)	0	54	1164	0	0	22	2054	18	118	23	0	54
Confl. Peds. (#/hr)		1		1		1		1				
Confl. Bikes (#/hr)				1				2				
Turn Type	Perm	Perm	NA		Perm	Perm	NA	Perm	Perm	NA		Perm
Protected Phases			4				8			2		
Permitted Phases	4	4			8	8		8	2			6
Actuated Green, G (s)		80.2	80.2			80.2	80.2	80.2	25.8	25.8		25.8
Effective Green, g (s)		80.2	80.2			80.2	80.2	80.2	25.8	25.8		25.8
Actuated g/C Ratio		0.67	0.67			0.67	0.67	0.67	0.22	0.22		0.22
Clearance Time (s)		7.0	7.0			7.0	7.0	7.0	7.0	7.0		7.0
Vehicle Extension (s)		3.0	3.0			3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		80	3345			264	3365	1021	297	350		284
v/s Ratio Prot			0.23				0.41			0.01		
v/s Ratio Perm		c0.45				0.06		0.01	0.09			0.04
v/c Ratio		0.68	0.35			0.08	0.61	0.02	0.40	0.07		0.19
Uniform Delay, d1		12.0	8.6			7.0	11.1	6.7	40.4	37.5		38.5
Progression Factor		1.00	1.00			1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		20.2	0.1			0.1	0.3	0.0	3.9	0.4		1.5
Delay (s)		32.2	8.7			7.1	11.5	6.7	44.4	37.9		40.0
Level of Service		C	A			A	B	A	D	D		D
Approach Delay (s)			9.7				11.4			42.2		
Approach LOS			A				B			D		
Intersection Summary												
HCM 2000 Control Delay			21.2									
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			120.0						14.0			
Intersection Capacity Utilization			88.1%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Future Total Conditions
 A.M. Peak Hour

Movement	↓ SBT	↙ SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	10	335
Future Volume (vph)	10	335
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.0	7.0
Lane Util. Factor	1.00	1.00
Frpb, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1845	1568
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1845	1568
Peak-hour factor, PHF	0.90	0.90
Adj. Flow (vph)	11	372
RTOR Reduction (vph)	0	28
Lane Group Flow (vph)	11	344
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	25.8	25.8
Effective Green, g (s)	25.8	25.8
Actuated g/C Ratio	0.22	0.22
Clearance Time (s)	7.0	7.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	396	337
v/s Ratio Prot	0.01	
v/s Ratio Perm		c0.22
v/c Ratio	0.03	1.02
Uniform Delay, d1	37.2	47.1
Progression Factor	1.00	1.00
Incremental Delay, d2	0.1	54.2
Delay (s)	37.3	101.3
Level of Service	D	F
Approach Delay (s)	92.1	
Approach LOS	F	
Intersection Summary		

Timings
3: NB Off-Ramp & West Oakland Park Boulevard

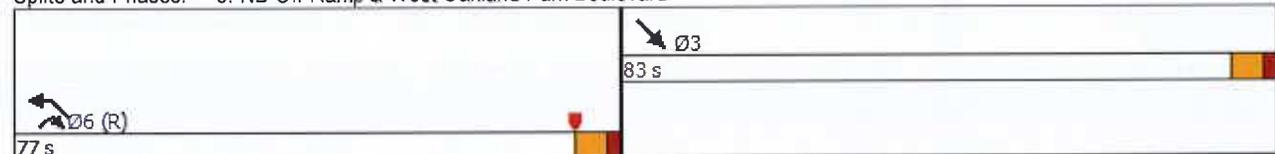
Future Total Conditions
A.M. Peak Hour

Lane Group	SET	NWL	NER
Lane Configurations	↑↑	↖↗	↖↗↘
Traffic Volume (vph)	439	682	265
Future Volume (vph)	439	682	265
Turn Type	NA	Prot	Prot
Protected Phases	3	6	6
Permitted Phases			
Detector Phase	3	6	6
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.0	10.0	10.0
Total Split (s)	83.0	77.0	77.0
Total Split (%)	51.9%	48.1%	48.1%
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 77 (48%), Referenced to phase 6:NWL, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NB Off-Ramp & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 3: NB Off-Ramp & West Oakland Park Boulevard

Future Total Conditions
 A.M. Peak Hour

Movement	EBL	EBR	SET	SER	NWL	NWT	NEL	NER
Lane Configurations			↑↑		↔			↑↑↑
Traffic Volume (vph)	0	0	439	0	682	0	0	265
Future Volume (vph)	0	0	439	0	682	0	0	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	16	12	12	12	12	12
Total Lost time (s)			6.0		6.0			6.0
Lane Util. Factor			0.95		0.97			0.76
Frt			1.00		1.00			0.85
Flt Protected			1.00		0.95			1.00
Satd. Flow (prot)			3972		3400			3575
Flt Permitted			1.00		0.95			1.00
Satd. Flow (perm)			3972		3400			3575
Peak-hour factor, PHF	0.96	0.96	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	462	0	718	0	0	279
RTOR Reduction (vph)	0	0	0	0	0	0	0	65
Lane Group Flow (vph)	0	0	462	0	718	0	0	214
Turn Type			NA		Prot			Prot
Protected Phases			3		6			6
Permitted Phases								
Actuated Green, G (s)			25.0		123.0			123.0
Effective Green, g (s)			25.0		123.0			123.0
Actuated g/C Ratio			0.16		0.77			0.77
Clearance Time (s)			6.0		6.0			6.0
Vehicle Extension (s)			3.0		3.0			3.0
Lane Grp Cap (vph)			620		2613			2748
v/s Ratio Prot			c0.12		c0.21			0.06
v/s Ratio Perm								
v/c Ratio			0.75		0.27			0.08
Uniform Delay, d1			64.5		5.4			4.6
Progression Factor			1.00		1.53			1.00
Incremental Delay, d2			4.9		0.3			0.1
Delay (s)			69.3		8.6			4.6
Level of Service			E		A			A
Approach Delay (s)	0.0		69.3			8.6	4.6	
Approach LOS	A		E			A	A	
Intersection Summary								
HCM 2000 Control Delay			27.0		HCM 2000 Level of Service			C
HCM 2000 Volume to Capacity ratio			0.35					
Actuated Cycle Length (s)			160.0		Sum of lost time (s)			12.0
Intersection Capacity Utilization			39.9%		ICU Level of Service			A
Analysis Period (min)			15					
c Critical Lane Group								

Timings
4: North Flamingo Road & NW 136th Avenue/Panther Parkway

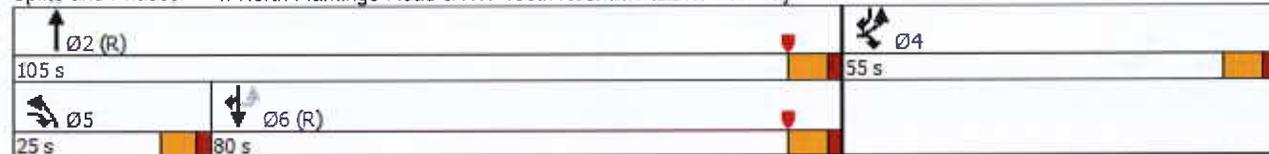
Future Total Conditions
A.M. Peak Hour

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	449	101	28	587	905	824
Future Volume (vph)	449	101	28	587	905	824
Turn Type	Prot	pt+ov	Prot	NA	NA	pt+ov
Protected Phases	4	4 5	5	2	6	6 4
Permitted Phases						
Detector Phase	4	4 5	5	2	6	6 4
Switch Phase						
Minimum Initial (s)	6.0		5.0	12.0	12.0	
Minimum Split (s)	47.0		11.5	19.0	47.0	
Total Split (s)	55.0		25.0	105.0	80.0	
Total Split (%)	34.4%		15.6%	65.6%	50.0%	
Yellow Time (s)	5.0		4.5	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	7.0		6.5	7.0	7.0	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None		None	C-Min	C-Min	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 131 (82%), Referenced to phase 2:NBT and 6:SBTU, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Splits and Phases: 4: North Flamingo Road & NW 136th Avenue/Panther Parkway



HCM Signalized Intersection Capacity Analysis
 4: North Flamingo Road & NW 136th Avenue/Panther Parkway

Future Total Conditions
 A.M. Peak Hour

							
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations	  			  		  	 
Traffic Volume (vph)	449	101	28	587	0	905	824
Future Volume (vph)	449	101	28	587	0	905	824
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	7.0		7.0	7.0
Lane Util. Factor	0.94	1.00	1.00	0.91		0.91	0.88
Frbp, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	1.00	1.00		1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00		1.00	1.00
Satd. Flow (prot)	4942	1568	1752	5036		5036	2760
Flt Permitted	0.95	1.00	0.95	1.00		1.00	1.00
Satd. Flow (perm)	4942	1568	1752	5036		5036	2760
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	522	117	33	683	0	1052	958
RTOR Reduction (vph)	0	38	0	0	0	0	124
Lane Group Flow (vph)	522	79	33	683	0	1052	834
Confl. Peds. (#/hr)		4	1				1
Turn Type	Prot	pt+ov	Prot	NA	Perm	NA	pt+ov
Protected Phases	4	4 5	5	2		6	6 4
Permitted Phases					6		
Actuated Green, G (s)	23.3	37.5	7.2	122.7		109.0	139.3
Effective Green, g (s)	23.3	37.5	7.2	122.7		109.0	139.3
Actuated g/C Ratio	0.15	0.23	0.05	0.77		0.68	0.87
Clearance Time (s)	7.0		6.5	7.0		7.0	
Vehicle Extension (s)	2.0		1.5	3.0		3.0	
Lane Grp Cap (vph)	719	367	78	3861		3430	2402
v/s Ratio Prot	c0.11	0.05	c0.02	0.14		0.21	c0.30
v/s Ratio Perm							
v/c Ratio	0.73	0.22	0.42	0.18		0.31	0.35
Uniform Delay, d1	65.3	49.4	74.4	5.0		10.3	1.9
Progression Factor	1.00	1.00	1.00	1.00		0.69	14.30
Incremental Delay, d2	3.1	0.1	1.3	0.1		0.1	0.0
Delay (s)	68.4	49.5	75.7	5.1		7.2	27.5
Level of Service	E	D	E	A		A	C
Approach Delay (s)	64.9			8.4		16.9	
Approach LOS	E			A		B	
Intersection Summary							
HCM 2000 Control Delay			24.2		HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio			0.43				
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	20.5	
Intersection Capacity Utilization			56.6%		ICU Level of Service		B
Analysis Period (min)			15				
c Critical Lane Group							

Timings
5: West Oakland Park Boulevard & Project Driveway

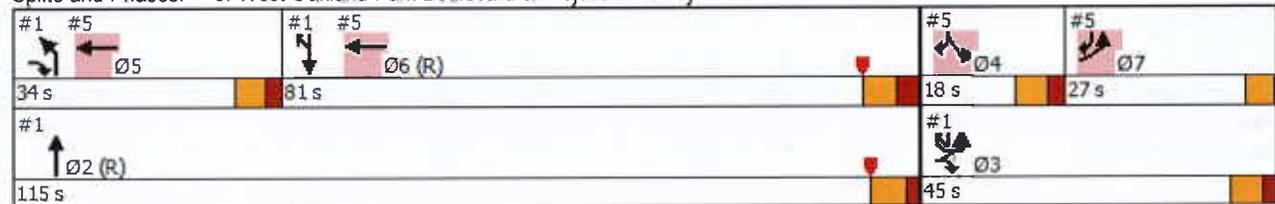
Future Total Conditions
A.M. Peak Hour

Lane Group	EBL	WBT	WBR	SBL	SBR	Ø2	Ø3	Ø5	Ø6
Lane Configurations									
Traffic Volume (vph)	54	1145	155	31	50				
Future Volume (vph)	54	1145	155	31	50				
Turn Type	Prot	NA	Free	Prot	pt+ov				
Protected Phases	7	5 6		4	4 7	2	3	5	6
Permitted Phases			Free						
Detector Phase	7	5 6		4	4 7				
Switch Phase									
Minimum Initial (s)	4.0			6.0		10.0	6.0	6.0	10.0
Minimum Split (s)	8.0			12.0		16.5	38.0	12.0	61.0
Total Split (s)	27.0			18.0		115.0	45.0	34.0	81.0
Total Split (%)	16.9%			11.3%		72%	28%	21%	51%
Yellow Time (s)	3.5			4.0		4.5	4.0	4.0	4.5
All-Red Time (s)	0.5			2.0		2.0	2.0	2.0	3.0
Lost Time Adjust (s)	0.0			0.0					
Total Lost Time (s)	4.0			6.0					
Lead/Lag	Lag			Lead				Lead	Lag
Lead-Lag Optimize?	Yes			Yes				Yes	Yes
Recall Mode	None			None		C-Min	None	None	C-Min

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 6:SBT and 2:NBT, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated

Splits and Phases: 5: West Oakland Park Boulevard & Project Driveway



HCM Signalized Intersection Capacity Analysis
 5: West Oakland Park Boulevard & Project Driveway

Future Total Conditions
 A.M. Peak Hour

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖		↑↑↑	↖	↖	↖
Traffic Volume (vph)	54	0	1145	155	31	50
Future Volume (vph)	54	0	1145	155	31	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		6.0	4.0	6.0	6.0
Lane Util. Factor	1.00		0.91	1.00	1.00	1.00
Frt	1.00		1.00	0.85	1.00	0.85
Flt Protected	0.95		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752		5036	1568	1752	1568
Flt Permitted	0.95		1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752		5036	1568	1752	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	58	0	1231	167	33	54
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	58	0	1231	167	33	54
Turn Type	Prot		NA	Free	Prot	pt+ov
Protected Phases	7		5 6		4	4 7
Permitted Phases				Free		
Actuated Green, G (s)	14.5		120.1	160.0	7.9	28.4
Effective Green, g (s)	14.5		120.1	160.0	7.9	28.4
Actuated g/C Ratio	0.09		0.75	1.00	0.05	0.18
Clearance Time (s)	4.0				6.0	
Vehicle Extension (s)	3.0				2.0	
Lane Grp Cap (vph)	158		3780	1568	86	278
v/s Ratio Prot	c0.03		c0.24		c0.02	0.03
v/s Ratio Perm				0.11		
v/c Ratio	0.37		0.33	0.11	0.38	0.19
Uniform Delay, d1	68.4		6.6	0.0	73.7	56.1
Progression Factor	1.07		0.74	1.00	1.00	1.00
Incremental Delay, d2	1.4		0.0	0.1	1.0	0.1
Delay (s)	75.0		4.9	0.1	74.7	56.2
Level of Service	E		A	A	E	E
Approach Delay (s)		75.0	4.3		63.2	
Approach LOS		E	A		E	
Intersection Summary						
HCM 2000 Control Delay			10.3		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.35			
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	23.5
Intersection Capacity Utilization			43.8%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Existing P.M.

Timings

1: North Flamingo Road & West Oakland Park Boulevard

Existing Conditions

P.M. Peak Hour

							Ø3	Ø4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (vph)	490	434	314	1656	1253	423		
Future Volume (vph)	490	434	314	1656	1253	423		
Turn Type	Prot	pt+ov	Prot	NA	NA	Perm		
Protected Phases	3 4	4 5	5	2	6		3	4
Permitted Phases						6		
Detector Phase	3 4	4 5	5	2	6	6		
Switch Phase								
Minimum Initial (s)			6.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)			24.0	24.5	47.5	47.5	38.0	24.0
Total Split (s)			30.0	98.0	68.0	68.0	38.0	24.0
Total Split (%)			18.8%	61.3%	42.5%	42.5%	24%	15%
Yellow Time (s)			4.5	4.5	4.5	4.5	4.0	4.0
All-Red Time (s)			2.0	2.0	3.0	3.0	2.0	2.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	7.5	7.5		
Lead/Lag			Lead		Lag	Lag		
Lead-Lag Optimize?			Yes		Yes	Yes		
Recall Mode			None	C-Min	C-Min	C-Min	None	None

Intersection Summary

Cycle Length: 160

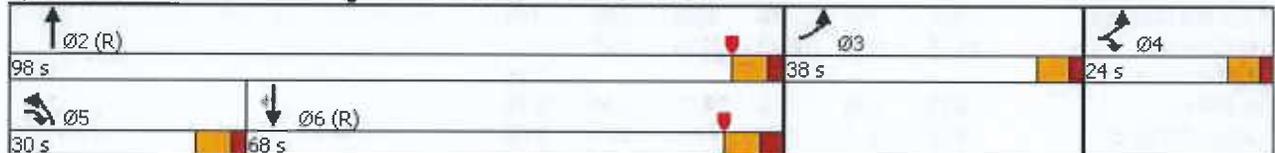
Actuated Cycle Length: 160

Offset: 15 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow

Natural Cycle: 135

Control Type: Actuated-Coordinated

Splits and Phases: 1: North Flamingo Road & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis

1: North Flamingo Road & West Oakland Park Boulevard

Existing Conditions
P.M. Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	 	  	 	  	  	
Traffic Volume (vph)	490	434	314	1656	1253	423
Future Volume (vph)	490	434	314	1656	1253	423
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.5	6.5	7.5	7.5
Lane Util. Factor	0.97	0.76	0.97	0.91	0.91	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	3610	3433	5085	5085	1560
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3433	3610	3433	5085	5085	1560
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	538	477	345	1820	1377	465
RTOR Reduction (vph)	0	376	0	0	0	218
Lane Group Flow (vph)	538	101	345	1820	1377	247
Confl. Peds. (#/hr)			2			2
Confl. Bikes (#/hr)						1
Turn Type	Prot	pt+ov	Prot	NA	NA	Perm
Protected Phases	3 4	4 5	5	2	6	
Permitted Phases						6
Actuated Green, G (s)	39.7	33.9	20.5	107.8	79.8	79.8
Effective Green, g (s)	39.7	33.9	20.5	107.8	79.8	79.8
Actuated g/C Ratio	0.25	0.21	0.13	0.67	0.50	0.50
Clearance Time (s)			6.5	6.5	7.5	7.5
Vehicle Extension (s)			2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	851	764	439	3426	2536	778
v/s Ratio Prot	c0.16	0.03	c0.10	c0.36	0.27	
v/s Ratio Perm						0.16
v/c Ratio	0.63	0.13	0.79	0.53	0.54	0.32
Uniform Delay, d1	53.6	51.1	67.6	13.3	27.6	23.9
Progression Factor	1.00	1.00	1.30	0.45	1.49	7.22
Incremental Delay, d2	1.1	0.0	7.6	0.5	0.6	0.8
Delay (s)	54.8	51.2	95.6	6.6	41.8	173.4
Level of Service	D	D	F	A	D	F
Approach Delay (s)	53.1			20.8	75.0	
Approach LOS	D			C	E	
Intersection Summary						
HCM 2000 Control Delay			47.2		HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.64			
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	26.0
Intersection Capacity Utilization			72.9%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

Timings
2: NW 120th Way & West Oakland Park Boulevard

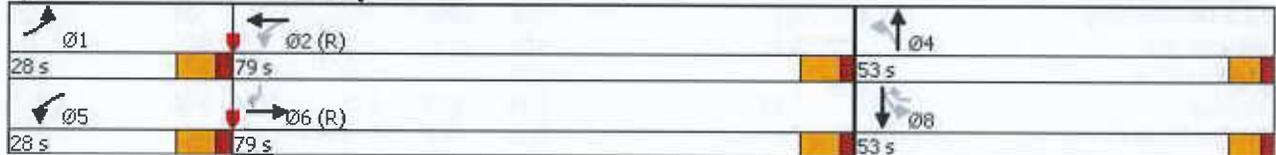
Existing Conditions
P.M. Peak Hour

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	98	1945	46	1483	63	66	7	38	6	149
Future Volume (vph)	98	1945	46	1483	63	66	7	38	6	149
Turn Type	Prot	NA	pm+pt	NA	custom	Perm	NA	Perm	NA	custom
Protected Phases	1	6	5	2			4		8	
Permitted Phases			2		8	4		8		6
Detector Phase	1	6	5	2	8	4	4	8	8	6
Switch Phase										
Minimum Initial (s)	5.0	12.0	4.0	12.0	6.0	6.0	6.0	6.0	6.0	12.0
Minimum Split (s)	12.0	39.0	11.0	39.0	46.0	51.0	51.0	46.0	46.0	39.0
Total Split (s)	28.0	79.0	28.0	79.0	53.0	53.0	53.0	53.0	53.0	79.0
Total Split (%)	17.5%	49.4%	17.5%	49.4%	33.1%	33.1%	33.1%	33.1%	33.1%	49.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	5.0
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)	7.0	7.0	7.0	7.0	6.0	6.0	6.0	6.0	6.0	7.0
Lead/Lag	Lead	Lag	Lead	Lag						Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes
Recall Mode	None	C-Min	None	C-Min	None	None	None	None	None	C-Min

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 8 (5%), Referenced to phase 2:WBTL and 6:EBT, Start of Green
 Natural Cycle: 115
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NW 120th Way & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Existing Conditions
 P.M. Peak Hour

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	98	1945	94	2	46	1483	63	66	7	38	38
Future Volume (vph)	4	98	1945	94	2	46	1483	63	66	7	38	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0			7.0	7.0	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		1.00
Frbp, ped/bikes		1.00	1.00			1.00	1.00	0.97	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		1.00
Frt		1.00	0.99			1.00	1.00	0.85	1.00	0.87		1.00
Flt Protected		0.95	1.00			0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1770	5043			1770	5085	1531	1770	1627		1770
Flt Permitted		0.07	1.00			0.07	1.00	1.00	0.75	1.00		0.72
Satd. Flow (perm)		135	5043			128	5085	1531	1403	1627		1348
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	4	110	2185	106	2	52	1666	71	74	8	43	43
RTOR Reduction (vph)	0	0	1	0	0	0	0	65	0	40	0	0
Lane Group Flow (vph)	0	114	2290	0	0	54	1666	6	74	11	0	43
Confl. Peds. (#/hr)		2		3		3		2				
Confl. Bikes (#/hr)				2				2				
Turn Type		Prot	NA			pm+pt	NA	custom	Perm	NA		Perm
Protected Phases		1	6			5	2			4		
Permitted Phases						2		8	4			8
Actuated Green, G (s)		55.3	122.3			76.6	71.8	12.9	12.9	12.9		12.9
Effective Green, g (s)		55.3	122.3			76.6	71.8	12.9	12.9	12.9		12.9
Actuated g/C Ratio		0.35	0.76			0.48	0.45	0.08	0.08	0.08		0.08
Clearance Time (s)		7.0	7.0			7.0	7.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)		1.5	3.0			1.5	3.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		46	3854			110	2281	123	113	131		108
v/s Ratio Prot			0.45			0.01	c0.33			0.01		
v/s Ratio Perm		c0.85				0.22		0.00	c0.05			0.03
v/c Ratio		2.48	0.59			0.49	0.73	0.05	0.65	0.09		0.40
Uniform Delay, d1		52.4	8.1			37.5	36.2	67.9	71.4	68.1		69.9
Progression Factor		1.00	1.24			1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		718.0	0.6			1.3	2.1	0.1	9.9	0.1		0.9
Delay (s)		770.4	10.6			38.8	38.3	67.9	81.3	68.2		70.7
Level of Service		F	B			D	D	E	F	E		E
Approach Delay (s)			46.7				39.5			76.0		
Approach LOS			D				D			E		
Intersection Summary												
HCM 2000 Control Delay			43.3			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			1.40									
Actuated Cycle Length (s)			160.0			Sum of lost time (s)				20.0		
Intersection Capacity Utilization			71.8%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Existing Conditions
 P.M. Peak Hour

Movement	SBT	SBR
Lane Configurations	↑	↗
Traffic Volume (vph)	6	149
Future Volume (vph)	6	149
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	7.0
Lane Util. Factor	1.00	1.00
Frbp, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1863	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1863	1583
Peak-hour factor, PHF	0.89	0.89
Adj. Flow (vph)	7	167
RTOR Reduction (vph)	0	39
Lane Group Flow (vph)	7	128
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Turn Type	NA	custom
Protected Phases	8	
Permitted Phases		6
Actuated Green, G (s)	12.9	122.3
Effective Green, g (s)	12.9	122.3
Actuated g/C Ratio	0.08	0.76
Clearance Time (s)	6.0	7.0
Vehicle Extension (s)	2.0	3.0
Lane Grp Cap (vph)	150	1210
v/s Ratio Prot	0.00	
v/s Ratio Perm		0.08
v/c Ratio	0.05	0.11
Uniform Delay, d1	67.9	4.8
Progression Factor	1.00	1.00
Incremental Delay, d2	0.0	0.2
Delay (s)	67.9	5.0
Level of Service	E	A
Approach Delay (s)	20.1	
Approach LOS	C	
Intersection Summary		

Timings

Existing Conditions

3: West Oakland Park Boulevard & SR 869/Sawgrass Expressway Ramps

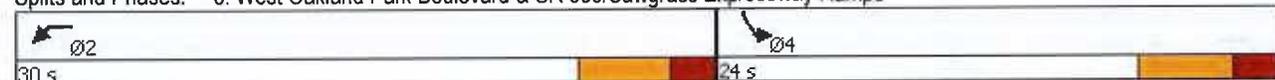
P.M. Peak Hour

	↖	↘
Lane Group	WBL	SBL
Lane Configurations	T T	T T
Traffic Volume (vph)	314	536
Future Volume (vph)	314	536
Turn Type	Prot	Prot
Protected Phases	2	4
Permitted Phases		
Detector Phase	2	4
Switch Phase		
Minimum Initial (s)	10.0	5.0
Minimum Split (s)	24.0	24.0
Total Split (s)	30.0	24.0
Total Split (%)	55.6%	44.4%
Yellow Time (s)	4.0	4.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)	0.0	0.0
Total Lost Time (s)	6.0	6.0
Lead/Lag		
Lead-Lag Optimize?		
Recall Mode	Min	Max

Intersection Summary

Cycle Length: 54
 Actuated Cycle Length: 44.7
 Natural Cycle: 50
 Control Type: Semi Act-Uncoord

Splits and Phases: 3: West Oakland Park Boulevard & SR 869/Sawgrass Expressway Ramps



HCM Signalized Intersection Capacity Analysis

Existing Conditions

3: West Oakland Park Boulevard & SR 869/Sawgrass Expressway Ramps

P.M. Peak Hour

Movement	WBU	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations							
Traffic Volume (vph)	3	314	0	536	0	0	0
Future Volume (vph)	3	314	0	536	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0			
Lane Util. Factor		0.97		0.97			
Frt		1.00		1.00			
Flt Protected		0.95		0.95			
Satd. Flow (prot)		3433		3433			
Flt Permitted		0.95		0.95			
Satd. Flow (perm)		3433		3433			
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.92	0.92
Adj. Flow (vph)	3	361	0	616	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	364	0	616	0	0	0
Turn Type	custom	Prot		Prot			
Protected Phases		2		4			
Permitted Phases							
Actuated Green, G (s)		14.4		18.2			
Effective Green, g (s)		14.4		18.2			
Actuated g/C Ratio		0.32		0.41			
Clearance Time (s)		6.0		6.0			
Vehicle Extension (s)		2.0		2.0			
Lane Grp Cap (vph)		1108		1400			
v/s Ratio Prot				c0.18			
v/s Ratio Perm		0.11					
v/c Ratio		0.33		0.44			
Uniform Delay, d1		11.4		9.5			
Progression Factor		1.00		1.00			
Incremental Delay, d2		0.1		1.0			
Delay (s)		11.5		10.5			
Level of Service		B		B			
Approach Delay (s)		11.5		10.5		0.0	
Approach LOS		B		B		A	
Intersection Summary							
HCM 2000 Control Delay			10.9		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio			0.39				
Actuated Cycle Length (s)			44.6		Sum of lost time (s)		12.0
Intersection Capacity Utilization			34.3%		ICU Level of Service		A
Analysis Period (min)			15				
c Critical Lane Group							

Timings

Existing Conditions

4: North Flamingo Road & NW 136th Avenue/Panther Parkway

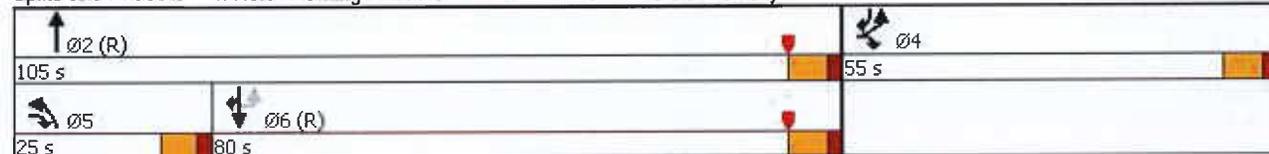
P.M. Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	882	94	78	1113	1	1093	566
Future Volume (vph)	882	94	78	1113	1	1093	566
Turn Type	Prot	pt+ov	Prot	NA	Perm	NA	pt+ov
Protected Phases	4	4 5	5	2		6	6 4
Permitted Phases					6		
Detector Phase	4	4 5	5	2	6	6	6 4
Switch Phase							
Minimum Initial (s)	6.0		5.0	12.0	12.0	12.0	
Minimum Split (s)	47.0		11.5	19.0	47.0	47.0	
Total Split (s)	55.0		25.0	105.0	80.0	80.0	
Total Split (%)	34.4%		15.6%	65.6%	50.0%	50.0%	
Yellow Time (s)	5.0		4.5	5.0	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0		6.5	7.0	7.0	7.0	
Lead/Lag			Lead		Lag	Lag	
Lead-Lag Optimize?			Yes		Yes	Yes	
Recall Mode	None		None	C-Min	C-Min	C-Min	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 36 (23%), Referenced to phase 2:NBT and 6:SBTU, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Splits and Phases: 4: North Flamingo Road & NW 136th Avenue/Panther Parkway



HCM Signalized Intersection Capacity Analysis

4: North Flamingo Road & NW 136th Avenue/Panther Parkway

Existing Conditions
P.M. Peak Hour

							
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	882	94	78	1113	1	1093	566
Future Volume (vph)	882	94	78	1113	1	1093	566
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	7.0	7.0	7.0	7.0
Lane Util. Factor	0.94	1.00	1.00	0.91	1.00	0.91	0.88
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flt	1.00	0.85	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4942	1568	1752	5036	1752	5036	2760
Flt Permitted	0.95	1.00	0.95	1.00	0.23	1.00	1.00
Satd. Flow (perm)	4942	1568	1752	5036	423	5036	2760
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	928	99	82	1172	1	1151	596
RTOR Reduction (vph)	0	24	0	0	0	0	93
Lane Group Flow (vph)	928	75	82	1172	1	1151	503
Confl. Peds. (#/hr)			1				1
Confl. Bikes (#/hr)							1
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Turn Type	Prot	pt+ov	Prot	NA	Perm	NA	pt+ov
Protected Phases	4	4 5	5	2		6	6 4
Permitted Phases					6		
Actuated Green, G (s)	36.5	54.9	11.4	109.5	91.6	91.6	135.1
Effective Green, g (s)	36.5	54.9	11.4	109.5	91.6	91.6	135.1
Actuated g/C Ratio	0.23	0.34	0.07	0.68	0.57	0.57	0.84
Clearance Time (s)	7.0		6.5	7.0	7.0	7.0	
Vehicle Extension (s)	2.0		1.5	3.0	3.0	3.0	
Lane Grp Cap (vph)	1127	538	124	3446	242	2883	2330
v/s Ratio Prot	c0.19	0.05	c0.05	0.23		c0.23	0.18
v/s Ratio Perm					0.00		
v/c Ratio	0.82	0.14	0.66	0.34	0.00	0.40	0.22
Uniform Delay, d1	58.7	36.3	72.4	10.4	14.7	19.0	2.4
Progression Factor	1.00	1.00	1.00	1.00	2.31	1.75	0.00
Incremental Delay, d2	4.8	0.0	9.8	0.3	0.0	0.4	0.0
Delay (s)	63.4	36.3	82.2	10.7	33.9	33.4	0.0
Level of Service	E	D	F	B	C	C	A
Approach Delay (s)	60.8			15.3		22.0	
Approach LOS	E			B		C	

Intersection Summary

HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

c: Critical Lane Group

Future Background P.M.

Timings
1: North Flamingo Road & West Oakland Park Boulevard

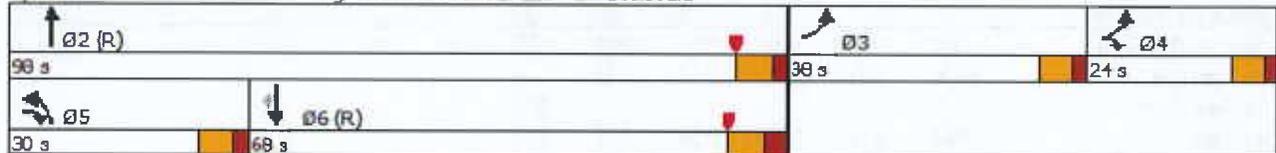
Future Background Conditions
P.M. Peak Hour

							Ø3	Ø4
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (vph)	507	449	325	1715	1298	438		
Future Volume (vph)	507	449	325	1715	1298	438		
Turn Type	Prot	pt+ov	Prot	NA	NA	Perm		
Protected Phases	3 4	4 5	5	2	6		3	4
Permitted Phases						6		
Detector Phase	3 4	4 5	5	2	6	6		
Switch Phase								
Minimum Initial (s)			6.0	10.0	10.0	10.0	6.0	6.0
Minimum Split (s)			24.0	24.5	47.5	47.5	38.0	24.0
Total Split (s)			30.0	98.0	68.0	68.0	38.0	24.0
Total Split (%)			18.8%	61.3%	42.5%	42.5%	24%	15%
Yellow Time (s)			4.5	4.5	4.5	4.5	4.0	4.0
All-Red Time (s)			2.0	2.0	3.0	3.0	2.0	2.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0		
Total Lost Time (s)			6.5	6.5	7.5	7.5		
Lead/Lag			Lead		Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes		Yes	Yes		
Recall Mode			None	C-Min	C-Min	C-Min	None	None

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 15 (9%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 135
 Control Type: Actuated-Coordinated

Splits and Phases: 1: North Flamingo Road & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 1: North Flamingo Road & West Oakland Park Boulevard

Future Background Conditions
 P.M. Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	507	449	325	1715	1298	438
Future Volume (vph)	507	449	325	1715	1298	438
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.5	6.5	7.5	7.5
Lane Util. Factor	0.97	0.76	0.97	0.91	0.91	1.00
Frbp, ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	3610	3433	5085	5085	1560
Flt Permitted	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3433	3610	3433	5085	5085	1560
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	557	493	357	1885	1426	481
RTOR Reduction (vph)	0	387	0	0	0	221
Lane Group Flow (vph)	557	106	357	1885	1426	260
Confl. Peds. (#/hr)			2			2
Confl. Bikes (#/hr)						1
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Turn Type	Prot	pt+ov	Prot	NA	NA	Perm
Protected Phases	3.4	4.5	5	2	6	
Permitted Phases						6
Actuated Green, G (s)	40.5	34.5	21.1	107.0	78.4	78.4
Effective Green, g (s)	40.5	34.5	21.1	107.0	78.4	78.4
Actuated g/C Ratio	0.25	0.22	0.13	0.67	0.49	0.49
Clearance Time (s)			6.5	6.5	7.5	7.5
Vehicle Extension (s)			2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	868	778	452	3400	2491	764
v/s Ratio Prot	c0.16	0.03	c0.10	c0.37	0.28	
v/s Ratio Perm						0.17
v/c Ratio	0.64	0.14	0.79	0.55	0.57	0.34
Uniform Delay, d1	53.3	50.7	67.3	14.0	28.9	25.0
Progression Factor	1.00	1.00	1.29	0.51	0.50	0.15
Incremental Delay, d2	1.2	0.0	7.5	0.6	0.7	0.9
Delay (s)	54.5	50.7	94.5	7.8	15.1	4.7
Level of Service	D	D	F	A	B	A
Approach Delay (s)	52.7			21.6	12.5	
Approach LOS	D			C	B	
Intersection Summary						
HCM 2000 Control Delay			24.5		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.66			
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	26.0
Intersection Capacity Utilization			73.7%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

Timings
2: NW 120th Way & West Oakland Park Boulevard

Future Background Conditions
P.M. Peak Hour

Lane Group	EBU	EBL	EBT	WBU	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	101	2014	2	48	1536	65	68	7	39	6	154
Future Volume (vph)	4	101	2014	2	48	1536	65	68	7	39	6	154
Turn Type	custom	Prot	NA	custom	pm+pt	NA	custom	Perm	NA	Perm	NA	custom
Protected Phases		1	6		5	2			4		8	
Permitted Phases	1			5	2		8	4		8		6
Detector Phase	1	1	6	5	5	2	8	4	4	8	8	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	12.0	4.0	4.0	12.0	6.0	6.0	6.0	6.0	6.0	12.0
Minimum Split (s)	12.0	12.0	39.0	11.0	11.0	39.0	46.0	51.0	51.0	46.0	46.0	39.0
Total Split (s)	28.0	28.0	79.0	28.0	28.0	79.0	53.0	53.0	53.0	53.0	53.0	79.0
Total Split (%)	17.5%	17.5%	49.4%	17.5%	17.5%	49.4%	33.1%	33.1%	33.1%	33.1%	33.1%	49.4%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	5.0
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	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)		7.0	7.0		7.0	7.0	6.0	6.0	6.0	6.0	6.0	7.0
Lead/Lag	Lead	Lead	Lag	Lead	Lead	Lag						Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes						Yes
Recall Mode	None	None	C-Max	None	None	C-Max	None	Max	Max	None	None	C-Max

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 8 (5%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow
 Natural Cycle: 135
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NW 120th Way & West Oakland Park Boulevard

Ø1	Ø2 (R)							Ø4			
28 s	79 s							53 s			
Ø5	Ø6 (R)							Ø8			
28 s	79 s							53 s			

HCM Signalized Intersection Capacity Analysis
2: NW 120th Way & West Oakland Park Boulevard

Future Background Conditions
P.M. Peak Hour

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations												
Traffic Volume (vph)	4	101	2014	97	2	48	1536	65	68	7	39	39
Future Volume (vph)	4	101	2014	97	2	48	1536	65	68	7	39	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0			7.0	7.0	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		1.00
Frbp, ped/bikes		1.00	1.00			1.00	1.00	0.97	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		1.00
Frt		1.00	0.99			1.00	1.00	0.85	1.00	0.87		1.00
Flt Protected		0.95	1.00			0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1769	5044			1770	5085	1541	1770	1626		1770
Flt Permitted		0.19	1.00			0.06	1.00	1.00	0.75	1.00		0.72
Satd. Flow (perm)		355	5044			103	5085	1541	1403	1626		1347
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	4	113	2263	109	2	54	1726	73	76	8	44	44
RTOR Reduction (vph)	0	0	3	0	0	0	0	52	0	31	0	0
Lane Group Flow (vph)	0	117	2369	0	0	56	1726	21	76	21	0	44
Confl. Peds. (#/hr)		2		3		3		2				
Confl. Bikes (#/hr)				2				2				
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Turn Type	custom	Prot	NA		custom	pm+pt	NA	custom	Perm	NA		Perm
Protected Phases		1	6			5	2			4		
Permitted Phases	1				5	2		8	4			8
Actuated Green, G (s)		21.0	87.7			77.3	72.0	47.0	47.0	47.0		47.0
Effective Green, g (s)		21.0	87.7			77.3	72.0	47.0	47.0	47.0		47.0
Actuated g/C Ratio		0.13	0.55			0.48	0.45	0.29	0.29	0.29		0.29
Clearance Time (s)		7.0	7.0			7.0	7.0	6.0	6.0	6.0		6.0
Vehicle Extension (s)		1.5	3.0			1.5	3.0	2.0	2.0	2.0		2.0
Lane Grp Cap (vph)		46	2764			104	2288	452	412	477		395
v/s Ratio Prot			c0.47			0.02	0.34			0.01		
v/s Ratio Perm		c0.33				0.24		0.01	c0.05			0.03
v/c Ratio		2.54	0.86			0.54	0.75	0.05	0.18	0.04		0.11
Uniform Delay, d1		69.5	30.8			29.9	36.6	40.5	42.2	40.4		41.3
Progression Factor		1.14	0.75			1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		745.8	3.2			2.7	2.4	0.0	1.0	0.2		0.0
Delay (s)		824.9	26.3			32.6	39.0	40.5	43.2	40.6		41.3
Level of Service		F	C			C	D	D	D	D		D
Approach Delay (s)			63.8				38.9			42.1		
Approach LOS			E				D			D		
Intersection Summary												
HCM 2000 Control Delay			51.4				HCM 2000 Level of Service					D
HCM 2000 Volume to Capacity ratio			0.89									
Actuated Cycle Length (s)			160.0						20.0			
Intersection Capacity Utilization			73.0%									C
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Future Background Conditions
 P.M. Peak Hour

	↓	↙
Movement	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	6	154
Future Volume (vph)	6	154
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	6.0	7.0
Lane Util. Factor	1.00	1.00
Frbp, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1863	1583
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1863	1583
Peak-hour factor, PHF	0.89	0.89
Adj. Flow (vph)	7	173
RTOR Reduction (vph)	0	78
Lane Group Flow (vph)	7	95
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Heavy Vehicles (%)	2%	2%
Turn Type	NA	custom
Protected Phases	8	
Permitted Phases		6
Actuated Green, G (s)	47.0	87.7
Effective Green, g (s)	47.0	87.7
Actuated g/C Ratio	0.29	0.55
Clearance Time (s)	6.0	7.0
Vehicle Extension (s)	2.0	3.0
Lane Grp Cap (vph)	547	867
v/s Ratio Prot	0.00	
v/s Ratio Perm		0.06
v/c Ratio	0.01	0.11
Uniform Delay, d1	40.1	17.4
Progression Factor	1.00	1.00
Incremental Delay, d2	0.0	0.3
Delay (s)	40.1	17.6
Level of Service	D	B
Approach Delay (s)	23.0	
Approach LOS	C	
Intersection Summary		

Timings
 3: NB Off-Ramp & West Oakland Park Boulevard

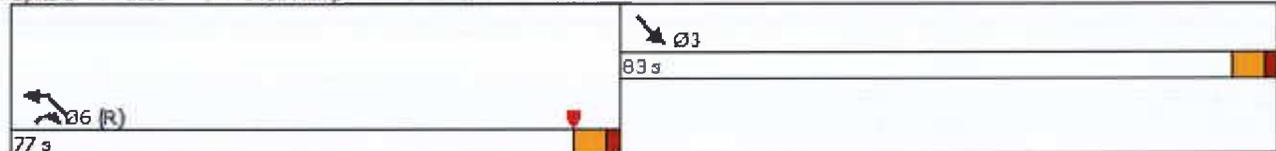
Future Background Conditions
 P.M. Peak Hour

Lane Group	SET	NWL	NER
Lane Configurations	↑↑	↖ ↗	↖ ↗ ↘
Traffic Volume (vph)	555	325	402
Future Volume (vph)	555	325	402
Turn Type	NA	Prot	Prot
Protected Phases	3	6	6
Permitted Phases			
Detector Phase	3	6	6
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.0	10.0	10.0
Total Split (s)	83.0	77.0	77.0
Total Split (%)	51.9%	48.1%	48.1%
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 77 (48%), Referenced to phase 6:NWL, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NB Off-Ramp & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
3: NB Off-Ramp & West Oakland Park Boulevard

Future Background Conditions
P.M. Peak Hour

								
Movement	EBL	EBR	SET	SER	NWL	NWT	NEL	NER
Lane Configurations			↑↑		↑↑			↑↑↑
Traffic Volume (vph)	0	0	555	0	325	0	0	402
Future Volume (vph)	0	0	555	0	325	0	0	402
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	16	12	12	12	12	12
Total Lost time (s)			6.0		6.0			6.0
Lane Util. Factor			0.95		0.97			0.76
Flt			1.00		1.00			0.85
Flt Protected			1.00		0.95			1.00
Satd. Flow (prot)			3972		3400			3575
Flt Permitted			1.00		0.95			1.00
Satd. Flow (perm)			3972		3400			3575
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	584	0	342	0	0	423
RTOR Reduction (vph)	0	0	0	0	0	0	0	113
Lane Group Flow (vph)	0	0	584	0	342	0	0	310
Turn Type			NA		Prot			Prot
Protected Phases			3		6			6
Permitted Phases								
Actuated Green, G (s)			30.8		117.2			117.2
Effective Green, g (s)			30.8		117.2			117.2
Actuated g/C Ratio			0.19		0.73			0.73
Clearance Time (s)			6.0		6.0			6.0
Vehicle Extension (s)			3.0		3.0			3.0
Lane Grp Cap (vph)			764		2490			2618
v/s Ratio Prot			c0.15		c0.10			0.09
v/s Ratio Perm								
v/c Ratio			0.76		0.14			0.12
Uniform Delay, d1			61.2		6.4			6.3
Progression Factor			1.00		1.00			1.00
Incremental Delay, d2			4.6		0.1			0.1
Delay (s)			65.7		6.5			6.4
Level of Service			E		A			A
Approach Delay (s)	0.0		65.7			6.5	6.4	
Approach LOS	A		E			A	A	
Intersection Summary								
HCM 2000 Control Delay			32.1		HCM 2000 Level of Service			C
HCM 2000 Volume to Capacity ratio			0.27					
Actuated Cycle Length (s)			160.0		Sum of lost time (s)			12.0
Intersection Capacity Utilization			34.7%		ICU Level of Service			A
Analysis Period (min)			15					

c Critical Lane Group

Timings
4: North Flamingo Road & NW 136th Avenue/Panther Parkway

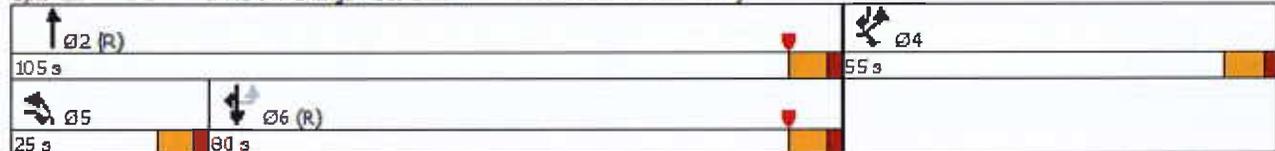
Future Background Conditions
P.M. Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	913	97	81	1153	1	1132	586
Future Volume (vph)	913	97	81	1153	1	1132	586
Turn Type	Prot	pt+ov	Prot	NA	Perm	NA	pt+ov
Protected Phases	4	4 5	5	2		6	6 4
Permitted Phases		4			6		
Detector Phase	4	4 5	5	2	6	6	6 4
Switch Phase							
Minimum Initial (s)	6.0		5.0	12.0	12.0	12.0	
Minimum Split (s)	47.0		11.5	19.0	47.0	47.0	
Total Split (s)	55.0		25.0	105.0	80.0	80.0	
Total Split (%)	34.4%		15.6%	65.6%	50.0%	50.0%	
Yellow Time (s)	5.0		4.5	5.0	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0		6.5	7.0	7.0	7.0	
Lead/Lag			Lead		Lag	Lag	
Lead-Lag Optimize?			Yes		Yes	Yes	
Recall Mode	None		None	C-Min	C-Min	C-Min	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 36 (23%), Referenced to phase 2:NBT and 6:SBTU, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Splits and Phases: 4: North Flamingo Road & NW 136th Avenue/Panther Parkway



HCM Signalized Intersection Capacity Analysis
 4: North Flamingo Road & NW 136th Avenue/Panther Parkway

Future Background Conditions
 P.M. Peak Hour

							
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	913	97	81	1153	1	1132	586
Future Volume (vph)	913	97	81	1153	1	1132	586
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	7.0	7.0	7.0	7.0
Lane Util. Factor	0.94	1.00	1.00	0.91	1.00	0.91	0.88
Frb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fit	1.00	0.85	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4942	1568	1752	5036	1752	5036	2760
Flt Permitted	0.95	1.00	0.95	1.00	0.22	1.00	1.00
Satd. Flow (perm)	4942	1568	1752	5036	405	5036	2760
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	961	102	85	1214	1	1192	617
RTOR Reduction (vph)	0	21	0	0	0	0	97
Lane Group Flow (vph)	961	81	85	1214	1	1192	520
Confl. Peds. (#/hr)			1				1
Confl. Bikes (#/hr)							1
Turn Type	Prot	pt+ov	Prot	NA	Perm	NA	pt+ov
Protected Phases	4	4 5	5	2		6	6 4
Permitted Phases		4			6		
Actuated Green, G (s)	37.6	56.3	11.7	108.4	90.2	90.2	134.8
Effective Green, g (s)	37.6	56.3	11.7	108.4	90.2	90.2	134.8
Actuated g/C Ratio	0.24	0.35	0.07	0.68	0.56	0.56	0.84
Clearance Time (s)	7.0		6.5	7.0	7.0	7.0	
Vehicle Extension (s)	2.0		1.5	3.0	3.0	3.0	
Lane Grp Cap (vph)	1161	551	128	3411	228	2839	2325
v/s Ratio Prot	c0.19	0.05	c0.05	0.24		c0.24	0.19
v/s Ratio Perm					0.00		
v/c Ratio	0.83	0.15	0.66	0.36	0.00	0.42	0.22
Uniform Delay, d1	58.1	35.4	72.2	11.0	15.3	19.9	2.4
Progression Factor	1.00	1.00	1.00	1.00	1.88	1.45	8.07
Incremental Delay, d2	4.7	0.0	9.6	0.3	0.0	0.4	0.0
Delay (s)	62.9	35.5	81.9	11.3	28.7	29.3	19.7
Level of Service	E	D	F	B	C	C	B
Approach Delay (s)	60.2			15.9		26.1	
Approach LOS	E			B		C	
Intersection Summary							
HCM 2000 Control Delay			31.6	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio			0.55				
Actuated Cycle Length (s)			160.0	Sum of lost time (s)		20.5	
Intersection Capacity Utilization			72.3%	ICU Level of Service		C	
Analysis Period (min)			15				
c Critical Lane Group							

Future Total P.M.

Timings
2: NW 120th Way & West Oakland Park Boulevard

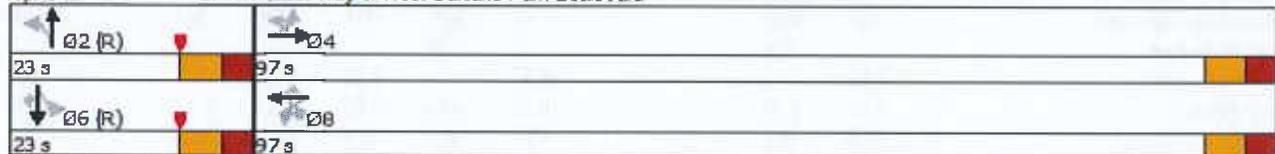
Future Total Conditions
P.M. Peak Hour

Lane Group	EBU	EBL	EBT	WBU	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	114	2062	2	48	1557	65	68	7	39	6	161
Future Volume (vph)	4	114	2062	2	48	1557	65	68	7	39	6	161
Turn Type	Perm	Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm	NA	Perm
Protected Phases			4			8			2		6	
Permitted Phases	4	4		8	8		8	2		6		6
Detector Phase	4	4	4	8	8	8	8	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Minimum Split (s)	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
Total Split (s)	97.0	97.0	97.0	97.0	97.0	97.0	97.0	23.0	23.0	23.0	23.0	23.0
Total Split (%)	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	80.8%	19.2%	19.2%	19.2%	19.2%	19.2%
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	4.0
All-Red Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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)		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max						

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 11 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 2: NW 120th Way & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Future Total Conditions
 P.M. Peak Hour

												
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL
Lane Configurations			  				  					
Traffic Volume (vph)	4	114	2062	97	2	48	1557	65	68	7	39	39
Future Volume (vph)	4	114	2062	97	2	48	1557	65	68	7	39	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0			7.0	7.0	7.0	7.0	7.0		7.0
Lane Util. Factor		1.00	0.91			1.00	0.91	1.00	1.00	1.00		1.00
Frbp, ped/bikes		1.00	1.00			1.00	1.00	0.97	1.00	1.00		1.00
Flpb, ped/bikes		1.00	1.00			1.00	1.00	1.00	1.00	1.00		1.00
Frt		1.00	0.99			1.00	1.00	0.85	1.00	0.87		1.00
Flt Protected		0.95	1.00			0.95	1.00	1.00	0.95	1.00		0.95
Satd. Flow (prot)		1752	4995			1752	5036	1524	1752	1611		1752
Flt Permitted		0.11	1.00			0.05	1.00	1.00	0.75	1.00		0.72
Satd. Flow (perm)		201	4995			84	5036	1524	1389	1611		1334
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	4	128	2317	109	2	54	1749	73	76	8	44	44
RTOR Reduction (vph)	0	0	5	0	0	0	0	19	0	14	0	0
Lane Group Flow (vph)	0	132	2421	0	0	56	1749	54	76	38	0	44
Confl. Peds. (#/hr)		2		3		3		2				
Confl. Bikes (#/hr)				2				2				
Turn Type	Perm	Perm	NA		Perm	Perm	NA	Perm	Perm	NA		Perm
Protected Phases			4				8			2		
Permitted Phases	4	4			8	8		8	2			6
Actuated Green, G (s)		88.0	88.0			88.0	88.0	88.0	18.0	18.0		18.0
Effective Green, g (s)		88.0	88.0			88.0	88.0	88.0	18.0	18.0		18.0
Actuated g/C Ratio		0.73	0.73			0.73	0.73	0.73	0.15	0.15		0.15
Clearance Time (s)		7.0	7.0			7.0	7.0	7.0	7.0	7.0		7.0
Vehicle Extension (s)		3.0	3.0			3.0	3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		147	3663			61	3693	1117	208	241		200
v/s Ratio Prot			0.48				0.35			0.02		
v/s Ratio Perm		0.66				0.67		0.04	0.05			0.03
v/c Ratio		0.90	0.66			0.92	0.47	0.05	0.37	0.16		0.22
Uniform Delay, d1		12.5	8.3			13.1	6.5	4.4	45.9	44.4		44.8
Progression Factor		1.00	1.00			1.00	1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2		44.9	0.5			85.4	0.1	0.0	4.9	1.4		2.5
Delay (s)		57.4	8.7			98.4	6.6	4.4	50.8	45.8		47.3
Level of Service		E	A			F	A	A	D	D		D
Approach Delay (s)			11.2				9.3			48.8		
Approach LOS			B				A			D		
Intersection Summary												
HCM 2000 Control Delay			13.6				HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			120.0						14.0			
Intersection Capacity Utilization			81.7%							D		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis
 2: NW 120th Way & West Oakland Park Boulevard

Future Total Conditions
 P.M. Peak Hour

Movement	↓	↙
	SBT	SBR
Lane Configurations	↑	↑
Traffic Volume (vph)	6	161
Future Volume (vph)	6	161
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.0	7.0
Lane Util. Factor	1.00	1.00
Frbp, ped/bikes	1.00	1.00
Flpb, ped/bikes	1.00	1.00
Frt	1.00	0.85
Flt Protected	1.00	1.00
Satd. Flow (prot)	1845	1568
Flt Permitted	1.00	1.00
Satd. Flow (perm)	1845	1568
Peak-hour factor, PHF	0.89	0.89
Adj. Flow (vph)	7	181
RTOR Reduction (vph)	0	40
Lane Group Flow (vph)	7	141
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Turn Type	NA	Perm
Protected Phases	6	
Permitted Phases		6
Actuated Green, G (s)	18.0	18.0
Effective Green, g (s)	18.0	18.0
Actuated g/C Ratio	0.15	0.15
Clearance Time (s)	7.0	7.0
Vehicle Extension (s)	3.0	3.0
Lane Grp Cap (vph)	276	235
v/s Ratio Prot	0.00	
v/s Ratio Perm		0.09
v/c Ratio	0.03	0.60
Uniform Delay, d1	43.5	47.6
Progression Factor	1.00	1.00
Incremental Delay, d2	0.2	10.8
Delay (s)	43.7	58.5
Level of Service	D	E
Approach Delay (s)	55.9	
Approach LOS	E	
Intersection Summary		

Timings
 3: NB Off-Ramp & West Oakland Park Boulevard

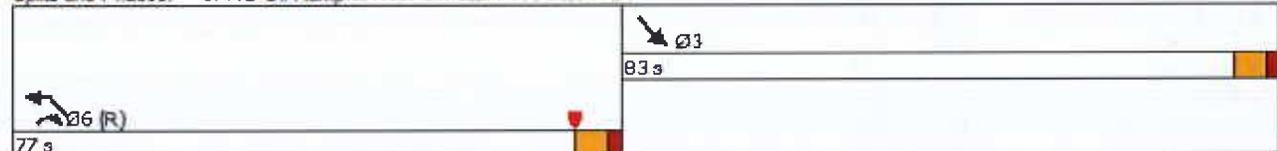
Future Total Conditions
 P.M. Peak Hour

Lane Group	SET	NWL	NER
Lane Configurations	↑↑	↖↗	↖↗↘
Traffic Volume (vph)	568	347	407
Future Volume (vph)	568	347	407
Turn Type	NA	Prot	Prot
Protected Phases	3	6	6
Permitted Phases			
Detector Phase	3	6	6
Switch Phase			
Minimum Initial (s)	4.0	4.0	4.0
Minimum Split (s)	22.0	10.0	10.0
Total Split (s)	83.0	77.0	77.0
Total Split (%)	51.9%	48.1%	48.1%
Yellow Time (s)	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 77 (48%), Referenced to phase 6:NWL, Start of Yellow
 Natural Cycle: 40
 Control Type: Actuated-Coordinated

Splits and Phases: 3: NB Off-Ramp & West Oakland Park Boulevard



HCM Signalized Intersection Capacity Analysis
 3: NB Off-Ramp & West Oakland Park Boulevard

Future Total Conditions
 P.M. Peak Hour

								
Movement	EBL	EBR	SET	SER	NWL	NWT	NEL	NER
Lane Configurations			↑↑		↔			↔
Traffic Volume (vph)	0	0	568	0	347	0	0	407
Future Volume (vph)	0	0	568	0	347	0	0	407
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	16	12	12	12	12	12
Total Lost time (s)			6.0		6.0			6.0
Lane Util. Factor			0.95		0.97			0.76
Flt			1.00		1.00			0.85
Flt Protected			1.00		0.95			1.00
Satd. Flow (prot)			3972		3400			3575
Flt Permitted			1.00		0.95			1.00
Satd. Flow (perm)			3972		3400			3575
Peak-hour factor, PHF	0.87	0.87	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	598	0	365	0	0	428
RTOR Reduction (vph)	0	0	0	0	0	0	0	117
Lane Group Flow (vph)	0	0	598	0	365	0	0	311
Turn Type			NA		Prot			Prot
Protected Phases			3		6			6
Permitted Phases								
Actuated Green, G (s)			31.6		116.4			116.4
Effective Green, g (s)			31.6		116.4			116.4
Actuated g/C Ratio			0.20		0.73			0.73
Clearance Time (s)			6.0		6.0			6.0
Vehicle Extension (s)			3.0		3.0			3.0
Lane Grp Cap (vph)			784		2473			2600
v/s Ratio Prot			c0.15		c0.11			0.09
v/s Ratio Perm								
v/c Ratio			0.76		0.15			0.12
Uniform Delay, d1			60.7		6.7			6.5
Progression Factor			1.00		1.71			1.00
Incremental Delay, d2			4.4		0.1			0.1
Delay (s)			65.1		11.5			6.6
Level of Service			E		B			A
Approach Delay (s)	0.0		65.1			11.5	6.6	
Approach LOS	A		E			B	A	
Intersection Summary								
HCM 2000 Control Delay			33.0		HCM 2000 Level of Service			C
HCM 2000 Volume to Capacity ratio			0.28					
Actuated Cycle Length (s)			160.0		Sum of lost time (s)			12.0
Intersection Capacity Utilization			35.2%		ICU Level of Service			A
Analysis Period (min)			15					

Timings
4: North Flamingo Road & NW 136th Avenue/Panther Parkway

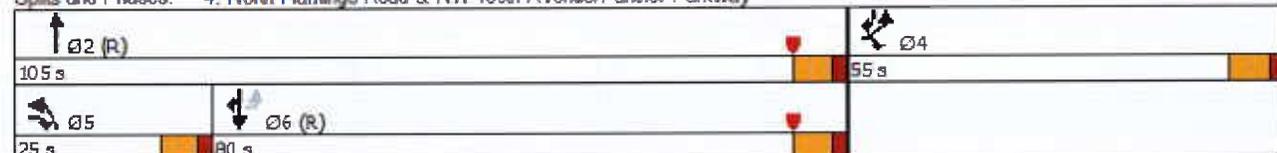
Future Total Conditions
P.M. Peak Hour

Lane Group	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑↑↑	↓	↑↑↑	↑↑
Traffic Volume (vph)	925	97	81	1163	1	1157	613
Future Volume (vph)	925	97	81	1163	1	1157	613
Turn Type	Prot	pt+ov	Prot	NA	Perm	NA	pt+ov
Protected Phases	4	4 5	5	2		6	6 4
Permitted Phases					6		
Detector Phase	4	4 5	5	2	6	6	6 4
Switch Phase							
Minimum Initial (s)	6.0		5.0	12.0	12.0	12.0	
Minimum Split (s)	47.0		11.5	19.0	47.0	47.0	
Total Split (s)	55.0		25.0	105.0	80.0	80.0	
Total Split (%)	34.4%		15.6%	65.6%	50.0%	50.0%	
Yellow Time (s)	5.0		4.5	5.0	5.0	5.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0		6.5	7.0	7.0	7.0	
Lead/Lag			Lead		Lag	Lag	
Lead-Lag Optimize?			Yes		Yes	Yes	
Recall Mode	None		None	C-Min	C-Min	C-Min	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 36 (23%), Referenced to phase 2:NBT and 6:SBTU, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated

Splits and Phases: 4: North Flamingo Road & NW 136th Avenue/Panther Parkway



HCM Signalized Intersection Capacity Analysis
 4: North Flamingo Road & NW 136th Avenue/Panther Parkway

Future Total Conditions
 P.M. Peak Hour

							
Movement	EBL	EBR	NBL	NBT	SBU	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑↑↑	↑	↑↑↑	↑↑
Traffic Volume (vph)	925	97	81	1163	1	1157	613
Future Volume (vph)	925	97	81	1163	1	1157	613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.0	7.0	6.5	7.0	7.0	7.0	7.0
Lane Util. Factor	0.94	1.00	1.00	0.91	1.00	0.91	0.88
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4942	1568	1752	5036	1752	5036	2760
Flt Permitted	0.95	1.00	0.95	1.00	0.22	1.00	1.00
Satd. Flow (perm)	4942	1568	1752	5036	400	5036	2760
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	974	102	85	1224	1	1218	645
RTOR Reduction (vph)	0	19	0	0	0	0	102
Lane Group Flow (vph)	974	83	85	1224	1	1218	543
Confl. Peds. (##/hr)			1				1
Confl. Bikes (##/hr)							1
Turn Type	Prot	pt+ov	Prot	NA	Perm	NA	pt+ov
Protected Phases	4	4 5	5	2		6	6 4
Permitted Phases					6		
Actuated Green, G (s)	38.1	56.8	11.7	107.9	89.7	89.7	134.8
Effective Green, g (s)	38.1	56.8	11.7	107.9	89.7	89.7	134.8
Actuated g/C Ratio	0.24	0.35	0.07	0.67	0.56	0.56	0.84
Clearance Time (s)	7.0		6.5	7.0	7.0	7.0	
Vehicle Extension (s)	2.0		1.5	3.0	3.0	3.0	
Lane Grp Cap (vph)	1176	556	128	3396	224	2823	2325
v/s Ratio Prot	c0.20	0.05	c0.05	0.24		c0.24	0.20
v/s Ratio Perm					0.00		
v/c Ratio	0.83	0.15	0.66	0.36	0.00	0.43	0.23
Uniform Delay, d1	57.8	35.2	72.2	11.2	15.5	20.4	2.5
Progression Factor	1.00	1.00	1.00	1.00	1.80	1.57	1.94
Incremental Delay, d2	4.7	0.0	9.6	0.3	0.0	0.4	0.0
Delay (s)	62.5	35.2	81.9	11.5	27.8	32.3	4.8
Level of Service	E	D	F	B	C	C	A
Approach Delay (s)	60.0			16.1		22.8	
Approach LOS	E			B		C	
Intersection Summary							
HCM 2000 Control Delay			30.1		HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio			0.56				
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	20.5	
Intersection Capacity Utilization			72.5%		ICU Level of Service		C
Analysis Period (min)			15				
c Critical Lane Group							

Timings
5: West Oakland Park Boulevard & Project Driveway

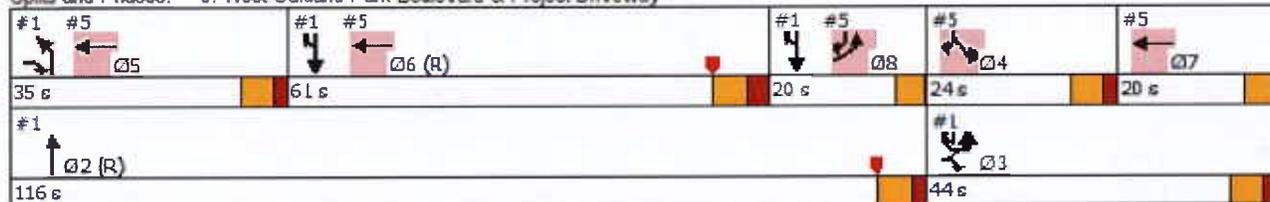
Future Total Conditions
P.M. Peak Hour

Lane Group	EBL	WBT	WBR	SBL	SBR	Ø2	Ø3	Ø5	Ø6	Ø7
Lane Configurations										
Traffic Volume (vph)	18	766	50	60	99					
Future Volume (vph)	18	766	50	60	99					
Turn Type	Prot	NA	Free	Prot	pt+ov					
Protected Phases	8	5 6 7		4	4 8	2	3	5	6	7
Permitted Phases			Free		4					
Detector Phase	8	5 6 7		4	4 8					
Switch Phase										
Minimum Initial (s)	3.0			6.0		10.0	6.0	6.0	10.0	4.0
Minimum Split (s)	7.0			24.0		16.5	38.0	12.0	61.0	8.0
Total Split (s)	20.0			24.0		116.0	44.0	35.0	61.0	20.0
Total Split (%)	12.5%			15.0%		73%	28%	22%	38%	13%
Yellow Time (s)	3.5			4.0		4.5	4.0	4.0	4.5	3.5
All-Red Time (s)	0.5			2.0		2.0	2.0	2.0	3.0	0.5
Lost Time Adjust (s)	0.0			0.0						
Total Lost Time (s)	4.0			6.0						
Lead/Lag				Lead				Lead	Lag	Lag
Lead-Lag Optimize?				Yes				Yes	Yes	Yes
Recall Mode	None			None		C-Min	None	None	C-Min	None

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 0 (0%), Referenced to phase 6:SBT and 2:NBT, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 5: West Oakland Park Boulevard & Project Driveway



HCM Signalized Intersection Capacity Analysis
 5: West Oakland Park Boulevard & Project Driveway

Future Total Conditions
 P.M. Peak Hour

						
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			  			
Traffic Volume (vph)	18	0	766	50	60	99
Future Volume (vph)	18	0	766	50	60	99
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		6.0	4.0	6.0	6.0
Lane Util. Factor	1.00		0.91	1.00	1.00	1.00
Frt	1.00		1.00	0.85	1.00	0.85
Flt Protected	0.95		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1752		5036	1568	1752	1568
Flt Permitted	0.95		1.00	1.00	0.95	1.00
Satd. Flow (perm)	1752		5036	1568	1752	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	19	0	824	54	65	106
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	19	0	824	54	65	106
Turn Type	Prot		NA	Free	Prot	pt+ov
Protected Phases	8		5 6 7		4	4 8
Permitted Phases				Free		4
Actuated Green, G (s)	15.9		116.3	160.0	10.3	30.2
Effective Green, g (s)	15.9		112.3	160.0	10.3	26.2
Actuated g/C Ratio	0.10		0.70	1.00	0.06	0.16
Clearance Time (s)	4.0				6.0	
Vehicle Extension (s)	3.0				2.0	
Lane Grp Cap (vph)	174		3534	1568	112	256
v/s Ratio Prot	0.01		c0.16		c0.04	c0.07
v/s Ratio Perm				0.03		
v/c Ratio	0.11		0.23	0.03	0.58	0.41
Uniform Delay, d1	65.6		8.5	0.0	72.7	60.0
Progression Factor	0.90		0.53	1.00	1.00	1.00
Incremental Delay, d2	0.3		0.0	0.0	4.9	0.4
Delay (s)	59.5		4.5	0.0	77.6	60.4
Level of Service	E		A	A	E	E
Approach Delay (s)		59.5	4.2		66.9	
Approach LOS		E	A		E	
Intersection Summary						
HCM 2000 Control Delay			15.2		HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.29			
Actuated Cycle Length (s)			160.0		Sum of lost time (s)	27.5
Intersection Capacity Utilization			30.9%		ICU Level of Service	A
Analysis Period (min)			15			
c Critical Lane Group						

Appendix I
Entry Gate Analysis

Entry Gate Analysis (A.M. Peak Hour)

Arrival Rate

IN
13

 veh/hr

Number of Entry Gates (N) = 1
Level of Confidence = 0.95

Storage Provided On-Site = 12 vehicles
Total Entering and Exiting Vehicles(q) = 13 veh/hr
Service Capacity per N (60 mins/Service Rate) (Q) = 600.00 veh/hr/pos
Average Service Rate (t) = 0.10 mins/veh
rho (t/Q) = 0.022

Service Rate

IN
0.100

 mins/veh

Control Delay = min
Service Time = mins/veh

Expected (avg.) number of vehicles in the system $E(m) = 0.00$
Expected (avg.) number of vehicles waiting in queue $E(n) = 0.02$
Mean time in the queue $E(w) = 0.00$ mins
Mean time in system $E(t) = 0.10$ mins

Proportion of customers who wait (P) $(E(w) > 0) = 2.17\%$
Probability of a queue exceeding a length (M) $P(x > M) = 5.00\%$

Entry Gate Analysis (P.M. Peak Hour)

Arrival Rate

IN
4

 veh/hr

Number of Entry Gates (N) = 1
 Level of Confidence = 0.95
 Storage Provided On-Site = 12 vehicles

Total Entering and Exiting Vehicles(q) = 4 veh/hr
 Service Capacity per N (60 mins/Service Rate) (Q) = 600.00 veh/hr/pos
 Average Service Rate (t) = 0.10 mins/veh
 rho (t/Q) = 0.007

Service Rate

IN
0.100

 mins/veh

Control Delay = min
 Service Time = mins/veh

Expected (avg.) number of vehicles in the system $E(m) = 0.00$
 Expected (avg.) number of vehicles waiting in queue $E(n) = 0.01$
 Mean time in the queue $E(w) = 0.00$ mins
 Mean time in system $E(t) = 0.10$ mins

Proportion of customers who wait (P) ($E(w) > 0$) = 0.67%
 Probability of a queue exceeding a length (M) ($P(x > M)$) = 5.00%

Table 4-4. PARC Service Rates

	Veh/hr	Sec/veh
Prepaid Frequent Parker Entry or Exit	435	8.3
Insertion Card	600	6.0
Proximity Card	800	4.5
Automatic Veh ID		
Pay Per Use Patron Vehicular Entry	400	9.0
Push Button Ticket	450	8.0
Auto Spit Ticket	200	18.0
Pay on Entry-flat fee, gated, ticketed	300	12.0
Pay on Entry flat-fee, non gated/ticketed		
Pay Per Use Patron Vehicular Exits		
Cash to cashier-Variable Rate	135	26.7
Credit card-online check (telephone line) and sign	95	38.0
Credit card online check but no sign	110	32.7
Credit card-batched or high speed line and no sign	175	20.7
Validated for free parking	300	12.0
Flat Rate Transaction (gated)	180	20.0
LPI if front plate	100	36.0
LPI if rear plate only	80	45.0
LPR	120	30.0
Insertion Ticket for POF Validation	360	10.0
POF Central Pay to Cashier		
Cash to POF cashier - Variable Rate	175	20.7
Credit card-online check (telephone line) and sign	115	32.7
Credit card-online check but no sign	135	26.7
Credit card-batched or high speed line and no sign	245	14.7
Validated for free parking	600	6.0
POF Central Pay to Machine		
Cash to APS-Variable Rate	75	48.0
Credit card - online check (telephone line) and sign	NA	NA
Credit card - online check but no sign	66	54.5
Credit card - batched or high speed line and no sign	100	36.0
Validated for free parking	240	15.0

Sharp turns in the approach to equipment lanes have a significant impact on μ . When it is more difficult for a patron to pull into the lane from the first position in the queue, seconds are lost from each transaction. This loss can be accounted for by adding seconds to the average transaction time to represent the turning factor. See Figure 4-10 for diagrams showing appropriate turning factors for design. If, for example, the design of a lane equipped with an insertion card reader requires a very difficult turn into the lane, and thus adds five seconds to the average transaction the adjusted service rate is $3600/(8.3+5 = 13.3)$ seconds per

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BHSF

Sunrise Hospital

BHSF Sunrise Noise Modeling Report

Reference: SM-02 rev 1

SPA | July 19, 2024

City of Sunrise
Community Development Department

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Job number 28648400

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1. Executive Summary

Arup conducted an exterior sound propagation study based on the current design of Baptist Health South Florida's Sunrise Hospital as part of the Site Plan Approval process. A 3D computer model was constructed to include the hospital buildings and their noise sources, surrounding roads, residential buildings, and ground topography. The model is used to predict sound levels at surrounding properties due to normal (non-emergency) mechanical equipment operation, emergency electrical generator operation, and typical loading dock sources.

Summary of results:

- Predicted sound levels due to non-emergency mechanical equipment operation in the current design comply with the Sunrise Code of Ordinances Article II Sec. 9-22 Table 1 "Maximum Permissible Sound Levels" (code limits) at neighboring residential real property lines (see Section 5.1).
- Predicted sound levels due to emergency generators combined with normal mechanical equipment operation comply with the daytime code limits at all residential property lines. In the event of a nighttime power outage where all electrical generators operate at 100%, sound levels comply with the residential nighttime code limits at eastern residences, and most southern residences with the exception of the property line of a few residential buildings south of Oakland Park Boulevard where the predicted levels are comparable to measured existing background sound levels (see Section 5.2). Per the Sunrise Code, Chapter 9 Article II Sec. 9-22, "*a sound shall not be considered in violation of the sound level limits ... if the measured sound level exceeds the background sound level by less than five (5) decibels*". The acoustic modeling shows that the hospital noise, including all generators running together, could exceed the background noise by up to 5 dB during the quietest measured nighttime hour so the acoustic treatment of the generators will be increased to ensure compliance at all residences.
- Predicted sound levels due to loading dock equipment (simultaneous equipment operation) combined with normal mechanical equipment operation are predicted to be less than the residential daytime code limits at residential property lines (see Section 5.3).
- The hospital buildings are predicted to attenuate primary road traffic noise at properties located in the vicinity of the parking garage by 1-10dBA (see Section 5.4).
- The measured existing background noise near residential property lines exceeds the code limits levels during most daytime and nighttime hours (see Section 4).

This report describes the modeling approach, noise inputs, and results of this study.

A description of the acoustic terminology used is given in the Appendix A.

2. Methodology

A 3D model was constructed using SoundPLAN v8.2 environmental noise modeling software.

The software implements the engineering methods specified in ISO 9613-2 for calculating outdoor sound propagation and are used for hospital equipment and loading dock sound predictions. The software implements The United States Federal Highway Administration's Traffic Noise Model (TNM) for road noise propagation (used in traffic noise shielding prediction only).

These calculation procedures account for the effects of distance between sound sources and receivers, topography, ground interaction, barrier walls, and buildings.

The ISO 9613-2 propagation model assumes moderate downwind propagation, equivalent to a moderate ground-based temperature inversion. These meteorological conditions are favorable to sound propagation.

We assumed hard/non-porous ground throughout the calculation area.

Noise levels were predicted at 5ft above ground level.

2.1 Noise Sources

Hospital equipment selections are preliminary at this early stage of design. We were provided with manufacturers sound data and/or estimated sizes/capacities for the following equipment. Where unit selections have not yet been made, we used representative sound data from equipment of comparable size/capacity.

Loading dock sound levels used in the model are from measurements taken at Baptist Health's West Kendall Hospital in February 2024.

Below is a summary of the equipment and other sound sources considered in the model. Details of the locations and sound power levels of the sources are given in Appendix B.

2.1.1 Hospital Equipment – Normal Operations

All normal operations mechanical equipment is assumed to run continuously at 100% capacity

Central Plant (west side of site):

- Cooling towers, roof mounted surrounded by a sound-attenuating + visual screen
- Air Source Heat pumps, roof mounted, surrounded by a sound-attenuating + visual screen
- Chiller plant (interior) sound break-out through service doors
- Medical Air Compressors & Medical Vacuum Pumps (interior)

Main hospital building:

- Kitchen and toilet exhaust fans discharging through louvers on façade
- Air Handling Units (fans) with air intake and discharge through louvers at level 4 façade
- Exhaust fans discharging at level 2 roof, level 3 roof, and level 9 roof

Parking Garage:

- Exhaust fans discharging into two exhaust stacks each with sound-attenuating louvers at roof level – the garage is now naturally ventilated so these are no longer in the project

2.1.2 Hospital Equipment – Electrical Generators

Central Plant (west side of site):

- Emergency electric generators, enclosed on roof with sound-attenuating + visual screen

2.1.3 Other Sources – Loading Dock Activity

Loading dock noise sources:

- Loading dock ventilation fan
- Trash compactor in operation
- Loading dock motorized lift in operation
- Truck backing up (with backup alarm)

3. Sunrise Noise Ordinance

Maximum permissible sound levels at the real property lines are defined in the Sunrise, Florida Code of Ordinances, Chapter 9 Article II Sec. 9-22 (Residential property line limits in **bold**):

Sec. 9-22. - Maximum permissible sound levels.

Notwithstanding any other provision in this article, it shall be unlawful, except as expressly permitted herein, to cause, allow, or permit the making of any sound which exceeds the limits set forth in this section. However, a sound shall not be considered in violation of the sound level limits set forth in Table 1 if the measured sound level exceeds the background sound level by less than five (5) decibels.

RECEIVING PROPERTY USE	TIMES	SOUND LEVEL
Residential, including multifamily	7:00 a.m. to 10:00 p.m. 10:00 p.m. to 7:00 a.m.	60 dBA 55 dBA
Commercial	Any time	65 dBA
Industrial	Any time	70 dBA
Western Sunrise Entertainment District*	6:00 p.m. to 4:00 a.m. 4:00 a.m. to 6:00 p.m.	85 dBA or 87 dBC 65 dBA or 75 dBC

**As established in section 16-82 of the City Code.*

The nearest residential properties south of Oakland Park Boulevard / west of Flamingo Drive are in the Western Sunrise Entertainment District. Notwithstanding this zoning designation, we refer to the residential code limits for all surrounding residential properties.

4. Existing Background Noise

Arup conducted site noise measurements to document the existing background noise conditions between January 30 and February 4, 2024. Details are in the Arup report “BHSF Sunrise Noise Survey Report” dated February 16, 2024.

This site survey included continuous noise logging over several days at locations on the BHSF site and close to residential properties lines to the south, east, and southeast. See Figure 1 for property line measurement locations.

We observed that background noise at these locations was primarily due to motor vehicle traffic on the Sawgrass Expressway, Oakland Park Boulevard, and Flamingo Road.

A summary of measured sound levels is in Table 1

Table 1: Summary of measured ambient sound levels at property line locations

Receiver	7:00 a.m. to 10:00 p.m. (daytime)		10:00 p.m. to 7:00 a.m. (nighttime)	
	Min hourly average (dBA Leq,1hr)	Max hourly average (dBA Leq,1hr)	Min hourly average (dBA Leq,1hr)	Max hourly average (dBA Leq,1hr)
ST-1 southeast	69 (9-10p.m.)	73 (5-6 p.m.)	59 (3-4a.m.)	69 (10-11p.m.)
ST-2 south	61 (9-10p.m.)	67 (3-4p.m.)	54 (2-3a.m.)	62 (10-11p.m.)
ST-3 east	60 (2-3p.m.)	69 (3-4p.m.)	54 (2-3a.m.)	62 (10-11p.m.)

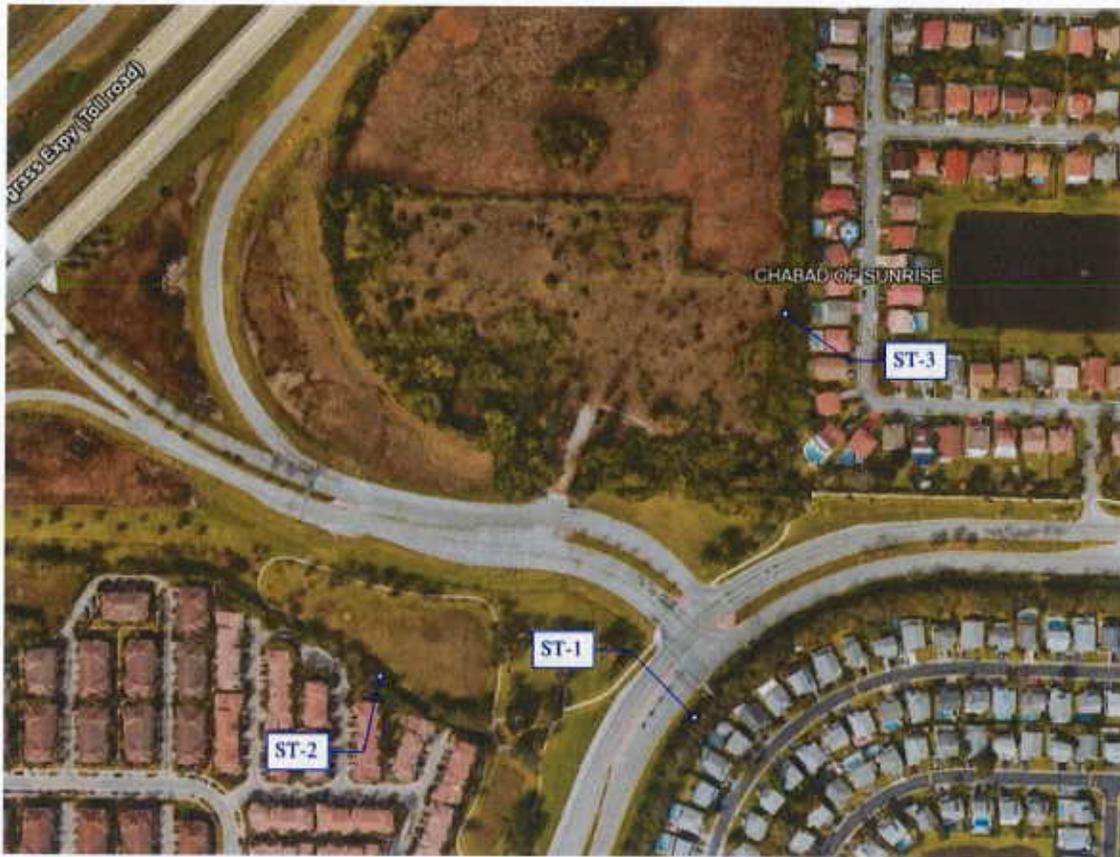


Figure 1: Background noise survey measurement locations near residential property lines

Background noise levels varied during the day and night, trending with observed traffic flow. From 7a.m. to 10p.m. (daytime), hourly background sound levels (Leq,1hr) at these survey locations exceeded 60dBA during 14 out of 15 daytime hours. From 10p.m. to 7a.m. (nighttime), hourly noise exceeded 55dBA at south and east locations for 6 out of 9 nighttime hours, and during all hours at the southeast location (ST-1).

5. Model Results

Sound levels from four scenarios were calculated with our model, including:

- normal hospital mechanical equipment operation (non-emergency)
- electrical generator operation (periodic testing and power outage conditions)
- loading dock activity
- hospital building effect on existing traffic noise

5.1 Normal Mechanical Equipment Operations

In this scenario, all noise sources described in Section 2.1.1 were implemented in the model, running at 100% capacity and assumed to run 24-hours per day. Figure 2 below shows the noise level predictions with the residential nighttime code limit line of 55dBA. The predicted noise levels at residential property receivers 1 through 59 are tabulated in Appendix C.

Noise due to normal mechanical equipment operations complies with the Sunrise code limits at all neighboring residential property lines.

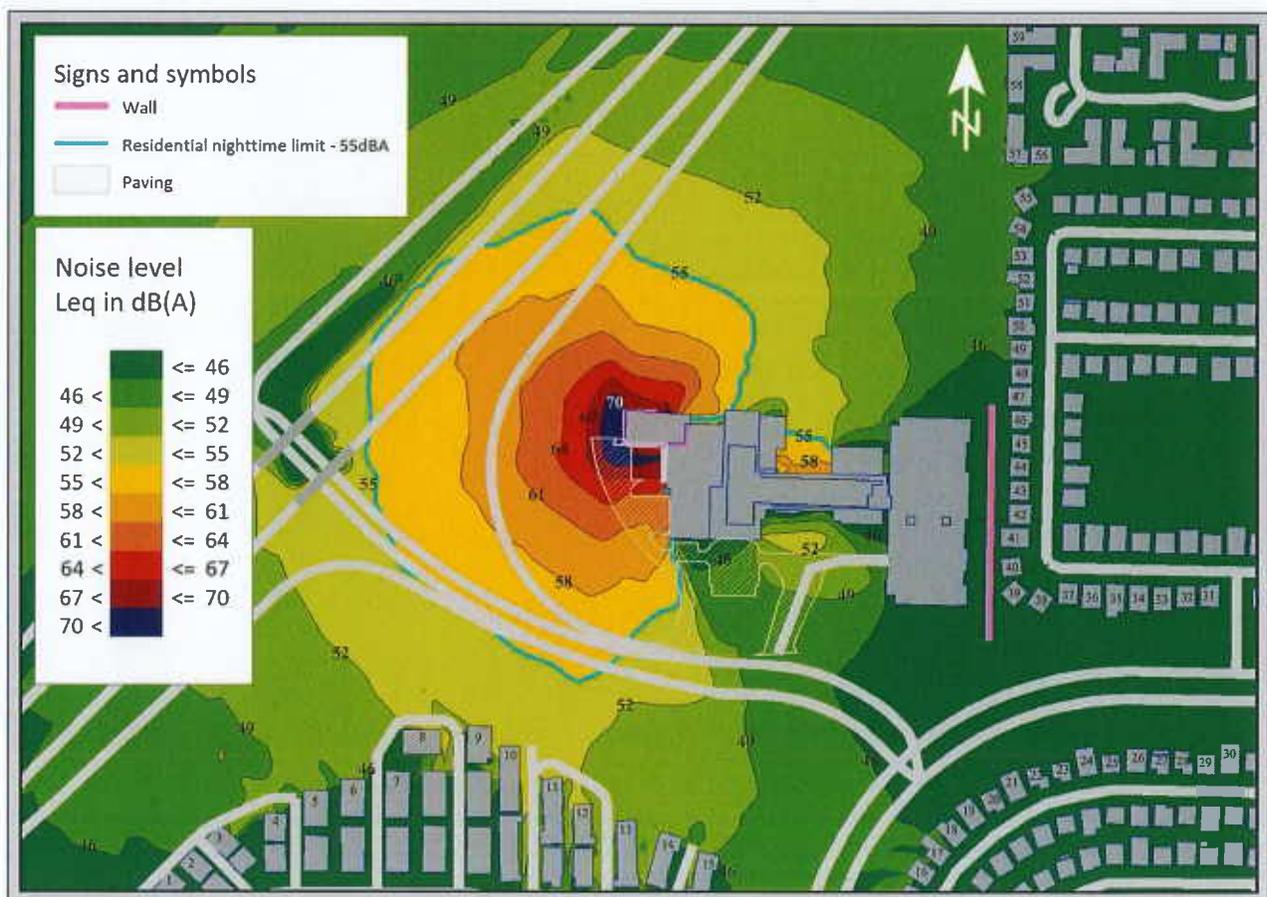


Figure 2. Normal mechanical equipment operations sound predicted at 5ft above ground

5.2 Emergency Electrical Generator Operations

In this scenario, all sources described in Section 2.1.1 were implemented in the model, running at 100% capacity. In addition, electrical generator noise is added for two scenarios: 1. Periodic testing (one generator running), and 2. Power outage (both generators running).

5.2.1 Periodic Generator Testing

In this scenario, one generator was implemented in the model, running at 100% capacity, simulating a typical equipment test during daytime. Figure 3 below shows the noise level predictions with the residential daytime code limit line of 60dBA. The predicted noise levels at residential property receivers 1 through 59 are tabulated in Appendix C.

Noise during single generator testing complies with the Sunrise residential daytime code limit at all neighboring residential property lines.

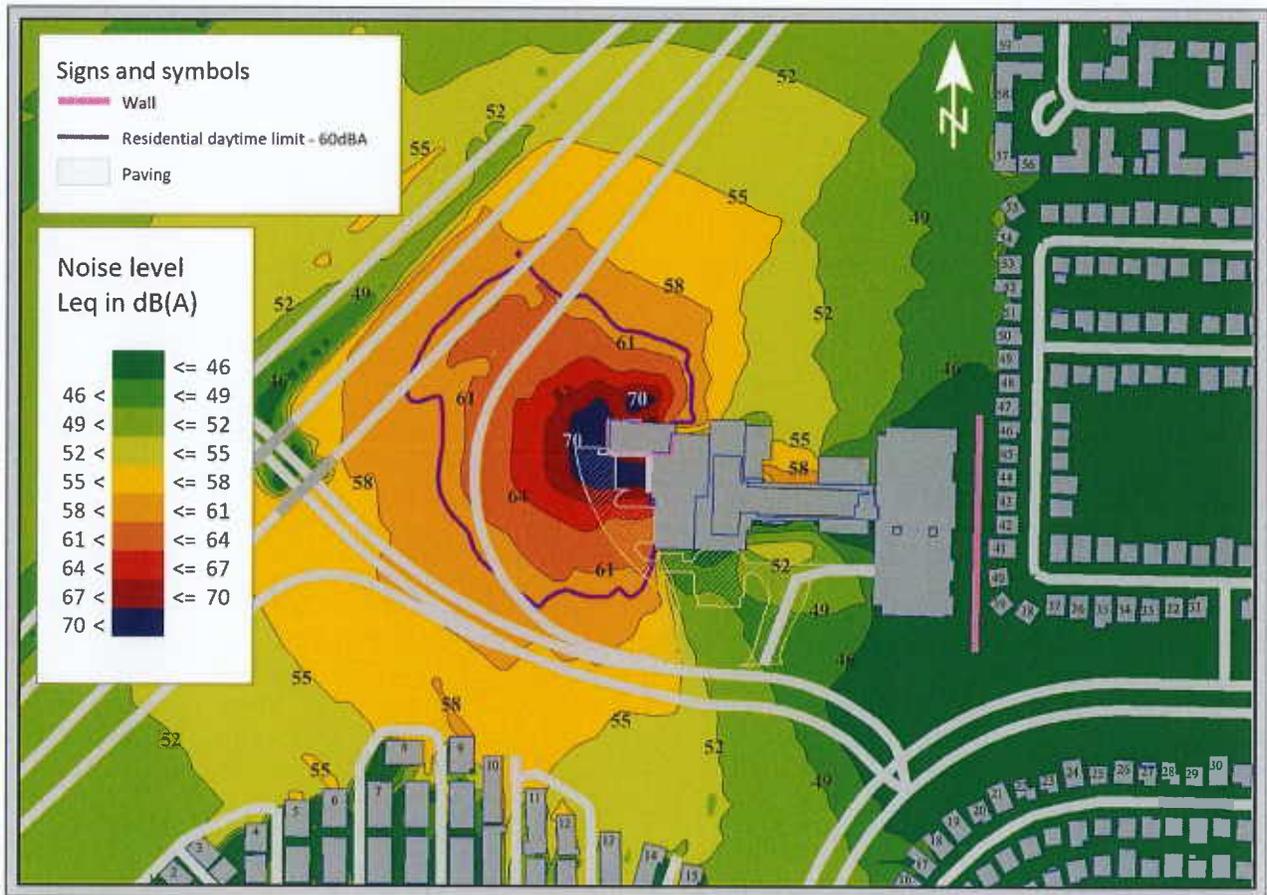


Figure 3. Predicted noise levels at 5ft above ground during periodic daytime generator testing (one generator operating).

5.2.2 All Generators Operating

In this scenario, all generators were implemented in the model, all running at 100% capacity, simulating a scenario when there is a power outage. Figure 4 below shows the noise level predictions with nighttime code limit line of 55dBA. The predicted noise levels at residential property receivers 1 through 59 are tabulated in Appendix C.

Sound levels meet the residential nighttime code limit at eastern residences, and most southern residences with the exception of the property line of a few residential buildings south of Oakland Park Boulevard (yellow/orange contours). The predicted property line sound levels at these properties range from 56-59dBA, compared to measured nighttime background noise in this area ranging from 54-62dBA (Leq, 1hr). Per the Sunrise Code, Chapter 9 Article II Sec. 9-22, “a sound shall not be considered in violation of the sound level limits ... if the measured sound level exceeds the background sound level by less than five (5) decibels”. The hospital noise, including all generators running together, could exceed the background noise by up to 5 dB during the quietest measured nighttime hour. This 1dB exceedance of the noise code would only occur during power outages. However, the acoustic treatment (enclosures and combustion exhaust mufflers) for the generators will be increased to ensure compliance with the noise code at all times.

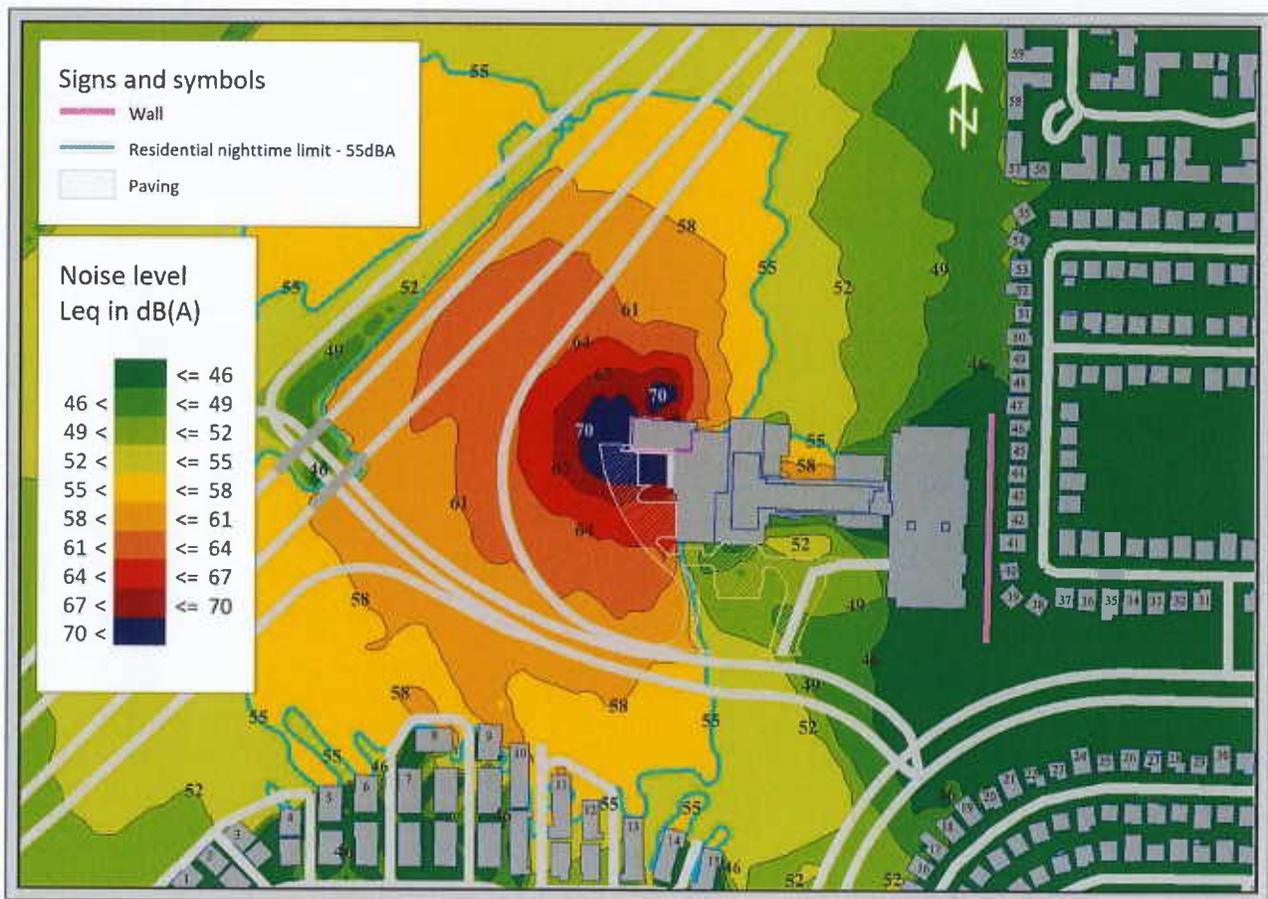


Figure 4. Predicted noise levels at 5ft above ground with all generators operating (power outage).

5.3 Loading Dock Noise

The loading dock noise sources from Section 2.1.3 were included in the noise model, together with all the normal mechanical systems operations, and the total noise is shown below.

Figure 5 below shows predicted noise levels (L_{eq} during loading dock noise events) with the residential daytime code limit line of 60dBA. The predicted noise levels at residential property receivers 1 through 59 are tabulated in Appendix C.

Predicted sound levels due to loading dock equipment (simultaneous equipment operation) combined with normal mechanical equipment operation are predicted to be less than the residential daytime code limits at all residential property lines.

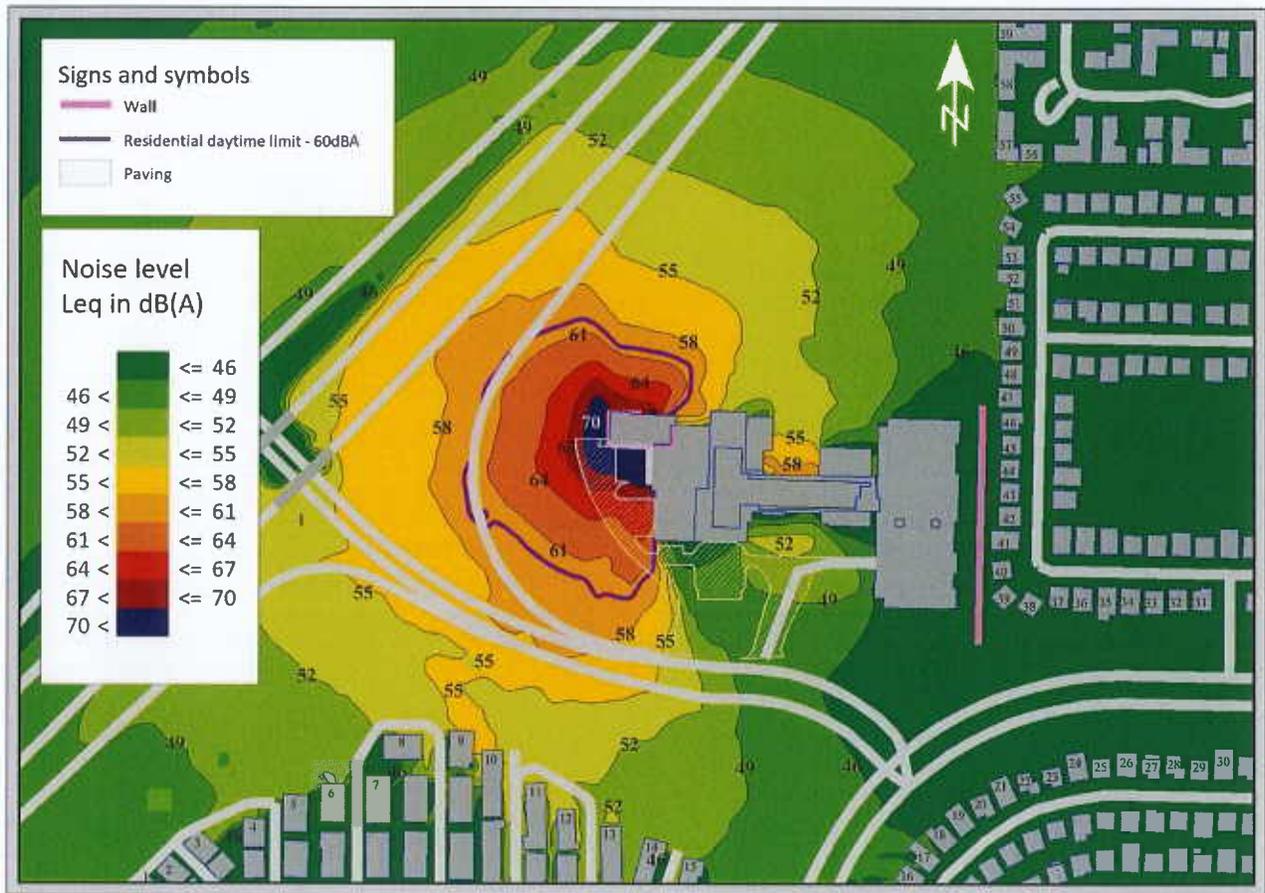


Figure 5. Predicted noise levels at 5ft above ground with loading dock sources combined with normal mechanical equipment operations

5.4 Hospital Building Effect On Existing Traffic Noise

We used traffic count data available from the Florida Department of Transportation (FDOT) 2022 Annual Average Daily Traffic Report as inputs into our model¹.

The calculated noise due to traffic (without the hospital buildings) agreed with our 72-hour energy averaged site noise measurements (Leq,72hr) at four measurement positions with varying distances from the primary roadways. Root mean square error between calculated and measured traffic noise was 1dBA.

The traffic noise model was used to predict the change in primary road traffic noise with addition of the proposed hospital buildings.

Figure 6 shows the predicted primary road traffic noise reduction. The reduction is most significant at 7 residential properties nearest the parking garage, with reduction in the range of 4-10dBA. Other areas shown in lighter shades of green have reduction in the range of 1-4dBA.

The 10-foot wall is shown in pink near the east property line.

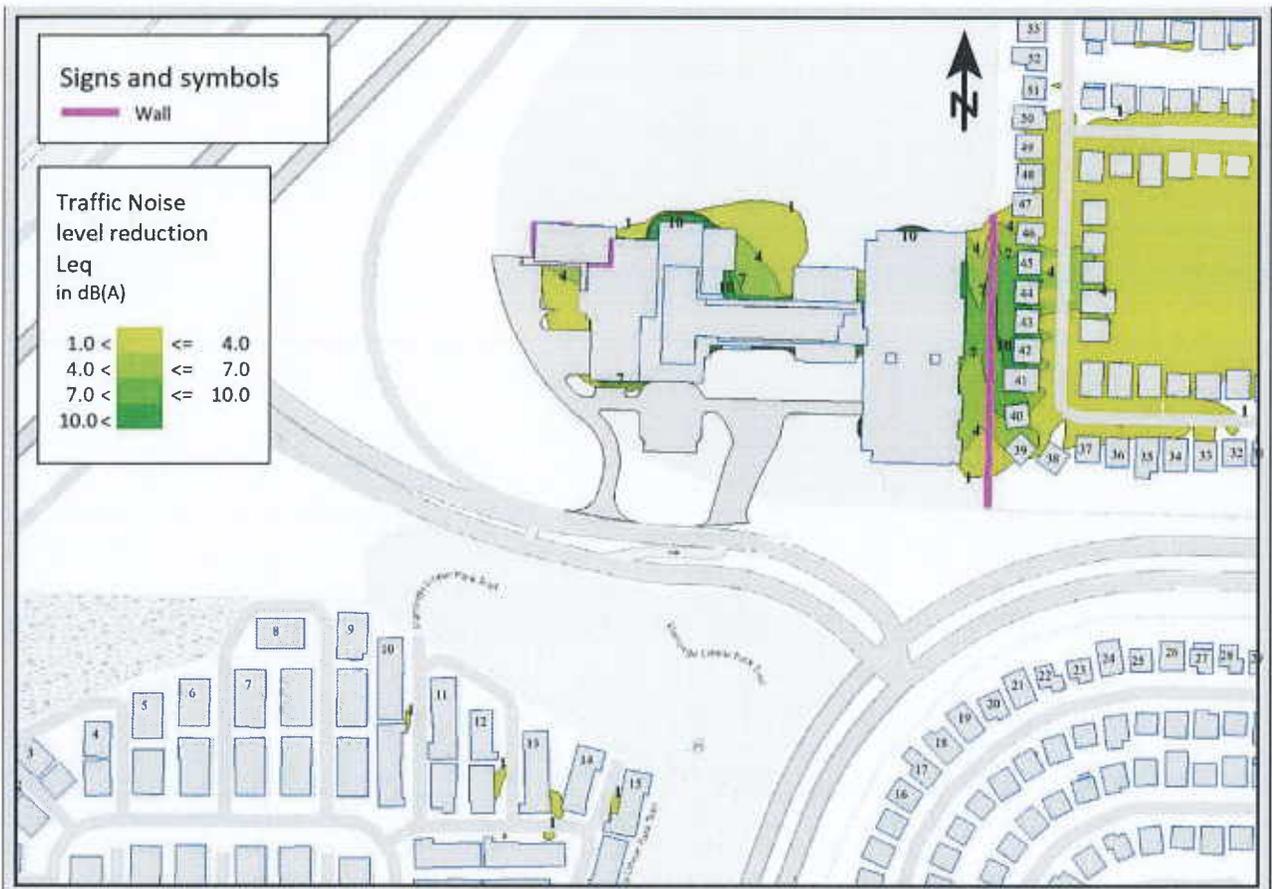


Figure 6: Predicted primary road traffic noise reduction from proposed hospital buildings

¹ The 2022 Annual Average Daily Traffic (AADT), and T-factor (percentage of trucks) reported for traffic monitoring sites 979933, 869096, 869177 (corresponding to the local volumes of the Sawgrass Expressway, Oakland Drive, and Flamingo Drive respectively).

Appendix A

Acoustic Terminology

A.1 Acoustics Glossary

Ambient Noise Level

The ambient noise level is the overall noise level measured at a location from multiple noise sources. When assessing noise from a particular development, the ambient noise level is defined as the remaining noise level in the absence of the specific noise source being investigated. For example, if a fan located on a city building is being investigated, the ambient noise level is the noise level from all other sources without the fan running. This would include sources such as traffic, birds, people talking and other nearby fans on other buildings.

Decibel

The decibel scale is a logarithmic scale which is used to measure sound and vibration levels. Human hearing is not linear and involves hearing over a large range of sound pressure levels, which would be unwieldy if presented on a linear scale. Therefore a logarithmic scale, the decibel (dB) scale, is used to describe sound levels.

An increase of approximately 10 dB corresponds to a subjective doubling of the loudness of a noise. The minimum increase or decrease in noise level that can be noticed is typically 2 to 3 dB.

dB(A)

dB(A) denotes a single-number sound pressure level that includes a frequency weighting (“A-weighting”) to reflect the subjective loudness of the sound level.

The frequency of a sound affects its perceived loudness. Human hearing is less sensitive at low and very high frequencies, and so the A-weighting is used to account for this effect. An A-weighted decibel level is written as dB(A).

Some typical dB(A) levels are shown below.

Sound Pressure Level dB(A)	Example
130	Human threshold of pain
120	Jet aircraft take-off at 100 m
110	Chain saw at 1 m
100	Inside nightclub
90	Heavy trucks at 5 m
80	Kerbside of busy street
70	Loud stereo in living room
60	Office or restaurant with people present
50	Domestic fan heater at 1m
40	Living room (without TV, stereo, etc)

Sound Pressure Level dB(A)	Example
30	Background noise in a theatre
20	Remote rural area on still night
10	Acoustic laboratory test chamber
0	Threshold of hearing

L_{eq}

The ‘equivalent continuous sound level’, L_{eq} , is used to describe the level of a time-varying sound or vibration measurement.

L_{eq} is often used as the “average” level for a measurement where the level is fluctuating over time. Mathematically, it is the energy-average level over a period of time (i.e. the constant sound level that contains the same sound energy as the measured level). When the dB(A) weighting is applied, the level is denoted dB L_{Aeq} . Often the measurement duration is quoted, thus $L_{Aeq,15\text{ min}}$ represents the dB(A) weighted energy-average level of a 15 minute measurement.

Sound Power and Sound Pressure

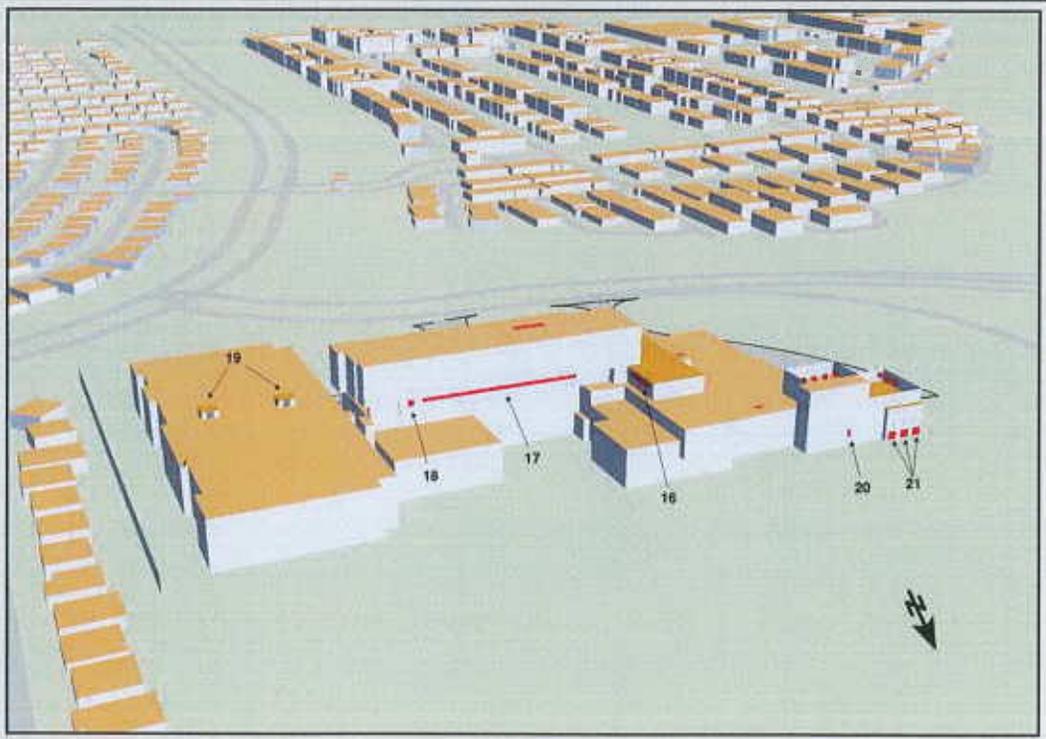
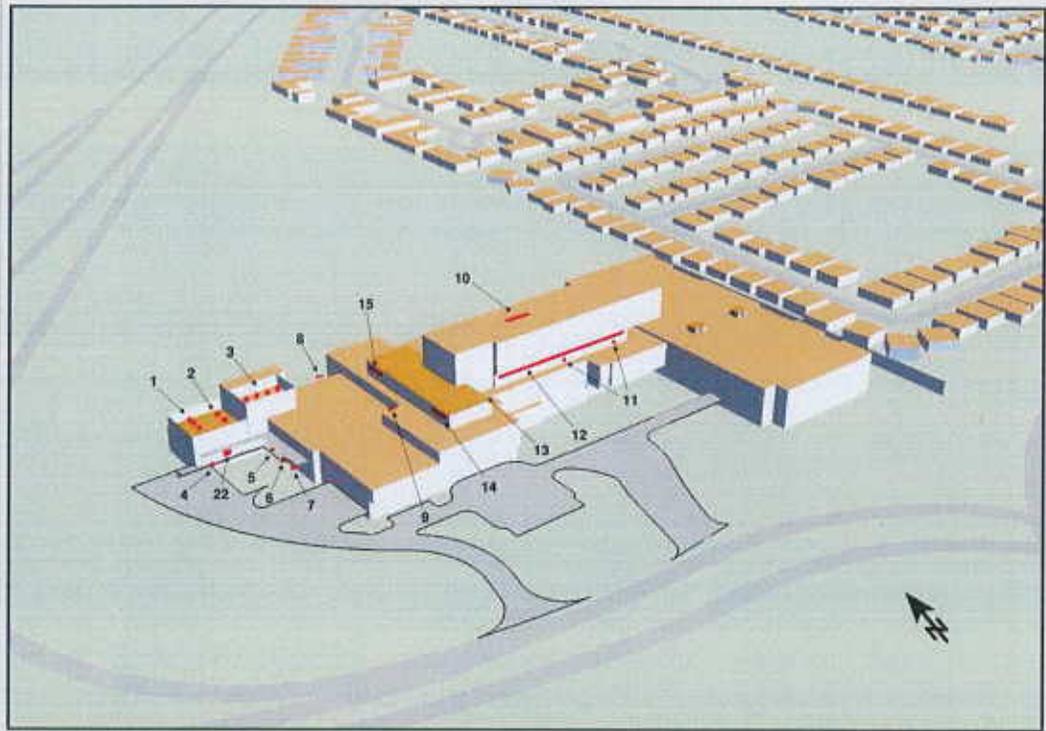
The sound power level (L_w) of a source is a measure of the total acoustic power radiated by a source. The sound pressure level (L_p) varies as a function of distance from a source. However, the sound power level is an intrinsic characteristic of a source (analogous to its mass), which is not affected by the environment within which the source is located.

Appendix B

Noise Source Details

B.1 Source Locations

The noise source locations 1 through 22 are illustrated in the two model images below. These sources are identified, and their sound power levels provided, in Section B.2.



B.2 Source Sound Power Levels

The sound power level (dB re:1pW) in each octave band from 63 Hz to 8kHz is listed in the table below for each source in the model.

#	Source	Location	Quantity	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
1	Cooling towers	Roof of CEP, louvered sound attenuating wall	3	110	105	106	101	99	99	95	89
2	Emergency generators	Roof of CEP, 85dBA @ 7m enclosure	2	106	107	107	107	105	103	100	95
3	Heat pumps (air source)	Roof of CEP, sound barrier walls	4		99	90	89	91	91	84	73
4	Trash compactor	Loading dock	1	94	89	88	86	86	82	77	71
5	Truck door	Loading dock	1	101	92	89	90	95	95	92	90
6	Loading dock motorized truck ramp	Loading dock	1	95	93	89	88	86	87	81	74
7	Loading dock exhaust (fan)	Loading dock	1	87	83	84	82	80	77	73	66
8	SPD exhaust fans	Roof	2	95	90	85	80	75	70	66	66
9	Pharmacy exhaust fans	Roof	2	93	88	83	78	73	68	64	64
10	Isolation exhaust fans	Roof	4	95	90	85	80	75	70	66	66
11	Toilet exhaust fan	Level 4 south louver	2	98	98	97	96	95	93	90	90
12	Air handler exhaust	Level 4 south louvers, total of 9 AHUs	1	98	98	103	98	95	92	90	87
13	Air handler exhaust	Level 4 east louvers, total or 3 AHUs	1	86	86	91	86	83	80	79	75
14	Air handler intake	Level 4 west louvers, total or 3 AHUs	1	88	88	93	88	85	82	81	77

#	Source	Location	Quantity	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
15	Air handler exhaust	Level 4 west louvers, total or 4 AHUs	1	91	91	96	91	88	85	84	80
16	Air handler intake	Level 4 east louvers, total or 4 AHUs	1	93	93	98	93	90	87	85	82
17	Air handler intake	Level 4 north louvers, total of 9 AHUs	1	100	100	104	99	97	94	92	88
18	Toilet exhaust fan	Level 4 north louver	1	98	98	97	96	95	93	90	90
19	Garage exhaust fans The garage is now naturally ventilated so these are not in the project	Parking garage. Fans connected to plenum stack, exhaust through louvers at roof level	20	93	90	90	83	79	78	71	71
20	Chiller plant exhaust fan	CEP N façade (louver)	1	84	84	83	82	81	79	76	76
21	Chillers	egress through access doors, N façade (interior incident sound power per door)	3	77	87	88	87	85	81	95	84
22	Fuel oil room exhaust fan	CEP L1 south façade	1	74	74	73	72	71	69	66	66

Appendix C

Tabulated Noise Predictions

C.1 Noise Predictions

The approximate noise levels predicted in the SoundPlan model and shown on the noise contour plots are tabulated below.

Receptor Number	Normal Mechanical Equipment Operations LAeq dB	Periodic Generator Testing LAeq dB	All Generators Operating LAeq dB	Loading Dock Noise LAeq dB
1	≤ 46	49-52	49-52	46-49
2	46-49	49-52	49-52	46-49
3	49-52	52-55	52-54	49-52
4	49-52	52-55	55	49-52
5	49-52	55-58	55	49-52
6	49-52	55-58	55	52
7	≤ 46	49-52	49-52	46
8	52-54	55-58	58-59	52-55
9	52-54	58-59	58-59	55-58
10	52-54	55-58	58-59	55-58
11	52-54	55-58	58-59	52-55
12	52-54	55-58	55-58	52-55
13	49-52	52-55	55	52-55
14	49-52	52-55	55-58	49-52
15	49-52	52-55	55-58	49-52
16	46-49	46-49	49-52	46-49
17	46-49	46-49	46-49	46-49
18	46-49	46-49	46-49	46-49
19	≤ 46	≤ 46	46-49	≤ 46
20	≤ 46	≤ 46	46-49	≤ 46
21	≤ 46	≤ 46	≤ 46	≤ 46
22	≤ 46	≤ 46	≤ 46	≤ 46
23	< 46	≤ 46	≤ 46	≤ 46
24	≤ 46	≤ 46	≤ 46	≤ 46

Receptor Number	Normal Mechanical Equipment Operations LAeq dB	Periodic Generator Testing LAeq dB	All Generators Operating LAeq dB	Loading Dock Noise LAeq dB
25	≤ 46	≤ 46	≤ 46	≤ 46
26	≤ 46	≤ 46	≤ 46	≤ 46
27	≤ 46	≤ 46	≤ 46	≤ 46
28	≤ 46	≤ 46	≤ 46	≤ 46
29	≤ 46	≤ 46	≤ 46	≤ 46
30	≤ 46	≤ 46	≤ 46	≤ 46
31	≤ 46	≤ 46	≤ 46	≤ 46
32	≤ 46	≤ 46	≤ 46	≤ 46
33	≤ 46	≤ 46	≤ 46	≤ 46
34	≤ 46	≤ 46	≤ 46	≤ 46
35	≤ 46	≤ 46	≤ 46	≤ 46
36	≤ 46	≤ 46	≤ 46	≤ 46
37	≤ 46	≤ 46	≤ 46	≤ 46
38	≤ 46	≤ 46	≤ 46	≤ 46
39	≤ 46	≤ 46	≤ 46	≤ 46
40	≤ 46	≤ 46	≤ 46	≤ 46
41	≤ 46	≤ 46	≤ 46	≤ 46
42	≤ 46	≤ 46	≤ 46	≤ 46
43	≤ 46	≤ 46	≤ 46	≤ 46
44	≤ 46	≤ 46	≤ 46	≤ 46
45	≤ 46	≤ 46	≤ 46	≤ 46
46	≤ 46	≤ 46	≤ 46	≤ 46
47	≤ 46	≤ 46	≤ 46	≤ 46
48	≤ 46	≤ 46	46-49	≤ 46
49	46-49	46-49	46-49	46-49
50	46-49	46-49	46-49	46-49
51	46-49	46-49	46-49	46-49
52	46-49	46-49	46-49	46-49

Receptor Number	Normal Mechanical Equipment Operations LAeq dB	Periodic Generator Testing LAeq dB	All Generators Operating LAeq dB	Loading Dock Noise LAeq dB
53	46-49	49-52	49-52	46-49
54	46-49	49-52	49-52	46-49
55	46-49	49-52	49-52	46-49
56	46-49	46-49	46-49	46-49
57	49-52	49-52	49-52	49-52
58	46-49	49-52	49-52	49
59	46-49	46-49	46-49	46-49

BHSF

Sunrise Hospital

BHSF Sunrise Noise Survey Report Rev A

Reference: SM-01

| July 19, 2024

City of Sunrise
Community Development Department

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1. Introduction

Arup is engaged as part of the design team for the proposed BHSF Sunrise Hospital. Working with the HKS design team and in discussion with the City of Sunrise, we performed a site noise study as part of the Site Plan Approval process. The following report outlines the methodology, process and results from our site noise study.

Existing sound levels on and around the site of the future Baptist Health South Florida's Sunrise Hospital were documented during a 7-day sound survey. These sound levels were collected in order to gain a better understanding of current site noise conditions, and to document existing ambient levels.

Overall, sound levels followed a consistent pattern throughout the week, with peaks during morning rush hour. Observed levels were typically lower during the weekend. Sound levels were primarily driven by traffic on the Sawgrass Expressway, as well as at the intersection of West Oakland Park Boulevard and North Flamingo Road.

This data will be used to inform project requirements for façade acoustic performance and limits for noise leaving the site.

A description of the acoustic terminology used is given in the Appendix.

2. Measurement Types and Locations

The Arup team visited site from January 29th, 2024 to February 5th. While on-site, we conducted (3) types of measurements:

1. Long-term (LT) noise monitoring (7 days). Long-term monitoring began at 3:00 on the 29th and concluded at 3:00 on the 5th.
2. Short-term (ST) noise monitoring (2 days). Short-term monitoring began at 3:00 on the 29th and concluded at 4:00 on February 1st.
3. Attended noise measurements (AM). Attended measurements were performed in 6 locations for 5-15 minutes at 3 different periods of the day, for a total of 18 measurements.

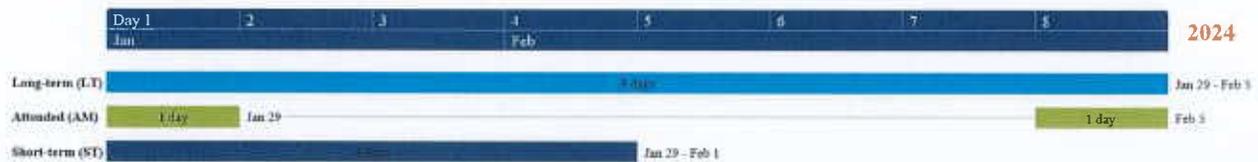


Figure 1 - Measurement Schedule

The locations of these measurements are shown in Figure 2 below. Note that ST-1 and ST-2 were both located off-site.

See the Appendix A for further details of the measurement conditions and equipment.

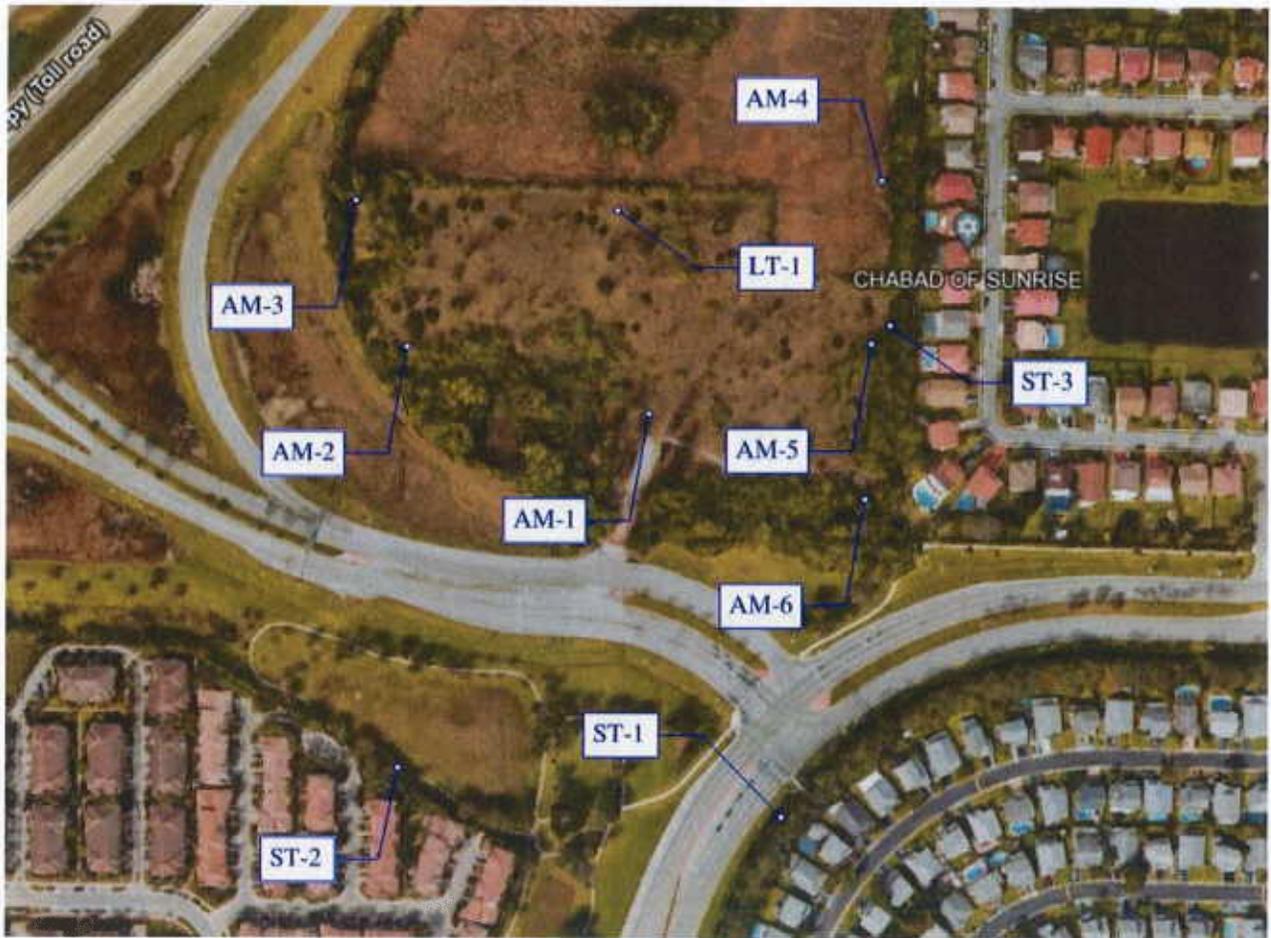


Figure 2 – Measurement Locations

ST-1 was located in a tree across North Flamingo Road	ST-2 was placed on a pole across W Oakland Park Boulevard.	ST-3, on the property
		

Picture 1 - Short-term logger locations, ST-1, ST-2 and ST-3



Picture 2 - Long-term logger location, LT-1

3. Measured Noise Levels

From the long-term noise measurements, at LT-1 on the hospital site, the following day-night levels were recorded:

Table 1 - L_{dn} values from long-term logger

Date	1/30	1/31	2/1	2/2	2/3	2/4
Day of the week	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
L _{dn} , dB	65	67	66	64	62	63

Weekend L_{dn} levels are 2-5 dB below levels recorded during the week. The highest L_{dn} we measured on the site was 67 dB(A).

From short-term noise measurements, the following day-night levels were recorded:

Table 2 - L_{dn} values from short-term loggers

Date	1/30	1/31
Day of the week	Tuesday	Wednesday
ST-1	72	72
ST-2	63	65
ST-3	64	65

The noise levels at ST-1 were higher (72 dB L_{dn}) than at the other locations because of its proximity to North Flamingo Road. Noise levels at ST-2, south of the hospital site, and ST-3, east of the site, were in the range 63 to 65 dB L_{dn}.

Attended measurements were performed at six different locations at different times of day. The figure below shows the locations of the (6) attended measurements along with lowest and highest measured LA_1 , LA_{eq} and LA_{90} . Measurements took place between 8:00 AM and 2:00 PM.



Figure 3 - Attended Measurement Locations and Levels

Average noise levels varied between 60 and 71 dB LA_{eq} across the site. The LA_1 values, which are representative of the typical maximum levels, varied between 64 and 74 dB(A). The LA_{90} values, which are representative of the typical ambient levels, varied between 58-70 dB(A).

4. Logging Time Traces

The plots below show both the LA_{eq} and LA_{max} (slow) for the three short-term loggers. The data range displayed is from Monday, January 29th at 4:00 PM to Thursday, February 1st and 4:00 PM. The trace on each figure is made up of individual 5 minute measurements.

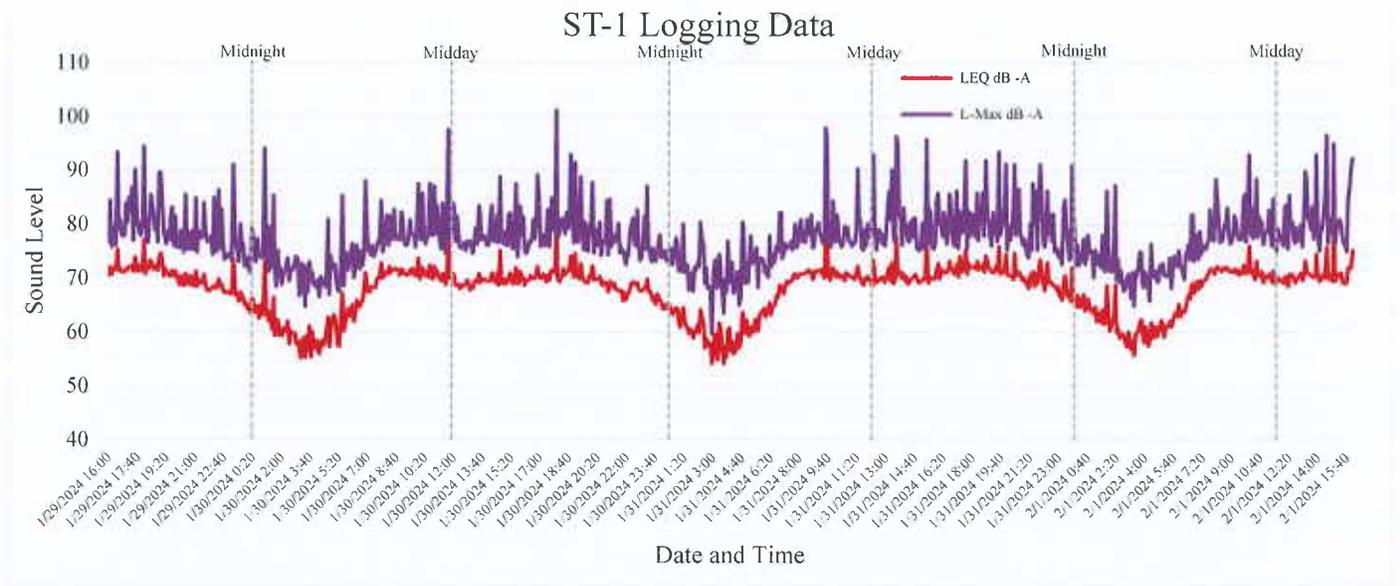


Figure 4 - ST-1 Logging Data

During the daytime, levels were typically between 69-71 dB LA_{eq} at ST-1. Starting at around 8:00 PM, levels recorded gradually decreased until they reached a minimum of 58-60 dB LA_{eq} occurring between 3:00 – 4:00 AM.

Maximum levels over 90 dB (A) were recorded during the day. These levels were a result of various vehicle sounds, such as car horns, motorcycle engine noises, and large trucks. In the case of ST-1 and ST-2, some spikes are also the result of landscape maintenance being performed nearby. This equipment would raise the measured level from the typical ambient.

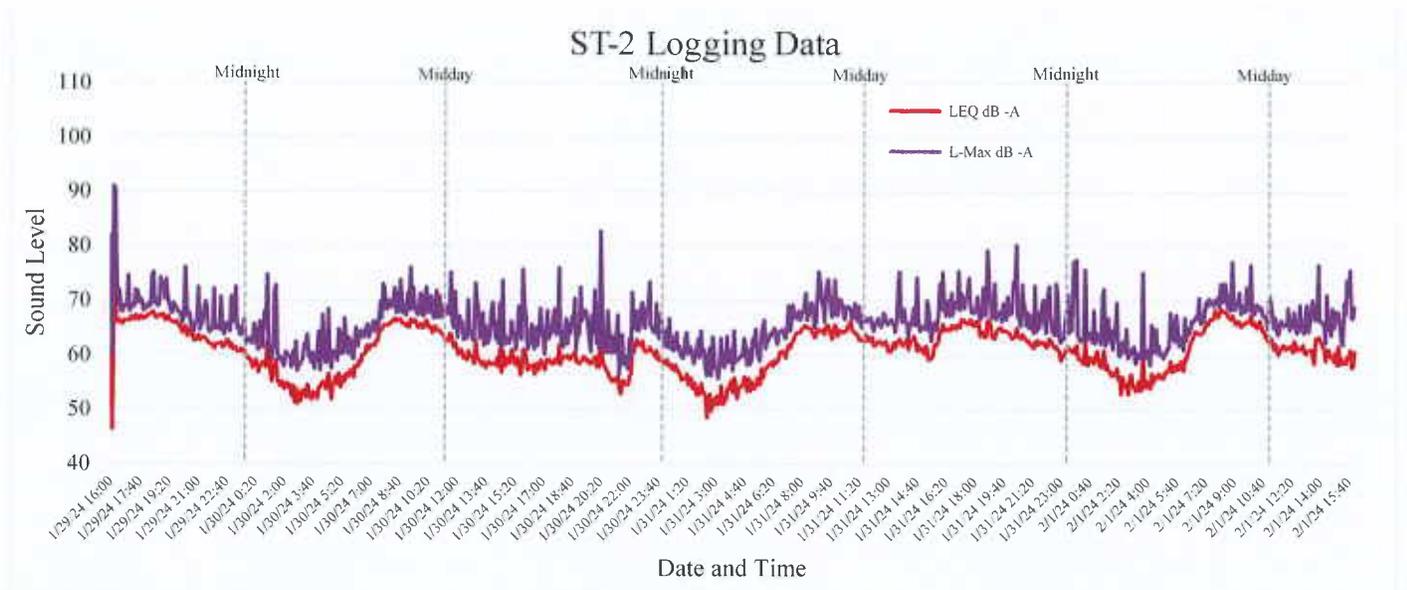


Figure 5 - ST-2 Logging Data

During the daytime, levels were typically between, 63-65 dB LA_{eq} at ST-2. Starting at around 8:00 PM, levels recorded gradually decreased until they reached a minimum of 53-55 dB LA_{eq} occurring between 3:00 – 4:00 AM.

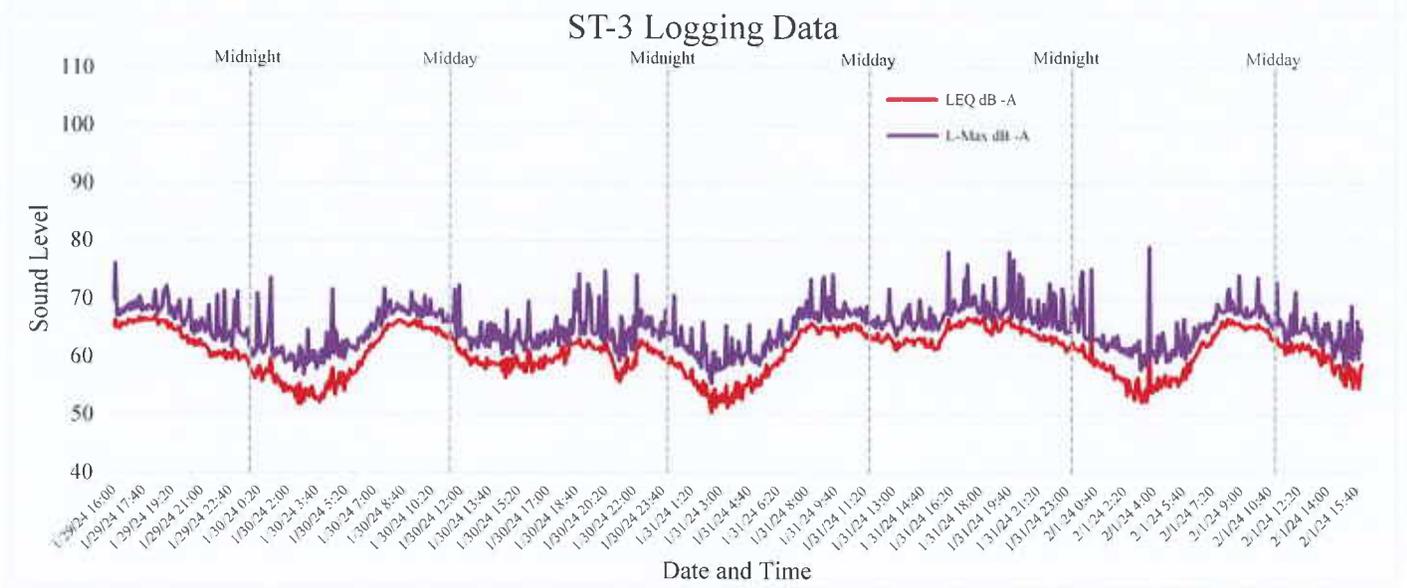


Figure 6 - ST-3 Logging Data

During the daytime, levels were typically between 60-65 dB LA_{eq} at ST-3. Starting at around 8:00 PM, levels recorded gradually decreased until they reached a minimum of 52-55 dB(A), occurring between 3:00 – 4:00 AM.

Figure 7 shows the LA_{eq} from position LT-1. Sound levels generally follow a similar pattern during the week, and are lower during the weekend. Data from 11:40 AM to 12:20 PM on February 4 has been omitted due to a rainstorm that occurred at that time, causing the brief spike.

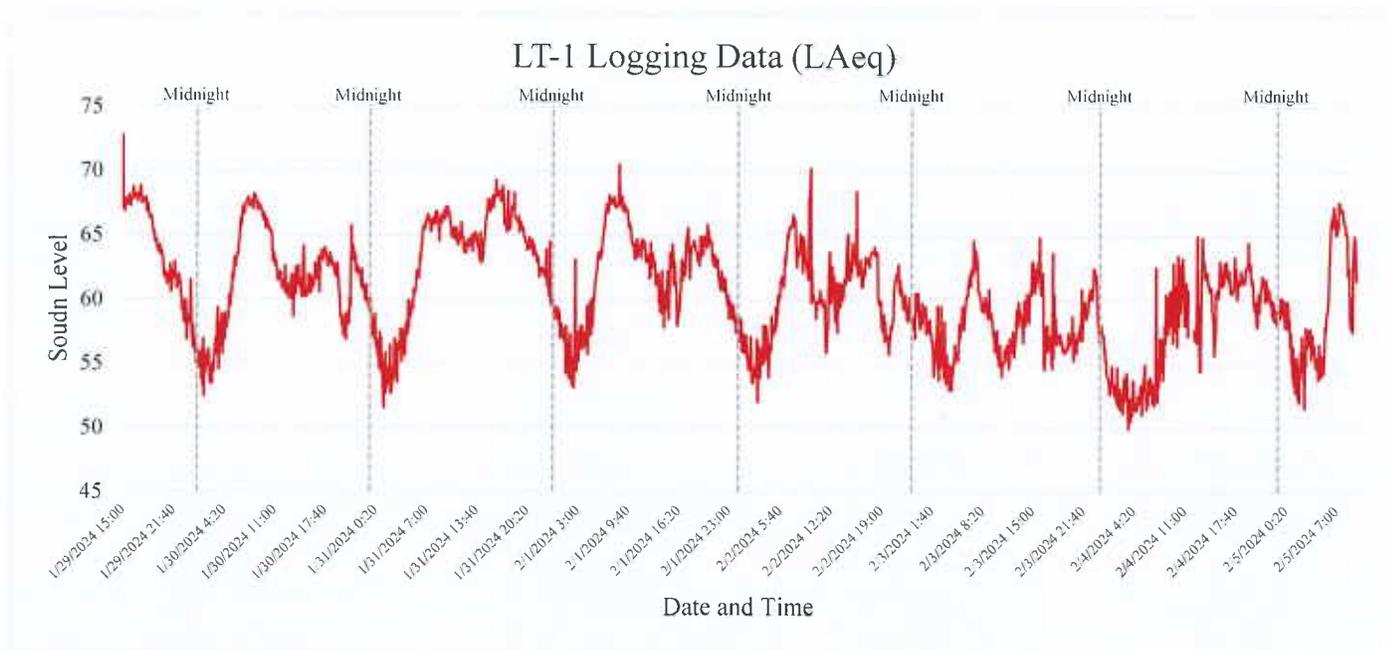


Figure 7 - LT-1 Logging Data

Patterns during the week are consistent with those recorded on the short-term loggers. During the week, levels typically peak (66-67 dBA_{eq}) around 8:00 AM, and reach their lowest (52-53 dBA_{eq}) between 1:00 AM and 3:00 AM.

Trends are believed to largely be influenced by traffic on both the Sawgrass Expressway as well as on West Oakland Park Boulevard and North Flamingo Road.

End of Report

A.1 Measurement Equipment and Conditions

A.1.1 Measurement Equipment

Measurement Type	Equipment	Notes
Long-term (LT) noise monitoring LT-1	Rion NL-52 sound level meter Rion UC-59 microphone Rion NC-74 acoustical calibrator Convergence meter (back up device)	Rion NL-52 was secured within a Pelican case, and then locked around a nearby tree. The microphone was elevated on a stand 5' off the ground. Sandbags were used to hold this in place. The Convergence meter was secured with gaff tape.
Short-term (ST) noise monitoring ST-1, 2 and 3	NSRT mk4 meters from Convergence Instruments	Secured with gaff tape.
Attended noise measurements (AM), AM 1 - 6	Brüel & Kjær 2250 sound level meter/analyzer Brüel & Kjær 4231 acoustical calibrator Brüel & Kjær 4189 measurement microphone	Elevated 5' off the ground with a tripod

A.1.2 Measurement Conditions

The weather was mostly sunny during our trip, with dry roads. The maximum average daily windspeed was 11.4 mph, and the minimum was 6 mph. However, we did encounter light showers on the afternoon of the 4th and morning of the 5th and we brought the meters under shelter for brief periods. Data collected at these times has been omitted from our analysis and is noted on logger time traces.

A.2 Acoustics Glossary

Ambient Noise Level

The ambient noise level is the overall noise level measured at a location from multiple noise sources. When assessing noise from a particular development, the ambient noise level is defined as the remaining noise level in the absence of the specific noise source being investigated. For example, if a fan located on a city building is being investigated, the ambient noise level is the noise level from all other sources without the fan running. This would include sources such as traffic, birds, people talking and other nearby fans on other buildings.

Decibel

The decibel scale is a logarithmic scale which is used to measure sound and vibration levels. Human hearing is not linear and involves hearing over a large range of sound pressure levels, which would be unwieldy if presented on a linear scale. Therefore a logarithmic scale, the decibel (dB) scale, is used to describe sound levels.

An increase of approximately 10 dB corresponds to a subjective doubling of the loudness of a noise. The minimum increase or decrease in noise level that can be noticed is typically 2 to 3 dB.

dB(A)

dB(A) denotes a single-number sound pressure level that includes a frequency weighting (“A-weighting”) to reflect the subjective loudness of the sound level.

The frequency of a sound affects its perceived loudness. Human hearing is less sensitive at low and very high frequencies, and so the A-weighting is used to account for this effect. An A-weighted decibel level is written as dB(A).

Some typical dB(A) levels are shown below.

Sound Pressure Level dB(A)	Example
130	Human threshold of pain
120	Jet aircraft take-off at 100 m
110	Chain saw at 1 m
100	Inside nightclub
90	Heavy trucks at 5 m
80	Kerbside of busy street
70	Loud stereo in living room
60	Office or restaurant with people present
50	Domestic fan heater at 1m
40	Living room (without TV, stereo, etc)
30	Background noise in a theatre
20	Remote rural area on still night
10	Acoustic laboratory test chamber
0	Threshold of hearing

L_1

The L_1 statistical level is often used to represent the maximum level of a sound level that varies with time.

Mathematically, the L_1 level is the sound level exceeded for 1% of the measurement duration. As an example, 87 dB $L_{A1,15\text{min}}$ is a sound level of 87 dB(A) or higher for 1% of the 15 minute measurement period.

L_{10}

The L_{10} statistical level is often used as the “average maximum” level of a sound level that varies with time.

Mathematically, the L_{10} level is the sound level exceeded for 10% of the measurement duration. L_{10} is often used for road traffic noise assessment. As an example, 63 dB $L_{A10,18\text{hr}}$ is a sound level of 63 dB(A) or higher for 10% of the 18 hour measurement period.

L_{90}

The L_{90} statistical level is often used as the “average minimum” or “background” level of a sound level that varies with time.

Mathematically, L_{90} is the sound level exceeded for 90% of the measurement duration. As an example, 45 dB $L_{A90,15\text{min}}$ is a sound level of 45 dB(A) or higher for 90% of the 15 minute measurement period.

L_{dn}

Referred to as the day-night level. A measure of environmental noise loudness in a day. Levels are averaged over a continuous 24 hour period, with a 10dB ‘penalty’ applied to nighttime (10pm-7am) levels.

L_{eq}

The ‘equivalent continuous sound level’, L_{eq} , is used to describe the level of a time-varying sound or vibration measurement.

L_{eq} is often used as the “average” level for a measurement where the level is fluctuating over time. Mathematically, it is the energy-average level over a period of time (i.e. the constant sound level that contains the same sound energy as the measured level). When the dB(A) weighting is applied, the level is denoted dB L_{Aeq} . Often the measurement duration is quoted, thus $L_{Aeq,15\text{min}}$ represents the dB(A) weighted energy-average level of a 15 minute measurement.

L_{max}

The L_{max} statistical level can be used to describe the “absolute maximum” level of a sound or vibration level that varies with time.

Mathematically, L_{max} is the highest value recorded during the measurement period. As an example, 94 dB L_{Amax} is a highest value of 94 dB(A) during the measurement period.

Since L_{max} is often caused by an instantaneous event, L_{max} levels often vary significantly between measurements.

Frequency

Frequency is the number of cycles per second of a sound or vibration wave. In musical terms, frequency is described as “pitch”. Sounds towards the lower end of the human hearing frequency range are perceived as “bass” or “low-pitched” and sounds with a higher frequency are perceived as “treble” or “high pitched”.

Sound Exposure Level (SEL)

The Sound Exposure Level or Single Event Noise Exposure Level, denoted SEL or L_{AE} , is a measure of the total amount of acoustic energy contained in an acoustic event. The SEL is the constant sound pressure level that would produce in a period of one second the same amount of acoustic energy contained in the acoustic event.

SEL is commonly used to quantify the total acoustic energy contained in transient events such as a vehicle pass-by.

Sound Power and Sound Pressure

The sound power level (L_w) of a source is a measure of the total acoustic power radiated by a source. The sound pressure level (L_p) varies as a function of distance from a source. However, the sound power level is an intrinsic characteristic of a source (analogous to its mass), which is not affected by the environment within which the source is located.



Natural Resource Assessment

**Baptist Health South
Florida, Inc.
Oakland Park Blvd & Flamingo Rd.
Broward County, Florida**

Prepared for:

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8500 SW 117th Avenue
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043106010
July 2024
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1920 Wekiva Way, Suite 200
West Palm Beach, FL 33411

City of Sunrise
Community Development Department

JUL 19 2024

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- APPENDIX A – FNAI Biodiversity Matrix
- APPENDIX B – USFWS IPaC Trust Resources Report
- APPENDIX C – SHPO Florida Master Site File Report

Natural Resource Assessment
Technical Memorandum

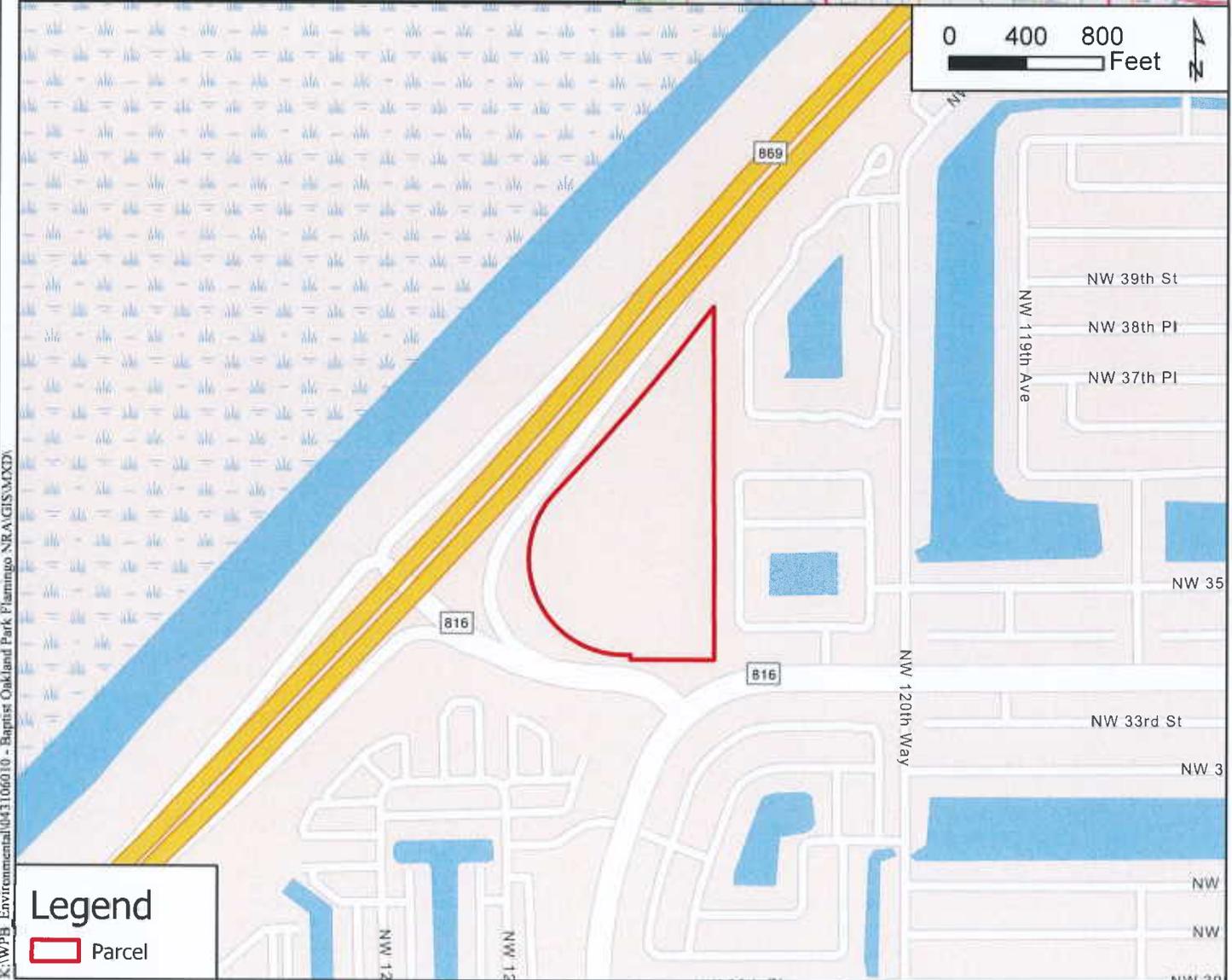
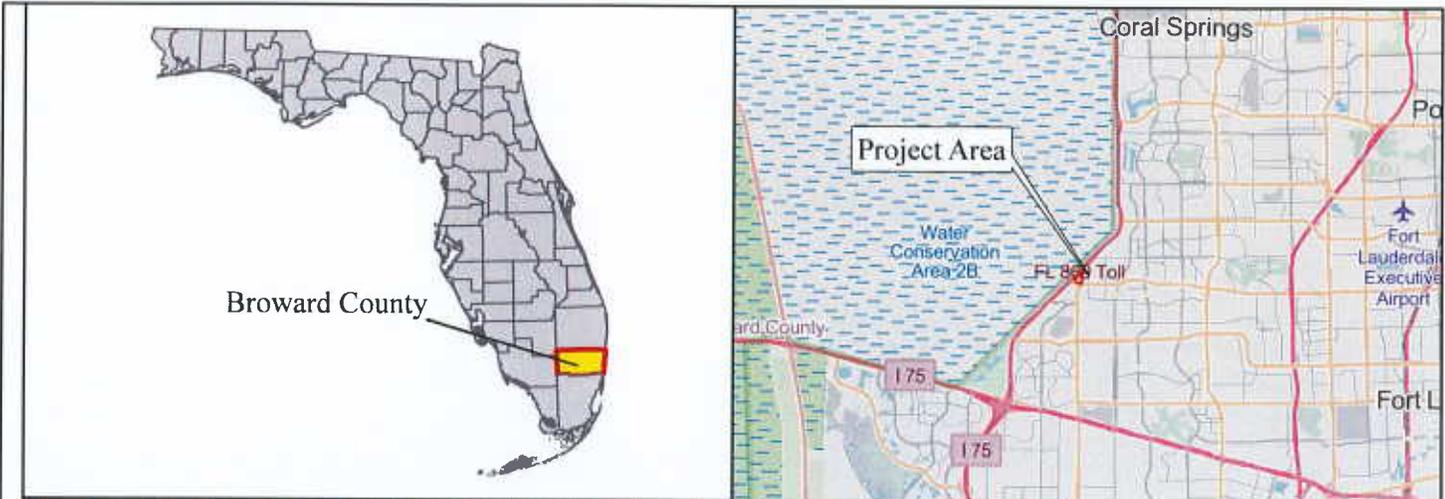
Baptist Health Enterprises
Oakland Park Blvd & Flamingo Rd.
Broward County, Florida

1.0 INTRODUCTION

The following technical memorandum summarizes a review of readily available documentation and the results of field reconnaissance conducted at the project site. The purpose of this Natural Resource Assessment was to characterize the existing conditions of the property relative to threatened and endangered species and their habitat, ecological communities, land cover and vegetation, wetlands, soils, hydrology, archaeological and historical resources, and floodplains.

The scope of this assessment included: reviewing available natural resource documentation, existing permits, listed species information, existing Geographical Information System (GIS) databases regarding known occurrences of listed species on and near the project site, site reconnaissance, and mapping and assessment of habitat types. Site reconnaissance also included a 15% gopher tortoise survey following Florida Fish and Wildlife Conservation Commission (FWC) *Gopher Tortoise Permitting Guidelines (Revised April 2023)*.

This project sits on approximately ±26 acres. It includes one parcel (494024180010) and is located at 12401 W. Oakland Park Blvd., Sunrise, Florida 33323. The location map is attached as **Figure 1**. A portion of the U.S. Geological Service (USGS) 7.5-Minute quadrangle map depicting the location of the project site is attached as **Figure 2**. The site is referenced in South Florida Water Management District (SFWMD) Environmental Resource Permits (ERP) #06-00016-S-04 and #06-80111-P, associated with the fill of the commercial parcel and creation of the on-site wetland conservation area. Additionally, the following regulatory permits were issued for the wetland conservation area: Florida Department of Environmental Protection State 404 Program No: 06-0396556-001-NPR, and Broward County Resilient Environmental Department Environmental Resource License (ERL) No. DF16-1137 and Surface Water Management License (SWM) No. SWM2021-062-0.



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Legend
 Parcel

Source: ESRI, FDOT, Maxar, GeofEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

<p>© 2024 Kimley-Horn and Associates, Inc. 1920 Wekiva Way, STE 200 West Palm Beach, FL 33411 Phone (561) 845-0665 www.kimley-horn.com</p>	<p>Project Location Map</p> <p>Baptist Health Enterprises Oakland Park Blvd & Flamingo Rd. Broward County, Florida</p>		
	1 inch = 800 feet	PROJECT NUMBER: 043106010	JULY 2024
		FIGURE 1	

0 700 1,400 Feet



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Legend

 Parcel

Source: ESRI, FDOT, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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USGS Topographic Map

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Broward County, Florida**

1 inch = 1,400 feet

PROJECT NUMBER: 043106010

JULY 2024

FIGURE 2

2.0 METHODOLOGY

The methodology for this assessment included a review of the following resources:

- Florida Natural Areas Inventory (FNAI) Biodiversity Matrix (<https://www.fnai.org/BiodiversityMatrix/index.html>)
- Various GIS data layers from the U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey (USGS), FWC [(<https://myfwc.com/wildlifehabitats/wildlife/bba/>)] and [(<https://cbop.audubon.org/conservation/about-eaglewatch-program>)]
- USFWS IPaC Trust Resources Report (<https://ecos.fws.gov/ipac/>)
- U.S. Department of Agriculture (USDA) / Natural Resources Conservation Service (NRCS) Web Soil Survey for Broward County Area, Florida (<http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>)
- State Historic Preservation Officer (SHPO), Florida Master Site File (<http://www.flheritage.com/>)
- USFWS National Wetlands Inventory (NWI) Maps (Web-based maps available from <http://www.fws.gov/wetlands/Data/mapper.html>)
- Federal Emergency Management Agency (FEMA) Digital Flood Insurance Rate Maps (FIRM; Web-based maps available from <http://msc.fema.gov/>)
- USGS Quadrangle Maps, Land Boundary Information System (LABINS; <http://www.labins.org>)
- SFWMD GIS data
- Florida Department of Environmental Protection (FDEP) MapDirect GIS
- Broward County Code of Ordinances
- SFWMD ERP Permit No. 06-00016-S-04 and 06-80111-P
- Broward County ERL No. DF16-1137 and SWM No. SWM2021-062-0

On July 2, 2024, a field review of the project site was conducted by environmental scientists to document the existing habitat conditions and determine potential wildlife utilization.

3.0 EXISTING CONDITIONS

3.1 SOILS

The USDA / NRCS *Soil Survey of Broward County Area, Florida*, maps the following soil on the property: (18) Lauderhill Muck, Hydric. A copy of the digital USDA/NRCS soils data is attached as *Figure 3*.

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Legend

NRCS Soils Description

- 18 - LAUDERHILL MUCK
- Parcel

Source: ESRI, FDOT, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

<p>Kimley»Horn</p> <p>© 2024 Kimley-Horn and Associates, Inc. 1920 Wekiva Way, STE 200 West Palm Beach, FL 33411 Phone (561) 845-0665 www.kimley-horn.com</p>	NRCS Soils Map		
	<p>Baptist Health Enterprises Oakland Park Blvd & Flamingo Rd. Broward County, Florida</p>		
1 inch = 300 feet	PROJECT NUMBER: 043106010	JULY 2024	FIGURE 3

3.2 LAND COVER AND NATURAL COMMUNITIES

Vegetative communities on the project site were identified through pedestrian transects and aerial photograph interpretation. Vegetative communities were classified using the *Florida Land Use, Cover, and Forms Classification System* (FLUCFCS, Florida Department of Transportation, 1999). A FLUCFCS map of the site is attached as **Figure 4**. A description of the upland land covers included below, characterizes dominant vegetation observed along random pedestrian transects, and does not represent an all-inclusive vegetative inventory.

FLUCFCS 190 – Open Land

This land use type consists of undeveloped and inactive land. This area was previously freshwater marsh (FLUCFCS 641), however, SFWMD ERP #06-00016-S-04 permitted the fill (limestone rock) of this portion of the wetland. The existing canopy consists of scattered ragweed (*Ambrosia artemisiifolia*), Caesar weed (*Urena lobata*), and bahia grass (*Paspalum notatum*).

3.3 WETLANDS, TIDAL WATERS AND OTHER SURFACE WATERS

The presence of wetlands was evaluated based on the Florida unified wetland delineation methodologies in accordance with Chapter 62-340, Florida Administrative Code (FAC) and the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region (Version 2.0). These methods consider prevalence of wetland vegetation, hydric soil indicators, and wetland hydrology. Surface waters include both natural and manmade bodies of water, such as streams, lakes, ponds, canals, and ditches. There is one wetland found onsite, as described below, which has been permitted as a conservation easement (see **Figure 5 – Wetland Map**). This project is proposing no impacts to the wetlands within the conservation easement.

FLUCFCS 641 – Freshwater Marshes

This land cover consists of the conservation easement found in the northern part of the project site. Vegetation found included Brazilian pepper (*Schinus terebinthifolia*), dahoon holly (*Ilex cassine*), bald cypress (*Taxodium distichum*), laurel oak (*Quercus laurifolia*), bishop wood (*Bischofia javanica*), pond apple (*Annona glabra*), firebush (*Hamelia patens*), cocoplum (*Chrysobalanus icaco*), buttonbush (*Cephalanthus occidentalis*), swamp fern (*Blechnum serrulatum*), giant leather fern (*Acrostichum danaeifolium*), pickerel weed (*Pontederia cordata*), duck potato (*Sagittaria latifolia*), soft stem bulrush

(*Scirpus validus*), fireflag (*Thalia geniculata*), swamp lily (*Crinum Americanum*), little bluestem (*Schizachyrium* spp.), tall flatsedge (*Cyperus eragrostis*), oyster plants (*Tradescantia spathacea*), seaside goldenrod (*Solidago sempervirens*), herb-of-grace (*Bacopa monnieri*), hairy beggarticks (*Bidens Pilosa*), starrush whitetop (*Rhynchospora colorata*), Virginia creeper (*Parthenocissus quinquefolia*), ragweed, earleaf acacia (*Acacia auriculiformis*), primrose willow (*Ludwigia* spp.), tropical almond (*Terminalia catappa*), torpedo grass (*Panicum repens*), crowfoot grass (*Dactyloctenium aegyptium*), and alligator weed (*Alternanthera philoxeroides*).

0 150 300 Feet



Legend

- Parcel
- 190: Open Land
- 641: Freshwater Marshes

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Source: ESRI, FDOT, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



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Florida Land Use, Cover, and Forms Classification System Map

Baptist Health Enterprises
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Broward County, Florida

1 inch = 300 feet

PROJECT NUMBER: 043106010

JULY 2024

FIGURE 4



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Source: ESRI, FDOT, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

<p>Kimley»Horn</p> <p>© 2024 Kimley-Horn and Associates, Inc. 1920 Wekiva Way, STE 200 West Palm Beach, FL 33411 Phone (561) 845-0665 www.kimley-horn.com</p>	Wetland Map		
	<p>Baptist Health Enterprises Oakland Park Blvd & Flamingo Rd. Broward County, Florida</p>		
1 inch = 300 feet	PROJECT NUMBER: 043106010	JULY 2024	FIGURE 5

3.4 WILDLIFE UTILIZATION

Wildlife observed on-site included mourning dove (*Zenaida macroura*) and turkey vulture (*Cathartes aura*).

3.5 ENDANGERED, THREATENED, AND SPECIES OF SPECIAL CONCERN

A listing of species potentially occurring within the project vicinity was reviewed using the databases described in the Section 2.0 Methodology. The results of the database review are as follows:

FNAI – FNAI reported the likely occurrence of the wood stork (*Mycteria americana*) and the Everglade snail kite (*Rostrhamus sociabilis*) within Matrix Unit 67041 and 67042 (see *Appendix A – FNAI Data Report*).

FWC – No wading bird rookeries are present within two miles of the site. There are no bald eagle (*Haliaeetus leucocephalus*) nests reported within two miles of the site. Based on a review of the GIS database from FWC, there are several observations of the Florida burrowing owl (*Athene cunicularia floridana*) within 3.2 miles of the site. However, there is no suitable habitat to support the burrowing owl on-site as the upland areas have been previously filled (with rock material) and is heavily disturbed. This species will not be discussed further.

USFWS Consultation Areas – The project site is in the following USFWS Consultation Areas:

- Everglade snail kite
- Florida bonneted bat (urban bat area)

No Everglade snail kites, evidence of snail kites, or apple snails (*Pomacea* spp.) were observed within the project site, however, nesting habitat is present within the freshwater marsh on-site. This species is discussed further below.

Potential foraging/roosting habitat exists on-site for the Florida bonneted bat. This species is discussed further below.

USFWS Wood Stork Colonies – The project site is within the core foraging area (CFA) of four wood stork colonies: Sawgrass Ford, Emerald Estates 1 and 2 Griffin, Cypress City, and Kinich. The CFA for the project site is defined as 18.6 miles from an active wood stork colony. This species is discussed further below.

USFWS IPaC Data – The IPaC Trust Resources Report (*Appendix B*) includes historical data in their reporting, which results in some species findings that do not reflect current on-site conditions. The eastern indigo snake (*Drymarchon corais couperi*) and Florida bonneted bat (*Eumops floridanus*) are the only listed species in the data with suitable habitat within the project limits. Listed species in the data that do not have suitable habitat on-site include: Florida panther (*Puma concolor coryi*), southeastern beach mouse (*Peromyscus polionotus niveiventris*), hawksbill sea turtle (*Eretmochelys coriacea*), leatherback sea turtle (*Dermochelys coriacea*), loggerhead sea turtle (*Caretta caretta*), West Indian manatee (*Trichechus manatus*), Bartram’s hairstreak butterfly (*Strymon acis bartrami*), Florida leafwing butterfly (*Anaea troglodyta floridalis*), and Miami blue butterfly (*Cyclargus thomasi bethunebakeri*).

USFWS Critical Habitat – The project site is not within any USFWS designated Critical Habitat.

Based on field reconnaissance and database reviews, a listing of the state and federally listed species potentially occurring within the immediate vicinity of the project site has been compiled. *Table 1* lists species that may occur and their likelihood of occurrence. Likelihood of occurrence is based on actual observation of the species, sign of the species (burrows, tracks, scat, etc.), observance of suitable habitat, or documented occurrences of the species within various databases.

**TABLE 1
Potential Listed Species Occurrence**

Common Name		Scientific Name	Federal Status	State Status ¹	Comments	Likelihood of Occurrence
BIRDS	Wood Stork	<i>Mycteria americana</i>	T	FT	Observed On-site: No Observed in Proximity: No Habitat present: Yes Habitat Type: Foraging	Medium
	Florida Sandhill Crane	<i>Grus canadensis pratensis</i>	NL	ST	Observed On-site: No Observed in Proximity: No Habitat present: Yes Habitat Type: Nesting	Medium
	Everglade Snail Kite	<i>Rostrhamus sociabilis plumbeus</i>	E	FE	Observed On-site: No Observed in Proximity: No Habitat present: Yes Habitat Type: Nesting	Medium
MAMMALS	Florida Bonneted Bat	<i>Eumops floridanus</i>	E	FE	Observed On-site: No Observed in Proximity: No Habitat present: Marginal Habitat Type: Foraging	Low
REPTILES	Eastern Indigo Snake	<i>Drymarchon corais couperi</i>	T	FT	Observed On-site: No Observed in Proximity: No Habitat present: Marginal Habitat Type: Nesting/foraging	Low
	Gopher Tortoise	<i>Gopherus polyphemus</i>	C	ST	Observed On-site: No Observed in Proximity: No Habitat present: Marginal Habitat Type: Burrowing/foraging	None

Federal Status: E = Endangered; T = Threatened; C = Candidate Species; NL = Not Listed.

State Status: FE = Federally Endangered; FT = Federally Threatened; ST = State Threatened. Note: Coordination is not required with FWC for federally listed species.

Based on the database review and field reconnaissance, the following species could occur on-site or require additional evaluation, survey, or permitting:

Wood Stork

The wood stork inhabits both fresh and saltwater habitats, such as fresh and saltwater marshes, tidal flats, wet prairies, cypress swamps, and drainage features. As part of the *Effect Determination Key for the Wood Stork in South Florida*, CFA buffers were established around known wood stork colonies. These buffers monitor proposed impacts to suitable foraging habitats (SFH) for the wood stork. SFH can be defined as shallow-water areas containing relatively open (<25% aquatic vegetation) water with a permanent or seasonal water depth between 2 and 15 inches. Within south Florida, the wood stork is

known to utilize an 18.6-mile radius CFA from its nesting area for foraging. Although no wood storks were observed during field reconnaissance, foraging habitat does exist within the wetland conservation easement. As no work is proposed within the wetland, this project will have no impacts on suitable foraging habitat for the wood stork. Therefore, this project will have no effect on the wood stork.

Florida Sandhill Crane

The Florida sandhill crane is non-migratory and inhabits open grasslands, freshwater marshes, swampy edges of lakes and ponds, riverbanks, prairies, pasture lands, and occasionally pine savanna throughout the state. Florida sandhill cranes typically start nesting on the margins of marshes and wet grasslands in late December and continue into June. Florida sandhill cranes were not observed during the site reconnaissance; although, nesting habitat is located within the wetland conservation easement. As no work is proposed within the wetland, this project will have no impacts on suitable nesting habitat for the sandhill crane. Therefore, this project will have no adverse effect on the Florida sandhill crane.

Everglade Snail Kite

The Everglade snail kite has experienced degradation of its foraging habitat. This species has a highly specific diet, which is made up almost exclusively of apple snails (*Pomacea paludosa*). Snail kites typically prefer large, open, freshwater marshes and shallow lakes (< 4 ft. deep) with a low density of emergent vegetation and typically nest in low trees or shrubs over water (commonly willow, wax myrtle, pond apple, buttonbush, but also in non-woody vegetation like cattail or sawgrass). Although no Everglade snail kites were observed during field reconnaissance, nesting habitat exists within the wetland conservation easement. As no work is proposed within the wetland, this project will have no impacts on suitable foraging/nesting habitat for the snail kite. Therefore, this project will have no effect on the Everglade snail kite.

Florida Bonneted Bat

The Florida bonneted bat is the largest bat species endemic to Florida. This species only occurs in fourteen counties in Florida: Miami-Dade, Monroe, Broward, Collier, Hendry, Lee, Glades, Charlotte, Okeechobee, Highlands, Desoto, Sarasota, Osceola, and Polk. This species is known to roost in artificial structures, natural tree cavities/crevices, and tree cavities created by woodpeckers and other species. This project is located within the South Florida Urban Bat Area and potential foraging habitat exists on-site within the wetland conservation easement. Additionally, three (3) bat boxes were observed

within the wetland conservation easement. Currently, there are no suitable roost trees located on the site. As this project is not proposing any impacts to the wetland, there will be no loss of foraging habitat for the bonneted bat. Therefore, this project will have no effect on the Florida bonneted bat.

Eastern Indigo Snake

The eastern indigo snake occurs in a range of habitats, including pine flatwoods, scrubby flatwoods, high pine, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats. The snake requires large tracts of land to survive and often winters in burrows of gopher tortoises, armadillos, cotton rats, and land crabs (in coastal areas) and forages in hydric habitats. No individuals were observed during field reconnaissance and there is limited habitat onsite for the snake. The snake may occasionally utilize the wetland conservation area. The upland area onsite did not contain any burrows or refugia that could be potentially utilized by the snake. Therefore, as this project is not proposing impacts to the wetland, there will be no effect on the eastern indigo snake.

Gopher Tortoise

The gopher tortoise is a burrowing tortoise that inhabits upland habitats such as pine flatwoods, xeric oak hammocks, and open sandy pastures, but can also often occur in disturbed areas. Because the on-site upland habitat was historically wetland that has been filled with limerock stone, and due to the developed nature of the surrounding area, on-site suitable habitat for the gopher tortoise is extremely limited and tortoise presence is unlikely. This project should have no adverse effects on the gopher tortoise and no further surveys for this species is recommended.

Listed Plant Species

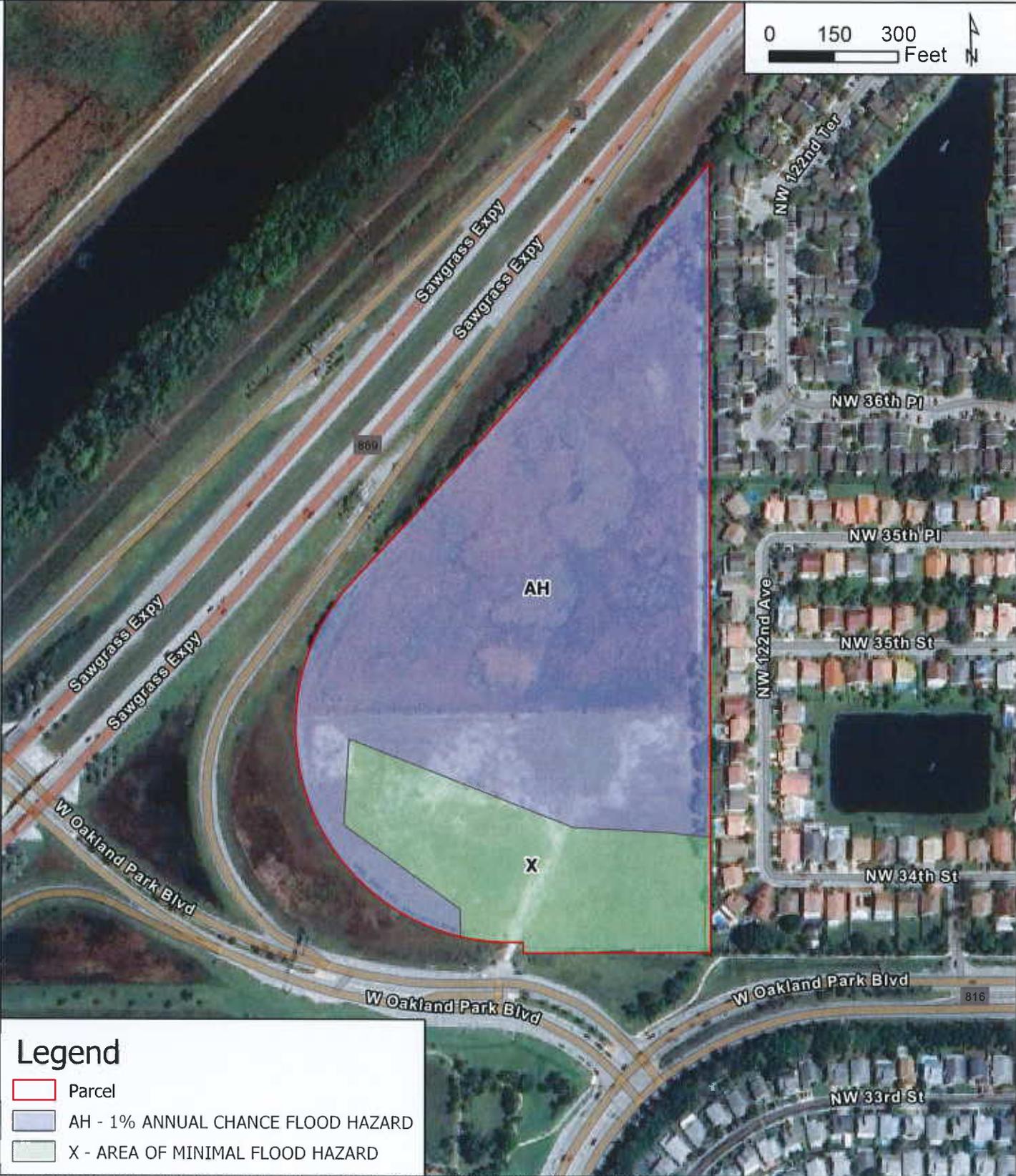
The Florida Department of Agriculture and Consumer Service's Notes on *Florida's Threatened and Endangered Plants*, and Richard Wunderlin's *Guide to Vascular Plants of Florida*, were consulted to assess habitat requirements for listed plant species. Although 7 state-listed plants and 3 federally listed plants were noted by FNAI and IPaC as possibly occurring in this area, none were observed during field reconnaissance. Habitat on-site has been disturbed from prior development, therefore habitat for listed plant species is limited. No further action should be required regarding listed plant species.

3.6 HISTORIC AND ARCHAEOLOGICAL RESOURCES

Kimley-Horn requested an inquiry from the Department of State, State Historic Preservation Officer (SHPO) Division of Historical Resources Florida Master Site File (FMSF) regarding the presence of known historical or archaeological findings on the project site or in the immediate vicinity (*Appendix C - SHPO Florida Master Site File Report*). SHPO identified no resources within the project site but identified one within the vicinity, which is not eligible for listing with the NRHP. As all documented resources are outside of the project site, no impacts are expected to occur for historic and archaeological resources and no further action should be required.

3.7 FLOODPLAIN INFORMATION

According to FEMA, the project site is located within Zone AH – 100 Year Floodplain, 1% Chance of Shallow Flooding and Zone X – within the 500-year floodplain. A FEMA flood zone map is attached as *Figure 5*. Additional engineering analysis will be required to address effects to the floodplain including design and construction of flood compensation areas. This will be evaluated during civil design and permitting with SFWMD and Broward County.



Legend

- Parcel
- AH - 1% ANNUAL CHANCE FLOOD HAZARD
- X - AREA OF MINIMAL FLOOD HAZARD

K:\WPB_Environmental\043106010 - Baptist Oakland Park Flamingo NRA\GIS\MXD

Source: ESRI, FDOT, Muxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



© 2024 Kimley-Horn and Associates, Inc.
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 West Palm Beach, FL 33411
 Phone (561) 845-0665
 www.kimley-horn.com

FEMA Flood Zone Map

Baptist Health Enterprises
Oakland Park Blvd & Flamingo Rd.
Broward County, Florida

1 inch = 300 feet

PROJECT NUMBER: 043106010

JULY 2024

FIGURE 6

4.0 REGULATORY REQUIREMENTS

4.1 LOCAL ENVIRONMENTAL ORDINANCES

The proposed study area is within the City of Sunrise and therefore must comply with the City of Sunrise Code of Ordinances. Prior to the issuance of a building permit, a landscaping plan shall be submitted to the city in conjunction with the site plan approval process. Portions of the property are within the limits of the 100-year floodplain, and therefore a permit will be required from the Broward County floodplain administrator if construction is proposed within the floodplain.

4.2 STATE REGULATORY REQUIREMENTS

Environmental Resource Permit

SFWMD ERPs (#06-00016-S-04 and #06-80111-P) were previously issued for this property to authorize the filling of a wetland on the south portion of the property and the creation of the conservation area in the north portion. The north portion of the property is under conservation easement and may not be altered. The alteration of any wetlands, surface waters, or stormwater management on-site will likely require a major modification to this permit. Wetland monitoring is currently on-going for the mitigation area as required by the South Florida Water Management District (SFWMD) and Broward County Resilient Environmental Department (BCRED). The monitoring began November 2nd, 2022 and occurs quarterly for five (5) years until November 2027. The following regulatory permits were also issued for the mitigation project: South Florida Water Management District ERP No. 06-00016-S-04 and No. 06-80111-P and Broward County Resilient Environmental Department ERL No. DF16-1137 and SWM No. SWM2021-062-0.

State Listed Species

As the project is not proposing any impacts to the wetland area, there are no State Listed species that could be impacted by the construction/development of the upland portions of the site.

4.3 FEDERAL REGULATORY REQUIREMENTS

Section 404 Dredge and Fill Permitting

The wetlands onsite were found to not be federally jurisdictional according to the FDEP NPR that was issued (06-0396556-001-NPR). No federal permitting should be required for this project.

Federal Listed Species

As the project is not proposing any impacts to the wetland area, there are no Federal listed species that could be impacted by the construction/development of the upland portions of the site.

5.0 SUMMARY AND RECOMMENDATIONS

- A landscape permit and landscape plan will be required to be submitted to the City of Sunrise in conjunction with the site plan approval process.
- The proposed project will have no negative impacts on state or federal listed flora or fauna and no pre-construction wildlife surveys are recommended at this time.
- Portions of the property are within the limits of the 100-year floodplain, and therefore a permit will be required from the Broward County floodplain administrator if construction is proposed within the floodplain.
- An ERP will be required from SFWMD to construct/modify the stormwater management system for the proposed development.
- Based on the FMSF, there were no cultural or archeological resources found on-site. No impacts are expected to occur for historic and archaeological resources and no further action should be required.

APPENDIX A
FNAI DATA REPORT



1018 Thomasville Road
 Suite 200-C
 Tallahassee, FL 32303
 850-224-8207
 850-681-9364 Fax
 www.fnai.org

FLORIDA
Natural Areas
 INVENTORY

Florida Natural Areas Inventory Biodiversity Matrix Query Results

UNOFFICIAL REPORT
 Created 7/17/2024

(Contact the FNAI Data Services Coordinator at 850.224.8207 or
 kbrinegar@fnai.fsu.edu for information on an official Standard Data Report)

NOTE: The Biodiversity Matrix includes only rare species and natural communities tracked by FNAI.

Report for 2 Matrix Units: 67041 , 67042

	<p>Descriptions</p> <p>DOCUMENTED - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit.</p> <p>DOCUMENTED-HISTORIC - There is a documented occurrence in the FNAI database of the species or community within this Matrix Unit; however the occurrence has not been observed/reported within the last twenty years.</p> <p>LIKELY - The species or community is <i>known</i> to occur in this vicinity, and is considered likely within this Matrix Unit because:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <ol style="list-style-type: none"> 1. documented occurrence overlaps this and adjacent Matrix Units, but the documentation isn't precise enough to indicate which of those Units the species or community is actually located in; <i>or</i> 2. there is a documented occurrence in the vicinity and there is suitable habitat for that species or community within this Matrix Unit. </div> <p>POTENTIAL - This Matrix Unit lies within the known or predicted range of the species or community based on expert knowledge and environmental variables such as climate, soils, topography, and landcover.</p>
--	---

Matrix Unit ID: 67041

0 **Documented** Elements Found

0 **Documented-Historic** Elements Found

2 **Likely** Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
Mycteria americana Wood Stork	G4	S2	T	FT
<i>Rostrhamus sociabilis</i> Snail Kite	G4G5	S2	E	FE

Matrix Unit ID: 67042

1 **Documented** Element Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Roystonea regia</i> Florida royal palm	G2G3	S2	N	E

0 Documented-Historic Elements Found

2 Likely Elements Found

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Mycteria americana</i> Wood Stork	G4	S2	T	FT
<i>Rostrhamus sociabilis</i> Snail Kite	G4G5	S2	E	FE

Matrix Unit IDs: 67041, 67042

14 Potential Elements Common to Any of the 2 Matrix Units

Scientific and Common Names	Global Rank	State Rank	Federal Status	State Listing
<i>Alligator mississippiensis</i> American Alligator	G5	S4	SAT	FT(S/A)
<i>Athene cunicularia floridana</i> Florida Burrowing Owl	G4T3	S3	N	ST
<i>Conradina grandiflora</i> large-flowered rosemary	G3	S3	N	T
<i>Drymarchon couperi</i> Eastern Indigo Snake	G3	S2?	T	FT
<i>Elytraria caroliniensis</i> var. <i>angustifolia</i> narrow-leaved Carolina scalystem	G4T2	S2	N	N
<i>Eumops floridanus</i> Florida bonneted bat	G1	S1	E	FE
<i>Glandularia maritima</i> coastal vervain	G3	S3	N	E
<i>Gopherus polyphemus</i> Gopher Tortoise	G3	S3	C	ST
<i>Jacquemontia curtissii</i> pineland jacquemontia	G2	S2	N	T
<i>Linum carteri</i> var. <i>smallii</i> Small's flax	G2T2	S2	N	E
<i>Prosthechea cochleata</i> clamshell orchid	G4G5	S2	N	E
<i>Roystonea regia</i> Florida royal palm	G2G3	S2	N	E
<i>Sachsia polycephala</i> Bahama sachsia	G2	S2	N	T
<i>Trichomanes punctatum</i> ssp. <i>floridanum</i> Florida filmy fern	G4G5T1	S1	E	E

Disclaimer

The data maintained by the Florida Natural Areas Inventory represent the single most comprehensive source of information available on the locations of rare species and other significant ecological resources statewide. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. FNAI shall not be held liable for the accuracy and completeness of these data, or opinions or conclusions drawn from these data. FNAI is not inviting reliance on these data. Inventory data are designed for the purposes of conservation planning and scientific research and are not intended for use as the primary criteria for regulatory decisions.

Unofficial Report

These results are considered unofficial. FNAI offers a [Standard Data Request](#) option for those needing certifiable data.

APPENDIX B
IPAC REPORT

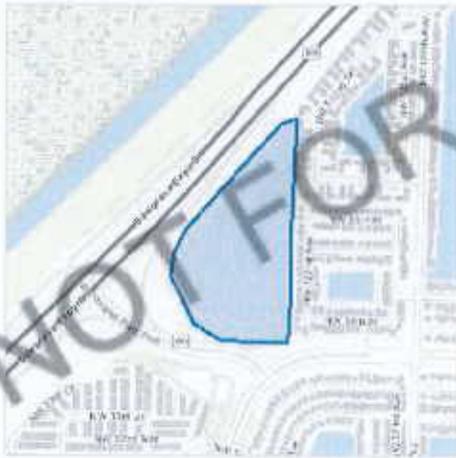
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Broward County, Florida



Local office

Florida Ecological Services Field Office

☎ (772) 5623909

📠 (772) 7780683

MAILING ADDRESS

1339 20th Street
Vero Beach, FL 32960

PHYSICAL ADDRESS

339 20th Street
Vero Beach, FL 92960

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed¹ by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME

STATUS

Florida Bonneted Bat *Eumops floridanus*

Endangered

Wherever found

There is **proposed** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/8630>

Florida Panther *Puma (=Felis) concolor coryi*

Endangered

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1763>

Puma (=mountain Lion) *Puma (=Felis) concolor* (all subsp. except *coryi*)

SAT

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/6049>

Southeastern Beach Mouse *Peromyscus polionotus niveiventris*

Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/3951>

West Indian Manatee *Trichechus manatus*

Threatened

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/4469>

Marine mammal

Birds

NAME

STATUS

Everglade Snail Kite *Rostrhamus sociabilis plumbeus*

Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/7713>

Wood Stork *Mycteria americana*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/8477>

Reptiles

NAME

STATUS

American Alligator *Alligator mississippiensis* SAT
Wherever found
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/776>

American Crocodile *Crocodylus acutus* Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/6604>

Eastern Indigo Snake *Drymarchon corais couperi* Threatened
Wherever found
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/646>

Hawksbill Sea Turtle *Eretmochelys imbricata* Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/3656>

Leatherback Sea Turtle *Dermochelys coriacea* Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/1493>

Loggerhead Sea Turtle *Caretta caretta* Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/1110>

Insects

NAME STATUS

Bartram's Hairstreak Butterfly *Strymon acis bartrami* Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/4837>

Florida Leafwing Butterfly *Anaea troglodyta floralis* Endangered
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/6652>

Miami Blue Butterfly *Cyclargus (=Hemiargus) thomasi bethunebakeri* Endangered
Wherever found
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/3797>

Monarch Butterfly *Danaus plexippus* Candidate
Wherever found
No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/9743>

Flowering Plants

NAME	STATUS
Beach Jacquemontia <i>Jacquemontia reclinata</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1277	Endangered
Tiny Polygala <i>Polygala smallii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/996	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the [FAQ below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the **PROBABILITY OF PRESENCE SUMMARY** at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

American Kestrel *Falco sparverius paulus*

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
<https://ecos.fws.gov/ecp/species/9587>

Breeds Apr 1 to Aug 31

<p>Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626</p>	<p>Breeds Sep 1 to Jul 31</p>
<p>Great Blue Heron <i>Ardea herodias occidentalis</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	<p>Breeds Jan 1 to Dec 31</p>
<p>King Rail <i>Rallus elegans</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8936</p>	<p>Breeds May 1 to Sep 5</p>
<p>Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	<p>Breeds May 1 to Jul 31</p>
<p>Reddish Egret <i>Egretta rufescens</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/7617</p>	<p>Breeds Mar 1 to Sep 15</p>
<p>Swallow-tailed Kite <i>Elanoides forficatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8938</p>	<p>Breeds Mar 10 to Jun 30</p>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

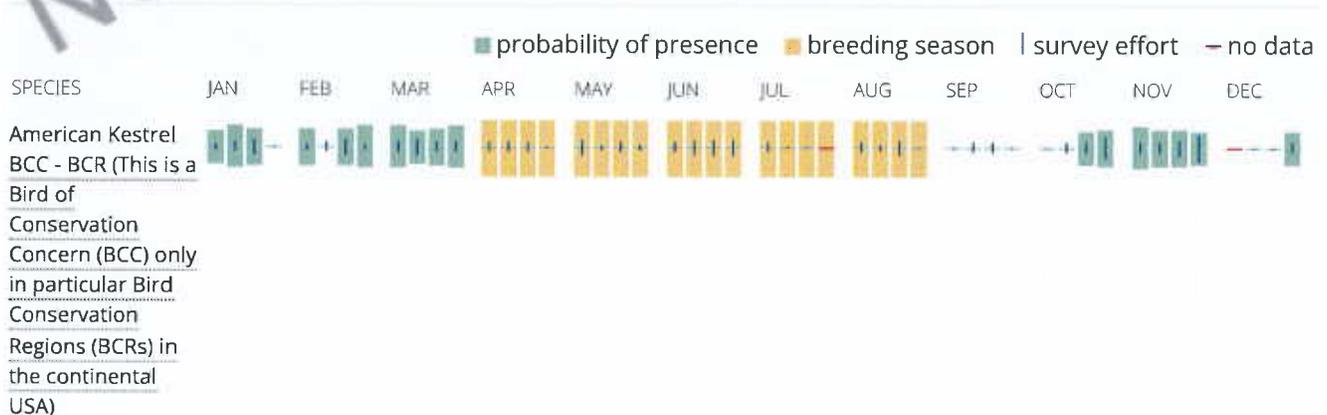
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald Eagle
Non-BCC
Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Great Blue Heron
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



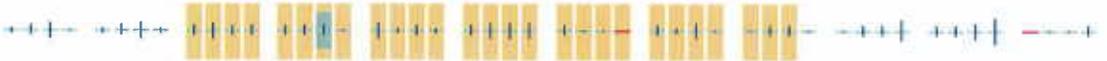
King Rail
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Prairie Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Reddish Egret
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Swallow-tailed Kite
BCC Rangewide
(CON) (This is a
Bird of
Conservation
Concern (BCC)
throughout its
range in the
continental USA
and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures or permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds](#)

[guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid

or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

NOT FOR CONSULTATION

Marine mammals

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take (to harass, hunt, capture, kill, or attempt to harass, hunt, capture or kill) of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

1. The [Endangered Species Act](#) (ESA) of 1973.
2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
3. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following marine mammals under the responsibility of the U.S. Fish and Wildlife Service are potentially affected by activities in this location:

NAME

West Indian Manatee *Trichechus manatus*
<https://ecos.fws.gov/ecp/species/4469>

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in

activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

NOT FOR CONSULTATION

APPENDIX C
SHPO FLORIDA MASTER SITE FILE REPORT



This record search is for informational purposes only and does NOT constitute a project review. This search only identifies resources recorded at the Florida Master Site File and does NOT provide project approval from the Division of Historical Resources. Contact the Compliance and Review Section of the Division of Historical Resources at 850-245-6333 for project review information.

July 3, 2024



Deborah Santos de Azevedo

Kimley-Horn | 1615 S Congress Ave #201, Delray Beach, FL 33445
Direct: 561-484-5774 | Mobile: 954-826-6691

In response to your inquiry of July 3, 2024, the Florida Master Site File lists one resource group recorded, within a 0.25-mile buffer, for the designated BAPTIST OAK subject property in Broward County, Fla.

When interpreting the results of our search, please consider the following information:

- This search area may contain *unrecorded* archaeological sites, historical structures or other resources even if previously surveyed for cultural resources.
- Because vandalism and looting are common at Florida sites, we ask that you limit the distribution of location information on archaeological sites.
- While many of our records document historically significant resources, the documentation of a resource at the Florida Master Site File does not necessarily mean the resource is historically significant.
- Federal, state and local laws require formal environmental review for most projects. This search **DOES NOT** constitute such a review. If your project falls under these laws, you should contact the Compliance and Review Section of the Division of Historical Resources at 850-245-6333.

Please do not hesitate to contact us if you have any questions regarding the results of this search.

Sincerely,

Eman M. Vovsi
Data Base Analyst
Florida Master Site File
cgfowler@dos.state.fl.us



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September 9th, 2024

Dear Mayor Ryan and City of Sunrise Commissioners:

Sawgrass Estates North HOA, Inc. strongly supports Baptist Health South Florida's proposal to build a 100-bed Community Hospital in Sunrise, Florida. This project will greatly enhance healthcare access for Sunrise residents and surrounding communities. Baptist Health is renowned for its excellence and extensive network of facilities and specialists across South Florida. Their not-for-profit mission and recognition as a top employer demonstrates their commitment to medical excellence and community service.

This proposed hospital will address a critical need for local healthcare services, reducing the necessity for Sunrise residents to travel outside the city for medical care. This improved accessibility will significantly enhance our overall quality of life. Additionally, the hospital will stimulate the local economy by creating jobs in various sectors, from administrative and support, to healthcare professionals. This economic boost will extend to local businesses, benefiting from increased patronage. Moreover, Baptist has proven to be a community partner through their long-standing participation and support for community events and programs.

The proposed hospital will provide additional opportunities to enhance community programs and support. The hospital will serve as a hub for health education and community engagement, offering programs on disease prevention and medical advancements.

In conclusion, the Baptist Health Sunrise Hospital project promises extensive benefits for Sunrise and its residents, including economic growth, enhanced healthcare access, and community enrichment. We urge the Sunrise City Commission to approve this proposal for the betterment of our community.

Thank you for your consideration.

Theresa Kline

Theresa Kline - President
Sawgrass Estates North

Artesia

August 9, 2024

Dear City of Sunrise City Commission,

On behalf of the Board of Directors of the Artesia Master Association, I wanted to share with you the support of Baptist Health South Florida's proposal to build a 100 bed community Hospital in Sunrise. We know this facility will greatly enhance the quality of life in Sunrise and afford all residents improved accessibility to the outstanding services offered by this organization.

Baptist Health is continually noted for their outstanding medical service, outstanding employment opportunities and community involvement. We also know the economic impact of this hospital in our community will impact so many of our local businesses.

Baptist Health is not only nationally known for quality health care, but for their outstanding educational programs, commitment to health education and their involvement in a tremendous number of community events.

Too often our residents unfortunately need to travel outside of Sunrise for their healthcare, which now, with this project, would be available within close proximity to their home. This we believe will be a life-saving resource for many in our area. We know this is very important resource to our more than 2000 residents in Artesia.

We believe this Baptist Health Sunrise Hospital project will provide extensive benefits to our community, our area economy and, of course, the many residents and families in Artesia and the Sunrise Community.

We urge the Sunrise City Commission to approve this proposal for the good of the community and the quality of life for all of us in Sunrise and Artesia.

Thank you for your consideration.



Louis Feuer, Vice-President

Artesia Master Association

Sunrise, FL



Management Association Inc.

4570 N Hiatus Road
Sunrise, FL 33351

August 9, 2024

Dear Mayor Ryan and City of Sunrise Commissioners:

Welleby Management Association Inc. strongly supports Baptist Health South Florida's proposal to build a 100-bed Community Hospital in Sunrise, Florida. This project will greatly enhance healthcare access for Sunrise residents and surrounding communities. Baptist Health is renowned for its excellence and extensive network of facilities and specialists across South Florida. Their not-for-profit mission and recognition as a top employer demonstrate their commitment to medical excellence and community service.

This proposed hospital will address a critical need for local healthcare services, reducing Sunrise residents' need to travel outside the city for medical care. This improved accessibility will significantly enhance our overall quality of life. Additionally, the hospital will stimulate the local economy by creating jobs in various sectors, from administrative and support to healthcare professionals. This economic boost will extend to local businesses, benefiting from increased patronage.

Moreover, Baptist has proven to be a community partner through their long-standing participation and support for community events and programs. The proposed hospital will provide additional opportunities to enhance community programs and support. The hospital will serve as a hub for health education and community engagement, offering programs on disease prevention and medical advancements.

In conclusion, the Baptist Health Sunrise Hospital project promises extensive benefits for Sunrise and its residents, including economic growth, enhanced healthcare access, and community enrichment. We urge the Sunrise City Commission to approve this proposal for the betterment of our community.

Thank you for your consideration.

Jessica L. Conover LCAM

FOR THE BOARD OF DIRECTORS



Sawgrass Preserve HOA, Inc.

August 7, 2024

Dear Mayor Ryan and City of Sunrise Commissioners:

Sawgrass Preserve strongly supports Baptist Health South Florida's proposal to build a 100-bed Community Hospital in Sunrise, Florida. This project will greatly enhance healthcare access for Sunrise residents and surrounding communities. Baptist Health is renowned for its excellence and extensive network of facilities and specialists across south Florida. Their not-for-profit mission and recognition as a top employer demonstrate their commitment to medical excellence and community service.

This proposed hospital will address a critical need for local healthcare services, reducing the necessity for Sunrise residents to travel outside the city for medical care. This improved accessibility will significantly enhance our overall quality of life. Additionally, the hospital will stimulate the local economy by creating jobs in various sectors, from administrative and support to healthcare professionals. This economic boost will extend to local businesses, benefiting from increased patronage.

Moreover, Baptist has proven to be a community partner through their long-standing participation and support for community events and programs. The proposed hospital will provide for additional opportunities to enhance community programs and support. The hospital will serve as a hub for health education and community engagement, offering programs on disease prevention and medical advancements.

In conclusion, the Baptist Health Sunrise Hospital project promises extensive benefits for Sunrise and its residents, including economic growth, enhanced healthcare access, and community enrichment. I urge the Sunrise City Commission to approve this proposal for the betterment of our community.

Thank you for your consideration.

Anamaria Nicolau

President,

A handwritten signature in black ink, appearing to be 'ANAMARIA NICOLAU', written over a horizontal line.

East Sunrise Resident Association

Meeting Location: 6800 Sunset Strip, Sunrise FL 33313
Mailing Address: PO Box 120086 Fort Lauderdale FL 33312
Tele: 954 507 7315

August 26, 2024

Dear Mayor Ryan and City of Sunrise Commissioners,

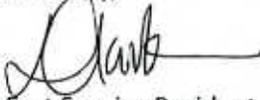
The East Sunrise Resident Association fully supports Baptist Health South Florida's proposal to construct a 100-bed Community Hospital in Sunrise, Florida. Baptist Health has a proven track record of providing valuable community programs focused on disease prevention, as well as being a leader in medical advancements, particularly in areas such as Stroke, Heart Failure, Colon Cancer and Maternal Health. Their not-for-profit mission and reputation as a top employer further showcase their commitment to excellence in healthcare and community service.

The need for a high-quality hospital within the City of Sunrise is clear. By having this facility in our city, we can address emergency medical needs locally and reduce the need for residents to seek medical care outside of Sunrise. Furthermore, the hospital will create job opportunities in a variety of sectors, from administrative roles to healthcare professionals, which will also benefit local businesses through increased patronage and economic growth.

In summary, the Baptist Health Sunrise Hospital project offers numerous advantages for Sunrise and its residents, including economic development, improved healthcare access, and overall community enrichment. We request the Sunrise City Commission to support this proposal and approve the construction of the hospital for the betterment of our community.

Thank you for your attention to this matter.

Sincerely,



East Sunrise Resident Association
Latoya Clarke, President



August 23, 2024

Mayor Michael J. Ryan and City of Sunrise Commissioners
City of Sunrise
10770 West Oakland Park Boulevard
Sunrise, FL 33351

Dear Mayor Ryan and City of Sunrise Commissioners:

The Florida Panthers supports Baptist Health South Florida's proposal to build a 100-bed Community Hospital in Sunrise, Florida. This project should greatly enhance healthcare access for Sunrise residents and surrounding communities. Baptist Health is renowned for its excellence and extensive network of facilities and specialists across south Florida. Their not-for-profit mission and recognition as a top employer demonstrate their commitment to medical excellence and community service.

This proposed hospital will address a critical need for local healthcare services, reducing the necessity for Sunrise residents to travel outside the city for medical care. This improved accessibility will significantly enhance our overall quality of life. Additionally, the hospital will stimulate the local economy by creating jobs in various sectors, from administrative and support to healthcare professionals. This economic boost will extend to local businesses, benefiting from increased patronage.

Moreover, Baptist has proven to be a community partner through their long-standing participation and support for community events and programs. The proposed hospital will provide for additional opportunities to enhance community programs and support. The hospital will serve as a hub for health education and community engagement, offering programs on disease prevention and medical advancements.

In conclusion, the Baptist Health Sunrise Hospital project promises extensive benefits for Sunrise and its residents, including economic growth, enhanced healthcare access, and community enrichment. I urge the Sunrise City Commission to approve this proposal for the betterment of our community.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew Caldwell".

Matthew Caldwell,
President and CEO



THE FAITH CENTER

Ordinary People With Extraordinary Faith

Senior Pastors: Henry and Carol Fernandez

5555 NW 95th Avenue, Sunrise, FL 33351 | TEL 954-742-7832 | FAX 954-742-7776
www.thefaithcenterint.org

August 7, 2024

Dear Mayor Ryan and City of Sunrise Commissioners:

The Faith Center, Inc. strongly supports Baptist Health South Florida's proposal to build a 100-bed Community Hospital in Sunrise, Florida. This project will greatly enhance healthcare access for Sunrise residents and surrounding communities. Baptist Health is renowned for its excellence and extensive network of facilities and specialists across south Florida. Their not-for-profit mission and recognition as a top employer demonstrate their commitment to medical excellence and community service.

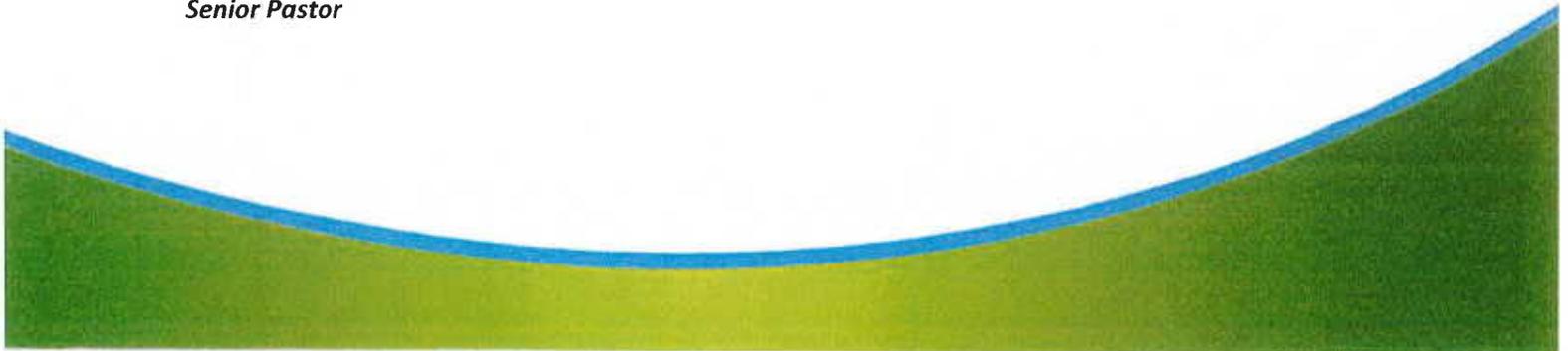
This proposed hospital will address a critical need for local healthcare services, reducing the necessity for Sunrise residents to travel outside the city for medical care. This improved accessibility will significantly enhance our overall quality of life. Additionally, the hospital will stimulate the local economy by creating jobs in various sectors, from administrative and support to healthcare professionals. This economic boost will extend to local businesses, benefiting from increased patronage.

Moreover, Baptist has proven to be a community partner through their long-standing participation and support for community events and programs. The proposed hospital will provide for additional opportunities to enhance community programs and support. The hospital will serve as a hub for health education and community engagement, offering programs on disease prevention and medical advancements.

In conclusion, the Baptist Health Sunrise Hospital project promises extensive benefits for Sunrise and its residents, including economic growth, enhanced healthcare access, and community enrichment. I urge the Sunrise City Commission to approve this proposal for the betterment of our community.

Thank you for your consideration.

Bishop Henry Fernandez
Senior Pastor





August 7, 2024

Dear Mayor Ryan and City of Sunrise Commissioners:

The Greater Sunrise Chamber of Commerce strongly supports Baptist Health South Florida's proposal to build a 100-bed Community Hospital in Sunrise, Florida. This project will greatly enhance healthcare access for Sunrise residents and surrounding communities. Baptist Health is renowned for its excellence and extensive network of facilities and specialists across south Florida. Their not-for-profit mission and recognition as a top employer demonstrate their commitment to medical excellence and community service.

This proposed hospital will address a critical need for local healthcare services, reducing the necessity for Sunrise residents to travel outside the city for medical care. This improved accessibility will significantly enhance our overall quality of life. Additionally, the hospital will stimulate the local economy by creating jobs in various sectors, from administrative and support to healthcare professionals. This economic boost will extend to local businesses, benefiting from increased patronage.

Moreover, Baptist has proven to be a community partner through their long-standing participation and support for community events and programs. The proposed hospital will provide additional opportunities to enhance community programs and support. The hospital will serve as a hub for health education and community engagement, offering programs on disease prevention and medical advancements.

In conclusion, the Baptist Health Sunrise Hospital project promises extensive benefits for Sunrise and its residents, including economic growth, enhanced healthcare access, and community enrichment. I urge the Sunrise City Commission to approve this proposal for the betterment of our community.

Thank you for your consideration.

Brian Feuer, President & CEO

The Greater Sunrise Chamber of Commerce



110 East Broward Blvd.
Suite 1990
Fort Lauderdale, FL 33301

954.524.3113 | local
954.524.3167 | fax
800.741.1420 | toll free

August 19, 2024

To Mayor Ryan and the Sunrise City Commission:

The Greater Fort Lauderdale Alliance supports Baptist Health's proposal to build a 100-bed community hospital in Sunrise, enhancing healthcare access for residents of Sunrise and the surrounding communities. Baptist Health is renowned for its excellence and extensive network of facilities and specialists across South Florida. The company's not-for-profit mission and recognition as a top employer demonstrates its commitment to medical excellence and community service.

The hospital will address a growing need for local healthcare services. As Sunrise has continued to grow to nearly 95,000 residents plus visitors, this hospital will enhance quality of life for residents and guests. The hospital will also stimulate the local economy by creating jobs in various sectors, from administrative and support to healthcare professionals, and the economic boost will also extend to local businesses.

Baptist has proven to be a genuine community partner through their long-standing participation and support for community events and programs. The proposed hospital will provide additional opportunities to enhance community programs and support and will serve as a hub for health education and community engagement, offering programs on disease prevention and medical advancements.

The new Baptist Health Sunrise Hospital project promises extensive benefits for Sunrise and its residents, including economic growth, enhanced healthcare access, and community enrichment. For these reasons, we encourage the Commission to approve the proposal. Thank you for your consideration.

With regards, I am

Sincerely,

A handwritten signature in blue ink that reads "Bob Swindell".

Bob Swindell, President/CEO



NOTICE OF PUBLIC HEARING

The City has received an application for approval of a **Special Exception** for a hospital use that is near your home or business. You are receiving this notice because you own property within 500 feet of this location. The proposed project is located at 12401 West Oakland Park Boulevard, Sunrise, Florida, as shown on the attached map. City staff has determined that this application meets all applicable code requirements. **Therefore, it will be placed on the quasi-judicial consent agenda for City Commission action at its meeting on TUESDAY, September 24, 2024 commencing at 5:30 P.M. This meeting will occur in the Sunrise City Hall Commission Chambers located at 10770 West Oakland Park Boulevard, 1st Floor, Sunrise, FL 33351.** This item may be recessed or tabled from this meeting to another meeting.

This application is on file in the Community Development Department of the City of Sunrise, located at 10770 W. Oakland Park Boulevard, 2nd Floor, Sunrise, FL, and may be viewed by any interested person Monday through Friday (excluding City holidays) between 9:00 a.m. and 4:30 p.m. or requested via AskZoning@sunrisefl.gov.

The City Commission will be meeting in-person; however, the public may attend and participate in the meeting in-person or via telephone by using Vast Conference Calling as early as fifteen (15) minutes before the start time utilizing the details below:

- a. Dial in number: (954) 395-2401
- b. Access Code: 368262

Attendees can press 5* on their phone keypad to comment during public hearings or during the open discussion. Attendees will be called upon to speak, one at a time, by the meeting organizer. For technical difficulties, please call (954) 578-4792.

You may be an "Affected Party," which is someone who will suffer an adverse effect to a legally recognizable interest if the City's Comprehensive Plan requirements and Land Development Regulations are not properly applied, as set forth in Section 16-277 of the City's Code of Ordinances. **If you want to attend the quasi-judicial consent proceeding as an Affected Party, you must file a written notice of appearance with the Community Development Department by 4:30 p.m. on the last business day before the hearing.** The notice of appearance shall state with particularity the Comprehensive Plan requirement or Land Development Regulation the person asserting affected party status contends is not being properly applied and the nature of the affected party's legally recognizable interest that may be affected by the City's approval of the land development application. Forms are available online at www.sunrisefl.gov in the [Community Development Document Library](#).

If a person decides to appeal any decision made by the board, agency, or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is based. See section 286.0105, Florida Statutes.

The City does not tolerate discrimination in any of its programs, services or activities; and will not exclude participation in, deny the benefits of, or subject to discrimination anyone on the grounds of real or perceived race, color, national origin, sex, gender identity, sexual orientation, age, disability/handicap, religion, family or income status.

In compliance with the ADA and Fla. Stat. § 286.26, any individual with a disability requesting a reasonable accommodation in order to participate in a public meeting should contact the City's ADA Coordinator at least 48 hours in advance of the scheduled meeting. Requests can be directed via e-mail to hr@sunrisefl.gov or via telephone to (954) 838-4522; Florida Relay: 711; Florida Relay (TIY/VCO): 1-800-955-8771; Florida Relay (Voice): 1-800-955-8770. Every reasonable effort will be made to allow for meeting participation.

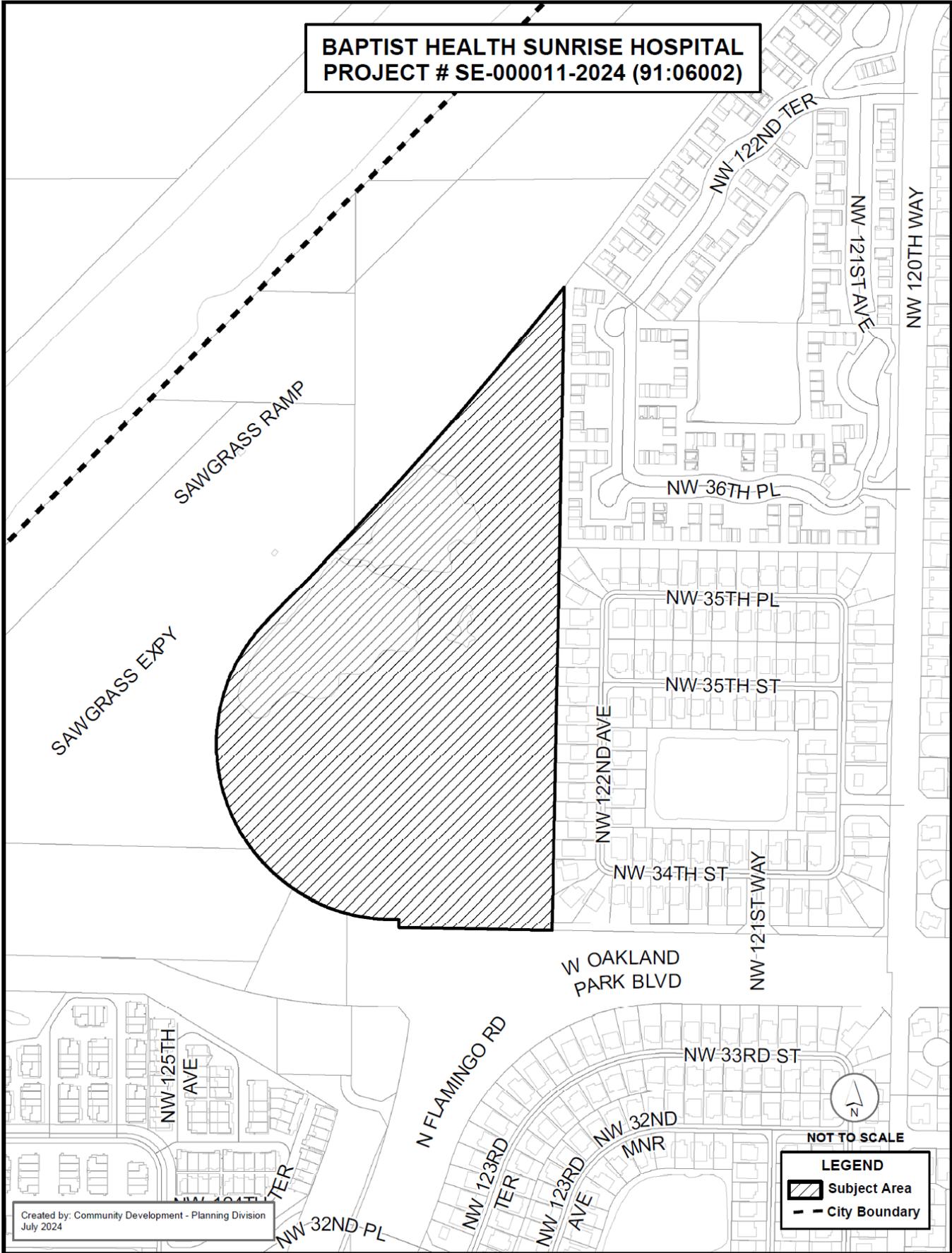
If you have any questions about this notice, then please contact City staff in the Planning Division at (954) 746-3281 or e-mail AskZoning@sunrisefl.gov.

Notification Date: September 9, 2024

COMMUNITY DEVELOPMENT DEPARTMENT
10770 W. Oakland Park Boulevard, 2nd Floor – Sunrise, Florida 33351
(954) 746-3281 AskZoning@sunrisefl.gov

Location Map

**BAPTIST HEALTH SUNRISE HOSPITAL
PROJECT # SE-00011-2024 (91:06002)**



Created by: Community Development - Planning Division
July 2024

LEGEND
[Hatched Box] Subject Area
[Dashed Line] City Boundary

SUN-SENTINEL

Sold To:

City Of Sunrise City Commission office - CU00113661
10770 West Oakland Park Blvd. 4th Floor, 4th Floor
Sunrise,FL 33351-6899

Bill To:

City Of Sunrise City Commission office - CU00113661
10770 West Oakland Park Blvd. 4th Floor, 4th Floor
Sunrise,FL 33351-6899

Published Daily

Fort Lauderdale, Broward County, Florida
Boca Raton, Palm Beach County, Florida
Miami, Miami-Dade County, Florida

State Of Florida

County Of Orange

Before the undersigned authority personally appeared
Rose Williams, who on oath says that he or she is a duly authorized representative of the SUN- SENTINEL,
a DAILY newspaper published in BROWARD/PALM BEACH/MIAMI-DADE County, Florida; that the
attached copy of advertisement, being a Legal Notice in:

The matter of 11720-Notice of Public Meeting .
Was published in said newspaper by print in the issues of, and by publication on the
newspaper's website, if authorized on Sep 14, 2024
SSC_Notice of Public Meeting
Affiant further says that the newspaper complies with all legal requirements for
publication in Chapter 50, Florida Statutes.

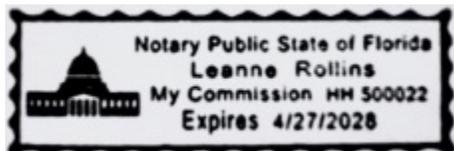


Signature of Affiant

Sworn to and subscribed before me this: September 15, 2024.



Signature of Notary Public



Name of Notary, Typed, Printed, or Stamped
Personally Known (X) or Produced Identification ()

Affidavit Delivery Method: E-Mail

Affidavit Email Address: LLawrence@sunrisefl.gov
7695584

NOTICE OF PUBLIC HEARING

The following item(s) will be presented to the City Commission, City of Sunrise, Florida on: September 24, 2024 at 5:30 p.m. in Sunrise City Hall, Commission Chambers located at 10770 West Oakland Park Boulevard, Sunrise, Florida, 33351.

This item will be on file in the Office of the City Clerk located at 10770 West Oakland Park Boulevard, Sunrise, Florida, 33351 and may be reviewed Monday through Friday, 9:00 a.m. to 5:00 p.m.

The City of Sunrise City Commission Meeting on September 10, 2024 at 5:30pm will be hosted in both an in-person format (Sunrise City Hall, 10770 West Oakland Park Boulevard, Sunrise, Florida, 33351) and a virtual format. The public is encouraged to attend and participate by telephone. Telephone call in number: 954-395-2401 Access Code: 368262 Attendees can press 5* on their phone keypad to make a comment during public hearings or during open discussion. Attendees will be called upon to speak, one at a time, by the meeting organizer. For technical difficulties please call 954-578-4792. Contact the City Manager's Office for additional information via mail to City Manager's Office, 10770 West Oakland Park Boulevard, Sunrise, FL 33351, via email to CityManager@sunrisefl.gov or via phone 954-746-3430.

C24208

AN ORDINANCE OF THE CITY OF SUNRISE, FLORIDA, AMENDING ORDINANCE NO. 715-X, AS AMENDED, BY AMENDING SECTION 2(B) "PAY PLAN" RELATING TO PAY PLAN STEP INCREASES FOR FIRE EXECUTIVE/MANAGEMENT POSITIONS; AND BY AMENDING SECTION 2(B) (1) "MERIT INCREASE" RELATING TO LAST SINGLE STEP MERIT INCREASES FOR FIRE EXECUTIVE/MANAGEMENT POSITIONS; PROVIDING FOR CONFLICT; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

C24241

AN ORDINANCE OF THE CITY OF SUNRISE, FLORIDA, AMENDING ORDINANCE NO. 782-X, AS AMENDED, RELATING TO THE LEISURE SERVICES FEE SCHEDULE, BY ADDING FEES FOR THE "VETERANS PARK MEMORIAL BRICK PROGRAM" AS EXHIBIT G; PROVIDING FOR CONFLICT; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

C24235

A RESOLUTION OF THE CITY OF SUNRISE, FLORIDA APPROVING A SPECIAL EXCEPTION FOR BAPTIST HEALTH SUNRISE HOSPITAL LOCATED AT 12401 West OAKLAND PARK BVD, SUNRISE, FLORIDA.

The public may attend and participate in the above meeting by telephone by using Vast Conference Calling as early as fifteen (15) minutes before the start time utiliz-

SUN-SENTINEL

ing the details below:

Call in number: 954-395-2401

Access Code: 368262

Attendees can press 5* on their phone keypad to sign up to make a comment during public hearings or during open discussion. Attendees will be called upon to speak, one at a time, by the meeting organizer.

For technical difficulties please call 954-578-4792

The meeting documents are available on our Commission Agendas webpage at <https://www.sunrisefl.gov/departments-services/city-commission/commission-agendas>

If a person decides to appeal any decision made by the board, agency, or commission with respect to any matter considered at such meeting or hearing, he or she will need a record of the proceedings, and that, for such purpose, he or she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is based F.S.S. 286.0105.

The City does not tolerate discrimination in any of its programs, services or activities, and will not exclude participation in, deny the benefits of, or subject to discrimination anyone on the grounds of real or perceived race, color, national origin, sex, gender identity, sexual orientation, age, disability/handicap, religion, family or income status.

In compliance with the ADA and F.S.S. 286.26, any individual with a disability requesting a reasonable accommodation in order to participate in a public meeting should contact the City's ADA Coordinator at least 2 hours in advance of the scheduled emergency meeting, or as soon as you receive this notice. Requests can be directed via e-mail to hr@sunrisefl.gov or via telephone to (954) 838-4522; Florida Relay: 711; Florida Relay (TYY/VCO): 1-800-955-8771; Florida Relay (Voice): 1-800-955-8770. Every reasonable effort will be made to allow for meeting participation.

Any person can submit written comments or evidence or other physical evidence which he or she intends to offer into evidence during the City Commission Meeting via email CityManager@sunrisefl.gov, or to the City Manager's Office, 10770 West Oakland Park Boulevard, Sunrise, FL 33351. The City of Sunrise will be conducting the September 24, 2024 City Commission Meeting via Vast Conference Calling call in number: 954-395-2401 Access Code: 368262.

09/14/2024 7695584

Lourdes M. Lawrence
Administrative Aide to
Mayor and Commissioners



Phone: (954) 746-3250
Fax: (954) 746-3243

September 19, 2024

Ana Lopez-Blazquez
Baptist Health South Florida, Inc.
6855 Red Road
Suite 600
Coral Gables, FL 33143

Dear Applicant:

Your application **Baptist Health Sunrise Hospital (Special Exception) (C24235)** has been placed on the quasi-judicial consent agenda for approval on Tuesday, September 24, 2024 at 5:30 p.m. at the City Commission meeting to be held in the commission chambers at City Hall located at 10770 West Oakland Park Blvd., Sunrise, Florida.

The City of Sunrise's City Commission Meeting will be hosted in both an in-person format and a virtual format. Telephone call in number: 954-395-2401 Access Code: 368262 Attendees can press 5* on their phone keypad to make a comment during public hearings or during open discussion. Attendees will be called upon to speak, one at a time, by the meeting organizer. For technical difficulties please call 954-578-4792.

This item may be removed from the quasi-judicial consent agenda by a commissioner of the City Commission, the staff, the applicant, or an affected party.

Any item removed from the quasi-judicial consent agenda shall be tabled to the next regularly scheduled commission meeting and will be placed on the quasi-judicial hearings. It will be your responsibility to follow up on the tabled date.

If you have any questions, please contact the Community Development Department at 954-746-3281.

Sincerely,

Lourdes Lawrence
Administrative Aide

cc: Shannon Ley, P.E., Director of Community Development
Laura Perez, Administrative Assistant, Community Development
Scott Peavler, Craven, Thompson, & Associates, Inc.