



## Public Works Traffic Analysis Comments

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Date: 7-24-2024

Subject: Midtown Doral – Phases IV, V and VI Site Plan Modification

Permit No. PLAN-2308-0058

Date Submitted: 7-5-2024

5<sup>th</sup> Review

Results of the Review:



**Approval Recommended**

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Doral Public Works Department has completed its review of the letter of intent for amendments to the Midtown Doral PUD for Pases IV, V and VIU related to Master Development and Settlement Agreements.

The proposed Midtown Doral project is located on the east side of NW 107th Avenue between NW 75th Lane and NW 90th Street in the City of Doral in Miami-Dade County, Florida. Phase IV, Phase V and Phase VI of the approved project proposes a mixed-use development with 126 residential units (ITE LUC 221) and 22,437.5 SF of retail space (ITE LUC 822) for phase IV, 126 residential units (ITE LUC 221) and 22,437.5 SF of retail space (ITE LUC 822) for phase V and 52,00 SF of retail space (ITE LUC 822) and 75,000 Sq. Ft of office space (LUC 710) for phase VI. The project is now proposing for Phase IV to consist of 146 residential units, Phase V to consist of 203 residential units and 11,370 SF of retail space, and phase VI consist of 203 residential units and 11,370 Sq. Ft of retail space.

The Public Works Department recommends approval with the following approved conditions:

1. A Directional median will be provided at the median opening located along NW 107<sup>th</sup> Ave N of NW 88 St to only allow Northbound left and eastbound left movements as shown in site plan.
  2. A Traffic Signal will be installed by developer at the NW 107<sup>th</sup> Ave and NW 86 St and at the NW 107<sup>th</sup> Ave and NW 88<sup>th</sup> St intersection. Note that coordination with the MDC school division is required to ensure it does not affect the school Traffic Operations Plan (TOP).
  3. Providing an exclusive left turn lane at the NW 107<sup>th</sup> Ave and NW 86<sup>th</sup> St intersection and at the NW 107<sup>th</sup> Ave and NW 88<sup>th</sup> St intersection.
  4. Applicant will provide a City of Doral trolley shelter to improve the existing trolley stop on the east side of NW 107 Ave just north of NW 88 St.
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Advisory comments below are necessary during site plan review process and implementation of the project:

- Note that any changes to the approved site plan land uses will require a revision to the traffic analysis.
- Approval is subject to review from City of Doral Public Works Department - Plans Review.
- Compliance with the applicable sections of the City's Land Development Code Chapter 77.

- Implementation of the proposed project dealing with roadway construction work, installation of signage, pavement markings and other needed items shall conform to all applicable requirements, standards and regulations of the latest version of the Manual on Uniform Traffic Control Devices (MUTCD), City of Doral, Miami-Dade County Department of Transportation and Public Works, and Miami-Dade Fire Rescue Department.

# Memorandum



**Date:** Thursday, July 18, 2024

**Subject:** DR 2024002220  
Applicant Name: Midtown Doral IV, V and VI

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## PROJECT DESCRIPTION

The Midtown Doral Phases IV, V, and VI project will involve a mixed-use development, featuring both mid-rise multifamily housing and retail spaces. Phase IV of the project proposes 146 residential units. Phase V of the project proposes a mixed-use development consisting of 203 residential units and 11,370 SF of retail space. Phases IV and V will share a seven-story parking garage that provides 848 parking spaces. Phase VI proposes a mixed-use development consisting of 203 residential units, 11,370 SF of retail space, and a six-story parking garage that provides 514 parking spaces. The site is currently occupied by a vacant lot.

## PROJECT LOCATION

The subject site will be located on the east side of NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 90<sup>th</sup> Street in the City of Doral.

## COMMENTS/RECOMMENDATION

**Miami-Dade County Department of Transportation and Public Works (DTPW) Traffic Engineering Division has reviewed the subject application and has no objections to this application, subject to the following conditions:**

1. Installation of a traffic signal at the intersections of NW 107 Avenue with NW 86 Street and NW 88 Street.
2. Restriping of the southbound left-turn lane at the intersection of NW 107 Avenue and NW 86 Street to allow this movement to access the subject development.
3. Addition of southbound left-turn lane at the intersection of NW 107 Avenue and NW 88 Street and perform modifications to the westbound approach to have an exclusive left turn lane and a shared through/right-turn lane.
4. Installation of a crosswalk on the south leg of the NW 107 Avenue and NW 88 Street intersection.
5. Installation of a directional median on NW 107 Avenue at the median opening north of NW 88 Street to allow for right-in/right-out movements only at the proposed driveway connection. This will still allow for northbound left and eastbound left-turn movements in/out of the existing adjacent property.

If you have any questions concerning the comments, or wish to discuss this matter further, please contact Leanne Garcia Fernandez at (305) 439-6491.

# Midtown Doral Phases IV, V, & VI

TRAFFIC STUDY

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**Prepared In:**  
June 2024

**DPA Job #:**  
23188

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## EXECUTIVE SUMMARY

The Midtown Doral Phases IV, V, and VI project will be located on the east side of NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 90<sup>th</sup> Street in Doral, Florida. Phase IV of the project proposes 146 residential units. Phase V of the project proposes a mixed-use development consisting of 203 residential units and 11,370 SF of retail space. Phases IV and V will share a seven-story parking garage that provides 848 parking spaces. Phase VI proposes a mixed-use development consisting of 203 residential units, 11,370 SF of retail space, and a six-story parking garage that provides 514 parking spaces. The site is currently occupied by a vacant lot.

Access to / from the Phase IV and V parking garage will be provided via a two-way driveway located on NW 86<sup>th</sup> Street, a two-way, right in / right out driveway located on NW 107<sup>th</sup> Avenue, and a two-way, right in / right out driveway located on NW 88<sup>th</sup> Street. The loading areas for Phases IV and V of the project are located along NW 86<sup>th</sup> Street and along the private internal roadway, north of the parking garage. Access to the loading areas is provided via a two-way driveway located on NW 86<sup>th</sup> Street and a two-way, right in / right out driveway located on NW 88<sup>th</sup> Street. Access to / from the Phase VI parking garage will be provided via a two-way, right in / right out driveway located along NW 88<sup>th</sup> Street and a two-way, right in / right out driveway located along NW 107<sup>th</sup> Avenue. The loading area for Phase VI of the project is located on the southwest corner of the site. Access to the loading area is also provided via the two-way, right in / right out driveway located along NW 88<sup>th</sup> Street and a two-way, right in / right out driveway located along NW 107<sup>th</sup> Avenue. For the purpose of this traffic analysis, the project build-out is anticipated by 2025.

An assessment of the traffic impacts associated with the Midtown Doral Phases IV, V, and VI project was performed in accordance with the requirements of the City of Doral, Miami-Dade County (MDC), and the methodology approved by both agencies. The intersection analysis indicates that all of the studied intersections, except the NW 107<sup>th</sup> Avenue / NW 90<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersections, currently operate and are projected to continue to operate within the City's overall LOS standards during the AM and PM peak hours. Signal timing adjustments are recommended to improve approach delays at the NW 107<sup>th</sup> Avenue / NW

74<sup>th</sup> Street intersection during the AM and PM peak hours. The unsignalized project driveways were also analyzed. The analysis indicates all driveways are projected to operate at acceptable LOS.

A signal warrant analysis was performed at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersections. The signal warrant study was performed using the *Manual on Uniform Traffic Control Devices* (MUTCD) published by the Federal Highway Administration (FHWA) and the Florida Department of Transportation (FDOT) *Manual on Uniform Traffic Studies* (MUTS). Meeting at least one of the signal warrants is a requirement before a traffic signal can be installed. The signal warrant analysis shows that warrants 1, 2, and 3 are met at the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersections. Therefore, a traffic signal at this intersection is recommended. However, MDC and the City of Doral must also agree with the need for a traffic signal and consider other issues and concerns before approving any new traffic signal.

The project is committed to restriping the southbound left turn lane at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection to allow this movement and convert the intersection to a signalized intersection. The project is also committed to signalizing and reconfiguring the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection. A southbound left turn lane will be added and the westbound approach will be modified to have an exclusive left turn and a shared through/right lane. A crosswalk will also be added to the south leg of the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection. Additionally, in order to make the driveway north of NW 88<sup>th</sup> Street right in / right out, the project will add a directional median to allow the northbound left and eastbound left movements in / out of the adjacent property. The project is also proposing to improve the existing trolley stop on the east side of NW 107<sup>th</sup> Avenue just north of NW 88<sup>th</sup> Street by adding a trolley shelter for passengers.

The project area is currently served by the City of Doral trolley routes 1, 3, and 4. The project is located in an area that is conducive for pedestrian activities providing ample sidewalks and pedestrian crosswalks. An off-street pedestrian / bicycle trail that runs parallel to NW 107<sup>th</sup> Avenue is also available within the project area. The availability of transit and the existing pedestrian / bicyclist infrastructure will encourage the use of other modes of transportation and will reduce the project's vehicular impacts on the roadway network.

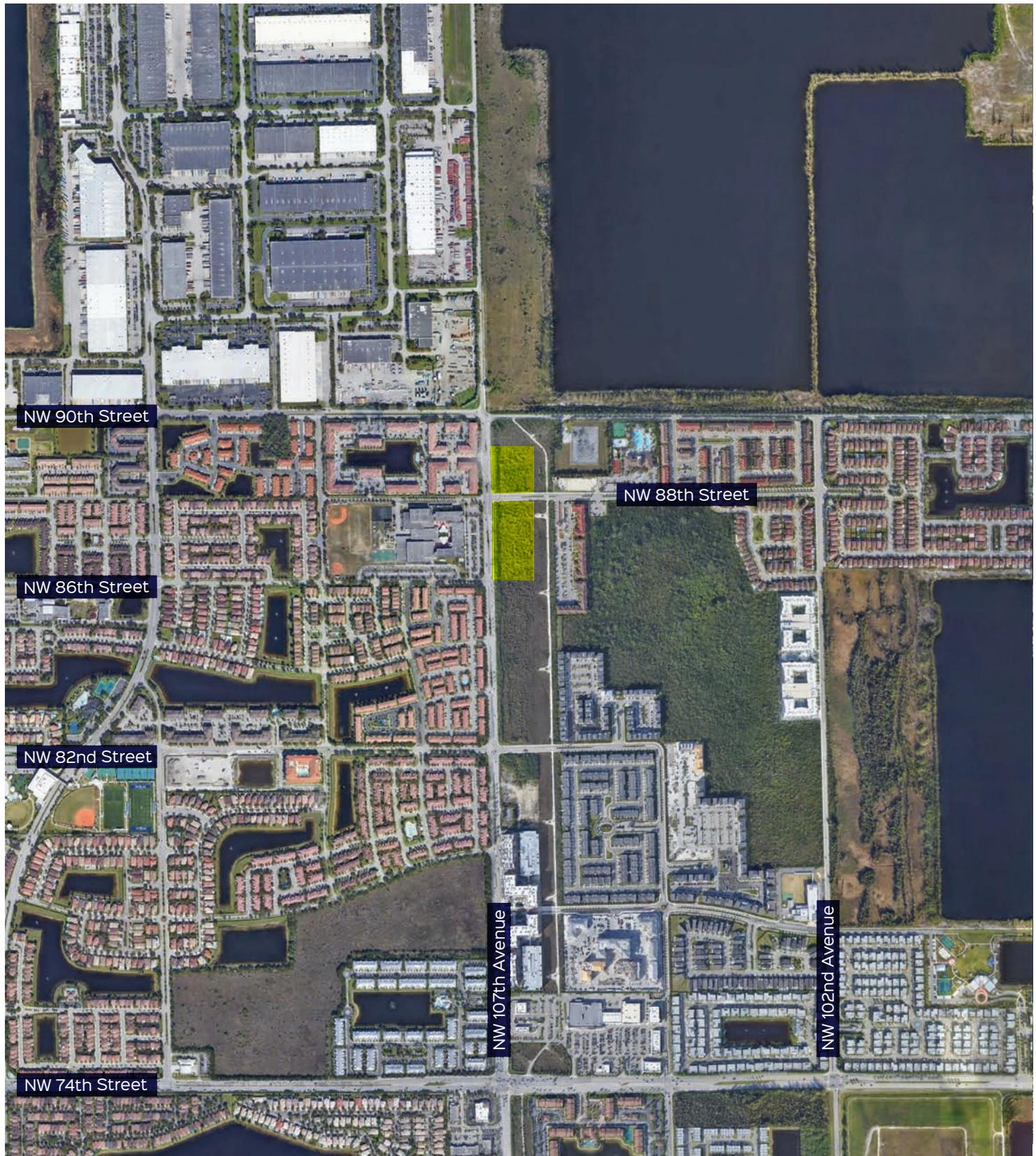
# **1.0 INTRODUCTION**

## **1.1 Project Background**

The Midtown Doral Phases IV, V, and VI project will be located on the east side of NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 90<sup>th</sup> Street in Doral, Florida (see Exhibit 1). Phase IV of the project proposes 146 residential units. Phase V of the project proposes a mixed-use development consisting of 203 residential units and 11,370 SF of retail space. Phases IV and V will share a seven-story parking garage that provides 848 parking spaces. Phase VI proposes a mixed-use development consisting of 203 residential units, 11,370 SF of retail space, and a six-story parking garage that provides 514 parking spaces. The site is currently occupied by a vacant lot. The proposed site plan is included in Appendix A.

## **1.2 Study Objective**

A traffic study was conducted in order to assess the impacts of the proposed project on the external roadway network. The study addresses trip generation, access to the site, and the traffic impacts on the nearby transportation network. The study was based on the methodology submitted and approved by the City of Doral and Miami-Dade County (MDC). The study is also consistent with *City of Doral Comprehensive Plan*.



 Project Location

## Exhibit 1

### Location Map



## **1.3 Study Area and Methodology**

### **Traffic Analysis**

The analysis undertaken is consistent with discussions with MDC, the City of Doral staff, and the *City of Doral Comprehensive Plan*. The following is a brief description of the study methodology (see Appendix B for the approved methodology):

#### ***Study Area***

The study area for the project includes the following intersections:

- NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street (U)
- NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street (U)
- NW 107<sup>th</sup> Avenue / NW 82<sup>nd</sup> Street (U)
- NW 107<sup>th</sup> Avenue / NW 90<sup>th</sup> Street (U)
- NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street (S)

The study area for the project includes the following roadway links:

- NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street
- NW 88<sup>th</sup> Street between NW 107<sup>th</sup> Avenue and NW 102<sup>nd</sup> Avenue
- NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 82<sup>nd</sup> Street
- NW 86<sup>th</sup> Street between NW 107<sup>th</sup> Avenue and NW 109<sup>th</sup> Avenue

#### ***Analysis Scenarios***

The analysis scenarios for this study are as follows:

- Existing year (2023)
- Future conditions with committed developments (2025)
- Future conditions with project and committed development (2025)

#### ***Data Collection***

- Vehicle turning movement counts (TMCs) were collected during the AM (7-9) and PM

(4–6) peak hour conditions of a regular weekday at the study intersections.

- 72-hour tube counts were collected during a regular week at the studied roadway links.
- Collected counts were also adjusted to reflect AM and PM peak hour peak season conditions for the intersection analysis. Traffic volumes were adjusted by applying the corresponding peak season conversion factors obtained from the 2022 *Florida Department of Transportation (FDOT) Peak Season Factor Category Report*.
- Field reviews were performed to obtain existing physical and operating characteristics of the roadway network within the study area. Data acquired includes the number and type of traffic lanes, intersection geometrics, signal timings, speed limit information, and other appropriate physical and operating characteristics.
- Future Transportation Projects – The 2023 TIP and the 2045 LRTP were reviewed and considered in the analysis at project build-out.

### ***Existing Conditions Intersection Capacity Analysis***

- Intersection capacity analyses were evaluated for the study area intersections using the Synchro software. Access driveways were also included as part of the level of service (LOS) analysis.

### ***Background Traffic***

- Future background traffic volumes were determined by applying a compound growth rate to existing volumes and adding committed development traffic. The growth rate was calculated based on a review of historical volumes obtained from FDOT and Miami-Dade County (MDC).
- Committed Developments – The City of Doral was consulted to determine any committed development in the vicinity of the project site and/or projects that will impact the concerned intersections. The nearby Century Town Phase II and III projects will be considered as committed developments in the analysis.
- If applicable, committed roadway improvements obtained from the 2023 Miami-Dade County TIP and/or FDOT's 5-year program that increases capacity was included in the analysis.

### ***Project Trip Generation***

Using information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition, trips associated with the proposed development were estimated. A deduction for other modes of transportation was based on local characteristics and/or modal splits near the proposed development.

### ***Project Trip Distribution***

Trip Distribution / Trip Assignment – Net new external project traffic will be assigned to the adjacent street network using the appropriate cardinal distribution from the *Miami-Dade 2045 Long Range Transportation Plan Update*, published by the *Metropolitan Planning Organization*. For estimating trip distribution for the project traffic, consideration was given to conditions such as the roadway network accessed by the project traffic, roadways available to travel in the desired direction, and attractiveness of traveling on a specific roadway.

### ***Future Conditions Intersection Analysis – Total Traffic Conditions***

- Future total traffic volumes were determined by combining project trips and background traffic volumes.
- Intersection capacity analyses were evaluated using the Synchro software. Access driveways were included as part of the analysis.

## **1.4 Project Site Information**

The Midtown Doral Phases IV, V, and VI project will be located on the east side of NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 90<sup>th</sup> Street in Doral, Florida. Phase IV of the project proposes 146 residential units. Phase V of the project proposes a mixed-use development consisting of 203 residential units and 11,370 SF of retail space. Phases IV and V will share a seven-story parking garage that provides 848 parking spaces. Phase VI proposes a mixed-use development consisting of 203 residential units, 11,370 SF of retail space, and a six-story parking garage that provides 514 parking spaces. The site is currently occupied by a vacant lot.

Access to / from the Phase IV and V parking garage will be provided via a two-way driveway located on NW 86<sup>th</sup> Street, a two-way, right in / right out driveway located on NW 107<sup>th</sup> Avenue, and a two-way, right in / right out driveway located on NW 88<sup>th</sup> Street. The loading areas for Phases IV and V of the project are located along NW 86<sup>th</sup> Street and along the project's private internal roadway, north of the parking garage. Access to the Phase IV and V loading areas are provided via a two-way driveway located on NW 86<sup>th</sup> Street and a two-way, right in / right out driveway located on NW 88<sup>th</sup> Street. Access to / from the Phase VI parking garage will be provided via a two-way, right in / right out driveway located along NW 88<sup>th</sup> Street and a two-way, right in / right out driveway located along NW 107<sup>th</sup> Avenue. The loading area for Phase VI of the project is located on the southwest corner of the site. Access to the loading area is also provided via the two-way, right in / right out driveway located along NW 88<sup>th</sup> Street and a two-way, right in / right out driveway located along NW 107<sup>th</sup> Avenue. For the purpose of this traffic analysis, the project build-out is anticipated by 2025.

## 2.0 DATA COLLECTION

Data collection for this study included roadway characteristics, intersection traffic counts, signal timing, and seasonal adjustment factors. The data collection effort is described in the following sections.

### 2.1 Roadway Characteristics

#### NW 107<sup>th</sup> Avenue

South of NW 74<sup>th</sup> Street, NW 107<sup>th</sup> Avenue is a two-way, four-lane, divided major collector roadway that provides north / south access within the project area. North of NW 74<sup>th</sup> Street, NW 107<sup>th</sup> Avenue is a minor arterial roadway. The posted speed limit is 40 mph within the study limits. The Miami-Dade County (MDC) has jurisdiction over NW 107<sup>th</sup> Avenue.

#### NW 74<sup>th</sup> Street

NW 74<sup>th</sup> Street is a two-way, six-lane, divided, principal arterial roadway that provides east / west access within the project area. Bike lanes are available along the both sides of the roadway, east of the NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection. The posted speed limit is 40 mph within the study limits. The MDC has jurisdiction over NW 74<sup>th</sup> Street.

#### NW 82<sup>nd</sup> Street

NW 82<sup>nd</sup> Street is a two-way, two-lane, divided, local roadway that provides east / west access within the project area. Bike lanes are available along the both sides of the NW 82<sup>nd</sup> Street roadway. The posted speed limit is 30 mph within the study limits. The City of Doral has jurisdiction over NW 82<sup>nd</sup> Street.

#### NW 86<sup>th</sup> Street

NW 86<sup>th</sup> Street is a two-way, two-lane, undivided, local roadway that provides east / west access within the project area. The speed limit is not posted within this segment of NW 86<sup>th</sup> Street. If not posted, the City speed limit is 30 mph. The City of Doral has jurisdiction over NW 86<sup>th</sup> Street.

NW 88<sup>th</sup> Street

East of NW 107<sup>th</sup> Avenue, NW 88<sup>th</sup> Street is a two-way, two-lane, divided, local roadway that provides east / west access within the project area. West of NW 107<sup>th</sup> Avenue, NW 88<sup>th</sup> Street is a two-way, two-lane, undivided, local roadway. The speed limit is not posted within this segment of NW 88<sup>th</sup> Street. If not posted, the City speed limit is 30 mph. The City of Doral has jurisdiction over NW 88<sup>th</sup> Street.

NW 90<sup>th</sup> Street

East of NW 107<sup>th</sup> Street, NW 90<sup>th</sup> Street is a two-way, two-lane, undivided, local roadway that provides east / west access within the project area. The posted speed limit is 30 mph within this segment of NW 90<sup>th</sup> Street. West of NW 107<sup>th</sup> Street, NW 90<sup>th</sup> Street is a two-way, two-lane, divided roadway. The posted speed limit is 35 mph within this segment of NW 90<sup>th</sup> Street. The City of Doral has jurisdiction over this segment of NW 90<sup>th</sup> Street.

## **2.2 Traffic Counts**

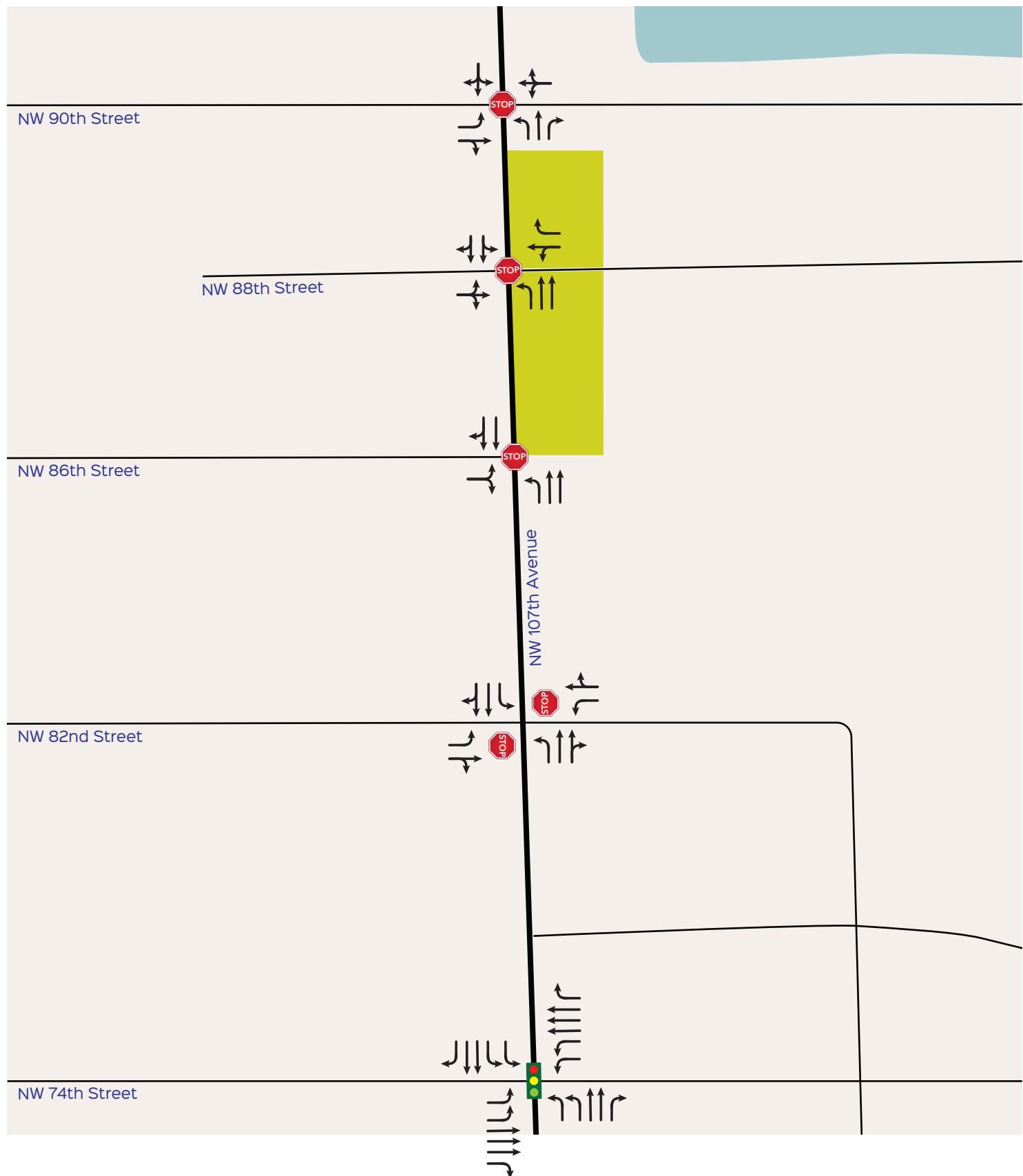
Vehicle turning movement counts (TMCs) at the analyzed intersections were collected October 31, 2023 during the AM and PM peak hour conditions. A 2022 weekly volume peak season conversion factor (PSCF) of 1.05 (Miami-Dade County north) was used, corresponding to the dates of the counts, to adjust the raw traffic counts to peak season conditions.

The TMCs at the NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection were collected on December 8, 2020 during the AM and PM peak hour conditions. A 2020 weekly PSCF of 1.08 was used to adjust the counts to peak season conditions. Due to the date of the collected TMCs at this intersection, the counts were regulated using an Adjustment Factor to correspond with the 2023 traffic volumes. The “Adjustment Factor” was developed by comparing TMC data previously collected on December 8, 2020 at the NW 88<sup>th</sup> Street / NW 107<sup>th</sup> Avenue and NW 82<sup>nd</sup> Street / NW 107<sup>th</sup> Avenue intersections against newly collected TMC at the same locations. Based on the difference in volume, the “Adjustment Factor” was developed. The counts at the NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection were grown to 2023 and then the Adjustment Factor was applied to obtain the existing traffic volumes.

72-hour tube counts were collected at the analyzed roadway segments on October 31, 2023 – November 2, 2023. A 2022 weekly volume PSCF of 1.05 (Miami-Dade County north) was used, corresponding to the dates of the counts, to adjust the raw traffic counts to peak season conditions. Collected TMCs, 72-hour counts, and PSCF are available in Appendix C.

## **2.3 Intersection Data**

A field survey was also conducted to obtain the intersection lane configurations to be used in the intersection analysis. Exhibit 2 shows the existing lane configurations at the analyzed intersections. Existing volumes for the AM and PM peak hours at the intersections analyzed are presented in Exhibit 3.

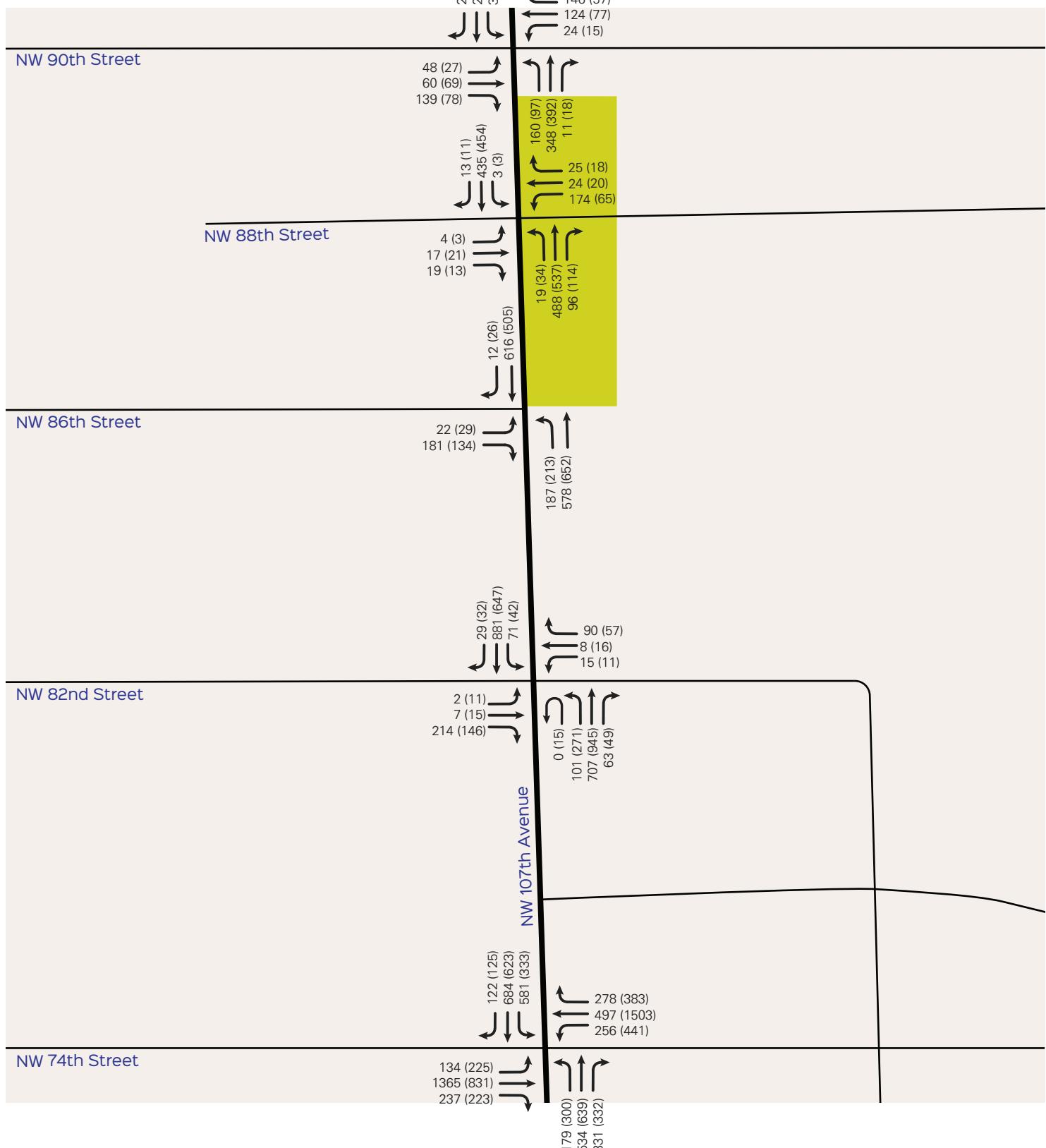


Project Location

## Exhibit 2

### Existing Lane Configurations





00 AM  
(00) PM

Project Location

## Exhibit 3

Existing AM and PM Peak Hour Traffic Volumes



## 2.4 Roadway Capacity Analysis

The FDOT's generalized service volume tables provide the maximum volume for a specific Level of Service (LOS). LOS is a qualitative assessment of a road's operating conditions and is represented by the letters A through F, where A is free flow (best condition) and F is the most congested condition. Exhibit 4 shows the existing roadway capacity volumes and the roadway link analysis for the segments under study based on the FDOT's 2023 Motor Vehicle Arterial Generalized Peak Hour Directional Service Volume Tables published within the *Multimodal Quality/Level of Service Handbook* (Appendix D). All roadway segments currently operate within the City's LOS standards.

**Exhibit 4: Existing Roadway Capacity Analysis  
Weekday AM and PM Peak Hour Conditions**

Roadway	Direction	# of Lanes	AM Peak Volume	PM Peak Volume	LOS Std	SV <sup>1</sup>	Meet LOS Std?
NW 107 <sup>th</sup> Avenue between NW 86 <sup>th</sup> Street and NW 88 <sup>th</sup> Street	NB	2LU	555	686	D	1,691	Yes
	SB	2LU	620	537	D	1,208	Yes
NW 88 <sup>th</sup> Street between NW 107 <sup>th</sup> Avenue and NW 102 <sup>nd</sup> Avenue	EB	1LU	134	43	D	1,691	Yes
	WB	1LU	124	63	D	1,268	Yes
NW 107 <sup>th</sup> Avenue between NW 86 <sup>th</sup> Street and NW 82 <sup>nd</sup> Street	NB	1LD	705	848	D	1,691	Yes
	SB	1LD	800	662	D	1,691	Yes
NW 86 <sup>th</sup> Street between NW 107 <sup>th</sup> Avenue and NW 109 <sup>th</sup> Avenue	EB	2LD	222	160	D	783	Yes
	WB	2LD	208	232	D	783	Yes

<sup>1</sup> **NW 107<sup>th</sup> Avenue (NB, Between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive left turn lane, No exclusive right turn lane ( $1,790 \times 0.9 \times 1.05 = 1,691$  vph); **NW 107<sup>th</sup> Avenue (SB, Between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, No exclusive left or right turn lanes ( $1,790 \times 0.9 \times 0.75 = 1,208$  vph); **NW 88<sup>th</sup> Street (EB, Between NW 107<sup>th</sup> Avenue and NW 102<sup>nd</sup> Avenue):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive left turn lane, No exclusive right turn lanes ( $1,790 \times 0.9 \times 1.05 = 1,691$  vph); **NW 88<sup>th</sup> Street (WB, Between NW 107<sup>th</sup> Avenue and NW 102<sup>nd</sup> Avenue):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive right turn lane, No exclusive left turn lanes ( $1,790 \times 0.9 \times 1.05 \times 0.75 = 1,268$  vph); **NW 107<sup>th</sup> Avenue (NB/SB, Between NW 86<sup>th</sup> Street and NW 82<sup>nd</sup> Street):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive left turn lane, No exclusive right turn lane ( $1,790 \times 0.9 \times 1.05 = 1,691$  vph); **NW 86<sup>th</sup> Street (EB/WB, Between NW 107<sup>th</sup> Avenue and NW 107<sup>th</sup> Avenue):** C4 classification, 1 Lane, Undivided, LOS D, Non-State Roadway, No exclusive left or right turn lanes ( $870 \times 0.9 = 783$  vph)

## 2.5 Intersection Capacity Analysis

The Synchro software was used to perform intersection capacity analysis at the analyzed intersections. Synchro is a macroscopic analysis and optimization software application that implements the Intersection Capacity Utilization method for determining intersection capacity. Synchro also supports the Highway Capacity Manual's (HCM) methodology for signalized / un-signalized intersections. Exhibit 5 shows the resulting LOS for the existing weekday AM and PM peak hour conditions. The analysis indicates that all of the studied intersections, except the NW 107<sup>th</sup> Avenue / NW 90<sup>th</sup> Street intersection, currently operate within the City's overall LOS standards. The eastbound approach of the NW 107<sup>th</sup> Avenue / NW 82<sup>nd</sup> Street intersection currently experiences delays during the PM peak hour. The westbound approach of the NW 107<sup>th</sup> Avenue / NW 82<sup>nd</sup> Street intersection also currently experiences delays during the AM and PM peak hours. The northbound and southbound approaches of the NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street currently experience delays during the AM and PM peak hours. Intersection capacity analysis worksheets are included in Appendix D.

**Exhibit 5: Existing Intersection Capacity Analysis**  
**Weekday AM and PM Peak Hour Conditions**

Intersection	Signalized/ Unsignalized	Direction	AM Peak		PM Peak		LOS Std <sup>1</sup>
			LOS	Delay (sec)	LOS	Delay (sec)	
NW 107 <sup>th</sup> Avenue / NW 88 <sup>th</sup> Street	U	NB	C	20.9	C	18.3	D
		SB	C	17.4	C	16.0	D
		EB	B	12.4	B	11.6	D
		WB	C	18.7	B	12.9	D
		<i>Overall</i>	<i>C</i>	<b>19.1</b>	<i>C</i>	<b>16.8</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 86 <sup>th</sup> Street	U	NB	B	14.3	B	13.3	D
		SB	D	35.0	C	19.7	D
		EB	C	16.0	B	13.4	D
		<i>Overall</i>	<i>C</i>	<b>22.7</b>	<i>C</i>	<b>15.5</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 82 <sup>nd</sup> Street	U	EB	D	31.8	E	40.1	D
		WB	F	127.6	F	69.1	D
NW 107 <sup>th</sup> Avenue / NW 90 <sup>th</sup> Street	U	NB	F	65.5	D	29.2	D
		SB	F	52.9	F	84.4	D
		EB	D	27.0	C	15.8	D
		WB	F	64.8	C	16.9	D
		<i>Overall</i>	<i>F</i>	<b>55.7</b>	<i>E</i>	<b>45.4</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 74 <sup>th</sup> Street	S	NB	F	86.4	F	91.0	D
		SB	E	79.7	F	119.7	D
		EB	D	54.1	D	49.2	D
		WB	E	55.9	D	48.9	D
		<i>Overall</i>	<i>E</i>	<b>66.1</b>	<i>E</i>	<b>68.4</b>	<b>D</b>

<sup>1</sup>The City of Doral Comprehensive Plan allows a capacity of D for all streets within the City of Doral.

Source: David Plummer & Associates

## **3.0 PLANNED AND PROGRAMMED ROADWAY IMPROVEMENTS**

The 2023 Miami-Dade County *Transportation Improvement Program* (TIP), the *2045 Long Range Transportation Program* (LRTP), and Doral Masterplan were reviewed to identify any programmed projects within the limits of the established study area. These documents show the following projects within the study area:

### **TIP Improvements**

**DT4460711** – DTPW highlighting bike lanes on multilane roads, bike lane / sidewalk.

**PW0001192** – NW 107<sup>th</sup> Avenue from NW 74<sup>th</sup> Street to NW 90<sup>th</sup> Street, resurfacing.

### **City of Doral Transportation Masterplan**

**Tier IV: Widen NW 90<sup>th</sup> Street** – NW 90<sup>th</sup> Street from NW 107<sup>th</sup> Avenue to NW 97<sup>th</sup> Avenue, widen an existing roadway to support future growth and development along this roadway.

The project is committed to adding southbound left turning lanes at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersections at the completion of the project. As such, these capacity improvements will be reflected in future with project conditions.

It should be noted that the widening of NW 90<sup>th</sup> Street is not expected to be completed for 15 to 20 years. Therefore, it was not reflected in the future conditions. Roadway project documentation is included in Appendix E.

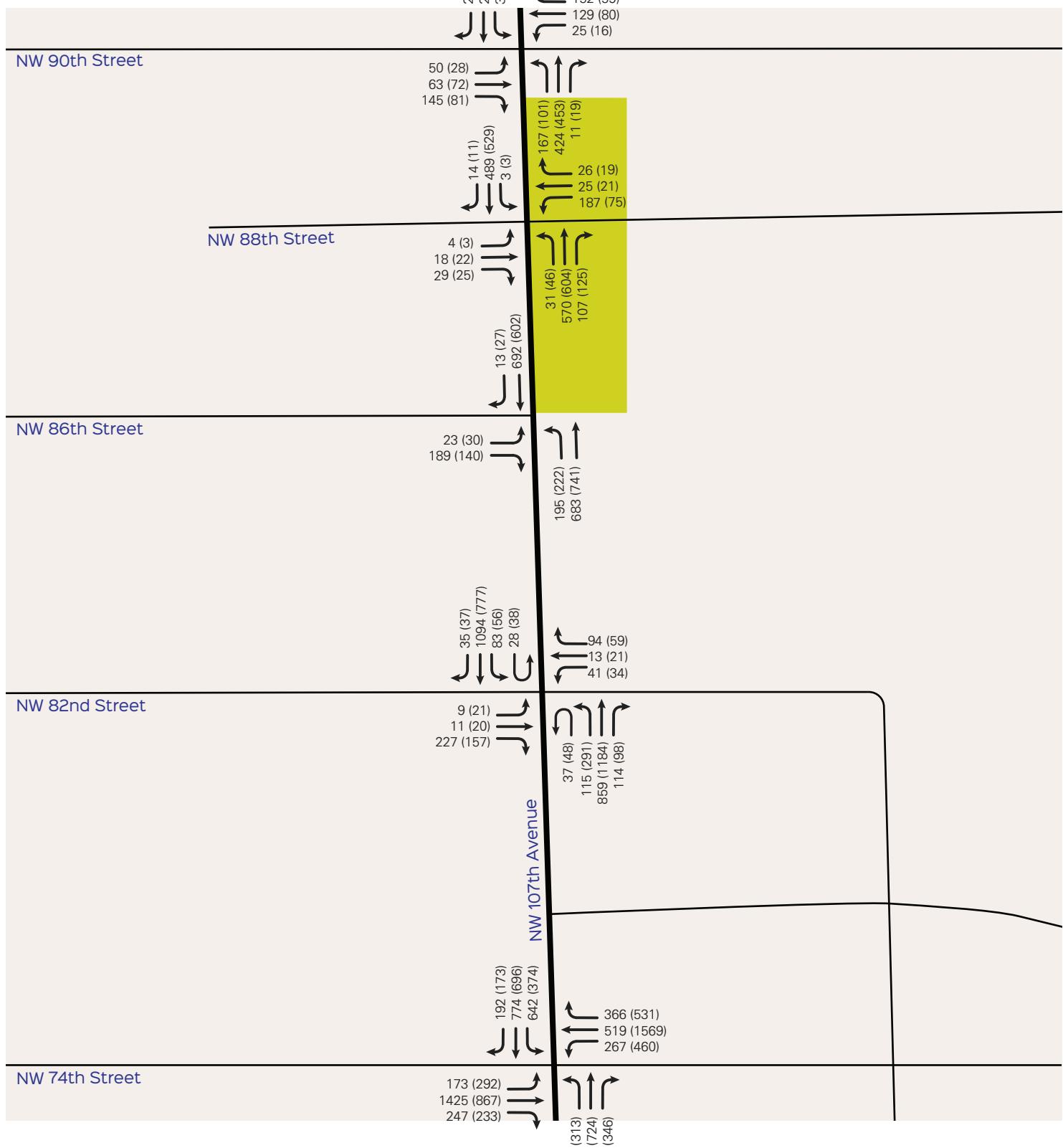
## **4.0 FUTURE TRAFFIC CONDITIONS**

### **4.1 Background Traffic**

Average Daily Traffic counts published by the Miami-Dade Public Works Department and the FDOT were reviewed to determine historic growth in the area. This analysis indicated that the annual growth rate in the area is 2.16%. As such, a growth rate of 2.16% was used to project future background traffic to the year 2025. Historic growth rate documentation is included in Appendix C.

The Century Town Phase II and III developments were found in the vicinity of the project site and were considered as committed developments. Committed development information is included in Appendix E. Turning movement volumes for future without project conditions were obtained by applying two years of background traffic and committed development traffic to existing volumes. Exhibit 6 shows the projected turning movement volumes for future without project conditions.

As part of the Century Town Phase II development, a signal is warranted at the NW 107<sup>th</sup> Avenue / NW 82<sup>nd</sup> Street intersection. This improvement will be reflected in the analysis for future without project and future with project conditions.



00 AM  
(00) PM

Project Location

## Exhibit 6

Future Without Project AM and PM Peak Hour Traffic Volumes



## 4.2 Future without Project Roadway Capacity Analysis

Exhibit 7 summarizes the resulting roadway LOS for future without project conditions. As with existing conditions, the results show that the analyzed roadways are projected to operate at a level of service within the City's adopted LOS standards.

**Exhibit 7: Future without Project Roadway Capacity Analysis**

Roadway	Direction	# of Lanes	AM Peak Volume	PM Peak Volume	LOS Std	SV <sup>1</sup>	Meet LOS Std?
NW 107 <sup>th</sup> Avenue between NW 86 <sup>th</sup> Street and NW 88 <sup>th</sup> Street	NB	2LU	659	776	D	1,691	Yes
	SB	2LU	696	635	D	1,208	Yes
NW 88 <sup>th</sup> Street between NW 107 <sup>th</sup> Avenue and NW 102 <sup>nd</sup> Avenue	EB	1LU	147	51	D	1,691	Yes
	WB	1LU	135	73	D	1,268	Yes
NW 107 <sup>th</sup> Avenue between NW 86 <sup>th</sup> Street and NW 82 <sup>nd</sup> Street	NB	1LD	854	1,038	D	1,691	Yes
	SB	1LD	967	806	D	1,691	Yes
NW 86 <sup>th</sup> Street between NW 107 <sup>th</sup> Avenue and NW 109 <sup>th</sup> Avenue	EB	2LD	232	167	D	783	Yes
	WB	2LD	217	242	D	783	Yes

<sup>1</sup> **NW 107<sup>th</sup> Avenue (NB, Between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive left turn lane, No exclusive right turn lane ( $1,790*0.9*1.05 = 1,691$  vph); **NW 107<sup>th</sup> Avenue (SB, Between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, No exclusive left or right turn lanes ( $1,790*0.9*0.75 = 1,208$  vph); **NW 88<sup>th</sup> Street (EB, Between NW 107<sup>th</sup> Avenue and NW 102<sup>nd</sup> Avenue):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive left turn lane, No exclusive right turn lanes ( $1,790*0.9*1.05 = 1,691$  vph); **NW 88<sup>th</sup> Street (WB, Between NW 107<sup>th</sup> Avenue and NW 102<sup>nd</sup> Avenue):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive right turn lane, No exclusive left turn lanes ( $1,790*0.9*1.05*0.75 = 1,268$  vph); **NW 107<sup>th</sup> Avenue (NB/SB, Between NW 86<sup>th</sup> Street and NW 82<sup>nd</sup> Street):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive left turn lane, No exclusive right turn lane ( $1,790*0.9*1.05 = 1,691$  vph); **NW 86<sup>th</sup> Street (EB/WB, Between NW 107<sup>th</sup> Avenue and NW 107<sup>th</sup> Avenue):** C4 classification, 1 Lane, Undivided, LOS D, Non-State Roadway, No exclusive left or right turn lanes ( $870*0.9 = 783$  vph)

### **4.3 Future without Project Intersection Capacity Analysis**

Future without project conditions were obtained by adding the committed developments and background traffic to the existing trips. Exhibit 8 shows the resulting LOS for the weekday AM and PM peak hours for future without project conditions. As with existing conditions, the analysis indicates that all of the studied intersections, except the NW 107<sup>th</sup> Avenue / NW 90<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersections, are projected to continue to operate within the City's overall LOS standards during the AM and PM peak hours. The eastbound and westbound approaches of the NW 107<sup>th</sup> Avenue / NW 82<sup>nd</sup> Street intersection are projected to experience delays during the AM and PM peak hours. The southbound approach of the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection is also projected to experience delays during the AM peak hour. Intersection capacity analysis worksheets are included in Appendix D.

**Exhibit 8: Future without Project Intersection Capacity Analysis**  
**Weekday AM and PM Peak Hour Conditions**

Intersection	Signalized/ Unsignalized	Direction	AM Peak		PM Peak		LOS Std <sup>1</sup>
			LOS	Delay (sec)	LOS	Delay (sec)	
NW 107 <sup>th</sup> Avenue / NW 88 <sup>th</sup> Street	U	NB	D	32.4	D	26.1	D
		SB	C	22.1	C	20.5	D
		EB	B	13.7	B	12.7	D
		WB	C	22.5	B	14.3	D
		<i>Overall</i>	<i>D</i>	<b>26.7</b>	<i>C</i>	<b>22.7</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 86 <sup>th</sup> Street	U	NB	C	17.5	C	16.0	D
		SB	F	60.3	D	29.8	D
		EB	C	17.7	B	14.6	D
		<i>Overall</i>	<i>D</i>	<b>34.3</b>	<i>C</i>	<b>20.8</b>	<b>D</b>
		<i>Overall</i>	<i>C</i>	<b>34.8</b>	<i>C</i>	<b>25.1</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 82 <sup>nd</sup> Street	S <sup>2</sup>	NB	C	23.8	B	15.5	D
		SB	C	30.9	C	23.5	D
		EB	F	87.0	F	81.2	D
		WB	E	64.8	E	76.8	D
		<i>Overall</i>	<i>C</i>	<b>34.8</b>	<i>C</i>	<b>25.1</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 90 <sup>th</sup> Street	U	NB	F	137.2	F	51.4	D
		SB	F	91.3	F	167.4	D
		EB	D	31.9	C	17.5	D
		WB	F	83.9	C	18.9	D
		<i>Overall</i>	<i>F</i>	<b>98.1</b>	<i>F</i>	<b>86.2</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 74 <sup>th</sup> Street	S	NB	F	96.2	F	108.5	D
		SB	F	95.3	F	160.2	D
		EB	E	56.8	E	61.3	D
		WB	E	60.0	D	52.7	D
		<i>Overall</i>	<i>E</i>	<b>73.9</b>	<i>F</i>	<b>83.2</b>	<b>D</b>

<sup>1</sup>The City of Doral Comprehensive Plan allows a capacity of D for all streets within the City of Doral.

Source: David Plummer & Associates

<sup>2</sup>The approved Century Town Phase II Traffic Study warrants a signal at this intersection.

## 4.4 Project Trip Generation

The trip generation for the proposed project was estimated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition. This manual provides gross trip generation rates and/or equations by land use type. These rates and equations estimate vehicle trip ends at a free-standing site's driveways. ITE trip generation worksheets are provided in Appendix F.

The proposed development plan incorporates residential and retail land uses, which can satisfy the work trip and retail needs for some residents, employees, and visitors without making a trip off-site. An internalization matrix was developed to establish the appropriate number of internal project trips. Internal capture rates used are also included in Appendix F.

Based on the US census data for tract 90.40, 4.1% of the area uses other modes of transportation. As such, a 4.1% deduction was taken for the residential land use based on the Census. ITE trip generation worksheets are provided in Appendix F. The project trip generation summary is provided in Exhibit 9.

### Exhibit 9: Project Trip Generation Summary

Proposed Phases IV & V

Proposed ITE Land Use Designation <sup>1</sup>	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Multifamily Housing (Mid-Rise) <i>Land Use Code: 221</i>	349 DU	1,618	33	109	142	83	53	136
Strip Retail Plaza (<40k) <i>Land Use Code: 822</i>	11,370 SF	710	16	11	27	43	43	86
<b>Total Gross Trips</b>		<b>2,328</b>	<b>49</b>	<b>120</b>	<b>169</b>	<b>126</b>	<b>96</b>	<b>222</b>
Other Modes of Transportation <sup>2</sup>		4.1%	-1	-4	-5	-3	-2	-5
Internalization (AM, PM) <sup>3</sup>		(2.4%, 13.8%)	-2	-2	-4	-15	-15	-30
<b>Net Existing Trips</b>			<b>46</b>	<b>114</b>	<b>160</b>	<b>108</b>	<b>79</b>	<b>187</b>

<sup>1</sup>Based on ITE *Trip Generation*, 11<sup>th</sup> Edition.

<sup>2</sup>Based on the US Census tract 90.40.

<sup>3</sup>Based on ITE *Trip Generation Handbook*, 3<sup>rd</sup> Edition.

### Proposed Phase VI

Proposed ITE Land Use Designation <sup>1</sup>	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Multifamily Housing (Mid-Rise) <i>Land Use Code: 221</i>	203 DU	922	18	60	78	48	31	79
Strip Retail Plaza (<40k) <i>Land Use Code: 822</i>	11,370 SF	710	16	11	27	43	43	86
<b>Total Gross Trips</b>		<b>1,632</b>	<b>34</b>	<b>71</b>	<b>105</b>	<b>91</b>	<b>74</b>	<b>165</b>
Other Modes of Transportation <sup>2</sup>		4.1%	-1	-2	-3	-2	-1	-3
Internalization (AM, PM) <sup>3</sup>		(2.0%, 18.5%)	-1	-1	-2	-15	-15	-30
<b>Net Existing Trips</b>			<b>32</b>	<b>68</b>	<b>100</b>	<b>74</b>	<b>58</b>	<b>132</b>

<sup>1</sup>Based on ITE Trip Generation, 11<sup>th</sup> Edition.

<sup>2</sup>Based on the US Census tract 90.40.

<sup>3</sup>Based on ITE Trip Generation Handbook, 3<sup>rd</sup> Edition.

## 4.5 Project Trip Assignment

Project traffic was distributed and assigned to the study area using the cardinal distribution for TAZ 687 shown in Exhibit 10. The cardinal distribution gives a generalized distribution of trips from a TAZ to other parts of Miami-Dade County. The distribution can be summarized as follows: 17% to the north, 34% to the south, 42% to the east, and 7% to the west.

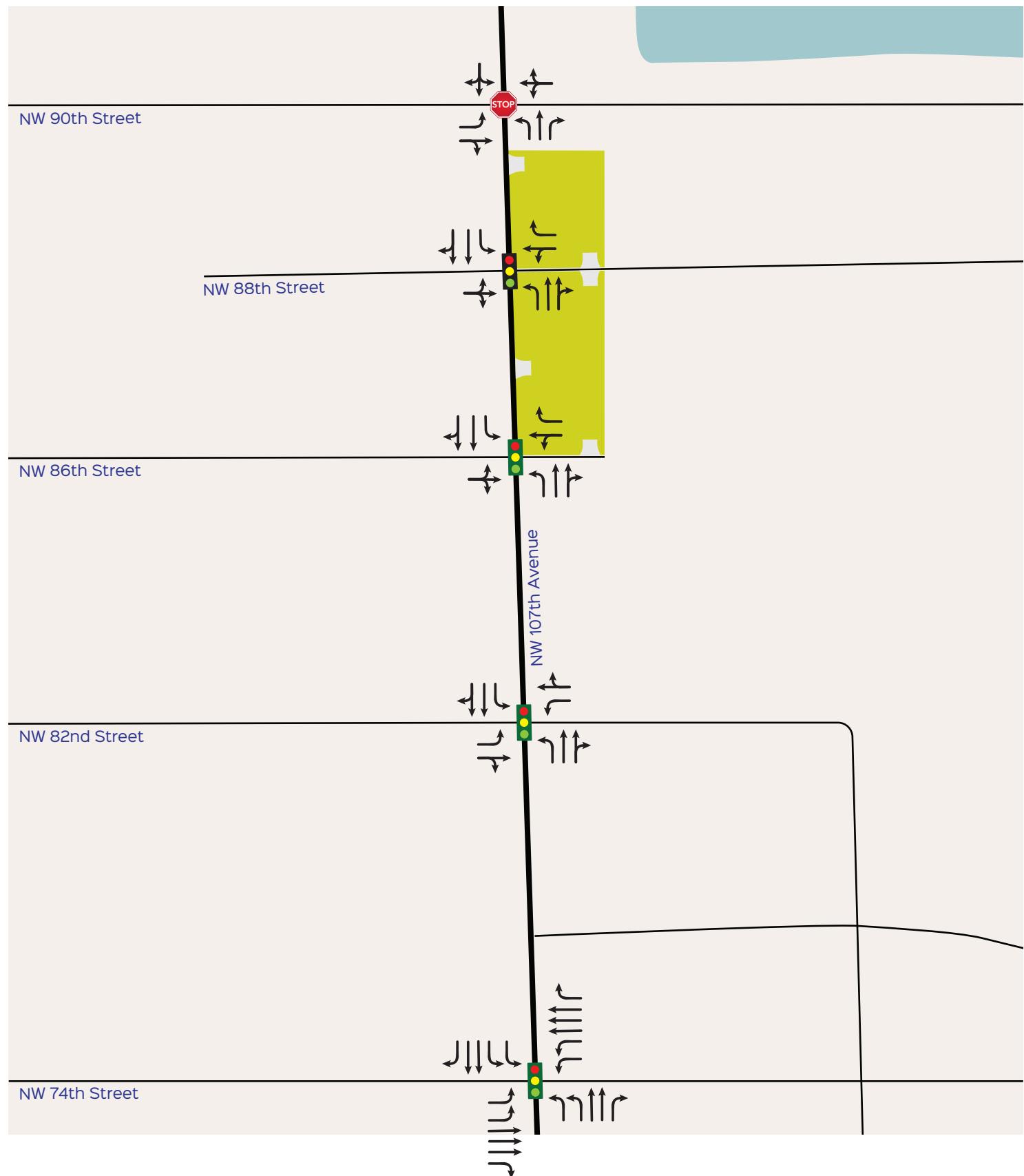
For estimating trip distribution for the project traffic, consideration was given to conditions such as the roadway network accessed by the project traffic, roadways available to travel in the desired direction, and attractiveness of traveling on a specific roadway. The project will be developed in phases. Phases IV and V will be completed on the same site, while Phase VI will be completed on a site to the north. Therefore, the project trip distribution and assignment for Phases IV and V are independent of the Phase VI project trip distribution and assignment. The proposed lane configurations is shown in Exhibit 11.

The project trip distribution and trip assignment for each phase are graphically portrayed in Exhibits 12 – 15. The project trip distribution along the extended roadway network is provided in Appendix C. Exhibit 16 shows the projected turning movements for future with project conditions.

**Exhibit 10: Cardinal Distribution (TAZ 687)**

DIRECTION	2015	2045	2025
NNE	12.2%	14.8%	13.1%
ENE	17.2%	14.4%	16.3%
ESE	27.1%	22.3%	25.5%
SSE	20.5%	21.0%	20.7%
SSW	12.5%	15.8%	13.6%
WSW	5.4%	3.6%	4.8%
WNW	2.1%	2.1%	2.1%
NNW	3.0%	6.1%	4.0%

Source: *Miami-Dade Long Range Transportation Plan*

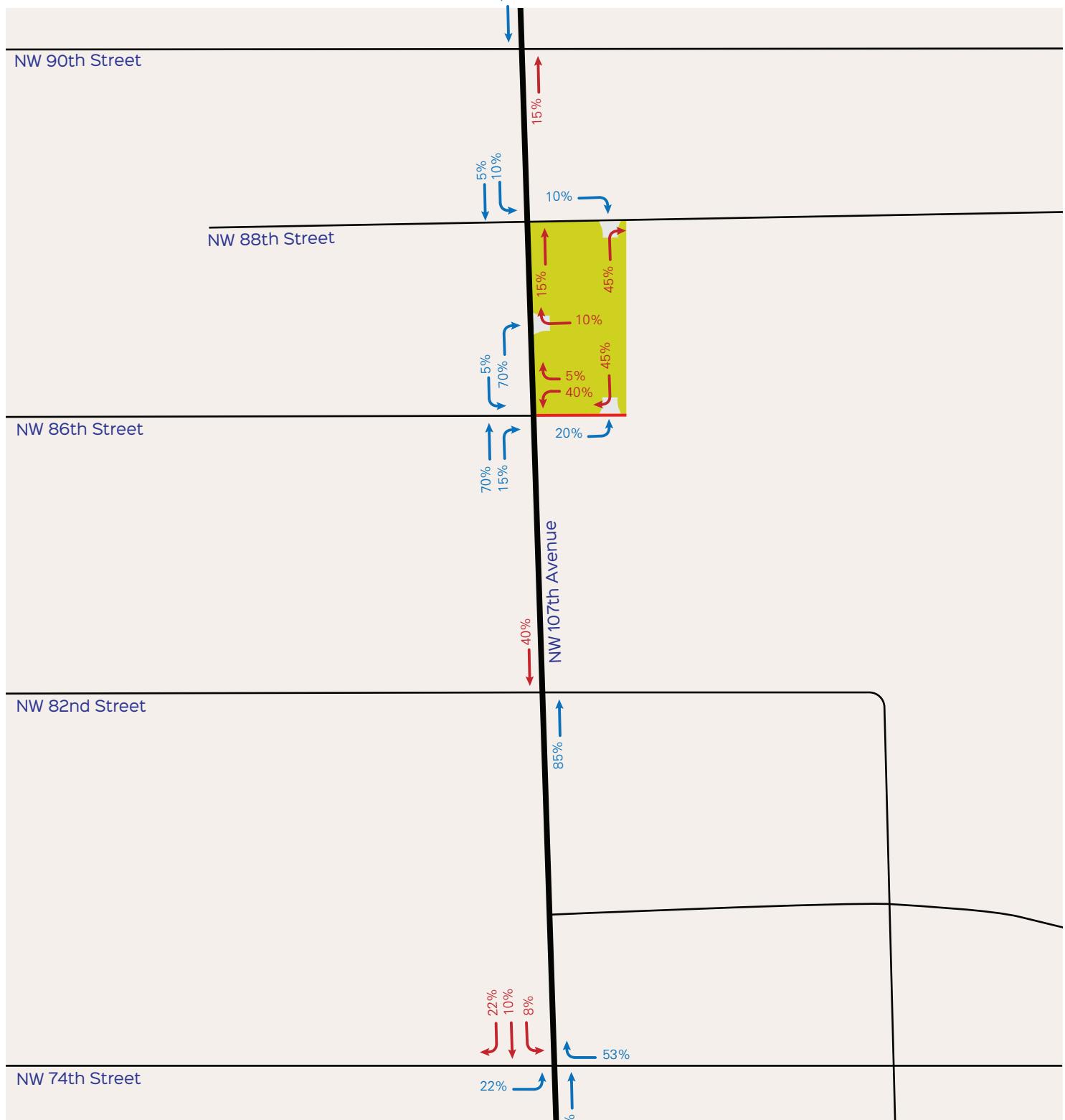


■ Project Location

## Exhibit 11

### Proposed Lane Configurations





█ % Inbound      — Future Roadway Extension

█ % Outbound

█ Project Location

## Exhibit 12

Project Trip Distribution Phases IV & V



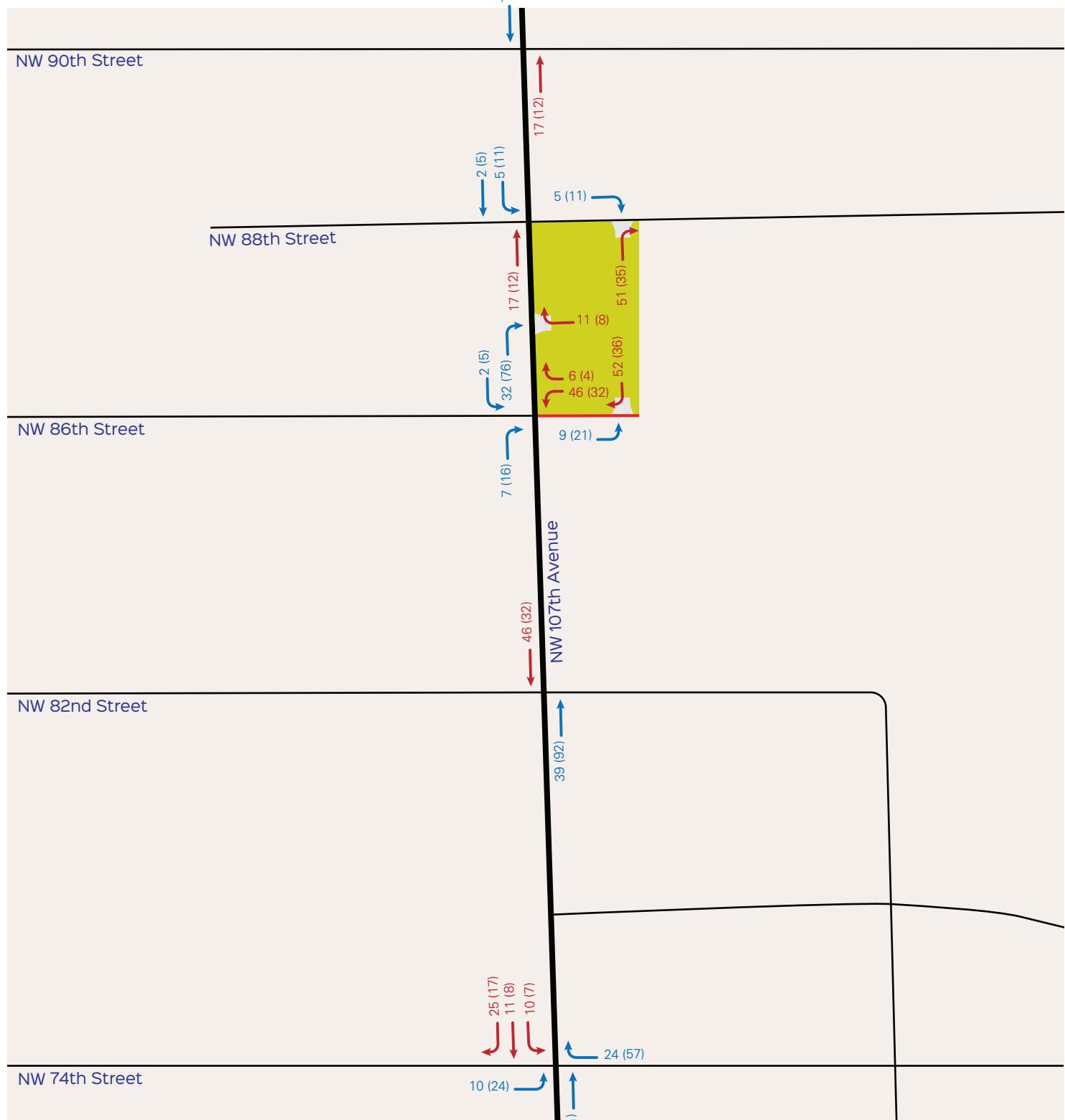


- █ % Inbound
- █ % Outbound
- Project Location

## Exhibit 13

Project Trip Distribution Phase VI





- █ Inbound
- █ Outbound
- █ Project Location

## Exhibit 14

### Project Trip Assignment Phases IV & V

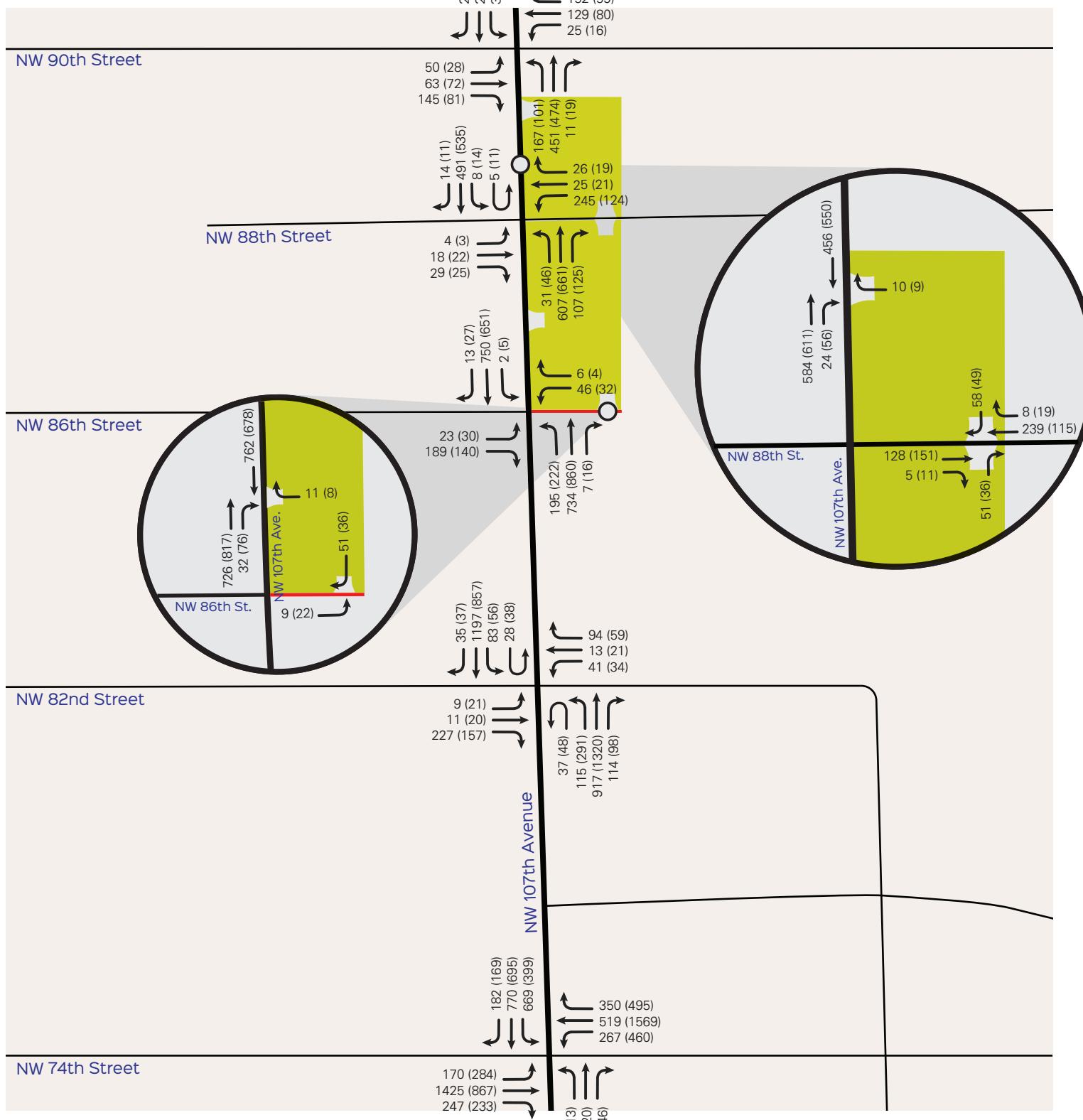




- █ Inbound 00 AM
- █ Outbound (00) PM
- █ Project Location

## Exhibit 15

### Project Trip Assignment Phase VI



00 AM  
(00) PM

  Project Location

## Exhibit 16

Future With Project AM and PM Peak Hour Traffic Volumes

## 4.6 Future with Project Roadway Capacity Analysis

Exhibit 17 summarizes the resulting roadway LOS for future with project conditions. As with existing and future without project conditions, the results show that the analyzed roadways are projected to operate at a level of service within the City's adopted LOS standards.

**Exhibit 17: Future with Project Roadway Capacity Analysis**

Roadway	Direction	# of Lanes	AM Peak Volume	PM Peak Volume	LOS Std	SV <sup>1</sup>	Meet LOS Std?
NW 107 <sup>th</sup> Avenue between NW 86 <sup>th</sup> Street and NW 88 <sup>th</sup> Street	NB	2LU	716	745	D	1,691	Yes
	SB	2LU	754	684	D	1,208	Yes
NW 88 <sup>th</sup> Street between NW 107 <sup>th</sup> Avenue and NW 102 <sup>nd</sup> Avenue	EB	1LU	96	15	D	1,691	Yes
	WB	1LU	192	122	D	1,268	Yes
NW 107 <sup>th</sup> Avenue between NW 86 <sup>th</sup> Street and NW 82 <sup>nd</sup> Street	NB	1LD	834	991	D	1,691	Yes
	SB	1LD	979	824	D	1,691	Yes
NW 86 <sup>th</sup> Street between NW 107 <sup>th</sup> Avenue and NW 109 <sup>th</sup> Avenue	EB	2LD	232	167	D	783	Yes
	WB	2LD	217	242	D	783	Yes

<sup>1</sup> **NW 107<sup>th</sup> Avenue (NB, Between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive left turn lane, No exclusive right turn lane ( $1,790 \times 0.9 \times 1.05 = 1,691$  vph); **NW 107<sup>th</sup> Avenue (SB, Between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, No exclusive left or right turn lanes ( $1,790 \times 0.9 \times 0.75 = 1,208$  vph); **NW 88<sup>th</sup> Street (EB, Between NW 107<sup>th</sup> Avenue and NW 102<sup>nd</sup> Avenue):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive left turn lane, No exclusive right turn lanes ( $1,790 \times 0.9 \times 1.05 = 1,691$  vph); **NW 88<sup>th</sup> Street (WB, Between NW 107<sup>th</sup> Avenue and NW 102<sup>nd</sup> Avenue):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive right turn lane, No exclusive left turn lanes ( $1,790 \times 0.9 \times 1.05 \times 0.75 = 1,268$  vph); **NW 107<sup>th</sup> Avenue (NB/SB, Between NW 86<sup>th</sup> Street and NW 82<sup>nd</sup> Street):** C4 classification, 2 Lanes, Divided, LOS D, Non-State Roadway, Exclusive left turn lane, No exclusive right turn lane ( $1,790 \times 0.9 \times 1.05 = 1,691$  vph); **NW 86<sup>th</sup> Street (EB/WB, Between NW 107<sup>th</sup> Avenue and NW 107<sup>th</sup> Avenue):** C4 classification, 1 Lane, Undivided, LOS D, Non-State Roadway, No exclusive left or right turn lanes ( $870 \times 0.9 = 783$  vph)

## **4.7 Future with Project Intersection Capacity Analysis**

Future background traffic, committed development traffic, and project trips were combined to obtain future with project traffic conditions at the analyzed intersections. Exhibit 18 shows the resulting LOS for the weekday AM and PM peak hours for future with project conditions. The analysis indicates that the NW 107<sup>th</sup> Avenue / NW 82<sup>nd</sup> Street intersection is projected to continue to operate within the City's overall LOS standards during the AM and PM peak hours. The northbound and westbound approaches of the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection are projected to experience delays during the AM and PM peak hours. The eastbound and westbound approaches of the NW 107<sup>th</sup> Avenue / NW 82<sup>nd</sup> Street intersection are also projected to experience delays during the AM and PM peak hours. The un-signalized intersection capacity analysis results show adequate operations at the project driveways. Intersection capacity analysis worksheets are included in Appendix D.

**Exhibit 18: Future with Project Intersection Capacity Analysis**  
**Weekday AM and PM Peak Hour Conditions**

Intersection	Signalized/ Unsignalized	Direction	AM Peak		PM Peak		LOS Std <sup>1</sup>
			LOS	Delay (sec)	LOS	Delay (sec)	
NW 107 <sup>th</sup> Avenue / NW 88 <sup>th</sup> Street	U	NB	E	49.7	E	40.5	D
		SB	D	27.0	D	25.5	D
		EB	B	14.8	B	13.6	D
		WB	E	36.2	C	17.8	D
		<i>Overall</i>	<i>E</i>	<b>38.8</b>	<i>D</i>	<b>32.1</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 86 <sup>th</sup> Street	U	NB	F	81.9	F	95.6	D
		SB	F	118.6	F	58.2	D
		EB	D	27.6	C	21.0	D
		WB	C	16.8	C	15.4	D
		<i>Overall</i>	<i>F</i>	<b>88.6</b>	<i>F</i>	<b>74.9</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 82 <sup>nd</sup> Street	S <sup>2</sup>	NB	C	27.7	B	17.3	D
		SB	C	33.9	C	27.5	D
		EB	F	88.4	F	81.2	D
		WB	E	64.5	E	76.7	D
		<i>Overall</i>	<i>D</i>	<b>37.6</b>	<i>C</i>	<b>27.0</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 90 <sup>th</sup> Street	U	NB	F	158.4	F	61.6	D
		SB	F	105.3	F	186.6	D
		EB	D	32.5	C	17.8	D
		WB	F	85.5	C	19.3	D
		<i>Overall</i>	<i>F</i>	<b>111.0</b>	<i>F</i>	<b>98.6</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 74 <sup>th</sup> Street	S	NB	F	98.0	F	115.9	D
		SB	F	109.8	F	186.7	D
		EB	E	57.6	E	75.6	D
		WB	E	61.0	E	58.0	D
		<i>Overall</i>	<i>E</i>	<b>78.9</b>	<i>F</i>	<b>94.9</b>	<b>D</b>
Project Driveway / NW 86 <sup>th</sup> Street	U	SB	A	8.5	A	8.4	N/A
South Project Driveway / NW 107 <sup>th</sup> Avenue	U	WB	B	11.2	B	11.9	N/A
Project Driveways / NW 88 <sup>th</sup> Street	U	NB	A	9.2	A	9.3	N/A
		SB	B	10.1	A	9.2	
North Project Driveway / NW 107 <sup>th</sup> Avenue	U	WB	B	10.7	B	10.8	N/A

<sup>1</sup>The City of Doral Comprehensive Plan allows a capacity of D for all streets within the City of Doral.

Source: David Plummer & Associates

<sup>2</sup>The approved Century Town Phase II Traffic Study warrants a signal at this intersection.

Signal timing adjustments are recommended to improve the intersection approach and overall delays at the NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection. Signal timing improvements were performed during the AM and PM peak hours. Adding seven seconds of green time to the southbound left movement, nine seconds of green time to the southbound approach, four seconds of green time to the eastbound left turn movement, and one second of green time to the westbound left turn movement improves the approach and overall delays for this intersection during the AM peak hour. Adding seven seconds of green time to the southbound left movement, ten seconds of green time to the southbound approach, three seconds of green time to the northbound approach, four seconds of green time to the eastbound left turn movement, and nine seconds of green time to the westbound left turn movement improves the approach delays and overall LOS for this intersection during the PM peak hour.

**Exhibit 18a: Future with Project with Signal Timing Improvements Intersection Capacity Analysis Weekday AM and PM Peak Hour Conditions**

Intersection	Signalized/ Unsignalized	Direction	AM Peak		PM Peak		LOS Std <sup>1</sup>
			LOS	Delay (sec)	LOS	Delay (sec)	
NW 107 <sup>th</sup> Avenue / NW 74 <sup>th</sup> Street	S	NB	F	98.6	F	98.7	D
		SB	E	72.4	F	87.3	D
		EB	E	67.2	E	62.8	D
		WB	E	63.1	E	73.7	D
		<i>Overall</i>	<i>E</i>	<i>72.4</i>	<i>E</i>	<i>77.9</i>	<i>D</i>

The approximate existing storage length and the projected 95<sup>th</sup> percentile back of queue (BOQ) expected at the exclusive turn lanes for the studied intersections during the AM and PM peak hour conditions are displayed in Exhibit 19. The results show that the existing storage lengths at the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street, NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street, and NW 107<sup>th</sup> Avenue / NW 90<sup>th</sup> Street intersections can accommodate the expected BOQs for existing, future without project, and future with project conditions during the AM and PM peak hours.

The NW 107<sup>th</sup> Avenue / NW 82<sup>nd</sup> Street intersection currently does not have enough capacity to accommodate the expected BOQs at the northbound left turning lane during the AM and PM peak hours for future without project and future with project conditions. The project only adds 36 feet

(less than two vehicles) and 58 feet (less than three vehicles) of queue to the northbound left turning lane during the respective AM and PM peak hours.

The NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection currently does not have enough capacity to accommodate the expected BOQs at the southbound left, eastbound left, and westbound right turning lanes during the AM and PM peak hours. The project adds 63 feet (less than three vehicles) and 52 feet (less than three vehicles) of queue to the southbound left turning lane during the respective AM and PM peak hours. The project also adds 26 feet (approximately one vehicle) and 54 feet (less than three vehicles) of queue to the eastbound left turn lane during the AM and PM peak hour, respectively.

#### **Exhibit 19: Projected 95<sup>th</sup> Percentile Back of Queues and Existing Storage Length**

Intersection	Direction	Existing		Future without Project		Future with Project		Existing Storage (feet)
		AM	PM	AM	PM	AM	PM	
NW 107 <sup>th</sup> Avenue / NW 88 <sup>th</sup> Street	NBL	2.2	4.4	4.4	6.6	6.6	6.6	140
	WBR	4.4	2.2	4.4	22	4.4	2.2	140
	SBL <sup>2</sup>	-	-	-	-	11	17	50
NW 107 <sup>th</sup> Avenue / NW 86 <sup>th</sup> Street	NBL	41.8	41.8	46.2	48.4	61.6	66	190
	SBL <sup>2</sup>	-	-	-	-	0	0	150
NW 107 <sup>th</sup> Avenue / NW 82 <sup>nd</sup> Street	NBL	15.4	37.4	154	187	190	245	165
	SBL	8.8	4.4	84	53	85	53	140
	EBL	2.2	19.8	24	50	24	50	165
	WBL	66	22	75	72	74	72	300
NW 107 <sup>th</sup> Avenue / NW 90 <sup>th</sup> Street	NBL	61.6	17.6	68.2	19.8	66	19.8	150
	NBR <sup>1</sup>	2.2	2.2	2.2	2.2	2.2	2.2	230
	EBL <sup>1</sup>	13.2	4.4	15.4	6.6	15.4	6.6	1200
NW 107 <sup>th</sup> Avenue / NW 74 <sup>th</sup> Street	NBL	159	242	165	253	165	259	485
	NBR	421	254	461	286	461	288	530
	SBL	518	344	602	401	665	453	365
	SBR	77	35	153	101	185	146	230
	EBL	128	209	171	304	197	360	300
	EBR	121	56	133	57	133	57	290
	WBL	262	384	280	409	280	418	500
	WBR	63	151	71	353	109	489	300

<sup>1</sup>A through lane that becomes an exclusive turn lane.

Source: David Plummer & Associates

<sup>2</sup>The proposed project will be adding the southbound left turn lanes.

## **4.8 Turn Lane Requirements**

The City of Doral Code of Ordinances, Section 77-46 provides guidelines to assist in the decision-making process for the need for exclusive right and left turn lanes at the proposed project driveways. The following are guidelines provided by Section 77-46 when considering exclusive turn lanes:

- (a) *Left turn lanes. A left turn lane with a minimum of this Land Development Code 150 feet of storage and 100 feet of transition shall be provided at each access point with an average daily trip end (volume) of 1,000 vehicles or more, and/or an average peak hour inbound left turn volume of 25 vehicles or more. Increased storage and transition lengths may be required by the city to provide for all deceleration outside the through lane.*
- (b) *Right turn deceleration lanes. A right turn deceleration lane with a minimum of 150 feet of storage and 100 feet of transition shall be required at each access point when the speed limit equals or exceeds 35 miles per hour or if the development will generate 100 or more right turn movements during the peak hour. Increased storage and transition lengths may be required by the city to provide for all deceleration outside the through lane.*

A review of the driveways was conducted based on the guidelines mentioned above to determine the necessity of any exclusive turn lanes at the project driveways. The review indicates that based on the inbound project volumes, no turn lanes are warranted at the project driveways. Exhibit 20 shows the right and left turn lane analysis for the proposed driveways. Although no left turns are allowed at any of the project's driveways, per request of the City, the need for a left turn lane at the Phase VI driveway along NW 107<sup>th</sup> Avenue was evaluated. The review of the left turn lane analysis indicated that a left turn lane at this driveway is not warranted based on the low volumes.

### Exhibit 20: Driveway Turn Lane Analysis

Right Turn Lane Analysis					
Intersection	Movement	Threshold (veh/h)	AM Peak (veh/h)	PM Peak (veh/h)	Threshold Met?
NW 107 <sup>th</sup> Avenue / South Project Driveway	NBR	100	32	76	Not Met
NW 88 <sup>th</sup> Street / South Project Driveway	EBR	100	5	11	Not Met
NW 88 <sup>th</sup> Street / North Project Driveway	WBR	100	8	19	Not Met
NW 107 <sup>th</sup> Avenue / North Project Driveway	NBR	100	24	56	Not Met

Left Turn Lane Analysis					
Intersection	Movement	Threshold (veh/h)	AM Peak (veh/h)	PM Peak (veh/h)	Threshold Met?
NW 107 <sup>th</sup> Avenue / North Project Driveway	SBL	25	5	11	Not Met

## 5.0 SIGNAL WARRANT ANALYSIS

As per City request, a traffic signal warrant analysis was performed for the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersections. The signal warrant analysis was performed using the *Manual on Uniform Traffic Control Devices* (MUTCD) published by the Federal Highway Administration (FHWA) and the Florida Department of Transportation (FDOT) *Manual on Uniform Traffic Studies* (MUTS). Meeting at least one of the signal warrants is a requirement before a traffic signal can be installed. However, MDC and the City of Doral must agree with the need for a traffic signal and consider other issues and concerns before approving any new traffic signal.

### 5.1 Data Collection

Directional 72-hour traffic counts were collected on Tuesday, October 31, 2023 through Thursday, November 2, 2023 at the approaches of the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersections. FDOT weekly peak season conversion factors (PSCF) of 1.05 (Miami-Dade County north) corresponding to the dates of the counts were used to adjust the counts to average daily traffic conditions. The existing adjusted traffic volumes for each intersection are provided in Exhibits 21 and 22. Seventy-two-hour counts are provided in Appendix H.

As stated in the MUTCD Chapter 4C, “*the study should consider the effects of the right-turn vehicles from the minor-street approaches. Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count when evaluating the count against the signal warrants.*” Therefore, the warrant analysis considered the effects of the right-turn vehicles from the minor street. A 20% deduction of the right-turn volumes was taken based on the lane configuration and volume of traffic.

**Exhibit 21**  
**Existing Conditions Approach Volumes**  
**NW 107th Avenue / NW 86th Street**

Time Period		RAW MACHINE COUNTS: NW 107th Avenue / NW 86th Street <sup>1</sup>												24-Hour Average						Two-Way						
		Tuesday, October 31, 2023				Wednesday, November 1, 2023				Thursday, November 2, 2023				NB				SB		EB		EB <sup>2</sup>		WB	NB / SB	EB / WB
		NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	EB <sup>2</sup>	WB	NB / SB	EB / WB						
12:00 AM	01:00 AM	64	59	15	0	109	76	19	0	74	56	9	0	82	64	14	12	0	146	14						
01:00 AM	02:00 AM	26	22	6	0	47	28	5	0	39	38	4	0	37	29	5	4	0	67	5						
02:00 AM	03:00 AM	30	12	2	0	33	15	5	0	37	20	3	0	33	16	3	2	0	49	3						
03:00 AM	04:00 AM	29	13	5	0	38	19	2	0	55	27	3	0	41	20	3	2	0	60	3						
04:00 AM	05:00 AM	75	34	5	0	86	43	7	0	74	34	5	0	78	37	6	5	0	115	6						
05:00 AM	06:00 AM	177	81	23	0	180	101	30	0	172	66	18	0	176	83	24	20	0	259	24						
06:00 AM	07:00 AM	372	248	70	0	350	342	120	0	341	238	60	0	354	276	83	69	0	630	83						
07:00 AM	08:00 AM	676	582	205	0	631	518	196	0	648	562	212	0	652	554	204	169	0	1,206	204						
08:00 AM	09:00 AM	719	623	209	0	645	568	181	0	649	562	185	0	671	584	192	159	0	1,255	192						
09:00 AM	10:00 AM	411	418	98	0	352	356	93	0	360	357	97	0	374	377	96	79	0	751	96						
10:00 AM	11:00 AM	300	281	67	0	352	321	77	0	306	353	75	0	319	318	73	60	0	638	73						
11:00 AM	12:00 PM	377	321	84	0	333	389	108	0	383	353	120	0	364	354	104	86	0	719	104						
12:00 PM	01:00 PM	457	490	108	0	478	462	90	0	450	429	108	0	462	460	102	84	0	922	102						
01:00 PM	02:00 PM	469	371	74	0	581	424	129	0	518	379	78	0	523	391	94	78	0	914	94						
02:00 PM	03:00 PM	609	475	165	0	604	455	169	0	593	462	190	0	602	464	175	145	0	1,066	175						
03:00 PM	04:00 PM	562	462	163	0	524	461	118	0	563	505	210	0	550	476	164	136	0	1,026	164						
04:00 PM	05:00 PM	642	465	119	0	626	434	119	0	635	504	128	0	634	468	122	101	0	1,102	122						
05:00 PM	06:00 PM	877	537	163	0	819	499	167	0	851	553	150	0	849	530	160	132	0	1,379	160						
06:00 PM	07:00 PM	812	498	155	0	705	450	140	0	706	455	158	0	741	468	151	125	0	1,209	151						
07:00 PM	08:00 PM	540	364	123	0	527	337	111	0	495	319	97	0	521	340	110	91	0	861	110						
08:00 PM	09:00 PM	405	287	129	0	429	245	88	0	433	243	91	0	422	258	103	85	0	681	103						
09:00 PM	10:00 PM	395	313	169	0	342	261	163	0	322	207	160	0	353	260	164	136	0	613	164						
10:00 PM	11:00 PM	278	238	68	0	218	146	25	0	213	139	36	0	236	174	43	36	0	411	43						
11:00 PM	12:00 AM	180	114	36	0	142	107	22	0	160	103	18	0	161	108	25	21	0	269	25						
	TOTAL	9,482	7,308	2,261	0	9,151	7,057	2,184	0	9,077	6,964	2,215	0	9,237	7,110	2,220	1,837	0	16,346	2,220						

<sup>1</sup>Seasonally Adjusted Using the following:

2022 North PSCF Adjustment Factor Factor Oct 31 - Nov 2, 2023 = 1.05

<sup>2</sup>Approach volume with right-turn adjustment based on Pagones Theorem

**Exhibit 22**  
**Existing Conditions Approach Volumes**  
**NW 107th Avenue / NW 88th Street**

Time Period		RAW MACHINE COUNTS: NW 107th Avenue / NW 88th Street <sup>1</sup>												24-Hour Average						Two-Way						
		Tuesday, October 31, 2023				Wednesday, November 1, 2023				Thursday, November 2, 2023				NB				SB		EB		EB <sup>2</sup>		WB	NB / SB	EB / WB
		NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	WB	NB	SB	EB	EB <sup>2</sup>	WB	NB / SB	EB / WB						
12:00 AM	01:00 AM	54	50	4	12	89	65	4	27	55	50	4	13	66	55	4	3	17	17	121	21					
01:00 AM	02:00 AM	22	21	1	5	38	32	2	11	32	35	0	6	31	29	1	1	7	7	60	8					
02:00 AM	03:00 AM	28	11	0	6	27	14	1	5	32	22	0	2	29	16	0	0	4	4	45	5					
03:00 AM	04:00 AM	27	13	2	1	38	13	0	1	46	23	1	6	37	16	1	1	3	3	53	4					
04:00 AM	05:00 AM	66	28	1	6	91	30	0	7	68	30	0	1	75	29	0	0	5	5	104	5					
05:00 AM	06:00 AM	169	78	4	16	197	72	4	20	164	66	4	14	177	72	4	3	17	17	249	21					
06:00 AM	07:00 AM	287	189	54	47	324	212	46	41	276	200	41	48	296	200	47	41	45	44	496	92					
07:00 AM	08:00 AM	520	345	141	229	483	312	109	177	480	400	154	212	494	352	135	119	206	200	847	341					
08:00 AM	09:00 AM	572	471	41	201	481	437	45	196	480	484	36	197	511	464	41	36	198	192	975	239					
09:00 AM	10:00 AM	354	352	25	80	307	311	23	98	303	305	23	74	321	323	24	21	84	82	644	108					
10:00 AM	11:00 AM	270	217	16	79	297	277	20	70	265	278	22	76	277	257	19	17	75	73	535	94					
11:00 AM	12:00 PM	329	275	20	69	299	270	20	68	305	282	27	69	311	276	22	19	69	67	587	91					
12:00 PM	01:00 PM	380	443	22	61	410	426	33	66	379	352	33	80	390	407	29	25	69	67	797	98					
01:00 PM	02:00 PM	370	333	19	64	477	338	24	89	406	327	22	78	418	333	22	19	77	75	750	99					
02:00 PM	03:00 PM	447	353	99	130	440	365	93	118	433	361	99	121	440	360	97	85	123	120	800	220					
03:00 PM	04:00 PM	425	397	50	99	440	402	41	110	429	405	50	119	431	401	47	41	109	106	833	156					
04:00 PM	05:00 PM	532	387	42	103	532	418	34	97	515	401	29	106	526	402	35	31	102	99	928	137					
05:00 PM	06:00 PM	693	473	38	103	694	485	46	116	670	460	37	133	686	473	40	35	117	114	1,158	158					
06:00 PM	07:00 PM	596	403	53	135	599	327	33	141	524	372	48	127	573	367	45	40	134	130	940	179					
07:00 PM	08:00 PM	376	267	56	123	376	251	34	88	402	239	53	98	385	252	48	42	103	100	637	151					
08:00 PM	09:00 PM	322	226	34	98	333	188	23	79	322	204	33	62	326	206	30	26	80	78	532	110					
09:00 PM	10:00 PM	323	206	48	134	280	191	28	76	257	158	38	62	287	185	38	33	91	88	472	129					
10:00 PM	11:00 PM	239	183	22	87	174	123	11	35	156	107	16	49	190	138	16	14	57	55	327</						

## 5.2 NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street Intersection

### 5.2.1 Future Conditions

As discussed in Section 4.1, the anticipated buildout year is 2025 and the area experiences a background growth rate of 2.16%. The Century Town Phase II and III developments were found in the vicinity of the project site and were considered as committed developments. Committed development trips were added to the existing traffic. Exhibit 23 shows the background traffic at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection for future without project conditions.

**Exhibit 23**  
Future without Project Conditions Approach Volumes  
NW 107th Avenue / NW 86th Street

Time Period			Background Traffic (2025)						Committed Trips Hourly Distribution <sup>1</sup>		Century Town Phase II		Committed Trips Hourly Distribution <sup>1</sup>		Century Town Phase III		Future without Project Total (2025)							
			Major Street			Minor Street			SBT	NBT	SBT	NBT	SBT	NBT	SBT	NBT	Major Street	Minor Street	EB	WB	Both App	EB	WB	Both App
			NB	SB	Both App	EB	WB	Both App	IN	OUT	24%	24%	IN	OUT	15%	15%	NB	SB	Both App	EB	WB	Both App		
12:00 AM	01:00 AM	86	66	152	13	0	13	23	10	5	2	13	4	2	2	90	74	164	13	0	13			
01:00 AM	02:00 AM	39	31	70	4	0	4	11	7	3	2	6	4	1	1	42	34	76	4	0	4			
02:00 AM	03:00 AM	35	16	51	2	0	2	6	3	1	1	3	1	0	0	36	18	54	2	0	2			
03:00 AM	04:00 AM	42	21	63	2	0	2	5	5	1	1	3	3	0	0	44	22	66	2	0	2			
04:00 AM	05:00 AM	82	39	120	5	0	5	9	37	2	9	1	6	0	0	91	41	132	5	0	5			
05:00 AM	06:00 AM	184	86	270	21	0	21	14	41	3	10	5	24	1	1	194	90	285	21	0	21			
06:00 AM	07:00 AM	370	288	658	72	0	72	40	156	9	38	11	90	2	2	409	299	708	72	0	72			
07:00 AM	08:00 AM	680	578	1,258	177	0	177	87	304	21	73	47	158	7	7	760	606	1,366	177	0	177			
08:00 AM	09:00 AM	700	610	1,310	166	0	166	178	238	43	57	38	133	6	6	763	658	1,421	166	0	166			
09:00 AM	10:00 AM	391	393	784	82	0	82	169	209	41	50	25	79	4	4	445	438	882	82	0	82			
10:00 AM	11:00 AM	333	332	666	63	0	63	235	225	56	54	32	53	5	5	392	393	785	63	0	63			
11:00 AM	12:00 PM	380	370	750	90	0	90	279	259	67	62	39	46	6	6	448	443	891	90	0	90			
12:00 PM	01:00 PM	482	480	962	88	0	88	333	318	80	76	52	56	8	8	566	568	1,134	88	0	88			
01:00 PM	02:00 PM	545	408	954	81	0	81	298	300	72	72	50	50	8	8	625	488	1,113	81	0	81			
02:00 PM	03:00 PM	628	484	1,113	151	0	151	279	293	67	70	47	43	7	7	706	558	1,264	151	0	151			
03:00 PM	04:00 PM	574	497	1,070	142	0	142	330	298	79	71	68	44	10	10	655	586	1,241	142	0	142			
04:00 PM	05:00 PM	662	488	1,150	105	0	105	393	351	94	84	119	66	18	18	764	600	1,364	105	0	105			
05:00 PM	06:00 PM	886	553	1,439	138	0	138	467	343	112	82	117	75	18	18	986	682	1,666	138	0	138			
06:00 PM	07:00 PM	773	488	1,261	130	0	130	420	317	101	76	143	66	21	21	871	610	1,481	130	0	130			
07:00 PM	08:00 PM	543	355	898	95	0	95	343	280	82	67	108	62	16	16	627	453	1,080	95	0	95			
08:00 PM	09:00 PM	441	270	710	88	0	88	244	222	59	53	88	36	13	13	507	341	849	88	0	88			
09:00 PM	10:00 PM	368	272	640	142	0	142	171	148	41	35	75	17	11	11	415	324	739	142	0	142			
10:00 PM	11:00 PM	247	182	429	38	0	38	81	62	19	15	36	25	5	5	267	207	474	38	0	38			
11:00 PM	12:00 AM	168	113	280	22	0	22	41	30	10	7	24	9	4	4	179	126	305	22	0	22			
<b>TOTAL</b>			<b>9,640</b>	<b>7,420</b>	<b>17,060</b>	<b>1,917</b>	<b>0</b>	<b>1,917</b>	<b>4,455</b>	<b>4,455</b>	<b>1,069</b>	<b>1,069</b>	<b>1,150</b>	<b>1,150</b>	<b>173</b>	<b>173</b>	<b>10,882</b>	<b>8,662</b>	<b>19,544</b>	<b>1,917</b>	<b>0</b>	<b>1,917</b>		

<sup>1</sup>Hourly distributions used are included in Appendix H

Project trips were then added to background traffic volumes, consistent with the trip generation and distribution reflected in Sections 4.4 and 4.5, to determine the hourly approach volumes at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection for future with project conditions. In order to get these volumes throughout 24 hours, daily project trips were distributed hourly. The method used is also consistent with the ITE *Trip Generation Manual*, 11<sup>th</sup> Edition. Land use hourly distributions used are included in Appendix H. Exhibit 24 shows the resulting hourly future with project traffic volumes at the intersection.

**Exhibit 24**  
**Future with Project Conditions Approach Volumes**  
**NW 107th Avenue / NW 86th Street**

Project Trips Hourly Distribution <sup>1</sup>		Midtown Doral Phases IV and V						Project Trips Hourly Distribution <sup>1</sup>		Midtown Doral Phase VI		Signalized Conditions Total					
		NBT	NBR	SBL	WBL	WBR	WBR <sup>2</sup>			IN	OUT	NBT	SBT	Major Street			Minor Street
IN	OUT	70%	15%	5%	40%	5%	5%	IN	OUT	60%	85%	NB	SB	Both App	EB	WB	Both App
4	1	3	1	0	0	0	0	7	2	4	2	98	76	174	13	0	13
5	3	4	1	0	1	0	0	3	2	2	2	48	36	84	4	1	6
2	1	1	0	0	0	0	0	1	1	1	1	38	19	58	2	0	3
2	2	1	0	0	1	0	0	1	1	1	1	46	23	69	2	1	3
0	5	0	0	0	2	0	0	1	2	1	2	91	43	134	5	2	7
2	18	1	0	0	7	1	1	2	9	1	8	197	98	295	21	8	29
8	66	6	1	0	26	3	3	4	36	2	31	418	330	748	72	30	102
27	112	19	4	1	45	6	6	16	68	10	58	793	665	1,458	177	50	227
49	120	34	7	2	48	6	6	34	71	20	60	825	721	1,546	166	54	220
35	67	25	5	2	27	3	3	27	43	16	37	491	476	967	82	30	113
47	56	33	7	2	22	3	3	38	40	23	34	455	430	885	63	25	88
54	56	38	8	3	22	3	3	43	42	26	36	520	481	1,001	90	25	115
72	74	50	11	4	30	4	4	58	56	35	48	662	619	1,281	88	33	121
64	65	45	10	3	26	3	3	48	49	29	42	708	532	1,241	81	29	110
61	61	43	9	3	24	3	3	47	48	28	41	786	602	1,388	151	27	178
77	61	54	12	4	24	3	3	56	48	34	41	754	631	1,385	142	27	169
126	96	88	19	6	38	5	5	91	74	55	63	926	669	1,595	105	43	149
126	71	88	19	6	28	4	4	84	53	50	45	1,143	734	1,877	138	32	170
123	73	86	18	6	29	4	4	72	48	43	41	1,019	657	1,676	130	33	163
99	66	69	15	5	26	3	3	66	47	40	40	751	498	1,249	95	30	125
69	40	48	10	3	16	2	2	50	37	30	31	596	376	972	88	18	106
60	29	42	9	3	12	1	1	37	24	22	20	488	347	836	142	13	155
33	17	23	5	2	7	1	1	20	11	12	9	307	218	525	38	8	45
19	4	13	3	1	2	0	0	10	4	6	3	201	130	331	22	2	24
1,164	1,164	815	175	58	466	58	58	816	816	490	694	12,361	9,414	21,774	1,917	524	2,441

<sup>1</sup>Hourly distributions used are included in Appendix H

<sup>2</sup>Approach volume with right-turn adjustment based on Pagones Theorem

## **5.2.2 Signal Warrant Analysis**

The signal warrant study was performed using the *Manual on Uniform Traffic Control Devices* (MUTCD) published by the FHWA and the FDOT *Manual on Uniform Traffic Studies* (MUTS). Before a signal can be installed, at least one of the signal warrant requirements must be met. MDC and local municipalities must also agree with the need and consider other issues and concerns before approving any new traffic signal.

Signal warrant requirements were examined to determine if a signal is warranted at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection for existing and future with project conditions. The existing and projected traffic volumes were compared with the nine signal warrants in the MUTS and the MUTCD. Fulfilling any one of the warrants is sufficient to recommend consideration of the installation of a traffic signal. See Appendix H for the signal warrant analysis worksheets at existing and future with project conditions. A summary of the results for each warrant is presented below.

### **Signal Warrant 1 – Eight-Hour Vehicular Volumes**

Traffic volumes at the intersection of NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street are sufficient to meet the requirements of this warrant (under condition B). ***This warrant is applicable and is met for this location.***

### **Signal Warrant 2 – Four-Hour Vehicular Volumes**

The plotted points representing traffic volumes for the four peak hours of the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection fall above the applicable threshold line. ***This warrant is applicable and is met for this location.***

### **Signal Warrant 3 – Peak Hour**

The peak hour warrant is intended for use at a location where traffic conditions are such that, for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. ***This warrant is applicable and is met for this location.***

### **Signal Warrant 4 – Pedestrian Volume**

The pedestrian volume signal warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street. High pedestrian activity is not expected to cross the major street. ***This warrant is applicable, but is not met for this location.***

### **Signal Warrant 5 – School Crossing**

The proposed signal is not intended to be a school crossing. ***Examination of the school crossing warrant at the subject intersection is not applicable.***

### **Signal Warrant 6 – Coordinated Signal System**

This warrant is intended for use in a coordinated signal system in order to maintain proper platooning of vehicles. This is not the intent of the signal. ***Therefore, this warrant is not applicable.***

### **Signal Warrant 7 – Crash Experience**

The crash experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal. ***This warrant is not applicable.***

### **Signal Warrant 8 – Roadway Network**

This warrant is intended to justify a signal to encourage the concentration and organization of traffic flow on a roadway network. The warrant is satisfied when all intersecting routes are considered major routes. The NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection does not meet this definition. ***Thus, this warrant is not applicable.***

### **Signal Warrant 9 – Intersection Near a Grade Crossing**

This warrant is intended for use at a location where none of the conditions described in the other eight traffic signal warrants are met, but the proximity to the intersection to a grade crossing on an intersection approach controlled by a Stop or Yield sign. The study intersection does not meet this definition. ***Therefore, this warrant is not applicable.***

Exhibit 25 displays a summary of the analysis for the traffic signal warrants at the intersection. Fulfilling any one of the warrants is sufficient to consider the installation of a traffic signal. The signal warrant analysis showed that for existing and future conditions, warrants 1, 2, and 3 are satisfied at the subject intersection. Therefore, a traffic signal is warranted at the NW 107<sup>th</sup> Avenue / 86<sup>th</sup> Street intersection.

**Exhibit 25: Summary of Signal Warrant Analysis  
NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street Intersection**

<b>Warrant</b>	<b>Warrant Description</b>	<b>Existing Conditions</b>	<b>Future Conditions</b>
1	Eight-Hour Vehicular Volumes	<b>Satisfied</b>	<b>Satisfied</b>
2	Four-Hour Vehicular Volumes	<b>Satisfied</b>	<b>Satisfied</b>
3	Peak Hour	<b>Satisfied</b>	<b>Satisfied</b>
4	Pedestrian Volume	<b>Not Satisfied</b>	<b>Not Satisfied</b>
5	School Crossing	Not Applicable	Not Applicable
6	Coordinated Signal System	Not Applicable	Not Applicable
7	Crash Experience	Not Applicable	Not Applicable
8	Roadway Network	Not Applicable	Not Applicable
9	Intersection Near a Grade Crossing	Not Applicable	Not Applicable

Source: David Plummer & Associates

## **5.3 NW 107<sup>th</sup> Avenue and NW 88<sup>th</sup> Street Intersection**

### **5.3.1 Future Conditions**

As discussed in Section 4.1, the anticipated buildout year is 2025 and the area experiences a background growth rate of 2.16%. The Century Town Phase II and III developments were found in the vicinity of the project site and were considered as committed developments. Committed development trips were added to the existing traffic. Exhibit 26 shows the background traffic at the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection for future without project conditions.

## **Exhibit 26**

Time Period		Background Traffic (2025)						Committed Trips Hourly Distribution <sup>1</sup>		Century Town Phase II						Committed Trips Hourly Distribution <sup>1</sup>		Century Town Phase III		Future without Project Total (2025)																			
		Growth		2.16%						EBR			EBR <sup>2</sup>			WBL			SBT		NBL		NBT		NBR		NBT			SBT		Major Street			Minor Street				
		Major Street		Minor Street																																			
				NB	SB	Both App	EB	WB	Both App	IN	OUT	5%	5%	3%	16%	5%	16%	3%	IN	OUT	15%	15%	NB	SB	Both App	EB	WB	Both App											
12:00 AM	01:00 AM	69	57	126	3	18	21	23	10	1	1	1	1	2	1	2	0	13	4	2	1	73	60	133	4	19	23												
01:00 AM	02:00 AM	32	31	63	1	8	9	11	7	1	1	0	1	0	1	0	6	4	1	1	35	32	67	2	8	10													
02:00 AM	03:00 AM	30	16	47	0	5	5	6	3	0	0	0	0	0	0	0	0	3	1	0	0	31	17	48	1	5	5												
03:00 AM	04:00 AM	39	17	56	1	3	4	5	5	0	0	0	0	1	0	1	0	3	3	0	0	40	18	58	1	3	4												
04:00 AM	05:00 AM	78	31	109	0	5	5	9	37	0	0	0	0	6	2	6	1	1	6	0	1	87	37	125	1	5	6												
05:00 AM	06:00 AM	184	75	260	3	17	21	14	41	1	1	0	0	6	2	6	1	5	24	1	4	195	85	280	4	18	22												
06:00 AM	07:00 AM	309	209	518	43	46	89	40	156	2	1	1	1	25	8	25	5	11	90	2	13	348	248	595	44	47	91												
07:00 AM	08:00 AM	516	368	884	124	209	333	87	304	4	3	3	49	15	49	9	47	158	7	24	596	440	1,036	127	211	330													
08:00 AM	09:00 AM	533	484	1,018	37	200	238	178	238	9	7	5	38	12	38	7	38	133	6	20	596	542	1,138	44	206	250													
09:00 AM	10:00 AM	335	337	672	22	86	107	169	209	8	6	5	33	10	33	6	25	79	4	12	389	382	771	28	91	119													
10:00 AM	11:00 AM	289	269	558	18	76	94	235	225	12	9	7	36	11	36	7	32	53	5	8	348	312	661	27	83	110													
11:00 AM	12:00 PM	325	288	612	20	70	90	279	259	14	10	8	42	13	42	8	39	46	6	7	393	336	729	30	78	108													
12:00 PM	01:00 PM	407	425	831	26	70	96	333	318	17	13	10	51	16	51	10	52	56	8	8	491	484	975	39	80	110													
01:00 PM	02:00 PM	436	347	783	19	78	98	298	300	15	11	9	48	15	48	9	50	50	8	8	515	403	918	30	87	118													
02:00 PM	03:00 PM	459	375	835	89	125	214	279	293	14	10	8	47	15	47	9	47	43	7	6	537	429	965	99	134	232													
03:00 PM	04:00 PM	450	419	869	43	111	154	330	298	16	12	10	48	15	48	9	68	44	10	7	532	473	1,005	55	121	126													
04:00 PM	05:00 PM	549	420	969	32	103	136	393	351	20	15	12	56	18	56	11	119	66	18	10	651	486	1,137	47	115	162													
05:00 PM	06:00 PM	716	493	1,209	37	119	156	467	343	23	17	14	55	17	55	10	117	75	18	11	815	559	1,375	54	133	188													
06:00 PM	07:00 PM	598	383	981	41	136	177	420	317	21	16	13	51	16	51	143	66	21	10	695	444	1,139	57	149	206														
07:00 PM	08:00 PM	401	263	665	43	104	148	343	280	17	13	10	45	14	45	8	108	62	16	9	485	317	802	57	115	171													
08:00 PM	09:00 PM	340	215	555	27	81	108	244	222	12	9	7	35	11	35	7	88	36	13	5	406	256	662	36	88	125													
09:00 PM	10:00 PM	299	193	492	34	91	126	171	148	9	7	5	24	7	24	4	75	17	11	3	346	219	565	41	97	138													
10:00 PM	11:00 PM	198	144	342	15	57	72	81	62	4	3	2	10	3	10	2	36	25	5	4	218	157	376	18	60	78													
11:00 PM	12:00 AM	133	96	226	7	29	35	41	30	2	1	1	5	2	5	1	24	9	4	1	143	104	363	38	206	250													
<b>TOTAL</b>		<b>7,726</b>	<b>5,955</b>	<b>13,681</b>	<b>687</b>	<b>1,848</b>	<b>2,536</b>	<b>4,455</b>	<b>4,455</b>	<b>223</b>	<b>167</b>	<b>134</b>	<b>713</b>	<b>223</b>	<b>713</b>	<b>134</b>	<b>1,150</b>	<b>1,150</b>	<b>173</b>	<b>173</b>	<b>8,867</b>	<b>6,841</b>	<b>15,808</b>	<b>854</b>	<b>1,982</b>	<b>2,836</b>													

<sup>1</sup>Hourly distributions used are included in Appendix H.

<sup>2</sup>Approach volume with right-turn adjustment based on Pagones Theorem.

Project trips were then added to background traffic volumes, consistent with the trip generation and distribution reflected in Sections 4.4 and 4.5, to determine the hourly approach volumes at the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection for future with project conditions. In order to get these volumes throughout 24 hours, daily project trips were distributed hourly. The method used is also consistent with the ITE *Trip Generation Manual*, 11<sup>th</sup> Edition. Land use hourly distributions used are included in Appendix H. Exhibit 27 shows the resulting hourly future with project traffic volumes at the intersection.

**Exhibit 27**  
**Future with Project Conditions Approach Volumes**  
**NW 107th Avenue / NW 88th Street**

Project Trips Hourly Distribution <sup>1</sup>		Midtown Doral Phases IV and V			Project Trips Hourly Distribution <sup>1</sup>		Midtown Doral Phase VI			Signalized Conditions Total					
		SBL	SBT	NBT			NBT	SBU	WBL	Major Street			Minor Street		
IN	OUT	10%	5%	15%	IN	OUT	60%	15%	85%	NB	SB	Both App	EB	WB	Both App
4	1	0	0	0	7	2	4	1	2	78	61	139	4	20	25
5	3	1	0	0	3	2	2	0	2	37	34	71	2	10	11
2	1	0	0	0	1	1	1	0	1	32	17	50	1	6	6
2	2	0	0	0	1	1	1	0	1	41	19	60	1	4	5
0	5	0	0	1	1	2	1	0	2	89	38	126	1	7	8
2	18	0	0	3	2	9	1	0	8	199	86	285	4	25	29
8	66	1	0	10	4	36	2	1	31	360	249	609	44	78	122
27	112	3	1	17	16	68	10	2	58	622	447	1,069	127	269	396
49	120	5	2	18	34	71	20	5	60	634	555	1,189	44	266	310
35	67	4	2	10	27	43	16	4	37	416	391	807	28	127	155
47	56	5	2	8	38	40	23	6	34	379	325	705	27	117	144
54	56	5	3	8	43	42	26	6	36	427	351	777	30	114	144
72	74	7	4	11	58	56	35	9	48	537	504	1,040	39	128	167
64	65	6	3	10	48	49	29	7	42	554	420	974	30	129	159
61	61	6	3	9	47	48	28	7	41	574	445	1,019	99	174	273
77	61	8	4	9	56	48	34	8	41	575	493	1,068	55	162	217
126	96	13	6	14	91	74	55	14	63	720	518	1,238	47	178	225
126	71	13	6	11	84	53	50	13	45	877	591	1,468	54	178	233
123	73	12	6	11	72	48	43	11	41	750	473	1,223	57	189	247
99	66	10	5	10	66	47	40	10	40	534	342	877	57	155	211
69	40	7	3	6	50	37	30	8	31	442	274	716	36	120	156
60	29	6	3	4	37	24	22	6	20	372	234	606	41	117	158
33	17	3	2	3	20	11	12	3	9	233	165	398	18	69	87
19	4	2	1	1	10	4	6	2	3	150	107	257	8	33	41
1,164	1,164	116	58	175	816	816	490	122	694	9,632	7,138	16,769	854	2,676	3,530

<sup>1</sup>Hourly distributions used are included in Appendix H

### **5.3.2 Signal Warrant Analysis**

The signal warrant study was performed using the *Manual on Uniform Traffic Control Devices* (MUTCD) published by the FHWA and the FDOT *Manual on Uniform Traffic Studies* (MUTS). Before a signal can be installed, at least one of the signal warrant requirements must be met. MDC and local municipalities must also agree with the need and consider other issues and concerns before approving any new traffic signal.

Signal warrant requirements were examined to determine if a signal is warranted at the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection for existing and future with project conditions. The existing and projected traffic volumes were compared with the nine signal warrants in the MUTS and the MUTCD. Fulfilling any one of the warrants is sufficient to recommend consideration of the installation of a traffic signal. See Appendix H for the signal warrant analysis worksheets at existing and future with project conditions. A summary of the results for each warrant is presented below.

#### **Signal Warrant 1 – Eight-Hour Vehicular Volumes**

Traffic volumes at the intersection of NW 107<sup>th</sup> Avenue and NW 88<sup>th</sup> Street are sufficient to meet the requirements of this warrant (under condition B). ***This warrant is applicable and is met for this location.***

#### **Signal Warrant 2 – Four-Hour Vehicular Volumes**

The plotted points representing traffic volumes for the four peak hours of the NW 107<sup>th</sup> Avenue and NW 88<sup>th</sup> Street intersection fall above the applicable threshold line. ***This warrant is applicable and is met for this location.***

#### **Signal Warrant 3 – Peak Hour**

The peak hour warrant is intended for use at a location where traffic conditions are such that, for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. ***This warrant is applicable and is met for this location.***

### **Signal Warrant 4 – Pedestrian Volume**

The pedestrian volume signal warrant is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street. High pedestrian activity is not expected to cross the major street. ***This warrant is applicable, but is not met for this location.***

### **Signal Warrant 5 – School Crossing**

The proposed signal is not intended to be a school crossing. ***Examination of the school crossing warrant at the subject intersection is not applicable.***

### **Signal Warrant 6 – Coordinated Signal System**

This warrant is intended for use in a coordinated signal system in order to maintain proper platooning of vehicles. This is not the intent of the signal. ***Therefore, this warrant is not applicable.***

### **Signal Warrant 7 – Crash Experience**

The crash experience signal warrant conditions are intended for application where the severity and frequency of crashes are the principal reasons to consider installing a traffic control signal. ***This warrant is not applicable.***

### **Signal Warrant 8 – Roadway Network**

This warrant is intended to justify a signal to encourage the concentration and organization of traffic flow on a roadway network. The warrant is satisfied when all intersecting routes are considered major routes. The NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection does not meet this definition. ***Thus, this warrant is not applicable.***

### **Signal Warrant 9 – Intersection Near a Grade Crossing**

This warrant is intended for use at a location where none of the conditions described in the other eight traffic signal warrants are met, but the proximity to the intersection to a grade crossing on an intersection approach controlled by a Stop or Yield sign. The study intersection does not meet this definition. ***Therefore, this warrant is not applicable.***

Exhibit 28 displays a summary of the analysis for the traffic signal warrants at the intersection. Fulfilling any one of the warrants is sufficient to consider the installation of a traffic signal. The signal warrant analysis showed that for future conditions, warrants 1, 2, and 3 are satisfied at the subject intersection. Therefore, a traffic signal is warranted at the NW 107<sup>th</sup> Avenue / 88<sup>th</sup> Street intersection.

**Exhibit 28: Summary of Signal Warrant Analysis  
NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street Intersection**

<b>Warrant</b>	<b>Warrant Description</b>	<b>Existing Conditions</b>	<b>Future Conditions</b>
1	Eight-Hour Vehicular Volumes	<b>Not Satisfied</b>	<b>Satisfied</b>
2	Four-Hour Vehicular Volumes	<b>Not Satisfied</b>	<b>Satisfied</b>
3	Peak Hour	<b>Not Satisfied</b>	<b>Satisfied</b>
4	Pedestrian Volume	<b>Not Satisfied</b>	<b>Not Satisfied</b>
5	School Crossing	Not Applicable	Not Applicable
6	Coordinated Signal System	Not Applicable	Not Applicable
7	Crash Experience	Not Applicable	Not Applicable
8	Roadway Network	Not Applicable	Not Applicable
9	Intersection Near a Grade Crossing	Not Applicable	Not Applicable

Source: David Plummer & Associates

## 6.0 FUTURE TRAFFIC WITH INTERSECTION IMPROVEMENTS

The NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersections are currently all-way stop controlled intersections. Upon the completion of the signal warrant analysis at both of these intersections, the results show that a traffic signal is recommended for the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersections. Therefore, both intersections were analyzed as a signalized intersection to determine the effects signalization would have on the intersection. Exhibit 29 shows the resulting LOS for the weekday AM and PM peak hours for future with project with the intersection improvement conditions. The analysis indicates that the two studied intersections are projected to operate within the City's overall LOS standards during the AM and PM peak hours. Intersection capacity analysis worksheets are included in Appendix D.

**Exhibit 29: Future with Project with Improvement Intersection Capacity Analysis  
Weekday AM and PM Peak Hour Conditions**

Intersection	Signalized/ Unsignalized	Direction	AM Peak		PM Peak		LOS Std <sup>1</sup>
			LOS	Delay (sec)	LOS	Delay (sec)	
NW 107 <sup>th</sup> Avenue / NW 88 <sup>th</sup> Street	S <sup>2</sup>	NB	B	17.5	B	14.9	D
		SB	B	17.2	B	14.2	D
		EB	C	33.3	D	35.0	D
		WB	C	30.7	C	26.7	D
		<i>Overall</i>	<b>B</b>	<b>20.3</b>	<b>B</b>	<b>16.5</b>	<b>D</b>
NW 107 <sup>th</sup> Avenue / NW 86 <sup>th</sup> Street	S <sup>2</sup>	NB	A	5.5	A	4.1	D
		SB	C	21.0	A	14.2	D
		EB	C	34.6	C	35.0	D
		WB	C	29.5	C	26.7	D
		<i>Overall</i>	<b>B</b>	<b>15.3</b>	<b>A</b>	<b>16.5</b>	<b>D</b>

<sup>1</sup>The City of Doral Comprehensive Plan allows a capacity of D for all streets within the City of Doral.

Source: David Plummer & Associates

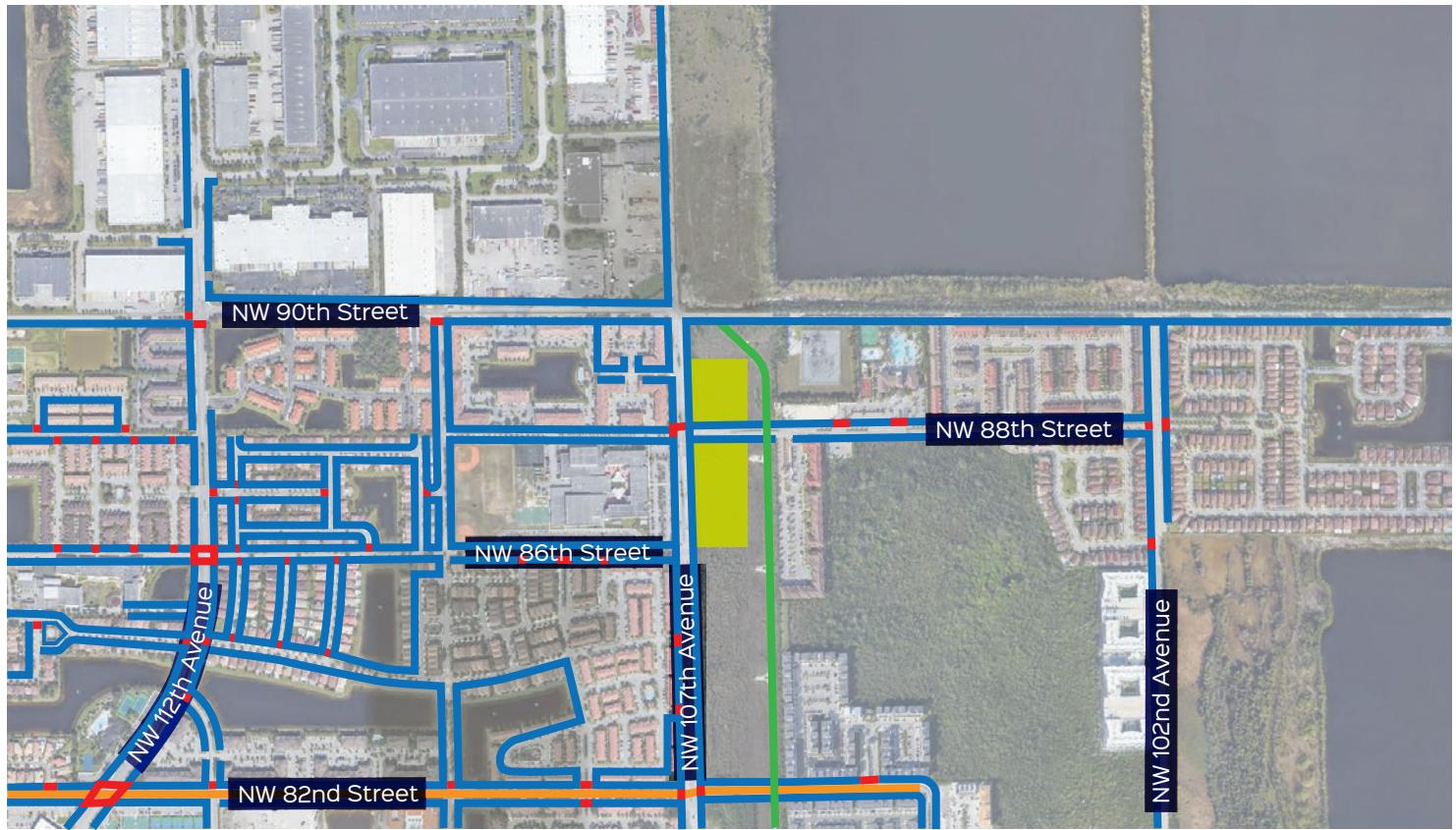
<sup>2</sup>A traffic signal is warranted at this intersection.

## 7.0 CIRCULATION PLAN

The Midtown Doral Phases IV, V, and VI project will be located on the east side of NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 90<sup>th</sup> Street in Doral, Florida. Access to / from the Phase IV and V parking garage will be provided via a two-way driveway located on NW 86<sup>th</sup> Street, a two-way, right in / right out driveway located on NW 107<sup>th</sup> Avenue, and a two-way, right in / right out driveway located on NW 88<sup>th</sup> Street. The loading areas for Phases IV and V of the project are located along NW 86<sup>th</sup> Street and along the project's private internal roadway, north of the parking garage. Access to the Phases IV and V loading areas are provided via a two-way driveway located on NW 86<sup>th</sup> Street and a two-way, right in / right out driveway located on NW 88<sup>th</sup> Street. Access to / from the Phase VI parking garage will be provided via a two-way, right in / right out driveway located along NW 88<sup>th</sup> Street and a two-way driveway located along NW 107<sup>th</sup> Avenue. The loading area for Phase VI of the project is located on the southwest corner of the site. Access to the Phase VI loading area is also provided via the two-way, right in / right out driveway located along NW 88<sup>th</sup> Street and a two-way driveway located along NW 107<sup>th</sup> Avenue.

The project is located in an area that is conducive for pedestrian activities. All intersections adjacent to the site have sidewalks and clearly marked crosswalks. NW 82<sup>nd</sup> Street and NW 88<sup>th</sup> Street, between NW 107<sup>th</sup> Avenue to NW 102<sup>nd</sup> Avenue, have exclusive bike lanes. An off-street pedestrian / bicycle trail that runs parallel to NW 107<sup>th</sup> Avenue is also available within the project area. A mobility plan was prepared for the site (Exhibit 30). The plan shows the project driveway, sidewalk connections, bike lanes, and pedestrian crosswalks.

The area surrounding the project is served by transit. The City of Doral trolley routes 1, 3, and 4 traverses the project area. The closest trolley stop to the project is located on NW 107<sup>th</sup> Avenue just north of NW 88<sup>th</sup> Street, along the western side of Phase VI. The project is proposing to improve this existing trolley stop by adding a trolley shelter for passengers. Exhibit 31 shows the available transit and trolley stops available near the project. See Appendix G for transit information.

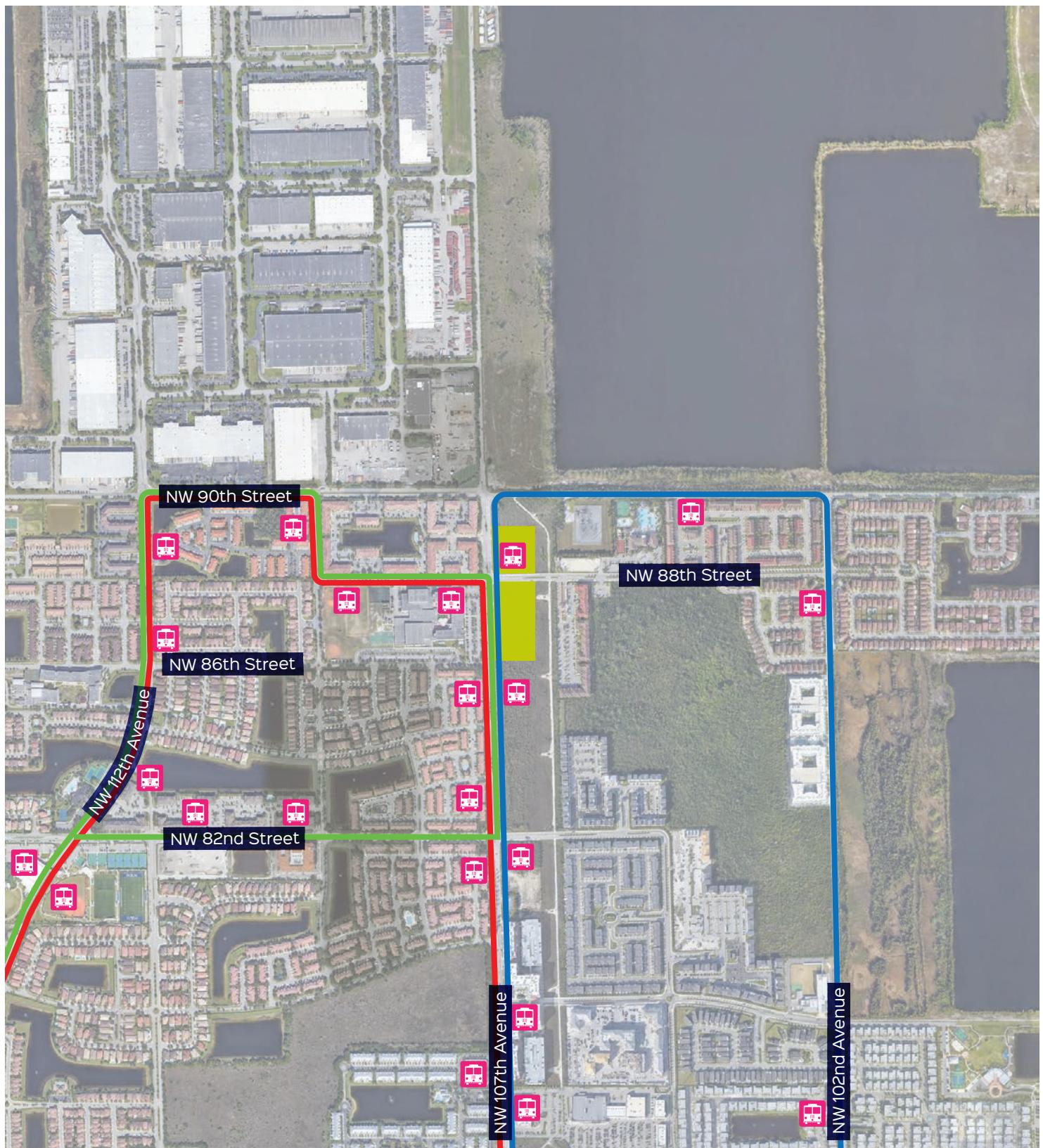


- Sidewalk
- Crosswalk
- Bike Lane
- Bike / Pedestrian Trail

■ Project Location

## Exhibit 30

### Mobility Plan - Pedestrian



Project Location

Trolley Stop

## Exhibit 31

### Mobility Plan - Transit

#### City of Doral Trolley

- Route 1
- Route 3
- Route 4



## 8.0 CONCLUSIONS

An assessment of the traffic impacts associated with the Midtown Doral Phases IV, V, and VI project was performed in accordance with the requirements of the City of Doral, Miami-Dade County (MDC), and the methodology approved by both agencies. The intersection analysis indicates that all of the studied intersections, except the NW 107<sup>th</sup> Avenue / NW 90<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersections, currently operate and are projected to continue to operate within the City's overall LOS standards during the AM and PM peak hours. Signal timing adjustments are recommended to improve approach delays at the NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection during the AM and PM peak hours. The unsignalized project driveways were also analyzed. The analysis indicates all driveways are projected to operate at acceptable LOS.

A signal warrant analysis was performed at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersections. The signal warrant study was performed using the *Manual on Uniform Traffic Control Devices* (MUTCD) published by the Federal Highway Administration (FHWA) and the Florida Department of Transportation (FDOT) *Manual on Uniform Traffic Studies* (MUTS). Meeting at least one of the signal warrants is a requirement before a traffic signal can be installed. The signal warrant analysis shows that warrants 1, 2, and 3 are met at the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersections. Therefore, a traffic signal at this intersection is recommended. However, MDC and the City of Doral must also agree with the need for a traffic signal and consider other issues and concerns before approving any new traffic signal.

The project is committed to restriping the southbound left turn lane at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection to allow this movement and convert the intersection to a signalized intersection. The project is also committed to signalizing and reconfiguring the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection. A southbound left turn lane will be added and the westbound approach will be modified to have an exclusive left turn and a shared through/right lane. A crosswalk will also be added to the south leg of the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection. Additionally, in order to make the driveway north of NW 88<sup>th</sup> Street right in / right out, the project

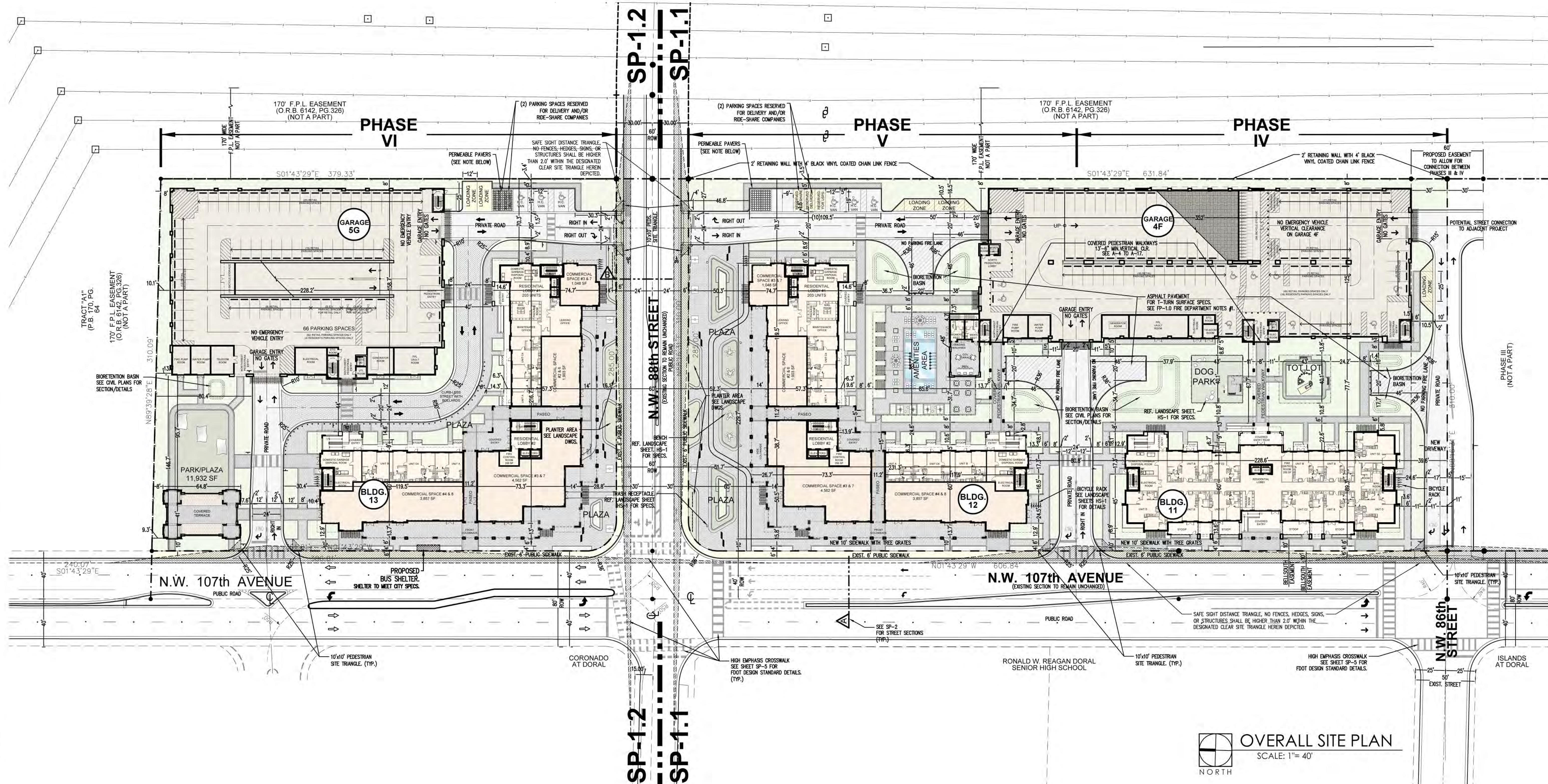
will add a directional median to allow the northbound left and eastbound left movements in / out of the adjacent property. The project is also proposing to improve the existing trolley stop on the east side of NW 107<sup>th</sup> Avenue just north of NW 88<sup>th</sup> Street by adding a trolley shelter for passengers.

The project area is currently served by the City of Doral trolley routes 1, 3, and 4. The project is located in an area that is conducive for pedestrian activities providing ample sidewalks and pedestrian crosswalks. An off-street pedestrian / bicycle trail that runs parallel to NW 107<sup>th</sup> Avenue is also available within the project area. The availability of transit and the existing pedestrian / bicyclist infrastructure will encourage the use of other modes of transportation and will reduce the project's vehicular impacts on the roadway network.

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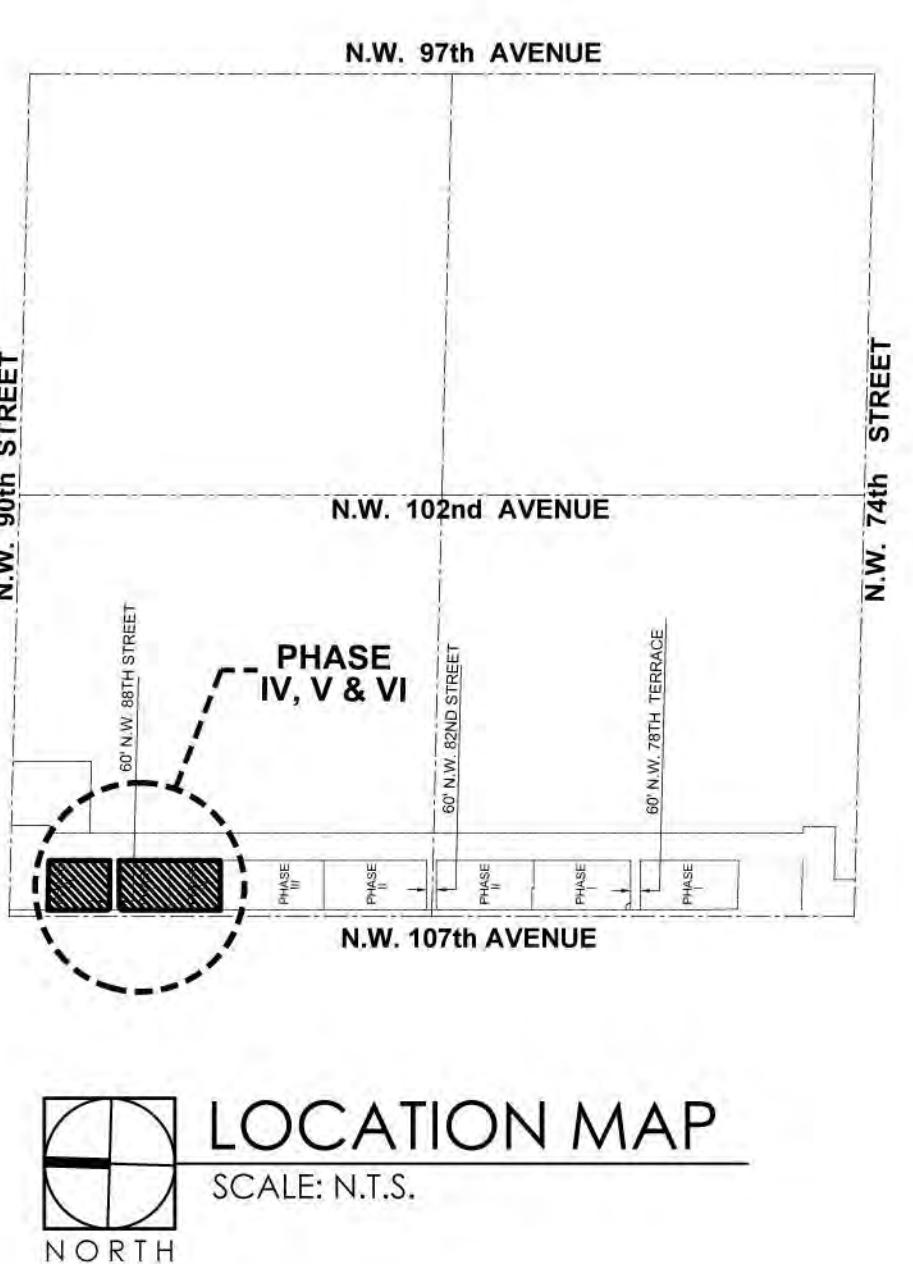
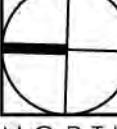
# **Appendix A**

## **Site Plan**



### OVERALL SITE PLAN

SCALE: 1" = 40'



LOCATION MAP  
SCALE: N.T.S.  
NORTH

#### COMMUNITY BENEFITS:

1. "LEED Gold" CERTIFICATION FOR ALL BUILDINGS OR AN EQUIVALENT CERTIFICATION.
2. PUBLIC PLAZA CONTAINING AT LEAST ONE CIVIC/CULTURAL FEATURE AND COMPRISING A MINIMUM OF 25% OF THE PROJECT FRONTRAGE ON THE STREET WITH A DEPTH OF AT LEAST 40 FEET.

LOW IMPACT DEVELOPMENT TECHNIQUES (LID) PROVIDED: BIoretention & French Drains. REF. ENGINEERING & LANDSCAPE PLANS FOR DETAILS. REF. SHEET SP-8 FOR BIORETENTION LOCATION. ADDITIONAL LID TECHNIQUES WILL BE ADDRESSED AT BUILDING PERMIT.

PROJECT WILL COMPLY WITH THE CITY'S PUBLIC ARTS PROGRAM SPECIFICATIONS AS PER CHAPTER 75.

INSTALLATION OF SIGNAGE, PAVEMENT MARKINGS AND OTHER NEED IT ITEMS DEALING WITH ROADWAY CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE REQUIRED STANDARDS OF THE MUDCD, CITY OF DORAL MIAMI DADE COUNTY, PUBLIC WORKS AND FIRE RESCUE DEPARTMENTS. REF. CIVIL DWGS.

FOR VEHICULAR & PEDESTRIAN CIRCULATION AND CONNECTIVITY DIAGRAMS WITHIN PHASE V, & VI AND ADJACENT PHASES REFERENCES SHEETS SP-2 & SP-3.

PER SECTION 68.669 TO THE MAXIMUM EXTENT POSSIBLE, ALL ON-SITE UTILITIES SHALL BE INSTALLED UNDERGROUND. THE PROJECT SHALL PROVIDE ADEQUATE LANDSCAPING TO SCREEN ALL ABOVE GROUND FACILITIES WHICH ARE NOT POSSIBLE TO PLACE UNDERGROUND.

#### NOTES:

1. ALL BUILDINGS SHALL MEET THE "GREEN BUILDING REQUIREMENTS" SET IN CHAPTER 63 OF THE CITY'S LDC.
2. BUILDING DESIGN COMPLIES WITH THE FOLLOWING SECTIONS 86-25(B), 86-27, 86-28 AND 86-29 OF THE CITY'S LDC. REF. BUILDING FLOOR PLANS AND ELEVATIONS.
3. ALL MECHANICAL EQUIPMENT ON ROOFTOP SHALL BE SCREENED FROM THE PUBLIC RIGHT-OF-WAY.
4. ALL UTILITIES SHALL BE INSTALL UNDERGROUND. IN THE EVENT THAT UTILITIES CAN NOT BE INSTALL UNDERGROUND ABOVE GROUND UTILITIES SHALL BE SCREEN WITH ADEQUATE LANDSCAPE AS PER SEC. 68.669. REFERENCE ENGINEERING PLANS FOR ABOVE GROUND UTILITIES Specs.
5. MINIMUM OF 20 PERCENT OF ALL REQUIRED SURFACE PARKING MUST BE CONSTRUCTED USING PERVIOUS OR HEAT-REFLECTIVE MATERIALS WITH A SOLAR REFLECTIVE INDEX (SRI) NO EXCEEDING 28 SUCH AS OPEN CELL PAVERS, MANAGE TURF, POROUS PAVEMENT, AND/OR OTHER PROVEN MATERIALS. SEE NOTE ON SP-1 & SP-1.2.
6. IRRIGATION, PHOTOMETRIC, AND CIVIL PLANS WILL BE PROVIDED AT THE TIME OF BUILDING PERMIT.
7. THE PROJECT SHALL MEET THE REQUIREMENTS OF THE CITY'S FLOOD PLAN ORDINANCE AND WILL BE REVIEWED AT THE TIME OF PERMITTING.
8. REFERENCE LANDSCAPE PLANS SHEER HS-1 FOR BENCHES, TRASH RECEPACES, OR ANY OTHER LANDSCAPE FEATURE DETAILS.
9. PROPOSED HERO HOUSING SHALL BE INCORPORATED WITH MARKET-RATE UNITS. FOR LOCATIONS SEE ARCHITECTURE PLANS INTERIOR AND EXTERIOR MATERIALS/FINISHES AND APPEARANCE SHALL MATCH THE MARKET RATE UNITS.

#### HERO HOUSING

TOTAL No. OF UNITS      HERO HOUSING UNITS PROVIDED (10% MIN.)      REGULAR HOUSING PROVIDED

TOTAL UNITS	10.14 %	89.86 %
552	56	496

PHASE IV - BUILDING 11

TOTAL UNITS	17.81 %	82.19 %
146	26	120

PHASE V - BUILDING 12

TOTAL UNITS	7.39 %	92.61 %
203	15	188

PHASE VI - BUILDING 13

TOTAL UNITS	7.39 %	92.61 %
203	15	188

REF. ARCHITECTURE PLANS FOR HERO HOUSING LOCATION.

#### ZONING DATA

PHASE IV, V & VI MIDTOWN DORAL PUD

NET SITE AREA      314,354 SF      7.21 ACRES

GROSS SITE AREA      376,394 SF      8.64 ACRES

ALLOWED/ REQUIRED      PROVIDED

TOTAL UNITS	552
DENSITY (UNITS/ACRE)	63.88
MINIMUM UNIT SIZE	650 SF
MAX. LOT COVERAGE	267,200.90 SF
MIN. DISTANCE BETWEEN BUILDINGS	20'-0"
FRONT SETBACK	0'-0"
REAR SETBACK	8'-0"
INTERIOR SETBACK	8'-0"
SIDE STREET SETBACK	0'-0"
MAXIMUM HEIGHT	113'-10"

ALLOWED/ REQUIRED      PROVIDED

TOTAL UNITS	552
DENSITY (UNITS/ACRE)	63.88
MINIMUM UNIT SIZE	650 SF
MAX. LOT COVERAGE	267,200.90 SF
MIN. DISTANCE BETWEEN BUILDINGS	20'-0"
FRONT SETBACK	0'-0"
REAR SETBACK	8'-0"
INTERIOR SETBACK	8'-0"
SIDE STREET SETBACK	0'-0"
MAXIMUM HEIGHT	113'-10"

PHASE IV, V & VI - SITE DATA

BUILDING 11, 12, 13 & GARAGE 4F & 5G

NET SITE AREA      314,354 SF      7.21 ACRES

AREA BREAKDOWN      SF      %

BUILDING 11	17,945	5.71
-------------	--------	------

BUILDING 12	29,929	9.52
-------------	--------	------

BUILDING 13	29,929	9.52
-------------	--------	------

GARAGE 4F	45,757	14.56
-----------	--------	-------

GARAGE 5G	35,156	11.18
-----------	--------	-------

PAVEMENT	40,858	13.00
----------	--------	-------

PEDESTRIAN PLAZA & SIDEWALKS	41,433	13.18
------------------------------	--------	-------

PARK COV. STRUCTURE	2,374	0.76
---------------------	-------	------

POOL & POOL DECK	6,200	1.97
------------------	-------	------

DOG PARK	1,721	0.55
----------	-------	------

TOT LOT	1,720	0.55
---------	-------	------

GREEN AREA	61,332	19.51
------------	--------	-------

TOTAL	314,354	100.00
-------	---------	--------

OPEN AREA BREAKDOWN      SF      %

PEDESTRIAN PLAZA & SIDEWALKS	41,433	13.18
------------------------------	--------	-------

POOL & POOL DECK	6,200	1.97
------------------	-------	------

DOG PARK	1,721	0.55
----------	-------	------

TOT LOT	1,720	0.55
---------	-------	------

GREEN AREA	61,332	19.51
------------	--------	-------

TOTAL OPEN AREA	106,206	33.79
-----------------	---------	-------

#### PHASE IV, V & VI - F.A.R. TABLE

BUILDING 11, 12, 13 & GARAGE 4F & 5G

NET SITE AREA      314,354 SF      7.21 ACRES

AREA BREAKDOWN      SF      %

BUILDING 11	17,945	5.71
-------------	--------	------

BUILDING 12	29,929	9.52
-------------	--------	------

BUILDING 13	29,929	9.52
-------------	--------	------

GARAGE 4F	45,757	14.56
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GARAGE 5G	35,156	11.18
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PAVEMENT	40,858	13.00
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PEDESTRIAN PLAZA & SIDEWALKS	41,433	13.18
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PARK COV. STRUCTURE	2,374	0.76
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POOL & POOL DECK	6,200	1.97
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DOG PARK	1,721	0.55
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TOT LOT	1,720	0.55
---------	-------	------

GREEN AREA	61,332	19.51
------------	--------	-------

TOTAL OPEN AREA	106,206	33.79
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SEAL:





# **Appendix B**

## **Approved Methodology**

## Midtown Doral Phases IV, V, and VI Traffic Study Methodology

**October 13, 2023**

**October 24, 2023**

### **PROJECT LOCATION**

The project will be located on the east side of NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 90<sup>th</sup> Street in Doral, Florida. Phase IV of the project proposes 146 residential units. Phase V of the project proposes a mixed-use development consisting of 203 residential units and 11,370 SF of retail space. Phases IV and V will share a seven-story parking garage that provides 848 parking spaces. Phase VI proposes a mixed-use development consisting of 203 residential units, 11,370 SF of retail space, and a six-story parking garage that provides 514 parking spaces. The project location and the proposed site plan are provided in Attachment A.

### **PURPOSE**

This methodology will provide the details of the Transportation Impact Study for the proposed development. Confirmation of this methodology will be requested from the City and/or its traffic consultant prior to performing the study.

### **TRAFFIC STUDY**

- Traffic Counts (Intersections) – Turning movement counts (TMCs) will be collected during the morning (7 – 9 am) and afternoon (4 – 6 pm) peak hour conditions of a regular weekday at the study intersections. The counts will be used to analyze the following four intersections:
  - NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street
  - NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street
  - NW 107<sup>th</sup> Avenue / **NW 82<sup>nd</sup> Street**
  - NW 107<sup>th</sup> Avenue / NW 90<sup>th</sup> Street

- 72-hour tube counts will be collected during the at the following four locations during a regular weekday at the studied roadways. The counts will be used to analyze the following four roadways:
  - NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street
  - NW 88<sup>th</sup> Street between NW 107<sup>th</sup> Avenue and NW 102<sup>nd</sup> Avenue
  - NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 82<sup>nd</sup> Street
  - NW 86<sup>th</sup> Street between NW 107<sup>th</sup> Avenue and NW 109<sup>th</sup> Avenue
- At the request of the City, signal warrant analyses will be conducted for following two intersections: NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street. As part of the analysis 72-hour tube counts will be collected at the approaches of the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersections during a regular weekday.
- Trip Generation – Trip generation for the project will estimated using trip generation information published by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11<sup>th</sup> Edition, otherwise engineering judgement will be used. ~~Pass-by trips will be established based on the ITE, Trip Generation Manual, 3<sup>rd</sup> Edition, pass-by rate.~~ Based on U.S. Census Bureau data (for tract 90.40), 4.1% of the area utilizes other modes of transportation. ~~Per request of Miami-Dade County, a 4.1% reduction will be applied for other modes of transportsations to the residential~~ trip generation calculations. Exhibit 1 shows the trip generation calculations for the proposed project. Trip generation documentation is available in Attachment B.

## Exhibit 1: Project Trip Generation

### Proposed Phase IV & V

Proposed ITE Land Use Designation <sup>1</sup>	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Multifamily Housing (Mid-Rise) <i>Land Use Code: 221</i>	349 DU	1,618	33	109	142	83	53	136
Strip Retail Plaza (<40k) <i>Land Use Code: 822</i>	11,370 SF	710	16	11	27	43	43	86
<b>Total Gross Trips</b>		<b>2,328</b>	<b>49</b>	<b>120</b>	<b>169</b>	<b>126</b>	<b>96</b>	<b>222</b>
Other Modes of Transportation (Residential) <sup>2</sup>		4.1%	-1	-4	-5	-3	-2	-5
Internalization (AM, PM) <sup>3</sup>		(2.5%, 14.1%)	-2	-2	-4	-15	-15	-30
<b>Net Existing Trips</b>			<b>46</b>	<b>114</b>	<b>160</b>	<b>108</b>	<b>79</b>	<b>187</b>

<sup>1</sup>Based on ITE Trip Generation, 11<sup>th</sup> Edition.

<sup>2</sup>Based on the US Census tract 90.40. Per request of the County, the deduction was only applied to residential project trips.

<sup>3</sup>Based on ITE Trip Generation Handbook, 3<sup>rd</sup> Edition.

### Proposed Phase VI

Proposed ITE Land Use Designation <sup>1</sup>	Number of Units	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Multifamily Housing (Mid-Rise) <i>Land Use Code: 221</i>	203 DU	922	18	60	78	48	31	79
Strip Retail Plaza (<40k) <i>Land Use Code: 822</i>	11,370 SF	710	16	11	27	43	43	86
<b>Total Gross Trips</b>		<b>1,632</b>	<b>34</b>	<b>71</b>	<b>105</b>	<b>91</b>	<b>74</b>	<b>165</b>
Other Modes of Transportation (Residential) <sup>2</sup>		4.1%	-1	-2	-3	-2	-1	-3
Internalization (AM, PM) <sup>3</sup>		(2.0%, 19.0%)	-1	-1	-2	-15	-15	-30
<b>Net Existing Trips</b>			<b>32</b>	<b>68</b>	<b>100</b>	<b>74</b>	<b>58</b>	<b>132</b>

<sup>1</sup>Based on ITE Trip Generation, 11<sup>th</sup> Edition.

<sup>2</sup>Based on the US Census tract 90.40. Per request of the County, the deduction was only applied to residential project trips.

<sup>3</sup>Based on ITE Trip Generation Handbook, 3<sup>rd</sup> Edition.

- Trip Distribution / Trip Assignment – Net new external project traffic will be assigned to the adjacent street network using the appropriate cardinal distribution for TAZ 687 from the 2045 Miami-Dade Long Range Transportation Plan Update, published by the Transportation Planning Organization. Normal area traffic patterns will also be considered when assigning project trips. A figure showing all of the assigned trips to the adjacent transportation network will be provided as part of the study. The expected build-out year is 2025. (See Attachment C for the Cardinal Distribution).

- Background Traffic – Available Florida Department of Transportation (FDOT) and Miami-Dade County (MDC) traffic counts will be consulted to determine a growth factor consistent with historical annual growth in the area. The Florida Department of Transportation (FDOT) traffic trend analysis spreadsheet will be used to calculate the growth rate using average daily traffic counts gathered from FDOT count stations. Where applicable, the historic growth rate analysis, based on FDOT count stations, will examine linear, exponential, and decaying exponential growth rates for the most recent five (5) year and ten (10) year periods. If negative, a 0.5% growth rate will be applied annually to provide a more conservative analysis. The growth factor will be applied to the existing traffic volumes to establish background traffic. This will be documented in the study.
- Committed Developments – The City will be consulted to identify nearby committed developments (approved but unbuilt/ unopened projects) in the project area. **Century Town Phase II & III** will be added to the analysis **as a committed development. If no committed developments are found in the area, a 0.5% growth rate will be applied to the analysis to account for any unknown committed developments in the area.**
- Future Transportation Projects – The Doral Masterplan, the 2023 TIP, and 2045 LRTP will be reviewed and consulted to determine any planned roadway improvements within the project area. Any found roadway improvements (published by the FDOT, MDC, City Doral, etc.) will be considered in the analysis at project build-out.
- Intersection Capacity Analysis – The intersection capacity analyses will be conducted for the following conditions:
  - Existing conditions (2023)
  - Future conditions with Committed Developments (2025)
  - Future conditions with Project and Committed Development (2025)

Intersection analysis will be done using the Synchro software based on the Highway Capacity Manual (HCM). Figures depicting trip distribution for each of these scenarios will be provided as part of this study. In addition to the intersections identified above, all projects driveways will be analyzed. If the results of the analysis show any intersection operating below the City's Level of Service standards, mitigation measures will be recommended.

- Signal Location and Timing – Existing signal phasing and timing for the signalized intersections will be obtained from Miami-Dade County. Signal data collected from the county will be included in the appendix of this study.
- As part of the intersection analysis, a table summarizing/comparing the 95<sup>th</sup> percentile vehicle stacking / queues and existing storage length for all exclusive turn lanes will be provided.
- Corridor capacity will be estimated using generalized vehicular capacities from the FDOT Quality / LOS Manual, or another acceptable equivalent.
- An exclusive turn lane evaluation at all driveways within public ROW will be provided. The analysis will be done following section 77-46 from City code.
- An extensive Transportation Demand Management plan (TDM) will be included in the report.

## **CIRCULATION ANALYSIS/PLAN**

- Multimodal – Pedestrian, bicycle and transit facilities will be defined in the Circulation Plan. Existing bus routes including schedule and bus stop locations will be discussed as part of the study. An effort will be made to include bicycle parking facilities within the project site to be utilized either by employees or tenants.

## **QUEUEING ANALYSIS**

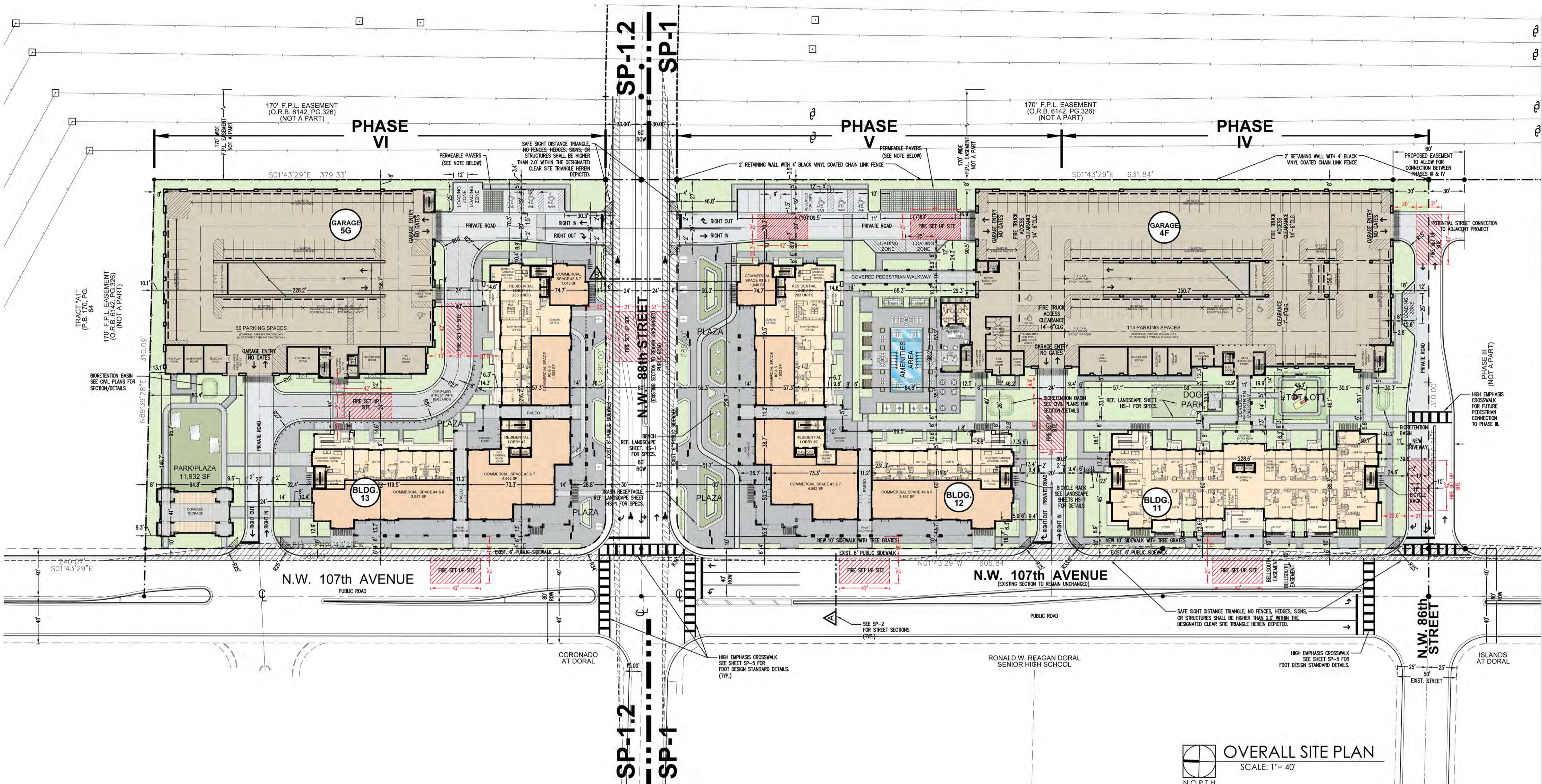
- If applicable, a queuing analysis will be performed at the gated entrance per the methods outlined in the Institute of Transportation Engineers (ITE) Transportation and Land Development. The vehicle queue (M) will be calculated based on processing rate, demand rate, service positions and utilization factor as necessary. The analysis will be done to ensure that there is sufficient on-site vehicle stacking so that there is no vehicle back-up onto the public right-of-way. Peak hour demand will be estimated at the project's entrances. The analysis will consider both demand and typical service times per vehicle. The gated entrances capacity will be a function of the numbers of lanes, type of service provided, and geometrics. The analysis, conclusions and recommendations will be documented in the traffic report.
- If applicable, a valet queuing analysis will be performed to determine the potential queue at the project's pick-up and drop-off areas. The queue will be calculated based on the peak hour traffic published by ITE's Trip Generation, 11<sup>th</sup> Edition. The project trip generation for the AM and PM peak hours will be used for the analysis. A processing rate will be used for valet operations.

Arrival flow rate from the traffic distribution will be converted to a random distribution using the Poisson formula (if applicable). The queuing analysis will be based on ITE's Transportation and Land Development publication – using Poisson arrivals and negative exponential service time. Entrance capacity will be a function of the numbers of lanes, number of valet attendants, and geometrics.

If you have any questions you can contact me at (305) 447-0900.

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## **Attachment A**



## OVERALL SITE PLAN

SCALE: 1" = 40'

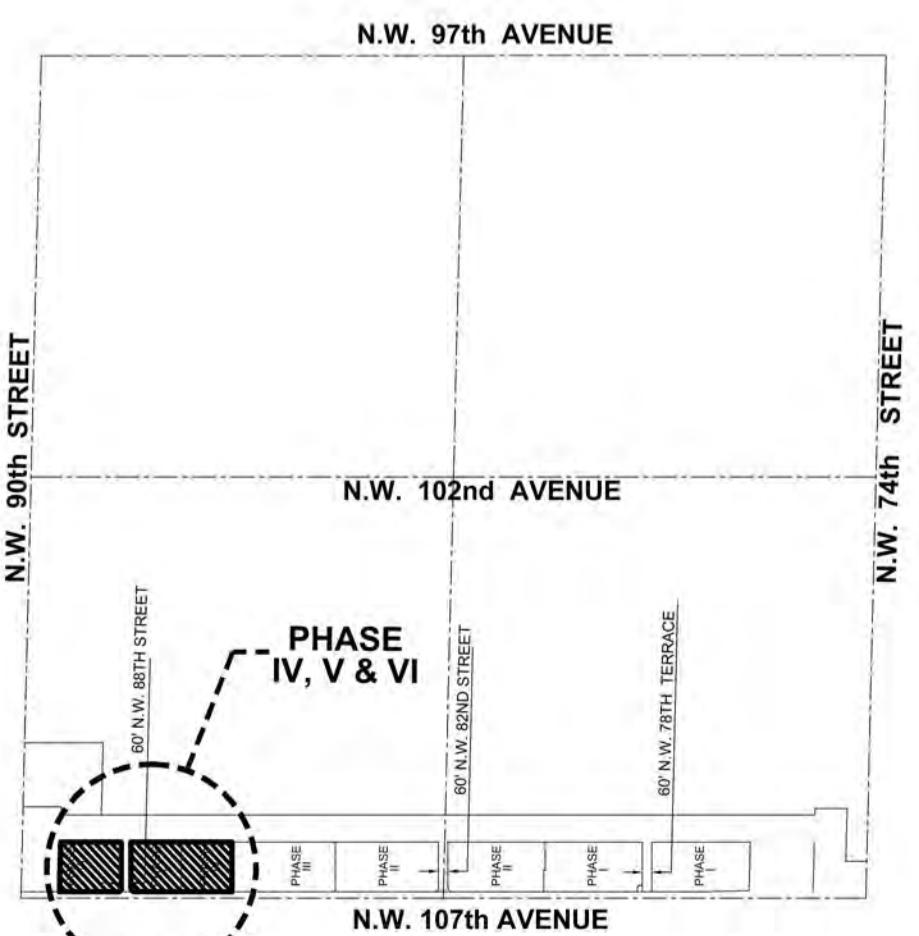
SCALE: 1 - 40

PHASE IV,V & VI - F.A.R. TABLE		
BUILDING 11, 12, 13 & GARAGE 4F & 5G		
NET SITE AREA	314,354 SF	7.21 ACRES
AREA BREAKDOWN	SF	F.A.R.
BUILDING 11	165,328	0.53
BUILDING 12	260,885	0.83
BUILDING 13	260,885	0.83
GARAGE 4F	335,659	1.07
GARAGE 5G	198,711	0.63
WORK COV. STRUCTURE	2,374	0.01
TOTAL	1,000,757	3.00

PHASE IV, V & VI - SITE DATA		
BUILDING 11, 12, 13 & GARAGE 4F & 5G		
NET SITE AREA	314,354 SF	7.21 ACRES

ZONING DATA		
PHASE IV, V & VI MIDTOWN DORAL PUD		
NET SITE AREA	314,354 SF	7.21 ACRES
GROSS SITE AREA	376,394 SF	8.64 ACRES
	ALLOWED/ REQUIRED	PROVIDED
UNITS		552
Y (UNITS/ACRE)		63.88
M UNIT SIZE	650 SF	699 SF
T COVERAGE	267,200.90 SF	168,119 SF
T COVERAGE	85.00 %	53.48%
DISTANCE BETWEEN BGS	20'-0"	40'-0"
SETBACK	0'-0"	0'-0"
SETBACK	8'-0"	8'-0"
FOR SETBACK	8'-0"	8'-0"
FREET SETBACK	0'-0"	0'-0"
IM. HEIGHT	11G1-12"	11G1-12"

IT COUNT & COMMERCIAL AREA		
PHASE IV, V & VI		
	RESIDENTIAL UNITS	COMMERCIAL
G 11	146	0 SF
G 12	203	11,370 SF
G 13	203	11,370 SF
	552	22,740 SF

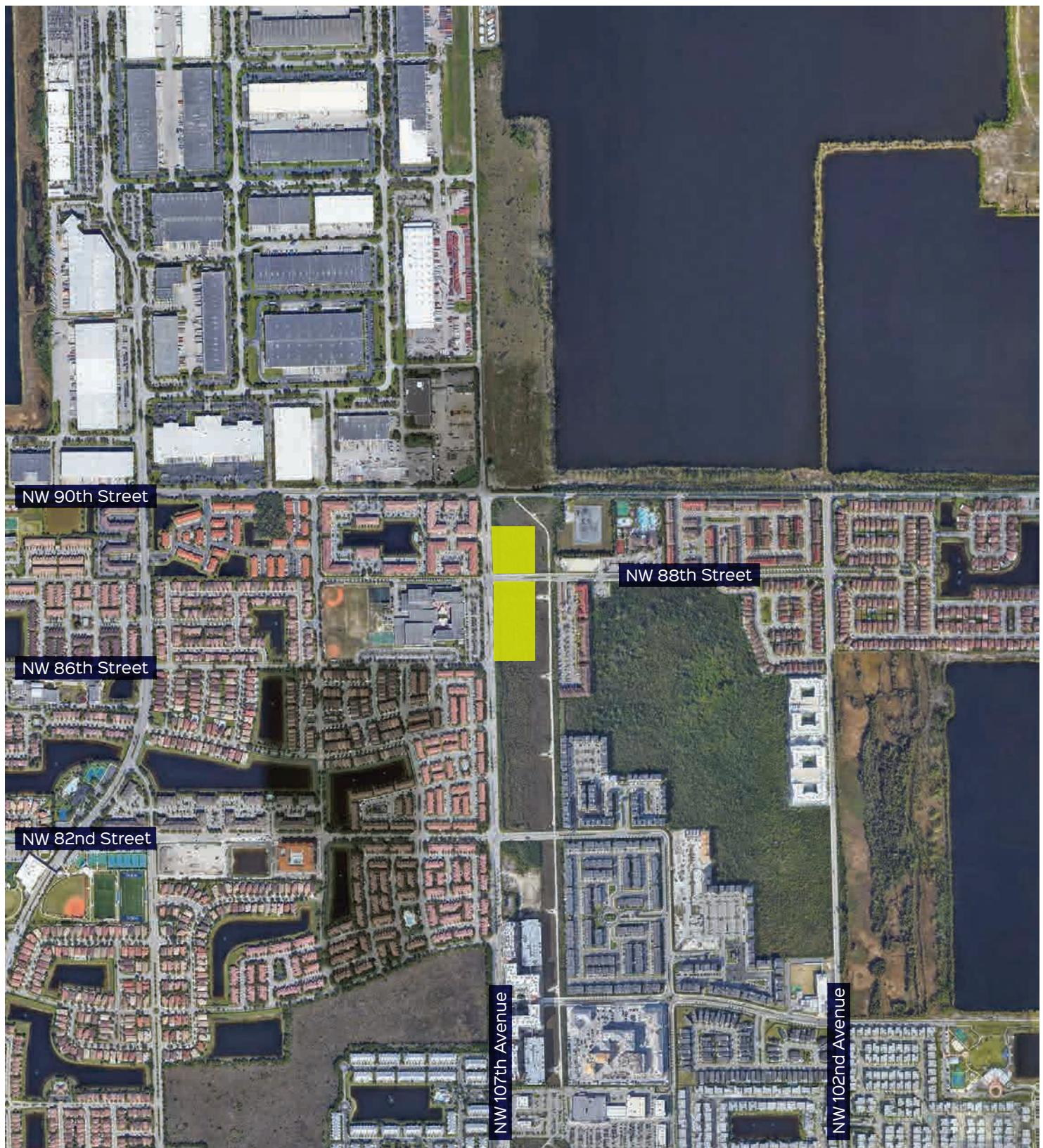




# LOCATION MAP

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SCALE: N.T.S.



 Project Location

## Exhibit 1

### Location Map

## **Attachment B**

**Scenario - 2**

Scenario Name: Phases IV and V

User Group:

**VEHICLE TRIPS BEFORE REDUCTION**

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit
					Rate/Equation	Split%	Split%
221 - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	349	Weekday	Best Fit (LIN) $T = 4.77(X) - 46.46$	809 50%	809 50%
221(1) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	349	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN) $T = 0.44(X) - 11.61$	33 23%	109 77%
221(2) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	349	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN) $T = 0.39(X) + 0.34$	83 61%	53 39%
822 - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday	Best Fit (LIN) $T = 42.20(X) + 229.68$	355 50%	355 50%
822(1) - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 2.36	16 60%	11 40%
822(2) - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) $\ln(T) = 0.71\ln(X) + 2.72$	43 50%	43 50%

**Scenario - 3**

Scenario Name: Phase VI

User Group:

**VEHICLE TRIPS BEFORE REDUCTION**

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit
					Rate/Equation	Split%	Split%
221 - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	203	Weekday	Best Fit (LIN) $T = 4.77(X) - 46.46$	461 50%	461 50%
221(1) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	203	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN) $T = 0.44(X) - 11.61$	18 23%	60 77%
221(2) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	203	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN) $T = 0.39(X) + 0.34$	49 61%	31 39%
822 - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday	Best Fit (LIN) $T = 42.20(X) + 229.68$	355 50%	355 50%
822(1) - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 2.36	16 60%	11 40%
822(2) - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) $\ln(T) = 0.71\ln(X) + 2.72$	43 50%	43 50%

## AM Peak Hour Trip Generation and Internalization

*Midtown Doral Phases IV and V*

Multifamily (Mid-Rise)		Strip Retail Plaza			
Land Use 221		Land Use 822			
349 DU		11,370 SF			
In	Out	In	Out		
33	109	16	11	169 ITE Trips	
-1	-4	-1	0	-6 -4.1% other modes of transportation	
32	105	15	11	163 Non Transit Vehicle Trips	
<b>UNBALANCED INTERNALIZATION</b>					
1%		17%			
1	1	3			
2%			14%		
1	1		2		
Multifamily (Mid-Rise)		Strip Retail Plaza			
In	Out	In	Out		
32	105	15	11	163 Vehicle Trips	
<b>BALANCED INTERNALIZATION</b>					
-1		-1			
-1			-1		
-1	-1	-1	-1	-4 Internal	
31	104	14	10	159 External Trips	
1.5%		7.7%		2.5% % Internal	
<b>31</b>	<b>104</b>	<b>14</b>	<b>10</b>	<b>159 Net New External Trips</b>	

## PM Peak Hour Trip Generation and Internalization

*Midtown Doral Phases IV and V*

Multifamily (Mid-Rise)		Strip Retail Plaza			
Land Use 221		Land Use 822			
349 DU		11,370 SF			
In	Out	In	Out		
83	53	43	43	222	ITE Trips
-3	-2	-2	-2	-9	-4.1% other modes of transportaion
80	51	41	41	213	Non Transit Vehicle Trips
<b>UNBALANCED INTERNALIZATION</b>					
42%		10%			
21	4	4			
46%				26%	
37	11			11	
Multifamily (Mid-Rise)		Strip Retail Plaza			
In	Out	In	Out		
80	51	41	41	213	Vehicle Trips
<b>BALANCED INTERNALIZATION</b>					
-4		-4			
-11				-11	
-11	-4	-4	-11	-30	Internal
69	47	37	30	183	External Trips
11.5%			18.3%	14.1%	% Internal
		0	0	0	0% Passby
<b>69</b>	<b>47</b>	<b>37</b>	<b>30</b>	<b>183</b>	<b>Net New External Trips</b>

## AM Peak Hour Trip Generation and Internalization

*Midtown Doral Phase VI*

Multifamily (Mid-Rise)		Strip Retail Plaza										
Land Use 221		Land Use 822										
203 DU		11,370 SF										
In		In										
Out		Out										
18		16		105 ITE Trips								
-1		-1		-4 -4.1% other modes of transportaion								
17		15		101 Non Transit Vehicle Trips								
<b>UNBALANCED INTERNALIZATION</b>												
<table border="1"> <tr> <td>1%</td> <td>1</td> <td>17%</td> <td>3</td> </tr> <tr> <td>2%</td> <td>0</td> <td>14%</td> <td>2</td> </tr> </table>		1%	1	17%	3	2%	0	14%	2			
1%	1	17%	3									
2%	0	14%	2									
Multifamily (Mid-Rise)		Strip Retail Plaza										
In		In										
17		15		101 Vehicle Trips								
<b>BALANCED INTERNALIZATION</b>												
<table border="1"> <tr> <td>-1</td> <td>-1</td> </tr> <tr> <td>0</td> <td>0</td> </tr> </table>		-1	-1	0	0							
-1	-1											
0	0											
0		-1		-2 Internal								
17		14		99 External Trips								
57 1.3%		11 3.8%		2.0% % Internal								
<b>17</b>		<b>14</b>		<b>99 Net New External Trips</b>								

## PM Peak Hour Trip Generation and Internalization

*Midtown Doral Phase VI*

Multifamily (Mid-Rise)		Strip Retail Plaza			
Land Use 221		Land Use 822			
203 DU		11,370 SF			
In	Out	In	Out		
48	31	43	43	165	ITE Trips
-2	-1	-2	-2	-7	-4.1% other modes of transportaion
46	30	41	41	158	Non Transit Vehicle Trips
<b>UNBALANCED INTERNALIZATION</b>					
42% 13	4	10% 4			
46% 21	11		26% 11		
Multifamily (Mid-Rise)		Strip Retail Plaza			
In	Out	In	Out		
46	30	41	41	158 Vehicle Trips	
<b>BALANCED INTERNALIZATION</b>					
-4		-4			
-11			-11		
-11	-4	-4	-11	-30	Internal
35	26	37	30	128	External Trips
19.7%			18.3%	19.0%	% Internal
		0	0	0	0% Passby
35	26	37	30	<b>128 Net New External Trips</b>	

# COMMUTING CHARACTERISTICS BY SEX



Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Census Tract 90.40, Miami-Dade County, Florida		
Total	Estimate	Margin of Error
<b>Label</b>		
Workers 16 years and over	2,922	±402
MEANS OF TRANSPORTATION TO WORK		
Car, truck, or van	82.6%	±5.3
Drove alone	74.6%	±6.1
Carpooled	8.0%	±3.0
In 2-person carpool	7.2%	±3.0
In 3-person carpool	0.4%	±0.5
In 4-or-more person carpool	0.4%	±0.4
Workers per car, truck, or van	1.05	±0.02
Public transportation (excluding taxicab)	3.7%	±4.3
Walked	0.4%	±0.6
Bicycle	0.0%	±1.6
Taxicab, motorcycle, or other means	0.3%	±0.4
Worked from home	12.9%	±4.0
PLACE OF WORK		
Workers 16 years and over who did not work from home	2,545	±392
VEHICLES AVAILABLE		
PERCENT ALLOCATED		

## Table Notes

### COMMUTING CHARACTERISTICS BY SEX

**Survey/Program:** American Community Survey

**Year:** 2021

**Estimates:** 5-Year

**Table ID:** S0801

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode

## Table Notes

### COMMUTING CHARACTERISTICS BY SEX

**Survey/Program:** American Community Survey.

**Year:** 2021

**Estimates:** 5-Year

**Table ID:** S0801

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

When information is missing or inconsistent, the Census Bureau logically assigns an acceptable value using the response to a related question or questions. If a logical assignment is not possible, data are filled using a statistical process called allocation, which uses a similar individual or household to provide a donor value. The "Allocated" section is the number of respondents who received an allocated value for a particular subject.

Several means of transportation to work categories were updated in 2019. For more information, see: Change to Means of Transportation.

The 2017-2021 American Community Survey (ACS) data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

#### Explanation of Symbols:

- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.

N

The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.  
(X)

The estimate or margin of error is not applicable or not available.

median-

The median falls in the lowest interval of an open-ended distribution (for example "2,500-")

median+

The median falls in the highest interval of an open-ended distribution (for example "250,000+").

\*\*

The margin of error could not be computed because there were an insufficient number of sample observations.

\*\*\*

The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.

\*\*\*\*

A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.

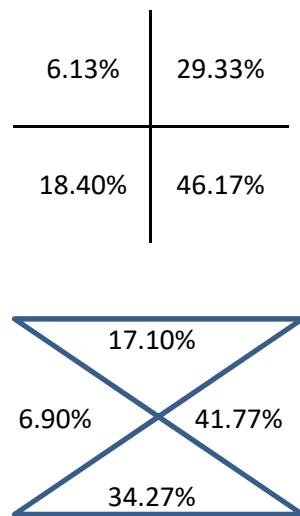
## **Attachment C**

**Cardinal Distribution**  
**Midtown Doral Phases IV, V, and VI**

23188

TAZ 687

DIRECTION	2015	2045	2025
NNE	12.2%	14.8%	13.1%
ENE	17.2%	14.4%	16.3%
ESE	27.1%	22.3%	25.5%
SSE	20.5%	21.0%	20.7%
SSW	12.5%	15.8%	13.6%
WSW	5.4%	3.6%	4.8%
WNW	2.1%	2.1%	2.1%
NNW	3.0%	6.1%	4.0%



# **Appendix C**

## **Data Collection**

**Traffic Volumes**

**Seasonal Factors**

**Historic Background Growth**

**Cardinal Distribution**

# **Traffic Volumes**

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 88th St  
**City:** Doral  
**Control:** 4-Way Stop

**Project ID:** 23-140438-001  
**Date:** 10/31/2023

**Data - Total**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 88th St				NW 88th St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	37	58	8	14	3	77	12	1	3	20	41	0	25	34	7	0	340
7:15 AM	11	75	21	12	1	82	6	0	1	14	37	0	26	13	13	0	312
7:30 AM	3	105	10	0	0	70	0	0	0	1	8	0	38	2	3	0	240
7:45 AM	5	116	18	0	1	71	1	0	2	0	6	0	50	1	6	0	277
8:00 AM	5	100	22	0	0	120	5	0	0	3	2	0	44	11	7	0	319
8:15 AM	4	129	19	0	0	112	4	0	1	5	7	0	37	10	7	0	335
8:30 AM	4	120	32	0	2	111	2	0	1	8	3	0	35	1	4	0	323
8:45 AM	0	93	17	0	0	91	2	0	0	3	6	0	27	5	3	0	247
TOTAL VOLUMES : APPROACH %'s :	69	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL 2393
6.65% 76.69% 14.16% 2.50%	0.90%	94.83%	4.13%	0.13%	4.65%	31.40%	63.95%	0.00%	68.95%	18.83%	12.22%	0.00%					
PEAK HR :	<b>07:45 AM - 08:45 AM</b>																TOTAL
PEAK HR VOL :	18	465	91	0	3	414	12	0	4	16	18	0	166	23	24	0	1254
PEAK HR FACTOR :	0.900	0.901	0.711	0.000	0.375	0.863	0.600	0.000	0.500	0.500	0.643	0.000	0.830	0.523	0.857	0.000	0.936
0.920	0.858		0.731										0.859				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	3	71	25	0	3	92	1	0	1	7	3	0	8	4	7	0	225
4:15 PM	14	80	32	0	0	80	1	0	1	3	3	0	11	3	4	0	232
4:30 PM	5	110	19	0	0	111	1	0	0	7	2	0	26	2	3	0	286
4:45 PM	11	109	23	0	1	78	0	0	2	4	7	0	23	5	1	0	264
5:00 PM	4	117	25	0	0	120	2	0	0	6	4	0	19	6	2	0	305
5:15 PM	9	131	29	0	1	113	1	0	0	4	2	0	14	4	5	0	313
5:30 PM	4	147	29	0	2	102	4	0	1	5	2	0	16	5	3	0	320
5:45 PM	14	116	26	1	0	97	3	0	2	5	4	0	13	4	7	0	292
TOTAL VOLUMES : APPROACH %'s :	64	881	208	1	7	793	13	0	7	41	27	0	130	33	32	0	TOTAL 2237
5.55% 76.34% 18.02% 0.09%	0.86%	97.54%	1.60%	0.00%	9.33%	54.67%	36.00%	0.00%	66.67%	16.92%	16.41%	0.00%					
PEAK HR :	<b>05:00 PM - 06:00 PM</b>																TOTAL
PEAK HR VOL :	31	511	109	1	3	432	10	0	3	20	12	0	62	19	17	0	1230
PEAK HR FACTOR :	0.554	0.869	0.940	0.250	0.375	0.900	0.625	0.000	0.375	0.833	0.750	0.000	0.816	0.792	0.607	0.000	0.961
0.906	0.912		0.795										0.907				

National Data & Surveying Services  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 88th St  
**City:** Doral  
**Control:** 4-Way Stop

**Project ID:** 23-140438-001  
**Date:** 10/31/2023

## Data - Cars

NS/EW Streets:		NW 107th Ave				NW 107th Ave				NW 88th St				NW 88th St				
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
		0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	36	57	8	14	3	75	12	1	3	20	41	0	25	34	7	0	336	
7:15 AM	10	73	20	12	1	82	6	0	1	14	36	0	26	13	13	0	307	
7:30 AM	3	104	10	0	0	70	0	0	0	1	6	0	38	1	3	0	236	
7:45 AM	5	116	18	0	1	70	1	0	2	0	4	0	50	1	5	0	273	
8:00 AM	5	97	22	0	0	118	4	0	0	3	1	0	44	11	7	0	312	
8:15 AM	3	129	19	0	0	111	4	0	1	5	6	0	37	10	7	0	332	
8:30 AM	4	118	31	0	2	108	1	0	1	8	3	0	35	1	4	0	316	
8:45 AM	0	87	17	0	0	88	2	0	0	3	5	0	27	4	3	0	236	
TOTAL VOLUMES : APPROACH %'s :	NL 66 6.48%	NT 781 76.72%	NR 145 14.24%	NU 26 2.55%	SL 7 0.92%	ST 722 95.00%	SR 30 3.95%	SU 1 0.13%	EL 8 4.88%	ET 54 32.93%	ER 102 62.20%	EU 0 0.00%	WL 282 69.46%	WT 75 18.47%	WR 49 12.07%	WU 0 0.00%	TOTAL 2348	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL 1233	
PEAK HR VOL :	17 0.850	460 0.891	90 0.726	0 0.000	3 0.375	407 0.862	10 0.625	0 0.000	4 0.500	16 0.500	14 0.583	0 0.000	166 0.830	23 0.523	23 0.821	0 0.855	0.928	
PM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
		0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	3	65	25	0	0	3	91	1	0	1	7	2	0	8	4	7	0	217
4:15 PM	13	80	32	0	0	76	1	0	1	3	1	0	9	3	4	0	223	
4:30 PM	5	108	19	0	0	110	1	0	0	7	2	0	26	2	2	0	282	
4:45 PM	11	104	23	0	1	76	0	0	2	4	6	0	23	5	1	0	256	
5:00 PM	4	113	25	0	0	120	2	0	0	6	2	0	19	6	2	0	299	
5:15 PM	9	128	28	0	0	113	1	0	0	4	1	0	14	4	5	0	307	
5:30 PM	4	146	29	0	2	101	4	0	1	5	1	0	16	5	3	0	317	
5:45 PM	14	115	26	1	0	96	3	0	2	5	3	0	13	4	7	0	289	
TOTAL VOLUMES : APPROACH %'s :	NL 63 5.58%	NT 859 76.02%	NR 207 18.32%	NU 1 0.09%	SL 6 0.75%	ST 783 97.63%	SR 13 1.62%	SU 0 0.00%	EL 7 10.61%	ET 41 62.12%	ER 18 27.27%	EU 0 0.00%	WL 128 66.67%	WT 33 17.19%	WR 31 16.15%	WU 0 0.00%	TOTAL 2190	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL 1212	
PEAK HR VOL :	31 0.554	502 0.860	108 0.931	1 0.250	2 0.250	430 0.896	10 0.625	0 0.000	3 0.375	20 0.833	7 0.583	0 0.000	62 0.816	19 0.792	17 0.607	0 0.000	0.956	
PEAK HR FACTOR :	0.897																	

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 88th St  
**City:** Doral  
**Control:** 4-Way Stop

**Project ID:** 23-140438-001  
**Date:** 10/31/2023

**Data - HT**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 88th St				NW 88th St						
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND						
AM	0	0	0	0	0	SL	ST	SR	SU	0	EL	ET	ER	EU	0	0	WR	WT	
7:00 AM	1	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
7:15 AM	1	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	5
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	4
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	1	0	0	4
8:00 AM	0	3	0	0	0	2	1	0	0	0	0	1	0	0	0	0	0	0	7
8:15 AM	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	3
8:30 AM	0	2	1	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	7
8:45 AM	0	6	0	0	0	3	0	0	0	0	0	1	0	0	1	0	0	0	11
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL		
<b>APPROACH %'s :</b>	3	15	2	0	0.00%	0	12	2	0	0	0	8	0	2	1	0	45		
<b>PEAK HR :</b>	<b>07:45 AM - 08:45 AM</b>				0	7	2	0	0	0	4	0	0	0	1	0	TOTAL		
<b>PEAK HR VOL :</b>	1	5	1	0	0.250	0.583	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.250	0.000	21		
<b>PEAK HR FACTOR :</b>	0.250	0.417	0.250	0.000	0.583	0.563	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.250	0.000	0.750		
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND						
	0	0	0	0	0	SL	ST	SR	SU	0	0	0	0	WL	WT	WR	WU		
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL		
4:00 PM	0	6	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	8	
4:15 PM	1	0	0	0	0	4	0	0	0	0	2	0	0	2	0	0	0	9	
4:30 PM	0	2	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	4	
4:45 PM	0	5	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	8	
5:00 PM	0	4	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	6	
5:15 PM	0	3	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	6	
5:30 PM	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	
5:45 PM	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3	
<b>TOTAL VOLUMES :</b>	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL		
<b>APPROACH %'s :</b>	1	22	1	0	1	10	0	0	0	0	9	0	2	0	1	0	47		
<b>PEAK HR :</b>	<b>05:00 PM - 06:00 PM</b>				1	2	0	0	0	0	5	0	0	0	0	0	TOTAL		
<b>PEAK HR VOL :</b>	0	9	1	0	0.000	0.563	0.250	0.000	0.250	0.500	0.000	0.625	0.000	0.000	0.000	0.000	18		
<b>PEAK HR FACTOR :</b>	0.000	0.563	0.250	0.000	0.625	0.750	0.625	0.000	0.000	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.750		

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 88th St  
**City:** Doral  
**Control:** 4-Way Stop

**Project ID:** 23-140438-001  
**Date:** 10/31/2023

**Data - Bikes**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 88th St				NW 88th St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	3
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
8:00 AM	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
<b>TOTAL VOLUMES : APPROACH %'s :</b>	NL 0 0.00%	NT 3 100.00%	NR 0 0.00%	NU 0 0.00%	SL 1 25.00%	ST 1 25.00%	SR 2 50.00%	SU 0 0.00%	EL 0 0.00%	ET 1 50.00%	ER 1 50.00%	EU 0 0.00%	WL 0 0.00%	WT 4 80.00%	WR 1 20.00%	WU 0 0.00%	<b>TOTAL</b> 14 0.438
<b>PEAK HR :</b>	<b>07:45 AM - 08:45 AM</b>				0	1	1	0	0	1	0	0	0	2	0	0	<b>TOTAL</b> 7
<b>PEAK HR VOL :</b>	0	2	0	0	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.500	0.000	0.500	<b>PEAK HR FACTOR :</b> 0.250

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
5:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	
<b>TOTAL VOLUMES : APPROACH %'s :</b>	NL 1 50.00%	NT 0 0.00%	NR 1 50.00%	NU 0 0.00%	SL 0 0.00%	ST 4 100.00%	SR 0 0.00%	SU 0 0.00%	EL 0 0.00%	ET 0 0.00%	ER 0 0.00%	EU 0 0.00%	WL 0 0.00%	WT 1 100.00%	WR 0 0.00%	WU 0 0.00%	<b>TOTAL</b> 7 0.500
<b>PEAK HR :</b>	<b>05:00 PM - 06:00 PM</b>				0	3	0	0	0	0	0	0	0	0	0	0	<b>TOTAL</b> 4 0.500
<b>PEAK HR VOL :</b>	0	0	1	0	0.000	0.375	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	<b>PEAK HR FACTOR :</b> 0.250

National Data & Surveying Services

# Intersection Turning Movement Count

**Location:** NW 107th Ave & NW 88th St  
**City:** Doral

**Project ID:** 23-140438-001  
**Date:** 10/31/2023

## Data - Pedestrians (Crosswalks)

NS/EW Streets:	NW 107th Ave		NW 107th Ave		NW 88th St		NW 88th St		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	11	0	12	0	0	0	8	31
7:15 AM	0	13	0	5	0	0	0	7	25
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	4	2	0	0	0	0	0	0	6
8:00 AM	0	0	1	1	0	0	0	1	3
8:15 AM	0	0	2	0	0	0	0	1	3
8:30 AM	4	0	0	0	1	0	0	0	5
8:45 AM	2	0	0	0	1	0	2	0	5
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	10	26	3	18	2	0	2	17	78
PEAK HR :	07:45 AM - 08:45 AM		14.29%		85.71%		100.00%		10.53% 89.47%
PEAK HR VOL :	8	2	3	1	1	0	0	2	17
PEAK HR FACTOR :	0.500	0.250	0.375	0.250	0.250			0.500	0.708
	0.417		0.500		0.250			0.500	

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	1	0	1	0	0	0	2	0	4
4:15 PM	0	0	0	1	0	0	1	0	2
4:30 PM	0	0	0	1	0	0	0	0	1
4:45 PM	0	1	0	0	0	0	0	1	2
5:00 PM	0	0	2	0	1	0	0	0	3
5:15 PM	0	0	1	0	0	0	0	1	2
5:30 PM	0	1	0	1	0	0	1	1	4
5:45 PM	2	2	0	0	0	1	2	2	9
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	3	4	4	3	1	1	6	5	27
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	2	3	3	1	1	1	3	4	18
PEAK HR FACTOR :	0.250	0.375	0.375	0.250	0.250	0.250	0.375	0.500	0.500
	0.313		0.500		0.500		0.438		

Prepared by National Data & Surveying Services

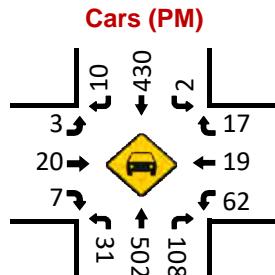
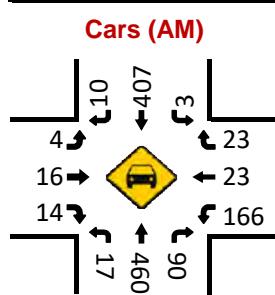
## **NW 107th Ave & NW 88th St**

## Peak Hour Turning Movement Count

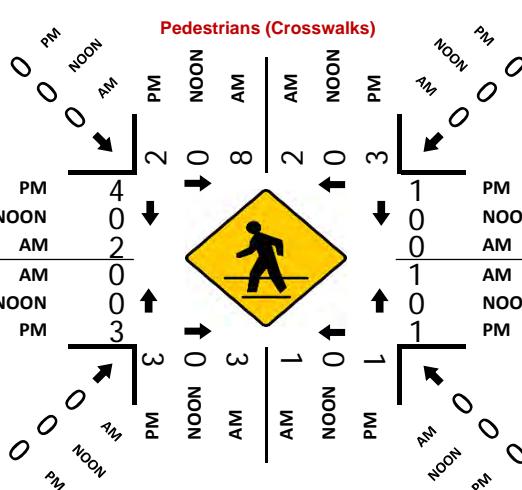
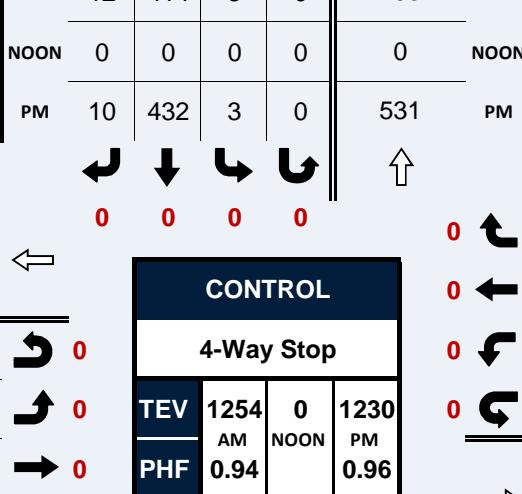
ID: 23-140438-001

**City:** Doral

<b>PEAK HOURS</b>	07:45 AM - 08:45 AM NONE 05:00 PM - 06:00 PM
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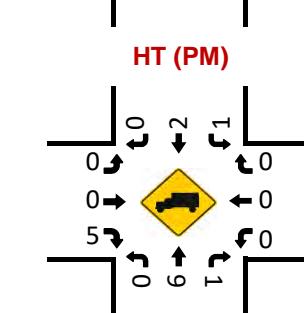
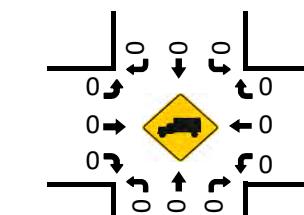
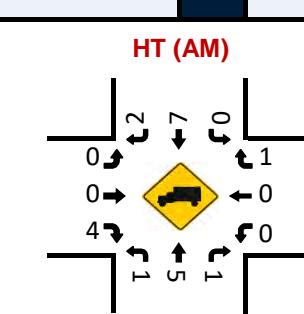
A dark blue rectangular sign with white text. At the top, it says "NW 107th Ave". Below that, in large letters, it says "SOUTHBOUND". At the bottom, it shows a schedule with columns for AM, 12, 414, 3, 0, 493, and AM.



**Day:** Tuesday

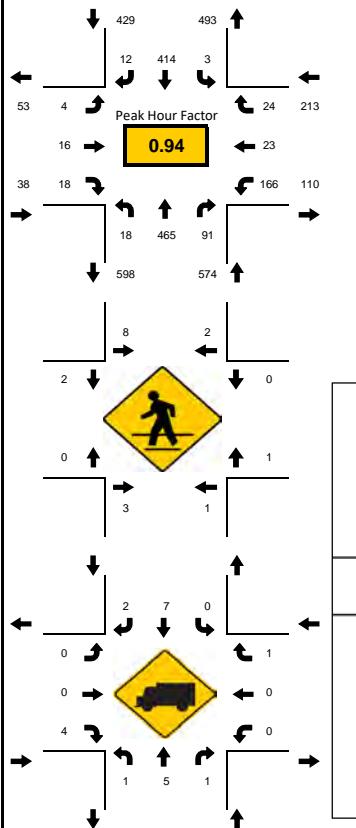
Date: 10/31/2023

7:00 AM - 09:00 AM  
NONE  
4:00 PM - 06:00 PM



**LOCATION:** NW 107th Ave & NW 88th St  
**CITY/STATE:** Doral, FL

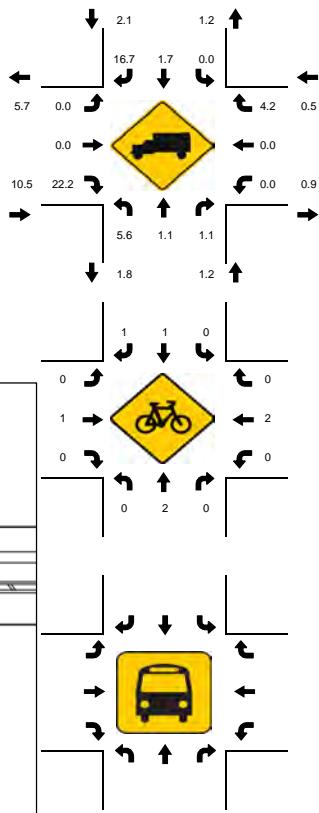
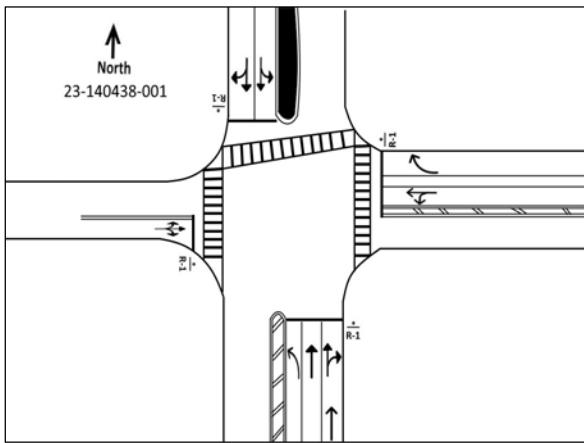
PROJECT ID: 23-140438-001  
DATE: Tue, Oct 31, 2023



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

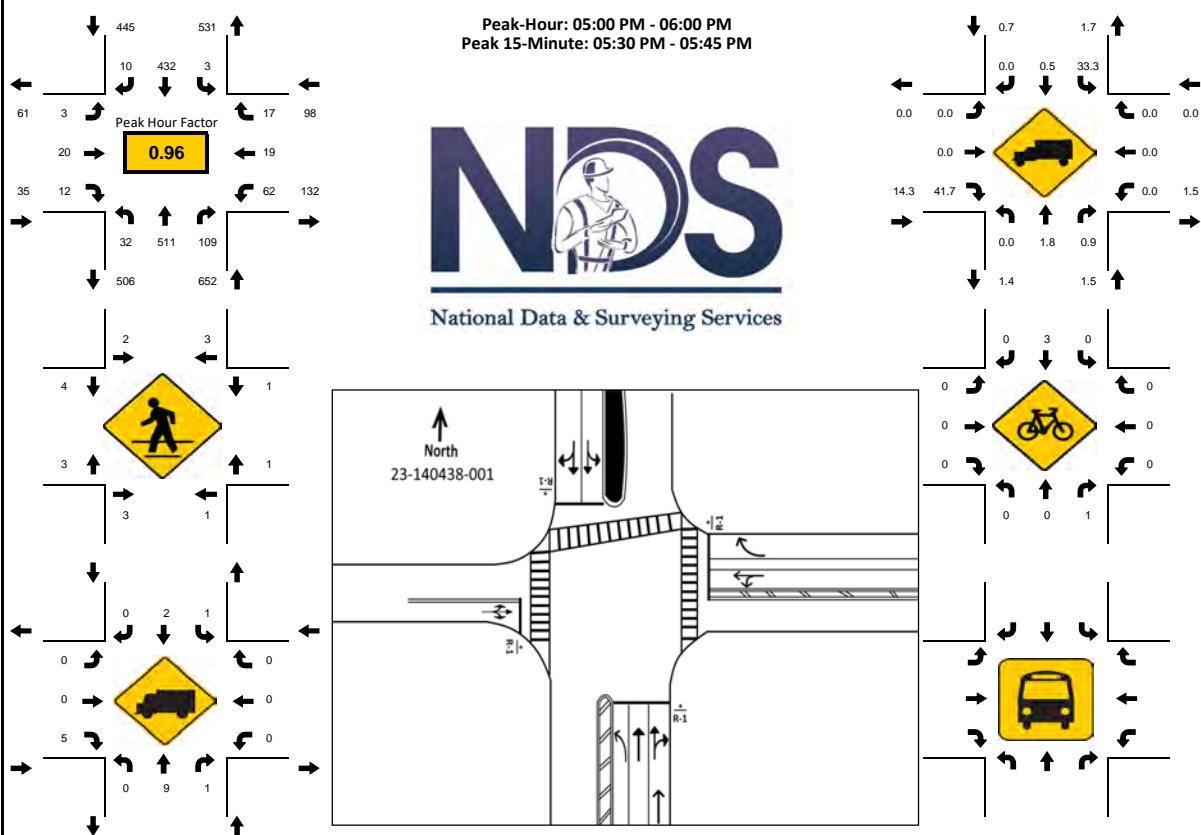


National Data & Surveying Services

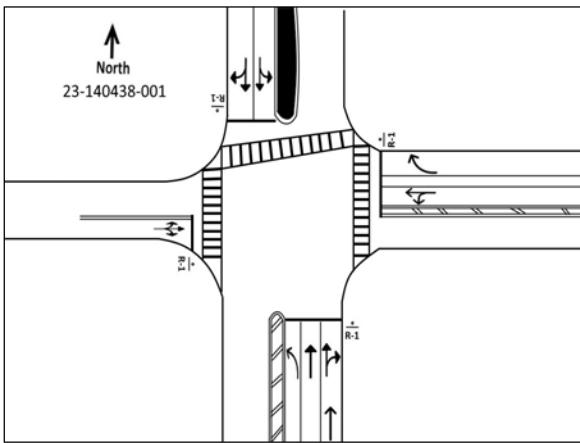


**LOCATION:** NW 107th Ave & NW 88th St  
**CITY/STATE:** Doral, FL

PROJECT ID: 23-140438-001  
DATE: Tue, Oct 31, 2023



National Data & Surveying Services



**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 86th St  
**City:** Doral  
**Control:** 3-Way Stop(NB/SB/EB)

**Project ID:** 23-140438-002  
**Date:** 10/31/2023

**Data - Total**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 86th St				NW 86th St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	76	115	0	0	0	119	16	0	2	0	60	0	0	0	0	0	388
7:15 AM	35	119	0	7	0	156	19	0	4	0	51	0	0	0	0	0	391
7:30 AM	15	111	0	0	0	115	4	1	3	0	44	0	0	0	0	0	293
7:45 AM	30	136	0	0	0	122	1	0	2	0	30	0	0	0	0	0	321
8:00 AM	64	126	0	0	0	162	5	3	4	0	50	0	0	0	0	0	414
8:15 AM	56	139	0	0	0	153	2	0	7	0	52	0	0	0	0	0	409
8:30 AM	28	149	0	0	0	147	3	0	8	0	40	0	0	0	0	0	375
8:45 AM	24	100	0	0	0	118	3	1	8	0	28	0	0	0	0	0	282
TOTAL VOLUMES : APPROACH %'s :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
24.66% 74.81% 0.00% 0.53%	328	995	0	7	0	1092	53	5	38	0	355	0	0	0	0	0	2873
PEAK HR :	<b>07:45 AM - 08:45 AM</b>																TOTAL
PEAK HR VOL :	178	550	0	0	0	584	11	3	21	0	172	0	0	0	0	0	1519
PEAK HR FACTOR :	0.695	0.923	0.000	0.000	0.933	0.901	0.550	0.250	0.656	0.000	0.827	0.000	0.000	0.000	0.000	0.917	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
4:00 PM	27	95	0	1	0	105	2	0	7	0	15	0	0	0	0	0	252
4:15 PM	30	121	0	0	0	91	0	0	2	0	23	0	0	0	0	0	267
4:30 PM	33	131	0	0	0	132	3	0	4	0	27	0	0	0	0	0	330
4:45 PM	30	142	0	0	0	111	4	0	4	0	28	0	0	0	0	0	319
5:00 PM	35	135	0	1	0	135	7	0	7	0	22	0	0	0	0	0	342
5:15 PM	51	164	0	0	0	127	3	0	6	0	25	0	0	0	0	0	376
5:30 PM	55	170	0	0	0	114	4	0	9	0	26	0	0	0	0	0	378
5:45 PM	61	152	0	0	0	105	11	0	6	0	55	0	0	0	0	0	390
TOTAL VOLUMES : APPROACH %'s :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
322 22.45% 1110 77.41% 0.00% 0.14%	0	0	920	34	0	45	0	221	0	0	83.08%	0.00%	0	0	0	0	2654
PEAK HR :	<b>05:00 PM - 06:00 PM</b>																TOTAL
PEAK HR VOL :	202	621	0	1	0	481	25	0	28	0	128	0	0	0	0	0	1486
PEAK HR FACTOR :	0.828	0.913	0.000	0.250	0.916	0.891	0.568	0.000	0.778	0.000	0.582	0.000	0.000	0.000	0.000	0.953	

National Data & Surveying Services  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 86th St  
**City:** Doral  
**Control:** 3-Way Stop(NB/SB/EB)

Project ID: 23-140438-002  
Date: 10/31/2023

## Data - Cars

NS/EW Streets:		NW 107th Ave				NW 107th Ave				NW 86th St				NW 86th St				
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM		0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM		76	113	0	0	0	117	16	0	2	0	59	0	0	0	0	383	
7:15 AM		35	115	0	7	0	156	19	0	4	0	51	0	0	0	0	387	
7:30 AM		14	110	0	0	0	112	4	1	3	0	44	0	0	0	0	288	
7:45 AM		30	136	0	0	0	119	1	0	2	0	29	0	0	0	0	317	
8:00 AM		63	123	0	0	0	159	5	3	4	0	49	0	0	0	0	406	
8:15 AM		56	138	0	0	0	151	2	0	7	0	52	0	0	0	0	406	
8:30 AM		28	147	0	0	0	144	3	0	7	0	40	0	0	0	0	369	
8:45 AM		24	94	0	0	0	114	3	1	8	0	28	0	0	0	0	272	
TOTAL VOLUMES :		NL 326	NT 976	NR 0	NU 7	SL 0	ST 1072	SR 53	SU 5	EL 37	ET 0	ER 352	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 2828
APPROACH %'s :		24.90%	74.56%	0.00%	0.53%	0.00%	94.87%	4.69%	0.44%	9.51%	0.00%	90.49%	0.00%					TOTAL 1498
PEAK HR VOL :		07:45 AM - 08:45 AM				0	573	11	3	20	0	170	0	0	0	0	0	
PEAK HR FACTOR :		0.702	0.925	0.000	0.000	0.000	0.901	0.550	0.250	0.714	0.000	0.817	0.000	0.000	0.000	0.000	0.922	
							0.879					0.805						

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	
4:00 PM	27	89	0	1	0	103	2	0	7	0	15	0	0	0	0	0	244
4:15 PM	30	120	0	0	0	83	0	0	2	0	23	0	0	0	0	0	258
4:30 PM	32	129	0	0	0	131	3	0	4	0	26	0	0	0	0	0	325
4:45 PM	30	137	0	0	0	108	4	0	4	0	28	0	0	0	0	0	311
5:00 PM	35	131	0	1	0	133	7	0	7	0	22	0	0	0	0	0	336
5:15 PM	51	160	0	0	0	126	3	0	6	0	25	0	0	0	0	0	371
5:30 PM	55	169	0	0	0	112	4	0	9	0	26	0	0	0	0	0	375
5:45 PM	61	151	0	0	0	104	11	0	6	0	54	0	0	0	0	0	387
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	321	1086	0	2	0	900	34	0	45	0	219	0	0	0	0	0	2607
PEAK HR % :	22.78% 77.08% 0.00% 0.14%				0.00% 96.36% 3.64% 0.00%				17.05% 0.00% 82.95% 0.00%				0.00% 0.00% 0.00% 0.00%				TOTAL
PEAK HR VOL :	05:00 PM - 06:00 PM				202	611	0	1	0	475	25	0	0	0	0	0	1469
PEAK HR FACTOR :	0.828	0.904	0.000	0.250	0.000	0.893	0.568	0.000	0.778	0.000	0.588	0.000	0.000	0.000	0.000	0.949	
					0.908		0.893				0.646						

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 86th St  
**City:** Doral  
**Control:** 3-Way Stop(NB/SB/EB)

**Project ID:** 23-140438-002  
**Date:** 10/31/2023

**Data - HT**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 86th St				NW 86th St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00 AM	0	2	0	0	0	2	0	0	0	0	1	0	0	0	0	5	
7:15 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
7:30 AM	1	1	0	0	0	3	0	0	0	0	0	0	0	0	0	5	
7:45 AM	0	0	0	0	0	3	0	0	0	0	1	0	0	0	0	4	
8:00 AM	1	3	0	0	0	3	0	0	0	0	0	1	0	0	0	8	
8:15 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	
8:30 AM	0	2	0	0	0	3	0	0	1	0	0	0	0	0	0	6	
8:45 AM	0	6	0	0	0	4	0	0	0	0	0	0	0	0	0	10	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	19	0	0	0	20	0	0	1	0	3	0	0	0	0	0	45
PEAK HR :	<b>07:45 AM - 08:45 AM</b>																TOTAL
PEAK HR VOL :	1	6	0	0	0	11	0	0	1	0	2	0	0	0	0	0	21
PEAK HR FACTOR :	0.250	0.500	0.000	0.000	0.000	0.917	0.000	0.000	0.250	0.000	0.500	0.000	0.000	0.000	0.000	0.656	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL	
4:00 PM	0	6	0	0	0	2	0	0	0	0	0	0	0	0	0	8	
4:15 PM	0	1	0	0	0	8	0	0	0	0	0	0	0	0	0	9	
4:30 PM	1	2	0	0	0	1	0	0	0	0	1	0	0	0	0	5	
4:45 PM	0	5	0	0	0	3	0	0	0	0	0	0	0	0	0	8	
5:00 PM	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	6	
5:15 PM	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	5	
5:30 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	
5:45 PM	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	3	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	1	24	0	0	0	20	0	0	0	0	2	0	0	0	0	47	
PEAK HR :	<b>05:00 PM - 06:00 PM</b>																TOTAL
PEAK HR VOL :	0	10	0	0	0	6	0	0	0	0	1	0	0	0	0	0	17
PEAK HR FACTOR :	0.000	0.625	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.708	

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 86th St  
**City:** Doral  
**Control:** 3-Way Stop(NB/SB/EB)

**Project ID:** 23-140438-002  
**Date:** 10/31/2023

**Data - Bikes**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 86th St				NW 86th St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
7:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	4
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>
<b>APPROACH %'s :</b>	<b>14</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20</b>
<b>PEAK HR :</b>	<b>07:45 AM - 08:45 AM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0.250</b>	<b>0.250</b>	<b>0.000</b>	<b>0.000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>
<b>PEAK HR FACTOR :</b>	<b>0.375</b>				<b>0.250</b>	<b>0.375</b>	<b>0.000</b>	<b>0.000</b>	<b>0.250</b>	<b>0.000</b>	<b>0.250</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.313</b>	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
5:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>
<b>APPROACH %'s :</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>
<b>PEAK HR :</b>	<b>05:00 PM - 06:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0.250</b>	<b>0.375</b>	<b>0.000</b>	<b>0.000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>
<b>PEAK HR FACTOR :</b>	<b>0.250</b>	<b>0.250</b>	<b>0.000</b>	<b>0.000</b>	<b>0.500</b>	<b>0.375</b>	<b>0.000</b>	<b>0.000</b>	<b>0.250</b>	<b>0.000</b>	<b>0.250</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.750</b>	

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** NW 107th Ave & NW 86th St  
**City:** Doral

**Project ID:** 23-140438-002  
**Date:** 10/31/2023

### Data - Pedestrians (Crosswalks)

NS/EW Streets:	NW 107th Ave		NW 107th Ave		NW 86th St		NW 86th St		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	19	0	0	7	0	26
7:15 AM	0	0	0	19	0	0	1	2	22
7:30 AM	0	0	0	0	0	0	1	0	1
7:45 AM	0	0	1	0	0	0	0	0	1
8:00 AM	0	0	1	0	0	0	0	0	1
8:15 AM	0	0	0	2	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	1	1	2
8:45 AM	1	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	EB 1	WB 0	EB 2	WB 40	NB 0	SB 0	NB 10	SB 3	TOTAL 56
APPROACH %'s :	100.00%	0.00%	4.76%	95.24%			76.92%	23.08%	
PEAK HR :	07:45 AM - 08:45 AM								TOTAL
PEAK HR VOL :	0	0	2	2	0	0	1	1	6
PEAK HR FACTOR :			0.500	0.250	0.500		0.250	0.250	0.750

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	1	0	1
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	1	0	0	0	1	2
5:00 PM	0	0	0	0	0	0	0	3	3
5:15 PM	1	0	0	0	0	0	0	1	2
5:30 PM	0	0	0	0	0	0	1	0	1
5:45 PM	1	1	0	0	0	0	0	1	3
TOTAL VOLUMES :	EB 2	WB 1	EB 0	WB 1	NB 0	SB 0	NB 2	SB 6	TOTAL 12
APPROACH %'s :	66.67%	33.33%	0.00%	100.00%			25.00%	75.00%	
PEAK HR :	05:00 PM - 06:00 PM								TOTAL
PEAK HR VOL :	2	1	0	0	0	0	1	5	9
PEAK HR FACTOR :	0.500	0.250	0.375				0.250	0.417	0.750

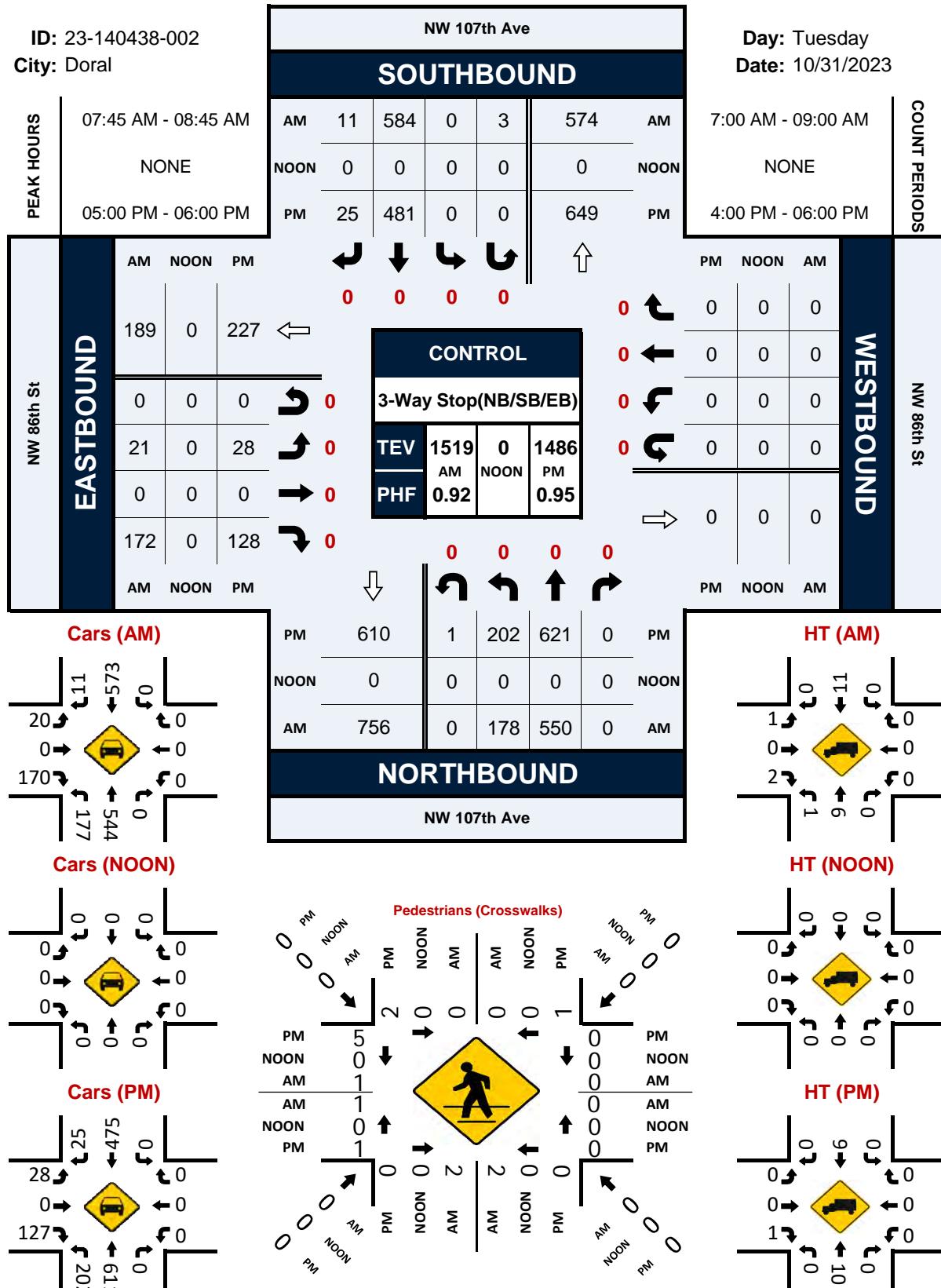
**NW 107th Ave & NW 86th St****Peak Hour Turning Movement Count**

ID: 23-140438-002

City: Doral

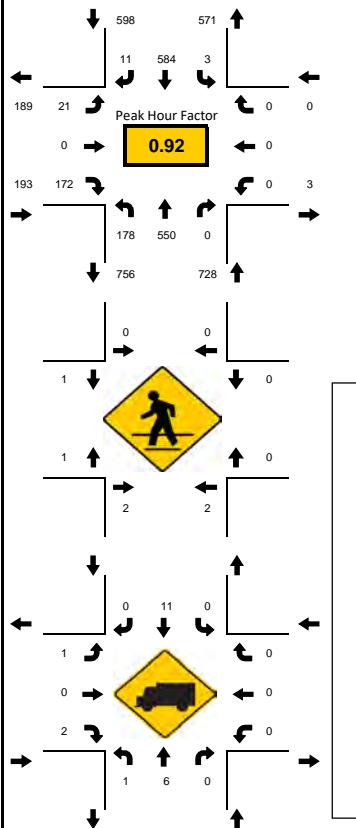
Day: Tuesday

Date: 10/31/2023



**LOCATION:** NW 107th Ave & NW 86th St  
**CITY/STATE:** Doral, FL

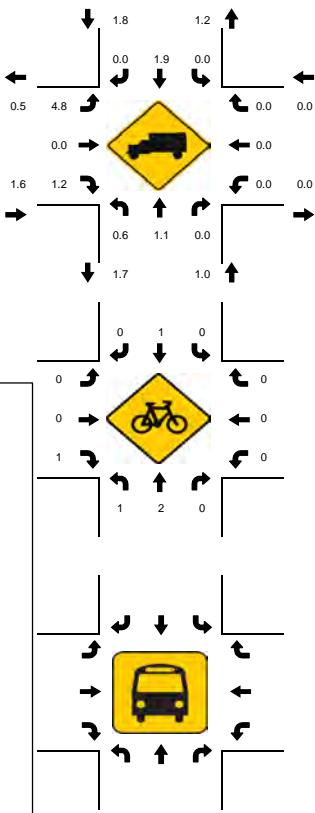
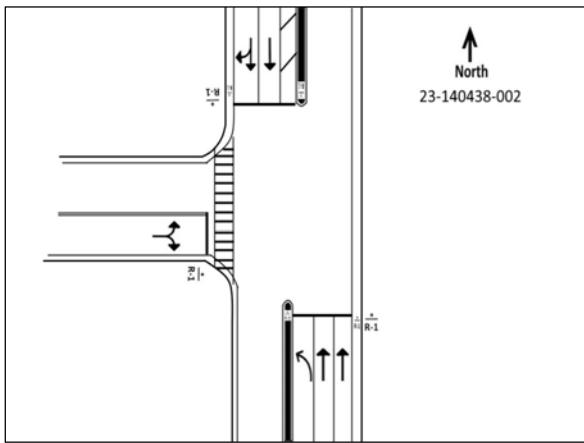
PROJECT ID: 23-140438-002  
DATE: Tue, Oct 31, 2023



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

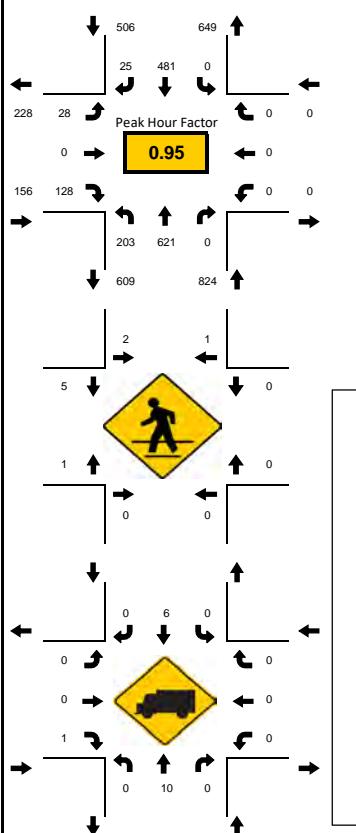


National Data & Surveying Services



**LOCATION:** NW 107th Ave & NW 86th St  
**CITY/STATE:** Doral, FL

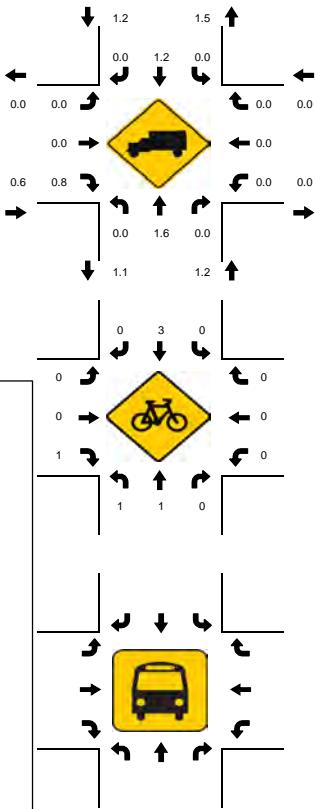
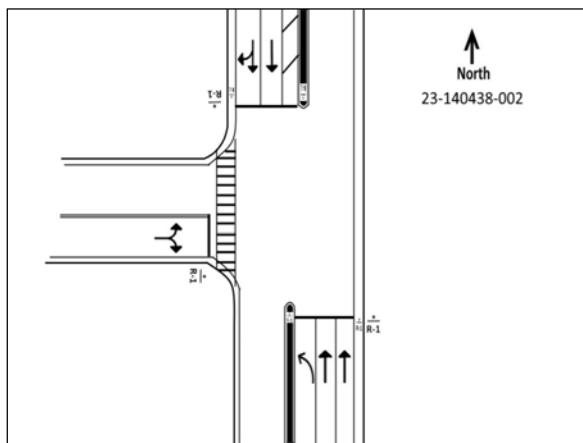
PROJECT ID: 23-140438-002  
DATE: Tue, Oct 31, 2023



**Peak-Hour: 05:00 PM - 06:00 PM**  
**Peak 15-Minute: 05:45 PM - 06:00 PM**



National Data & Surveying Services



**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 82nd St  
**City:** Doral  
**Control:** 2-Way Stop(EB/WB)

**Project ID:** 23-140438-003  
**Date:** 10/31/2023

**Data - Total**

NS/EW Streets:		NW 107th Ave				NW 107th Ave				NW 82nd St				NW 82nd St					
<b>AM</b>		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				<b>TOTAL</b>	
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	20	267	16	1		15	222	10	1	0	0	43	0	3	2	40	0	640	
7:15 AM	17	127	11	1		30	270	11	0	1	2	53	0	2	1	19	0	545	
7:30 AM	21	124	15	2		11	187	2	0	0	2	53	0	5	1	12	0	435	
7:45 AM	32	155	18	2		11	160	5	0	1	3	55	0	4	4	15	0	465	
8:00 AM	38	173	11	3		11	230	5	0	2	3	57	0	6	3	20	0	562	
8:15 AM	32	187	13	2		22	193	5	0	0	2	72	0	4	3	23	0	558	
8:30 AM	23	159	20	1		15	191	6	1	2	4	47	0	6	1	19	0	495	
8:45 AM	26	129	8	2		8	161	5	0	1	2	44	0	6	4	7	0	403	
<b>TOTAL VOLUMES :</b>		<b>209</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>	
<b>APPROACH %'s :</b>		<b>12.62%</b>	<b>79.77%</b>	<b>6.76%</b>	<b>0.85%</b>	<b>6.88%</b>	<b>90.27%</b>	<b>2.74%</b>	<b>0.11%</b>	<b>1.56%</b>	<b>4.01%</b>	<b>94.43%</b>	<b>0.00%</b>	<b>17.14%</b>	<b>9.05%</b>	<b>73.81%</b>	<b>0.00%</b>	<b>4103</b>	
<b>PEAK HR :</b>		<b>07:00 AM - 08:00 AM</b>																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>		<b>90</b>	<b>673</b>	<b>60</b>	<b>6</b>		<b>67</b>	<b>839</b>	<b>28</b>	<b>1</b>	<b>2</b>	<b>7</b>	<b>204</b>	<b>0</b>	<b>14</b>	<b>8</b>	<b>86</b>	<b>0</b>	<b>2085</b>
<b>PEAK HR FACTOR :</b>		<b>0.703</b>	<b>0.630</b>	<b>0.833</b>	<b>0.750</b>		<b>0.558</b>	<b>0.777</b>	<b>0.636</b>	<b>0.250</b>	<b>0.500</b>	<b>0.583</b>	<b>0.927</b>	<b>0.000</b>	<b>0.700</b>	<b>0.500</b>	<b>0.538</b>	<b>0.000</b>	<b>0.814</b>
<b>0.682</b>						<b>0.752</b>						<b>0.903</b>							
<b>PM</b>		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				<b>TOTAL</b>	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
4:00 PM	43	124	6	1		5	119	3	0	2	0	27	0	5	3	17	0	355	
4:15 PM	54	166	13	2		3	116	7	0	4	1	18	0	8	3	8	0	403	
4:30 PM	41	175	15	3		6	155	8	1	3	0	25	0	3	1	17	0	453	
4:45 PM	64	167	10	7		4	140	4	0	3	2	25	0	1	6	12	0	445	
5:00 PM	60	190	11	2		7	156	9	0	3	7	32	0	4	3	14	0	498	
5:15 PM	55	229	11	0		11	150	8	0	1	3	39	1	1	2	11	0	522	
5:30 PM	66	249	7	6		9	153	4	0	4	3	31	0	2	6	15	0	555	
5:45 PM	77	232	18	6		13	157	9	0	1	1	37	0	3	4	14	0	572	
<b>TOTAL VOLUMES :</b>		<b>460</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>	
<b>APPROACH %'s :</b>		<b>21.80%</b>	<b>72.61%</b>	<b>4.31%</b>	<b>1.28%</b>	<b>4.61%</b>	<b>91.17%</b>	<b>4.14%</b>	<b>0.08%</b>	<b>7.69%</b>	<b>6.23%</b>	<b>85.71%</b>	<b>0.37%</b>	<b>16.56%</b>	<b>17.18%</b>	<b>66.26%</b>	<b>0.00%</b>	<b>3803</b>	
<b>PEAK HR :</b>		<b>05:00 PM - 06:00 PM</b>																<b>TOTAL</b>	
<b>PEAK HR VOL :</b>		<b>258</b>	<b>900</b>	<b>47</b>	<b>14</b>		<b>40</b>	<b>616</b>	<b>30</b>	<b>0</b>	<b>9</b>	<b>14</b>	<b>139</b>	<b>1</b>	<b>10</b>	<b>15</b>	<b>54</b>	<b>0</b>	<b>2147</b>
<b>PEAK HR FACTOR :</b>		<b>0.838</b>	<b>0.904</b>	<b>0.653</b>	<b>0.583</b>		<b>0.769</b>	<b>0.981</b>	<b>0.833</b>	<b>0.000</b>	<b>0.563</b>	<b>0.500</b>	<b>0.891</b>	<b>0.250</b>	<b>0.625</b>	<b>0.625</b>	<b>0.900</b>	<b>0.000</b>	<b>0.938</b>
			<b>0.915</b>				<b>0.958</b>					<b>0.926</b>					<b>0.859</b>		

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 82nd St  
**City:** Doral  
**Control:** 2-Way Stop(EB/WB)

**Project ID:** 23-140438-003  
**Date:** 10/31/2023

**Data - Cars**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 82nd St				NW 82nd St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	20	265	16	1	15	218	9	1	0	0	43	0	3	2	40	0	633
7:15 AM	17	122	11	1	30	270	11	0	1	2	53	0	2	1	19	0	540
7:30 AM	21	123	14	2	11	185	1	0	0	2	53	0	5	1	12	0	430
7:45 AM	32	155	17	2	11	157	4	0	1	3	54	0	4	4	15	0	459
8:00 AM	38	169	11	3	10	228	4	0	2	3	57	0	6	3	20	0	554
8:15 AM	32	185	13	2	22	191	5	0	0	2	72	0	4	3	23	0	554
8:30 AM	23	157	19	1	15	188	6	1	2	4	47	0	6	1	19	0	489
8:45 AM	26	124	8	2	8	157	5	0	1	2	44	0	6	4	7	0	394
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>
<b>APPROACH %'s :</b>	209	1300	109	14	122	1594	45	2	7	18	423	0	36	19	155	0	4053
<b>PEAK HR :</b>	<b>07:00 AM - 08:00 AM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	90	665	58	6	67	830	25	1	2	7	203	0	14	8	86	0	2062
<b>PEAK HR FACTOR :</b>	0.703	0.627	0.853	0.750	0.558	0.769	0.568	0.250	0.500	0.583	0.940	0.000	0.700	0.500	0.538	0.000	0.814
<b>PM</b>																	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	43	118	6	1	5	118	2	0	2	0	27	0	5	3	17	0	347
4:15 PM	54	165	13	2	2	110	6	0	4	1	18	0	8	3	8	0	394
4:30 PM	41	173	15	3	6	153	8	1	3	0	25	0	3	1	16	0	448
4:45 PM	64	162	10	7	4	137	4	0	2	2	25	0	1	6	12	0	436
5:00 PM	59	186	10	2	7	156	7	0	3	7	32	0	4	3	14	0	490
5:15 PM	55	227	11	0	11	150	7	0	1	3	39	1	1	2	10	0	518
5:30 PM	65	248	7	6	9	151	4	0	4	3	31	0	2	6	15	0	551
5:45 PM	77	231	18	6	12	156	9	0	1	1	37	0	3	4	14	0	569
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>
<b>APPROACH %'s :</b>	458	1510	90	27	56	1131	47	1	20	17	234	1	27	28	106	0	3753
<b>PEAK HR :</b>	<b>05:00 PM - 06:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	256	892	46	14	39	613	27	0	9	14	139	1	10	15	53	0	2128
<b>PEAK HR FACTOR :</b>	0.831	0.899	0.639	0.583	0.813	0.982	0.750	0.000	0.563	0.500	0.891	0.250	0.625	0.625	0.883	0.000	0.935

National Data & Surveying Services  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 82nd St  
**City:** Doral  
**Control:** 2-Way Stop(EB/WB)

Project ID: 23-140438-003  
Date: 10/31/2023

Data - HT

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 82nd St  
**City:** Doral  
**Control:** 2-Way Stop(EB/WB)

**Project ID:** 23-140438-003  
**Date:** 10/31/2023

**Data - Bikes**

NS/EW Streets:		NW 107th Ave				NW 107th Ave				NW 82nd St				NW 82nd St				
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM		2	4	1	0	0	1	0	0	0	0	0	0	0	5	0	13	
7:15 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
7:30 AM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM		0	2	0	0	1	2	0	0	0	0	0	0	0	0	0	5	
8:15 AM		0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
8:30 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45 AM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>TOTAL VOLUMES :</b>		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>		2	7	1	0	1	3	0	0	0	0	1	0	0	6	0	21	
<b>PEAK HR :</b>		<b>07:00 AM - 08:00 AM</b>				0				0				0				<b>TOTAL</b>
<b>PEAK HR VOL :</b>		2	5	1	0	0.250	0.313	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.300	0.000	15	
<b>PEAK HR FACTOR :</b>		0.286				0.250				0.000				0.300				0.288
		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:15 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM		0	1	0	0	0	2	0	0	0	1	0	0	0	0	0	4	
4:45 PM		0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	
5:00 PM		0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	
5:15 PM		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
5:30 PM		0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
5:45 PM		1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	3	
<b>TOTAL VOLUMES :</b>		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
<b>APPROACH %'s :</b>		1	3	0	0	0	5	0	0	0	1	0	0	0	2	1	0	13
<b>PEAK HR :</b>		<b>05:00 PM - 06:00 PM</b>				0				0				0				<b>TOTAL</b>
<b>PEAK HR VOL :</b>		1	2	0	0	0.250	0.500	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.250	0.000	0	7
<b>PEAK HR FACTOR :</b>		0.750				0.750				0.000				0.250				0.583

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** NW 107th Ave & NW 82nd St  
**City:** Doral

**Project ID:** 23-140438-003  
**Date:** 10/31/2023

### Data - Pedestrians (Crosswalks)

NS/EW Streets:	NW 107th Ave		NW 107th Ave		NW 82nd St		NW 82nd St		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	1	0	2	0	4	1	8
7:15 AM	0	0	0	0	3	0	2	1	6
7:30 AM	1	2	0	0	1	0	0	0	4
7:45 AM	1	2	0	0	0	0	0	1	4
8:00 AM	1	0	0	0	0	0	1	0	2
8:15 AM	0	1	0	1	2	0	1	0	5
8:30 AM	0	1	1	1	1	1	0	1	6
8:45 AM	2	0	0	0	2	2	0	1	7
TOTAL VOLUMES :	EB 5	WB 6	EB 2	WB 2	NB 11	SB 3	NB 8	SB 5	TOTAL 42
APPROACH %'s :	45.45%	54.55%	50.00%	50.00%	78.57%	21.43%	61.54%	38.46%	
PEAK HR :	<b>07:00 AM - 08:00 AM</b>								TOTAL
PEAK HR VOL :	2	4	1	0	6	0	6	3	22
PEAK HR FACTOR :	0.500	0.500	0.250	0.250	0.500	0.500	0.375	0.750	0.688

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	1	0	2	0	0	0	4	7
4:15 PM	1	3	0	0	0	0	2	1	7
4:30 PM	0	0	0	0	0	0	1	2	3
4:45 PM	0	0	0	2	2	0	0	1	5
5:00 PM	0	0	0	0	1	0	0	2	3
5:15 PM	0	0	2	1	0	0	1	3	7
5:30 PM	0	0	0	0	0	2	0	0	2
5:45 PM	0	0	0	0	0	1	0	4	5
TOTAL VOLUMES :	EB 1	WB 4	EB 2	WB 5	NB 3	SB 3	NB 4	SB 17	TOTAL 39
APPROACH %'s :	20.00%	80.00%	28.57%	71.43%	50.00%	50.00%	19.05%	80.95%	
PEAK HR :	<b>05:00 PM - 06:00 PM</b>								TOTAL
PEAK HR VOL :	0	0	2	1	1	3	1	9	17
PEAK HR FACTOR :	0.250		0.250	0.250	0.250	0.375	0.250	0.563	0.607

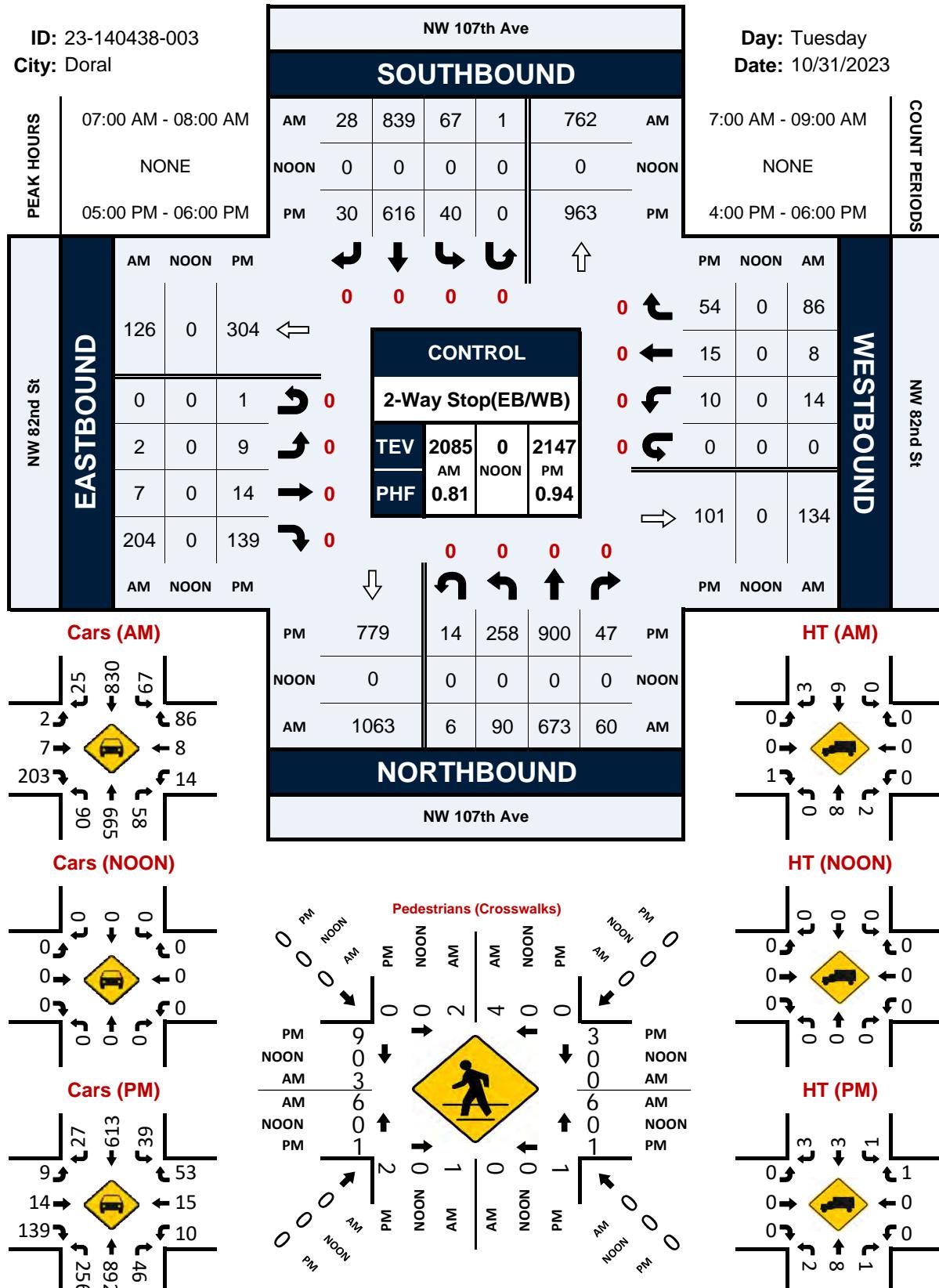
**NW 107th Ave & NW 82nd St****Peak Hour Turning Movement Count**

ID: 23-140438-003

City: Doral

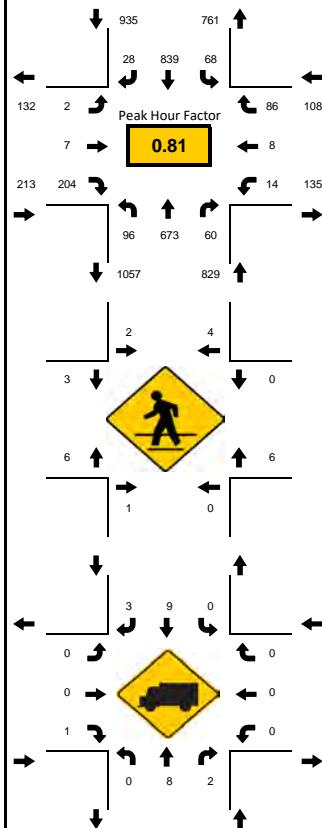
Day: Tuesday

Date: 10/31/2023

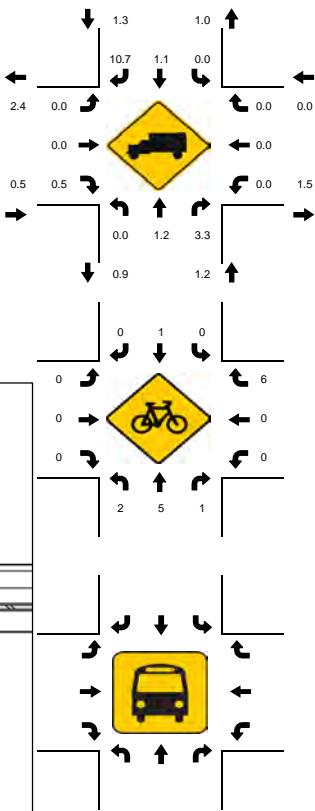


LOCATION: NW 107th Ave & NW 82nd St  
CITY/STATE: Doral, FL

PROJECT ID: 23-140438-003  
DATE: Tue, Oct 31, 2023



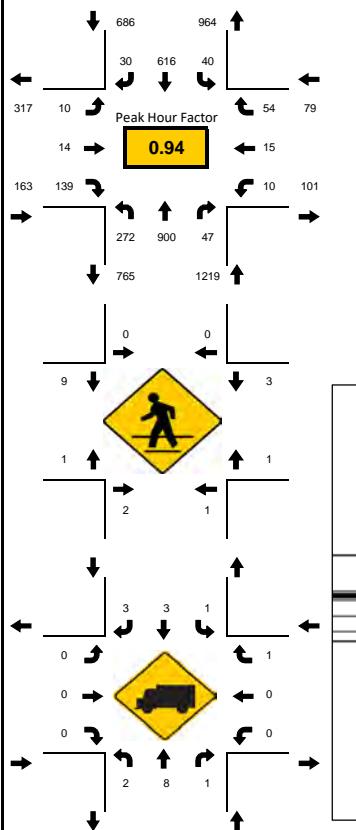
National Data & Surveying Services



15-Min Count Period Beginning At	NW 107th Ave Northbound					NW 107th Ave Southbound					NW 82nd St Eastbound					NW 82nd St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	20	267	16	1		15	222	10	1		0	0	43	0		3	2	40	0		640	2085
7:15 AM	17	127	11	1		30	270	11	0		1	2	53	0		2	1	19	0		545	2007
7:30 AM	21	124	15	2		11	187	2	0		0	2	53	0		5	1	12	0		435	2020
7:45 AM	32	155	18	2		11	160	5	0		1	3	55	0		4	4	15	0		465	2080
8:00 AM	38	173	11	3		11	230	5	0		2	3	57	0		6	3	20	0		562	2018
8:15 AM	32	187	13	2		22	193	5	0		0	2	72	0		4	3	23	0		558	1456
8:30 AM	23	159	20	1		15	191	6	1		2	4	47	0		6	1	19	0		495	898
8:45 AM	26	129	8	2		8	161	5	0		1	2	44	0		6	4	7	0		403	403
<b>Northbound</b>						<b>Southbound</b>					<b>Eastbound</b>					<b>Westbound</b>						
<b>Peak 15-Min Flowrates</b>						<b>Eastbound</b>					<b>Westbound</b>					<b>Northbound</b>						
All Vehicles	128	1068	72	8		120	1080	44	4		4	12	220	0		20	16	160	0		2956	
Heavy Trucks	0	20	4	0		0	16	4	0		0	0	4	0		0	0	0	0		48	
Pedestrians		4					12						20					12			48	
Bicycles																					52	
Stopped Buses		8	16	4	0		0	4	0	0		0	0	0		0	0	20	0			

**LOCATION:** NW 107th Ave & NW 82nd St  
**CITY/STATE:** Doral, FL

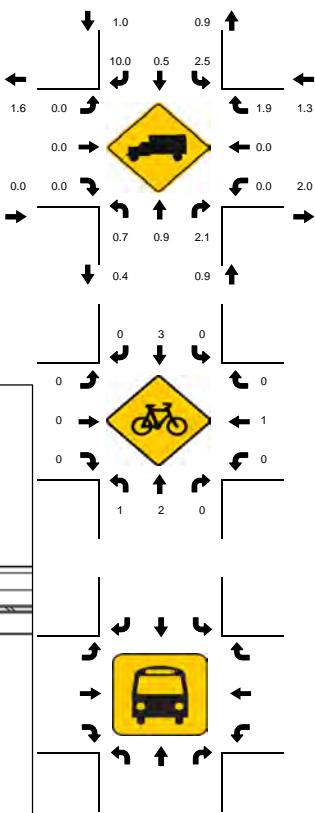
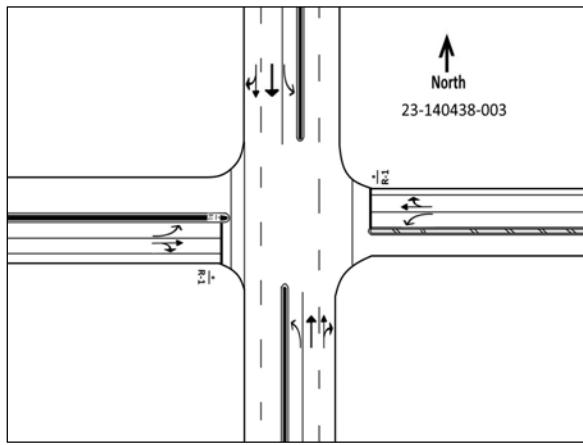
**PROJECT ID:** 23-140438-003  
**DATE:** Tue, Oct 31, 2023



**Peak-Hour: 05:00 PM - 06:00 PM**  
**Peak 15-Minute: 05:45 PM - 06:00 PM**



National Data & Surveying Services



**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 90th St  
**City:** Doral  
**Control:** 4-Way Stop

**Project ID:** 23-140438-004  
**Date:** 10/31/2023

**Data - Total**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 90th St				NW 90th St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	9	48	5	0	7	62	3	0	6	11	14	0	8	23	19	0	215
7:15 AM	9	61	14	0	5	47	5	0	9	16	7	1	6	27	30	0	237
7:30 AM	13	87	4	0	7	38	1	0	6	11	5	0	5	22	29	0	228
7:45 AM	32	81	5	0	5	28	2	0	12	11	15	0	6	31	51	0	279
8:00 AM	37	67	2	0	13	63	10	0	5	11	30	0	6	35	29	0	308
8:15 AM	50	92	1	0	6	52	7	0	10	22	50	4	6	40	36	0	376
8:30 AM	33	91	2	0	5	53	3	0	15	13	37	0	5	12	23	0	292
8:45 AM	19	64	3	0	6	55	2	0	4	9	14	1	3	16	26	0	222
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>
<b>APPROACH %'s :</b>	202 24.37%	591 71.29%	36 4.34%	0 0.00%	54 11.13%	398 82.06%	33 6.80%	0 0.00%	67 19.20%	104 29.80%	172 49.28%	6 1.72%	45 9.11%	206 41.70%	243 49.19%	0 0.00%	2157
<b>PEAK HR :</b>	<b>07:45 AM - 08:45 AM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	152 0.760	331 0.899	10 0.500	0 0.000	29 0.558	196 0.778	22 0.550	0 0.000	42 0.700	57 0.648	132 0.660	4 0.250	23 0.958	118 0.738	139 0.681	0 0.000	1255 0.834
<b>PEAK HR FACTOR :</b>	0.862				0.718				0.683				0.795				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	5	60	4	0	12	70	7	0	2	14	13	0	5	8	16	0	216
4:15 PM	8	60	3	0	21	67	9	0	4	10	15	1	2	13	12	0	225
4:30 PM	12	89	2	0	21	83	7	0	6	26	19	0	1	13	12	0	291
4:45 PM	23	83	5	0	15	56	3	0	4	12	14	1	2	15	12	0	245
5:00 PM	23	78	5	0	20	87	2	0	6	22	19	0	7	17	15	0	301
5:15 PM	12	105	3	0	18	94	6	0	10	14	23	0	2	15	13	0	315
5:30 PM	26	109	5	0	23	85	3	0	7	18	17	2	1	19	14	0	329
5:45 PM	31	81	4	0	17	73	2	0	1	12	15	0	4	22	12	0	274
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>
<b>APPROACH %'s :</b>	140 16.75%	665 79.55%	31 3.71%	0 0.00%	147 18.35%	615 76.78%	39 4.87%	0 0.00%	40 13.03%	128 41.69%	135 43.97%	4 1.30%	24 9.52%	122 48.41%	106 42.06%	0 0.00%	2196
<b>PEAK HR :</b>	<b>05:00 PM - 06:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	92 0.742	373 0.856	17 0.850	0 0.000	78 0.848	339 0.902	13 0.542	0 0.000	24 0.600	66 0.750	74 0.804	2 0.250	14 0.500	73 0.830	54 0.900	0 0.000	1219 0.926
<b>PEAK HR FACTOR :</b>	0.861				0.911				0.883				0.904				

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 90th St  
**City:** Doral  
**Control:** 4-Way Stop

**Project ID:** 23-140438-004  
**Date:** 10/31/2023

**Data - Cars**

NS/EW Streets:		NW 107th Ave				NW 107th Ave				NW 90th St				NW 90th St				
<b>AM</b>		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				<b>TOTAL</b>
		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	9	47	5	0	0	7	60	3	0	6	11	14	0	8	23	19	0	212
7:15 AM	8	60	14	0	0	4	47	5	0	9	16	7	1	6	27	30	0	234
7:30 AM	13	87	3	0	0	5	37	1	0	6	10	5	0	5	22	29	0	223
7:45 AM	32	80	5	0	0	5	28	2	0	12	11	15	0	6	31	51	0	278
8:00 AM	36	66	1	0	0	13	63	10	0	5	11	28	0	5	35	29	0	302
8:15 AM	50	92	1	0	0	6	52	7	0	10	22	49	4	6	40	36	0	375
8:30 AM	33	89	2	0	0	5	49	3	0	13	13	37	0	5	12	23	0	284
8:45 AM	19	60	2	0	0	5	51	2	0	4	9	13	1	3	15	25	0	209
<b>TOTAL VOLUMES :</b>		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>
<b>APPROACH %'s :</b>		200	581	33	0	50	387	33	0	65	103	168	6	44	205	242	0	2117
<b>PEAK HR :</b>		<b>07:45 AM - 08:45 AM</b>				10.64% 82.34% 7.02% 0.00%				19.01%	30.12%	49.12%	1.75%	8.96%	41.75%	49.29%	0.00%	<b>TOTAL</b>
<b>PEAK HR VOL :</b>		151	327	9	0	29	192	22	0	40	57	129	4	22	118	139	0	1239
<b>PEAK HR FACTOR :</b>		0.755	0.889	0.450	0.000	0.558	0.762	0.550	0.000	0.769	0.648	0.658	0.250	0.917	0.738	0.681	0.000	0.826
<b>PM</b>		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				<b>TOTAL</b>
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00 PM	5	54	4	0	0	11	69	6	0	1	13	13	0	5	8	14	0	203
4:15 PM	8	60	3	0	0	21	62	9	0	4	9	15	1	2	13	11	0	218
4:30 PM	12	87	2	0	0	20	83	6	0	6	26	19	0	1	12	11	0	285
4:45 PM	23	78	4	0	0	15	55	3	0	3	12	13	1	2	15	12	0	236
5:00 PM	23	74	5	0	0	20	86	1	0	6	22	19	0	7	16	11	0	290
5:15 PM	12	102	3	0	0	18	94	6	0	9	14	23	0	2	15	12	0	310
5:30 PM	26	108	5	0	0	22	84	3	0	6	17	17	2	1	19	14	0	324
5:45 PM	31	80	4	0	0	17	73	2	0	1	12	14	0	4	22	11	0	271
<b>TOTAL VOLUMES :</b>		NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	<b>TOTAL</b>
<b>APPROACH %'s :</b>		140	643	30	0	144	606	36	0	36	125	133	4	24	120	96	0	2137
<b>PEAK HR :</b>		<b>05:00 PM - 06:00 PM</b>				18.32% 77.10% 4.58% 0.00%				12.08%	41.95%	44.63%	1.34%	10.00%	50.00%	40.00%	0.00%	<b>TOTAL</b>
<b>PEAK HR VOL :</b>		92	364	17	0	77	337	12	0	22	65	73	2	14	72	48	0	1195
<b>PEAK HR FACTOR :</b>		0.742	0.843	0.850	0.000	0.851	0.896	0.500	0.000	0.611	0.739	0.793	0.250	0.500	0.818	0.857	0.000	0.922

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 90th St  
**City:** Doral  
**Control:** 4-Way Stop

**Project ID:** 23-140438-004  
**Date:** 10/31/2023

**Data - HT**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 90th St				NW 90th St				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
7:00 AM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
7:30 AM	0	0	1	0	2	1	0	0	0	1	0	0	0	0	0	0	5
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	1	1	1	0	0	0	0	0	0	0	2	0	1	0	0	0	6
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:30 AM	0	2	0	0	0	4	0	0	2	0	0	0	0	0	0	0	8
8:45 AM	0	4	1	0	1	4	0	0	0	0	1	0	0	1	1	0	13
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>
<b>APPROACH %'s :</b>	2 13.33%	10 66.67%	3 20.00%	0 0.00%	4 26.67%	11 73.33%	0 0.00%	0 0.00%	2 28.57%	1 14.29%	4 57.14%	0 0.00%	1 33.33%	1 33.33%	1 33.33%	0 0.00%	40
<b>PEAK HR :</b>	<b>07:45 AM - 08:45 AM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	1 0.250	4 0.500	1 0.250	0 0.000	0 0.000	4 0.250	0 0.000	0 0.000	2 0.250	0 0.000	3 0.375	0 0.000	1 0.250	0 0.000	0 0.000	0 0.000	16
<b>PEAK HR FACTOR :</b>	0.500				0.250				0.625				0.250				0.500
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0 NL	0 NT	0 NR	0 NU	0 SL	0 ST	0 SR	0 SU	0 EL	0 ET	0 ER	0 EU	0 WL	0 WT	0 WR	0 WU	TOTAL
4:00 PM	0	6	0	0	1	1	1	0	1	1	0	0	0	0	2	0	13
4:15 PM	0	0	0	0	0	5	0	0	0	1	0	0	0	0	1	0	7
4:30 PM	0	2	0	0	1	0	1	0	0	0	0	0	0	1	1	0	6
4:45 PM	0	5	1	0	0	1	0	0	1	0	1	0	0	0	0	0	9
5:00 PM	0	4	0	0	0	1	1	0	0	0	0	0	0	1	4	0	11
5:15 PM	0	3	0	0	0	0	0	0	1	0	0	0	0	0	1	0	5
5:30 PM	0	1	0	0	1	1	0	0	1	1	0	0	0	0	0	0	5
5:45 PM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	3
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>TOTAL</b>
<b>APPROACH %'s :</b>	0 0.00%	22 95.65%	1 4.35%	0 0.00%	3 20.00%	9 60.00%	3 20.00%	0 0.00%	4 44.44%	3 33.33%	2 22.22%	0 0.00%	0 0.00%	2 16.67%	10 83.33%	0 0.00%	59
<b>PEAK HR :</b>	<b>05:00 PM - 06:00 PM</b>																<b>TOTAL</b>
<b>PEAK HR VOL :</b>	0 0.000	9 0.563	0 0.000	0 0.000	1 0.250	2 0.500	1 0.250	0 0.000	2 0.500	1 0.250	1 0.250	0 0.000	0 0.000	1 0.250	6 0.375	0 0.000	24
<b>PEAK HR FACTOR :</b>	0.563				0.500				0.500				0.350				0.545

**National Data & Surveying Services**  
**Intersection Turning Movement Count**

**Location:** NW 107th Ave & NW 90th St  
**City:** Doral  
**Control:** 4-Way Stop

**Project ID:** 23-140438-004  
**Date:** 10/31/2023

**Data - Bikes**

NS/EW Streets:	NW 107th Ave				NW 107th Ave				NW 90th St				NW 90th St									
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND									
AM	0	0	0	0	0	SL	ST	SR	0	0	ET	ER	EU	0	0	WR	WT	0	0	0	0	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	3
7:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	2	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	2	1	0	0	0	7
8:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	3
8:30 AM	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>0</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>0</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>0</b>	<b>TOTAL</b>	<b>24</b>	
<b>APPROACH %'s :</b>	<b>50.00%</b>	<b>50.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>50.00%</b>	<b>50.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>88.89%</b>	<b>11.11%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>77.78%</b>	<b>22.22%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>TOTAL</b>	<b>24</b>	
<b>PEAK HR :</b>	<b>07:45 AM - 08:45 AM</b>				<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>TOTAL</b>	<b>14</b>	
<b>PEAK HR VOL :</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.250</b>	<b>0.250</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.500</b>	<b>0.500</b>	<b>0.250</b>	<b>0.000</b>	<b>0.000</b>	<b>0.500</b>	<b>0.250</b>	<b>0.000</b>	<b>0.417</b>	<b>0.500</b>	
<b>PM</b>	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND									
PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TOTAL
NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	0	0	0	0	0	0	0
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0	5
<b>TOTAL VOLUMES :</b>	<b>NL</b>	<b>NT</b>	<b>NR</b>	<b>NU</b>	<b>0</b>	<b>SL</b>	<b>ST</b>	<b>SR</b>	<b>SU</b>	<b>0</b>	<b>EL</b>	<b>ET</b>	<b>ER</b>	<b>EU</b>	<b>WL</b>	<b>WT</b>	<b>WR</b>	<b>WU</b>	<b>0</b>	<b>TOTAL</b>	<b>10</b>	
<b>APPROACH %'s :</b>	<b>25.00%</b>	<b>75.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>100.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>80.00%</b>	<b>20.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>0.00%</b>
<b>PEAK HR :</b>	<b>05:00 PM - 06:00 PM</b>				<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>8</b>
<b>PEAK HR VOL :</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.250</b>	<b>0.375</b>	<b>0.000</b>	<b>0.000</b>	<b>0.333</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.375</b>	<b>0.250</b>	<b>0.000</b>	<b>0.500</b>	<b>0.400</b>	

# National Data & Surveying Services

## Intersection Turning Movement Count

**Location:** NW 107th Ave & NW 90th St  
**City:** Doral

**Project ID:** 23-140438-004  
**Date:** 10/31/2023

### Data - Pedestrians (Crosswalks)

NS/EW Streets:	NW 107th Ave		NW 107th Ave		NW 90th St		NW 90th St		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	2	0	0	0	0	0	2
7:15 AM	0	0	0	2	0	0	1	0	3
7:30 AM	0	0	1	1	0	0	1	0	3
7:45 AM	0	0	0	0	0	0	0	1	1
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	2	2
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	3	3	0	0	2	4	12
PEAK HR :	<b>07:45 AM - 08:45 AM</b>								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	4	4
PEAK HR FACTOR :									0.500
									0.500

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	1	1
5:00 PM	0	0	1	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	1	1
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES :	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
APPROACH %'s :	0	0	2	0	0	0	0	2	4
PEAK HR :	<b>05:00 PM - 06:00 PM</b>								TOTAL
PEAK HR VOL :	0	0	2	0	0	0	0	1	3
PEAK HR FACTOR :									0.750
									0.250
									0.500

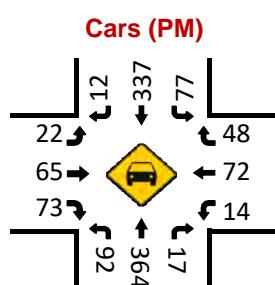
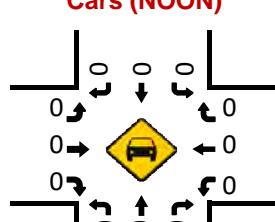
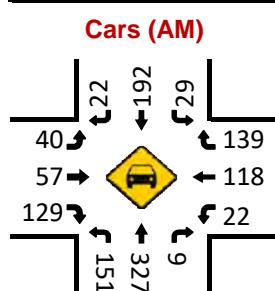
## **NW 107th Ave & NW 90th St**

## Peak Hour Turning Movement Count

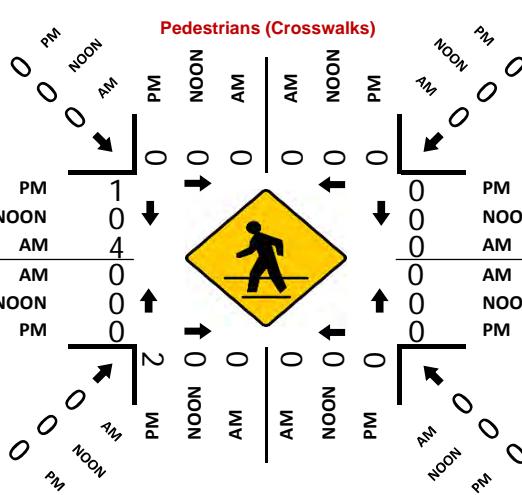
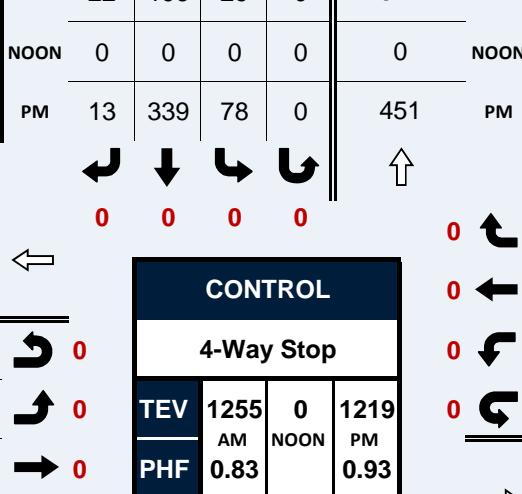
ID: 23-140438-004

**City:** Doral

<b>PEAK HOURS</b>	07:45 AM - 08:45 AM NONE 05:00 PM - 06:00 PM
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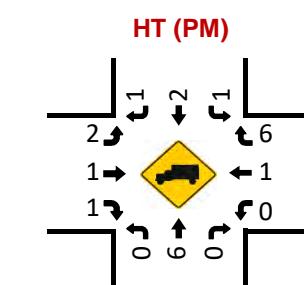
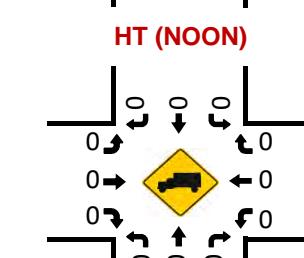
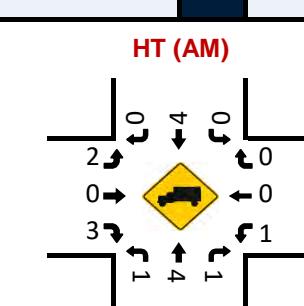
A dark blue rectangular sign with white text. At the top, it says "NW 107th Ave". Below that, in large letters, it says "SOUTHBOUND". At the bottom, it has a grid of numbers: AM 22 196 29 0 512 AM.



**Day:** Tuesday

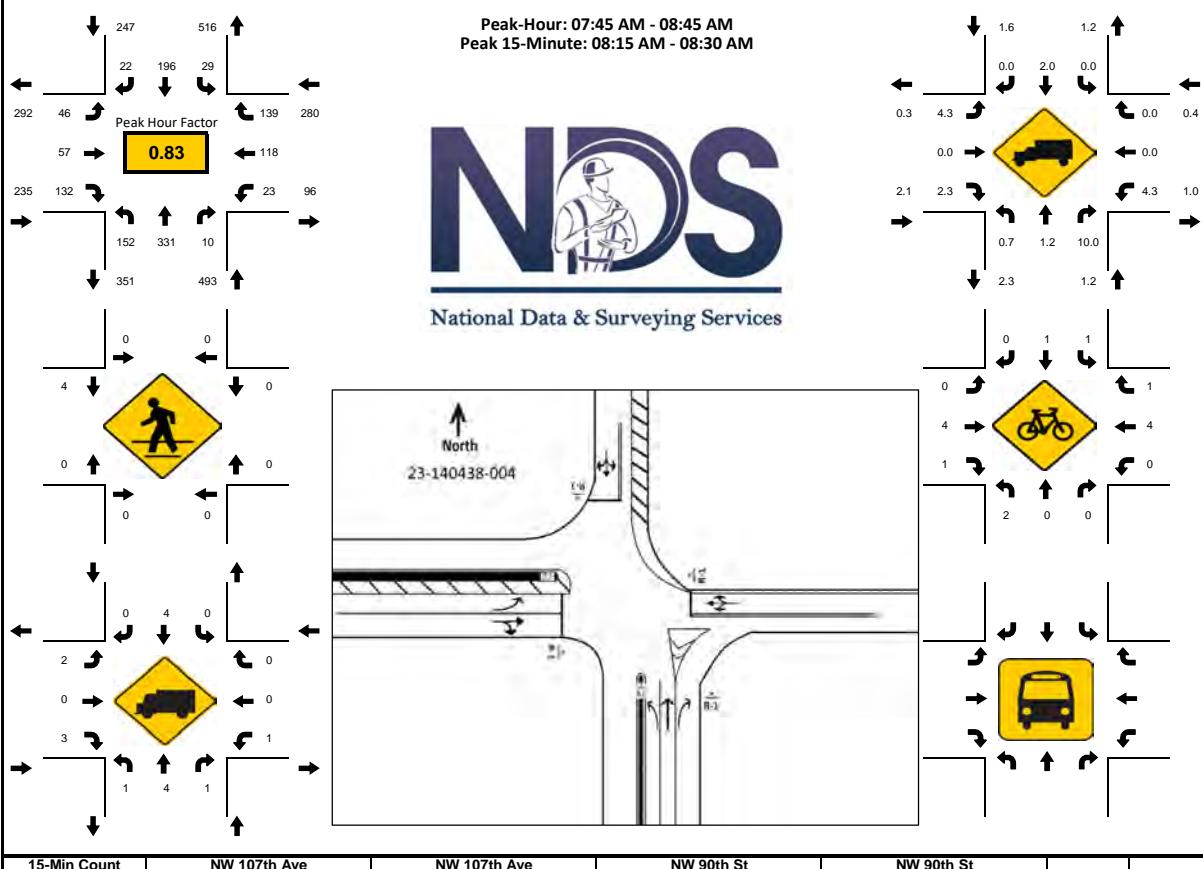
Date: 10/31/2023

COUNT PERIOD  
7:00 AM - 09:00 AM  
NONE  
4:00 PM - 06:00 PM

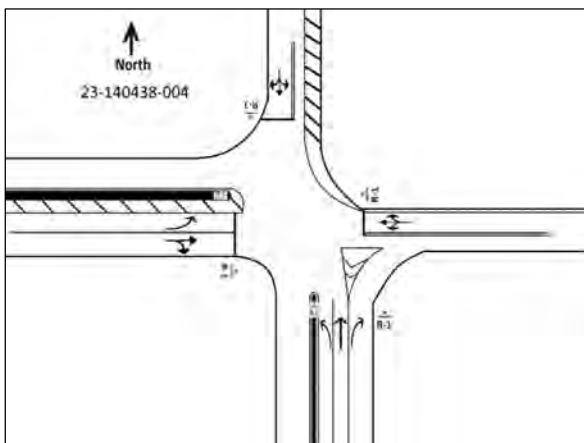


**LOCATION:** NW 107th Ave & NW 90th St  
**CITY/STATE:** Doral, FL

PROJECT ID: 23-140438-004  
DATE: Tue, Oct 31, 2023

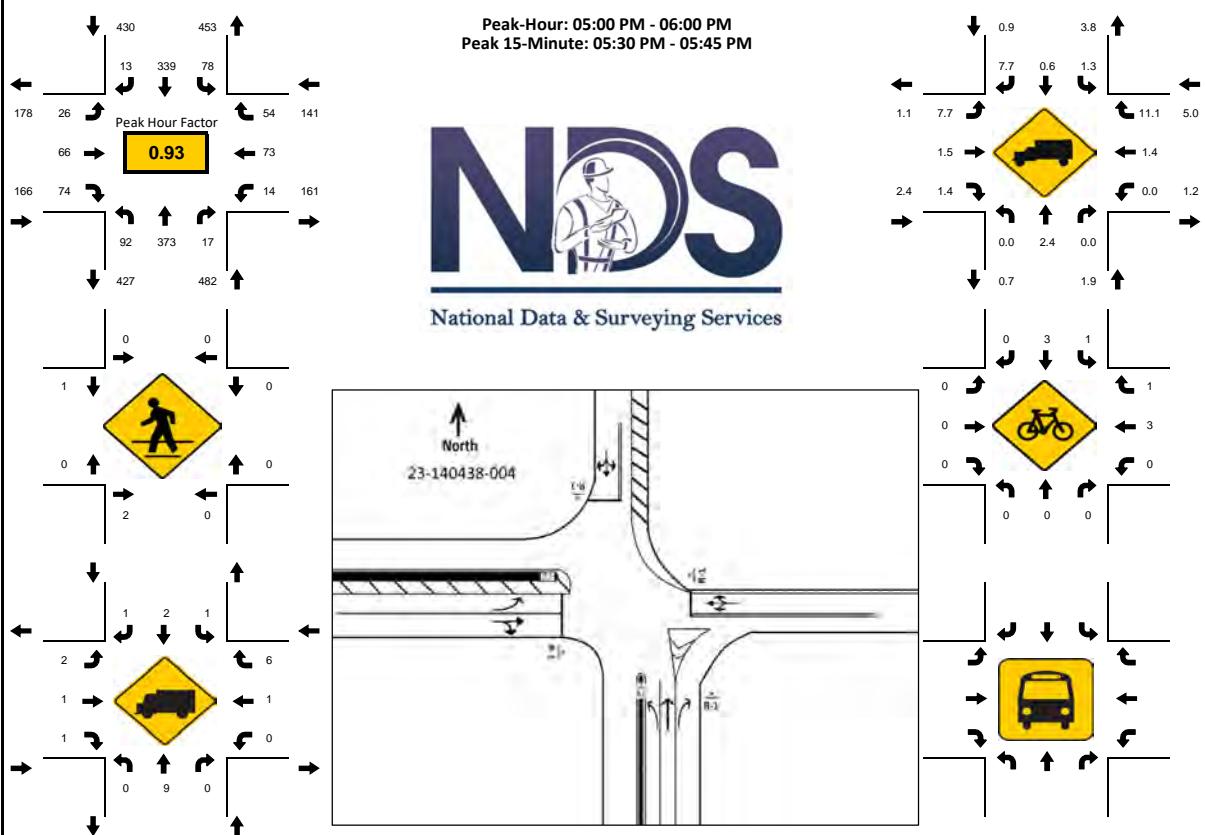


National Data & Surveying Services

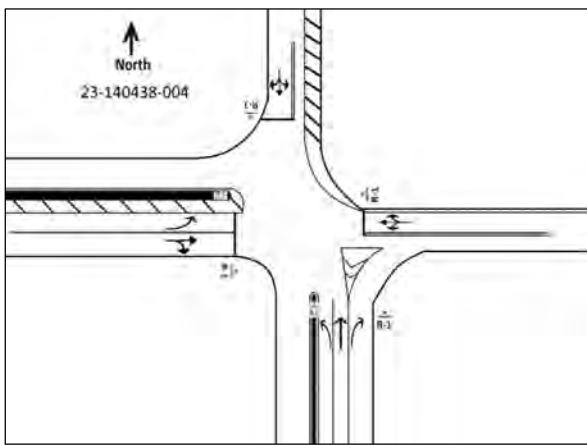


**LOCATION:** NW 107th Ave & NW 90th St  
**CITY/STATE:** Doral, FL

**PROJECT ID:** 23-140438-004  
**DATE:** Tue, Oct 31, 2023



National Data & Surveying Services



NW 88th Street / NW 107th Avenue - 12/8/2020 7:30-8:30am					NW 88th Street / NW 107th Avenue - 10/31/2023				
Approach	AM	PSCF	w PSCF	Grown 2023	Approach	AM	PSCF	w PSCF	old / new
NB	452	1.08	488	520	NB	536	1.05	563	8%
SB	347	1.08	375	400	SB	384	1.05	403	1%
EB	35	1.08	38	40	EB	35	1.05	37	-10%
WB	94	1.08	102	108	WB	216	1.05	227	52%
TOTAL	928	1.08	1002	1069	TOTAL	1171	1.05	1230	13%
NW 88th Street / NW 107th Avenue - 12/8/2020 5-6pm					NW 88th Street / NW 107th Avenue - 10/31/2023				
Approach	PM	PSCF	w PSCF	Grown 2023	Approach	PM	PSCF	w PSCF	
NB	390	1.08	421	449	NB	652	1.05	685	34%
SB	476	1.08	514	548	SB	445	1.05	467	-17%
EB	34	1.08	37	39	EB	35	1.05	37	-7%
WB	113	1.08	122	130	WB	98	1.05	103	-26%
TOTAL	1013	1.08	1094	1166	TOTAL	1230	1.05	1292	10%
NW 82nd Street / NW 107th Avenue - 12/8/2020 7:45-8:45am					NW 82nd Street / NW 107th Avenue - 10/31/2023				
Approach	AM	PSCF	w PSCF	Grown 2023	Approach	AM	PSCF	w PSCF	old / new
NB	628	1.08	678	723	NB	869	1.05	912	21%
SB	670	1.08	724	772	SB	855	1.05	898	14%
EB	192	1.08	207	221	EB	248	1.05	260	15%
WB	60	1.08	65	69	WB	108	1.05	113	39%
TOTAL	1550	1.08	1674	1785	TOTAL	2080	1.05	2184	18%
NW 82nd Street / NW 107th Avenue - 12/8/2020 5-6pm					NW 82nd Street / NW 107th Avenue - 10/31/2023				
Approach	PM	PSCF	w PSCF	Grown 2023	Approach	PM	PSCF	w PSCF	
NB	766	1	827	882	NB	1219	1.05	1280	31%
SB	687	1.08	742	791	SB	686	1.05	720	-10%
EB	139	1.08	150	160	EB	163	1.05	171	6%
WB	69	1.08	75	79	WB	79	1.05	83	4%
TOTAL	1661	1.08	1794	1913	TOTAL	2147	1.05	2254	15%

Average volume % increase	
AM	PM
16%	12%
Average Adjustment Factor	
1.16	1.12

# Traffic Survey Specialists, Inc.

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483  
Phone (561) 272-3255

NW 74TH STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
SIGNALIZED

File Name : 74TH & 107TH  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 1

### Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

Start Time	NW 107TH AVENUE From North				NW 74TH STREET From East				NW 107TH AVENUE From South				NW 74TH STREET From West				Int. Total
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
07:00 AM	0	68	59	12	0	27	65	41	1	12	74	35	0	24	180	30	628
07:15 AM	0	65	91	13	0	49	82	33	0	13	76	60	0	10	192	26	710
07:30 AM	1	105	94	17	0	30	77	53	1	25	83	58	0	11	226	33	814
07:45 AM	0	100	136	20	0	42	68	45	0	20	83	46	0	22	264	54	900
Total	1	338	380	62	0	148	292	172	2	70	316	199	0	67	862	143	3052
08:00 AM	1	96	129	19	0	48	98	68	0	33	102	71	0	19	251	47	982
08:15 AM	0	121	121	34	0	56	108	56	0	52	115	66	1	28	245	41	1044
08:30 AM	0	117	126	19	0	46	98	39	0	29	100	65	0	30	262	36	967
08:45 AM	0	105	102	19	0	43	113	41	0	21	81	54	0	16	240	39	874
Total	1	439	478	91	0	193	417	204	0	135	398	256	1	93	998	163	3867
04:00 PM	1	70	90	25	0	74	214	47	0	59	111	60	0	40	171	37	999
04:15 PM	0	63	113	21	0	65	260	78	2	43	110	61	1	26	151	47	1041
04:30 PM	0	60	105	19	0	74	251	81	1	52	128	56	0	26	156	30	1039
04:45 PM	0	70	115	24	1	68	266	64	0	51	109	56	1	25	158	40	1048
Total	1	263	423	89	1	281	991	270	3	205	458	233	2	117	636	154	4127
05:00 PM	0	69	127	32	0	90	286	55	2	59	116	69	0	36	173	45	1159
05:15 PM	0	70	125	21	1	92	289	71	1	67	132	62	1	48	163	37	1180
05:30 PM	1	56	108	23	1	95	310	82	0	48	114	60	1	46	154	52	1151
05:45 PM	0	62	123	21	0	63	281	89	0	55	133	66	1	41	154	39	1128
Total	1	257	483	97	2	340	1166	297	3	229	495	257	3	171	644	173	4618
Grand Total	4	1297	1764	339	3	962	2866	943	8	639	1667	945	6	448	3140	633	15664
Apprch %	0.1	38.1	51.8	10	0.1	20.2	60	19.8	0.2	19.6	51.2	29	0.1	10.6	74.3	15	
Total %	0	8.3	11.3	2.2	0	6.1	18.3	6	0.1	4.1	10.6	6	0	2.9	20	4	
LIGHT VEHICLES	4	1281	1744	333	3	952	2655	936	8	630	1647	930	6	443	2909	623	15104
% LIGHT VEHICLES	100	98.8	98.9	98.2	100	99	92.6	99.3	100	98.6	98.8	98.4	100	98.9	92.6	98.4	96.4
HEAVY VEHICLES	0	16	20	6	0	10	211	7	0	9	20	15	0	5	231	10	560
% HEAVY VEHICLES	0	1.2	1.1	1.8	0	1	7.4	0.7	0	1.4	1.2	1.6	0	1.1	7.4	1.6	3.6

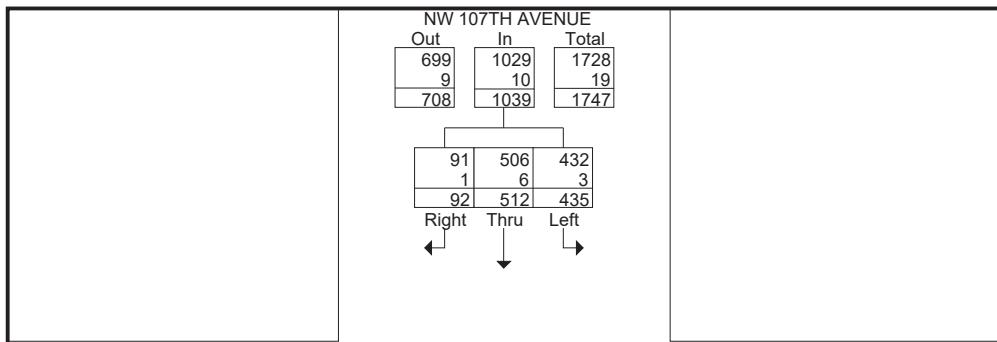
# Traffic Survey Specialists, Inc.

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483  
Phone (561) 272-3255

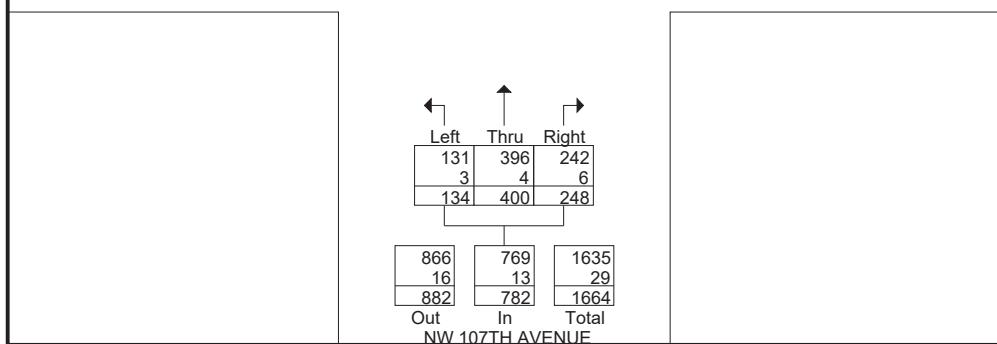
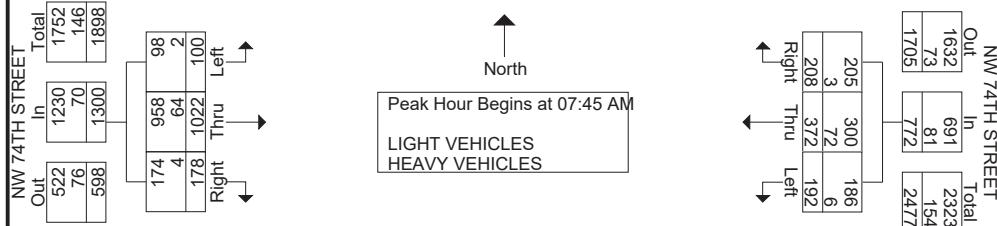
NW 74TH STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
SIGNALIZED

File Name : 74TH & 107TH  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 2

	NW 107TH AVENUE From North					NW 74TH STREET From East					NW 107TH AVENUE From South					NW 74TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	100	136	20	256	0	42	68	45	155	0	20	83	46	149	0	22	264	54	340	900
08:00 AM	1	96	129	19	245	0	48	98	68	214	0	33	102	71	206	0	19	251	47	317	982
08:15 AM	0	121	121	34	276	0	56	108	56	220	0	52	115	66	233	1	28	245	41	315	1044
08:30 AM	0	117	126	19	262	0	46	98	39	183	0	29	100	65	194	0	30	262	36	328	967
Total Volume	1	434	512	92	1039	0	192	372	208	772	0	134	400	248	782	1	99	1022	178	1300	3893
% App. Total	0.1	41.8	49.3	8.9		0	24.9	48.2	26.9		0	17.1	51.2	31.7		0.1	7.6	78.6	13.7		
PHF	.250	.897	.941	.676	.941	.000	.857	.861	.765	.877	.000	.644	.870	.873	.839	.250	.825	.968	.824	.956	.932
LIGHT VEHICLES	100	99.3	98.8	98.9	99.0	0	96.9	80.6	98.6	89.5	0	97.8	99.0	97.6	98.3	100	98.0	93.7	97.8	94.6	95.5
HEAVY VEHICLES	0	0.7	1.2	1.1	1.0	0	3.1	19.4	1.4	10.5	0	2.2	1.0	2.4	1.7	0	2.0	6.3	2.2	5.4	4.5



Peak Hour Data



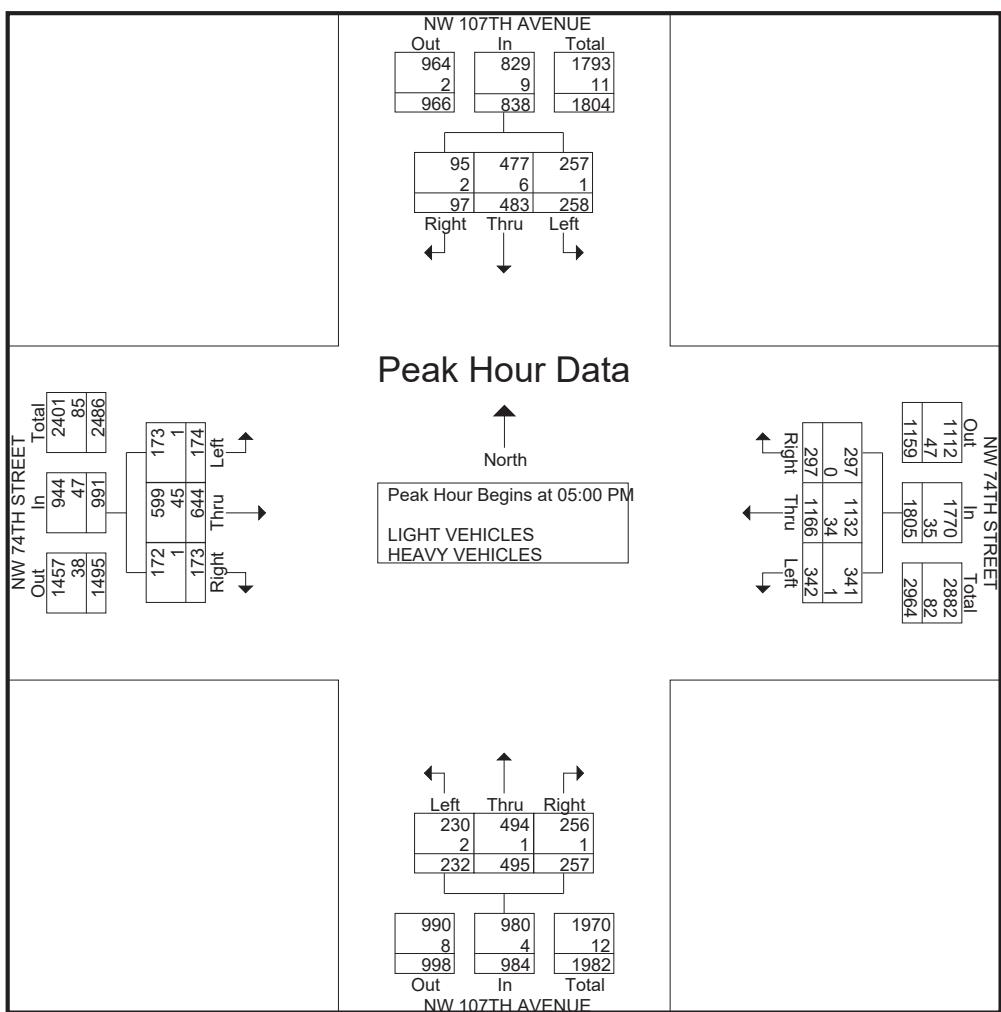
# **Traffic Survey Specialists, Inc.**

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483  
Phone (561) 272-3255

NW 74TH STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
SIGNALIZED

File Name : 74TH & 107TH  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 3

	NW 107TH AVENUE From North					NW 74TH STREET From East					NW 107TH AVENUE From South					NW 74TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	69	127	32	228	0	90	286	55	431	2	59	116	69	246	0	36	173	45	254	1159
05:15 PM	0	70	125	21	216	1	92	289	71	453	1	67	132	62	262	1	48	163	37	249	1180
05:30 PM	1	56	108	23	188	1	95	310	82	488	0	48	114	60	222	1	46	154	52	253	1151
05:45 PM	0	62	123	21	206	0	63	281	89	433	0	55	133	66	254	1	41	154	39	235	1128
Total Volume	1	257	483	97	838	2	340	1166	297	1805	3	229	495	257	984	3	171	644	173	991	4618
% App. Total	0.1	30.7	57.6	11.6		0.1	18.8	64.6	16.5		0.3	23.3	50.3	26.1		0.3	17.3	65	17.5		
PHF	.250	.918	.951	.758	.919	.500	.895	.940	.834	.925	.375	.854	.930	.931	.939	.750	.891	.931	.832	.975	.978
LIGHT VEHICLES						1132															
% LIGHT VEHICLES	100	99.6	98.8	97.9	98.9	100	99.7	97.1	100	98.1	100	99.1	99.8	99.6	99.6	100	99.4	93.0	99.4	95.3	97.9
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0.4	1.2	2.1	1.1	0	0.3	2.9	0	1.9	0	0.9	0.2	0.4	0.4	0	0.6	7.0	0.6	4.7	2.1



# Traffic Survey Specialists, Inc.

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483  
Phone (561) 272-3255

NW 74TH STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
SIGNALIZED

File Name : 74TH & 107TH  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 1

### Groups Printed- PEDESTRIANS & BIKES

	NW 107TH AVENUE From North				NW 74TH STREET From East				NW 107TH AVENUE From South				NW 74TH STREET From West				
Start Time	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Int. Total
07:00 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	1	0	1	0	1	0	0	0	1	0	1	0	5
07:45 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Total	0	0	0	0	1	0	5	0	2	0	0	0	1	0	1	0	10
08:00 AM	0	0	0	0	0	0	1	0	0	0	2	0	0	0	2	0	5
08:15 AM	0	0	0	0	2	0	0	0	0	0	1	0	0	1	2	0	5
Total	0	0	0	0	2	0	1	0	0	0	3	0	0	1	0	3	0
04:00 PM	6	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	11
04:15 PM	0	0	0	0	1	0	0	0	1	0	3	0	0	0	1	0	6
04:45 PM	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	3
Total	6	0	0	0	3	0	1	0	1	0	3	0	5	0	1	0	20
05:00 PM	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	4
05:15 PM	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	8
05:30 PM	2	0	1	0	3	0	3	0	1	0	2	0	3	0	0	0	13
05:45 PM	1	0	1	0	4	0	5	0	2	0	0	0	2	0	1	0	15
Total	3	0	2	0	10	0	10	0	4	0	3	0	6	0	2	0	40
Grand Total	9	0	2	0	16	0	17	0	7	0	9	0	13	0	7	0	80
Apprch %	81.8	0	18.2	0	48.5	0	51.5	0	43.8	0	56.2	0	65	0	35	0	
Total %	11.2	0	2.5	0	20	0	21.2	0	8.8	0	11.2	0	16.2	0	8.8	0	

**Traffic Survey Specialists, Inc.**

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483  
Phone (561) 272-3255

NW 88TH STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
NOT SIGNALIZED

File Name : 88th & 107th  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 1

**Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES**

Start Time	NW 107TH AVENUE From North				NW 88TH STREET From East				NW 107TH AVENUE From South				NW 88TH STREET From West				Int. Total
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
07:00 AM	0	0	52	1	0	4	5	5	1	17	55	8	0	0	2	22	172
07:15 AM	0	1	61	3	0	5	2	3	0	13	74	6	0	5	3	18	194
07:30 AM	0	1	70	1	0	11	3	7	0	3	104	3	0	1	4	10	218
07:45 AM	0	1	92	1	0	12	1	4	0	0	111	7	0	0	1	1	231
Total	0	3	275	6	0	32	11	19	1	33	344	24	0	6	10	51	815
08:00 AM	0	2	95	3	0	16	6	6	0	4	91	14	0	1	4	4	246
08:15 AM	0	0	81	0	0	16	6	6	0	2	99	14	0	1	4	4	233
08:30 AM	0	1	83	1	0	13	1	6	0	0	71	17	0	1	5	5	204
08:45 AM	0	1	63	2	0	12	2	2	0	4	76	9	0	1	3	9	184
Total	0	4	322	6	0	57	15	20	0	10	337	54	0	4	16	22	867
04:00 PM	0	4	104	3	0	12	1	2	0	5	62	16	0	1	4	4	218
04:15 PM	0	0	87	3	0	8	2	4	0	5	79	18	0	0	3	8	217
04:30 PM	0	0	110	3	0	10	2	5	0	6	76	16	0	1	3	5	237
04:45 PM	0	2	97	4	0	24	2	5	0	7	84	13	0	0	2	5	245
Total	0	6	398	13	0	54	7	16	0	23	301	63	0	2	12	22	917
05:00 PM	0	1	122	2	0	15	6	2	0	5	67	14	0	0	5	6	245
05:15 PM	0	2	125	2	0	12	12	2	0	4	62	15	0	0	1	8	245
05:30 PM	0	0	119	4	0	19	7	2	0	8	85	21	0	0	6	4	275
05:45 PM	0	1	98	0	0	26	2	8	0	11	72	26	0	0	2	2	248
Total	0	4	464	8	0	72	27	14	0	28	286	76	0	0	14	20	1013
Grand Total	0	17	1459	33	0	215	60	69	1	94	1268	217	0	12	52	115	3612
Apprch %	0	1.1	96.7	2.2	0	62.5	17.4	20.1	0.1	5.9	80.3	13.7	0	6.7	29.1	64.2	
Total %	0	0.5	40.4	0.9	0	6	1.7	1.9	0	2.6	35.1	6	0	0.3	1.4	3.2	
LIGHT VEHICLES	0	16	1429	32	0	213	59	65	1	93	1252	213	0	12	52	100	3537
% LIGHT VEHICLES	0	94.1	97.9	97	0	99.1	98.3	94.2	100	98.9	98.7	98.2	0	100	100	87	97.9
HEAVY VEHICLES	0	1	30	1	0	2	1	4	0	1	16	4	0	0	0	15	75
% HEAVY VEHICLES	0	5.9	2.1	3	0	0.9	1.7	5.8	0	1.1	1.3	1.8	0	0	0	13	2.1

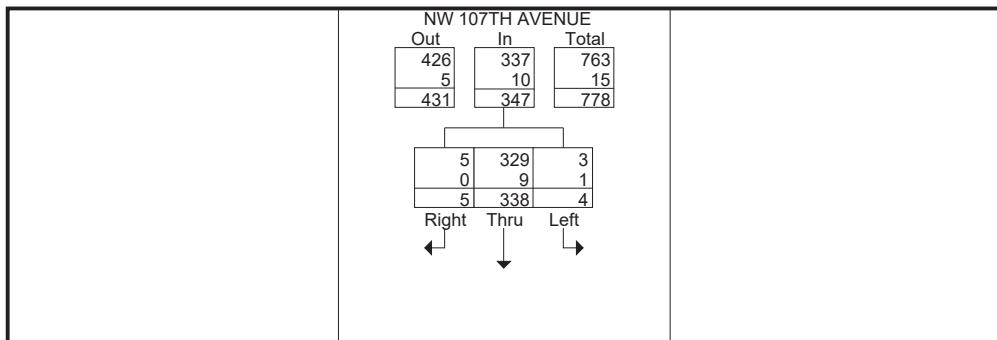
# Traffic Survey Specialists, Inc.

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483  
Phone (561) 272-3255

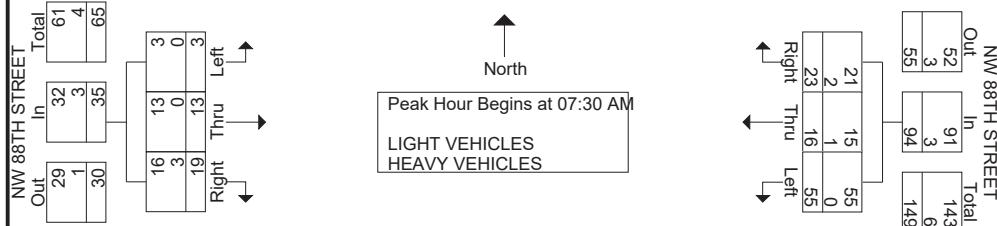
NW 88TH STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
NOT SIGNALIZED

File Name : 88th & 107th  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 2

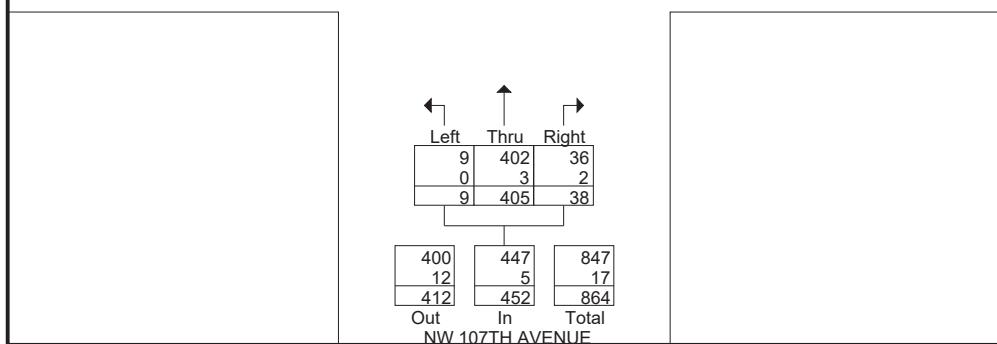
	NW 107TH AVENUE From North					NW 88TH STREET From East					NW 107TH AVENUE From South					NW 88TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	1	70	1	72	0	11	3	7	21	0	3	104	3	110	0	1	4	10	15	218
07:45 AM	0	1	92	1	94	0	12	1	4	17	0	0	111	7	118	0	0	1	1	2	231
08:00 AM	0	2	95	3	100	0	16	6	28	28	0	4	91	14	109	0	1	4	4	9	246
08:15 AM	0	0	81	0	81	0	16	6	6	28	0	2	99	14	115	0	1	4	4	9	233
Total Volume	0	4	338	5	347	0	55	16	23	94	0	9	405	38	452	0	3	13	19	35	928
% App. Total	0	1.2	97.4	1.4		0	58.5	17	24.5		0	2	89.6	8.4		0	8.6	37.1	54.3		
PHF	.000	.500	.889	.417	.868	.000	.859	.667	.821	.839	.000	.563	.912	.679	.958	.000	.750	.813	.475	.583	.943
LIGHT VEHICLES	0	75.0	97.3	100	97.1	0	100	93.8	91.3	96.8	0	100	99.3	94.7	98.9	0	100	100	84.2	91.4	97.7
% LIGHT VEHICLES	0	25.0	2.7	0	2.9	0	0	6.3	8.7	3.2	0	0	0.7	5.3	1.1	0	0	0	15.8	8.6	2.3
HEAVY VEHICLES																					
% HEAVY VEHICLES																					



Peak Hour Data



North  
Peak Hour Begins at 07:30 AM  
LIGHT VEHICLES  
HEAVY VEHICLES



# Traffic Survey Specialists, Inc.

85 SE 4th Avenue, Unit 109, Delray Beach, Florida 33483  
Phone (561) 272-3255

NW 88TH STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
NOT SIGNALIZED

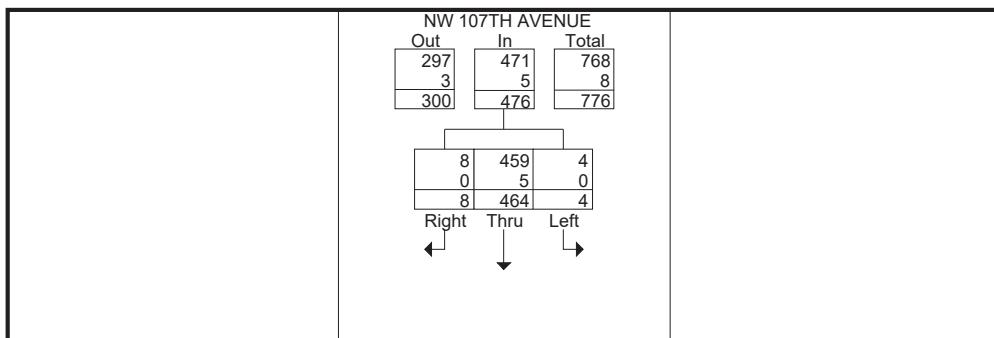
File Name : 88th & 107th  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 3

	NW 107TH AVENUE From North					NW 88TH STREET From East					NW 107TH AVENUE From South					NW 88TH STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total

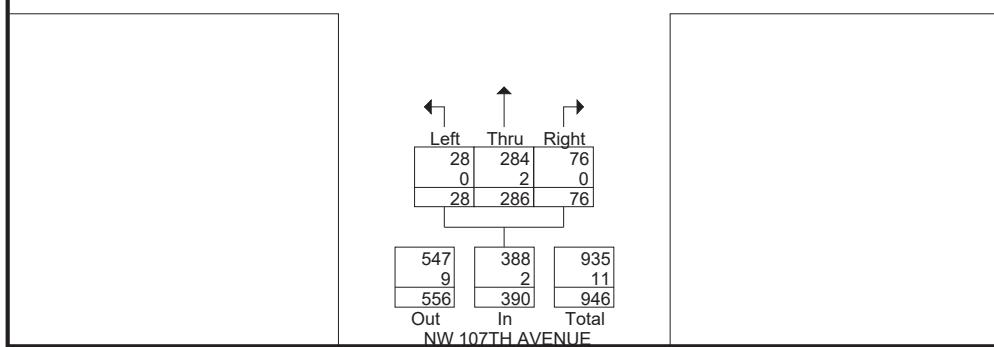
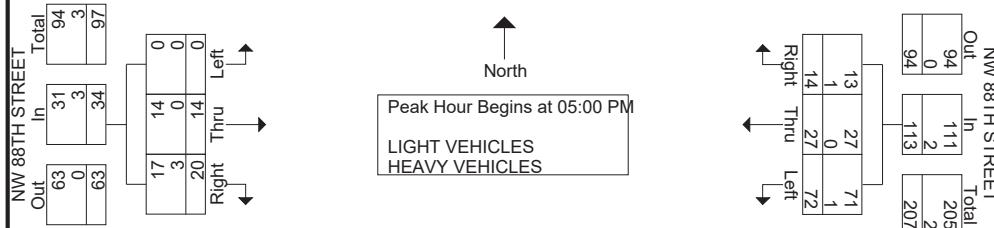
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	0	1	122	2	125	0	15	6	2	23	0	5	67	14	86	0	0	5	6	11	245
05:15 PM	0	2	125	2	129	0	12	12	2	26	0	4	62	15	81	0	0	1	8	9	245
05:30 PM	0	0	119	4	123	0	19	7	2	28	0	8	85	21	114	0	0	6	4	10	275
05:45 PM	0	1	98	0	99	0	26	2	8	36	0	11	72	26	109	0	0	2	2	4	248
Total Volume	0	4	464	8	476	0	72	27	14	113	0	28	286	76	390	0	0	14	20	34	1013
% App. Total	0	0.8	97.5	1.7		0	63.7	23.9	12.4		0	7.2	73.3	19.5		0	0	41.2	58.8		
PHF	.000	.500	.928	.500	.922	.000	.692	.563	.438	.785	.000	.636	.841	.731	.855	.000	.000	.583	.625	.773	.921
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	100	98.9	100	98.9	0	98.6	100	92.9	98.2	0	100	99.3	100	99.5	0	0	100	85.0	91.2	98.8
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	1.1	0	1.1	0	1.4	0	7.1	1.8	0	0	0.7	0	0.5	0	0	0	15.0	8.8	1.2



Peak Hour Data



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NW 88TH STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
NOT SIGNALIZED

File Name : 88th & 107th  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 1

### Groups Printed- PEDESTRIANS & BIKES

Start Time	NW 107TH AVENUE From North				NW 88TH STREET From East				NW 107TH AVENUE From South				NW 88TH STREET From West				Int. Total
	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	
07:00 AM	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	4
07:15 AM	0	0	0	0	0	0	0	0	3	0	0	0	5	0	1	0	9
07:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	3
07:45 AM	1	0	0	0	1	0	0	0	0	0	0	0	2	0	0	0	4
Total	1	0	0	0	2	0	0	0	4	0	0	0	12	0	1	0	20
08:00 AM	1	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	5
08:15 AM	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
08:45 AM	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4
Total	4	0	0	0	2	0	0	0	2	0	0	0	5	0	1	0	14
04:00 PM	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	4
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
04:30 PM	3	0	1	0	0	0	0	0	0	0	0	0	2	0	1	0	7
04:45 PM	2	0	0	0	1	0	0	0	1	0	0	0	2	0	0	0	6
Total	7	0	1	0	2	0	0	0	2	0	0	0	5	0	1	0	18
05:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2
05:15 PM	1	0	1	0	0	0	1	0	0	0	0	0	3	0	1	0	7
05:30 PM	0	0	0	0	2	0	0	0	1	0	0	0	2	0	0	0	5
05:45 PM	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	7
Total	4	0	1	0	6	0	1	0	2	0	0	0	6	0	1	0	21
Grand Total	16	0	2	0	12	0	1	0	10	0	0	0	28	0	4	0	73
Apprch %	88.9	0	11.1	0	92.3	0	7.7	0	100	0	0	0	87.5	0	12.5	0	
Total %	21.9	0	2.7	0	16.4	0	1.4	0	13.7	0	0	0	38.4	0	5.5	0	

# Traffic Survey Specialists, Inc.

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NW 82ND STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
NOT SIGNALIZED

File Name : 82ND & 107TH  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 1

### Groups Printed- LIGHT VEHICLES - HEAVY VEHICLES

Start Time	NW 107TH AVENUE From North				NW 82ND STREET From East				NW 107TH AVENUE From South				NW 82ND STREET From West				Int. Total
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	
07:00 AM	0	4	81	5	0	1	1	12	1	8	121	3	1	5	0	28	271
07:15 AM	0	5	111	6	0	3	0	6	0	14	103	2	0	1	0	27	278
07:30 AM	0	3	130	1	0	3	1	6	0	20	118	4	0	2	5	36	329
07:45 AM	0	2	147	2	0	5	1	8	2	20	123	2	0	2	2	54	370
Total	0	14	469	14	0	12	3	32	3	62	465	11	1	10	7	145	1248
08:00 AM	0	7	158	3	0	4	5	13	0	33	142	3	0	2	1	30	401
08:15 AM	0	12	160	0	0	1	1	11	1	25	149	4	0	0	2	56	422
08:30 AM	0	12	163	4	0	0	1	10	0	11	105	8	0	1	0	42	357
08:45 AM	0	3	130	5	0	6	1	2	0	20	101	4	0	1	1	35	309
Total	0	34	611	12	0	11	8	36	1	89	497	19	0	4	4	163	1489
04:00 PM	0	4	147	4	0	2	1	3	1	29	113	6	0	1	2	25	338
04:15 PM	1	8	131	3	0	4	1	10	3	39	137	3	0	0	0	33	373
04:30 PM	0	3	139	2	0	6	1	6	3	53	143	5	0	1	1	19	382
04:45 PM	0	8	145	5	0	2	1	10	1	27	134	6	0	3	1	34	377
Total	1	23	562	14	0	14	4	29	8	148	527	20	0	5	4	111	1470
05:00 PM	0	1	178	5	0	5	4	7	0	30	116	12	0	2	1	33	394
05:15 PM	0	7	160	6	0	1	3	11	3	48	143	7	0	0	1	28	418
05:30 PM	0	6	154	3	0	3	1	12	3	38	144	8	0	1	2	30	405
05:45 PM	0	6	155	6	0	5	3	14	1	64	142	7	0	3	4	34	444
Total	0	20	647	20	0	14	11	44	7	180	545	34	0	6	8	125	1661
Grand Total	1	91	2289	60	0	51	26	141	19	479	2034	84	1	25	23	544	5868
Apprch %	0	3.7	93.8	2.5	0	23.4	11.9	64.7	0.7	18.3	77.8	3.2	0.2	4.2	3.9	91.7	
Total %	0	1.6	39	1	0	0.9	0.4	2.4	0.3	8.2	34.7	1.4	0	0.4	0.4	9.3	
LIGHT VEHICLES	1	88	2252	52	0	51	25	139	19	477	2015	82	1	25	21	540	5788
% LIGHT VEHICLES	100	96.7	98.4	86.7	0	100	96.2	98.6	100	99.6	99.1	97.6	100	100	91.3	99.3	98.6
HEAVY VEHICLES	0	3	37	8	0	0	1	2	0	2	19	2	0	0	2	4	80
% HEAVY VEHICLES	0	3.3	1.6	13.3	0	0	3.8	1.4	0	0.4	0.9	2.4	0	0	8.7	0.7	1.4

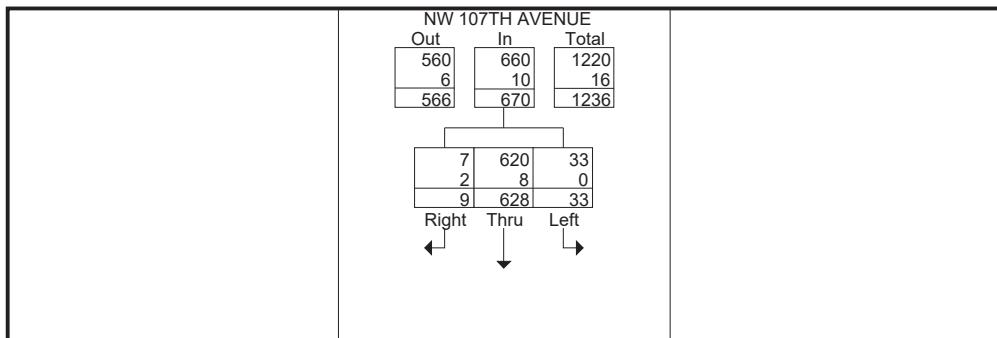
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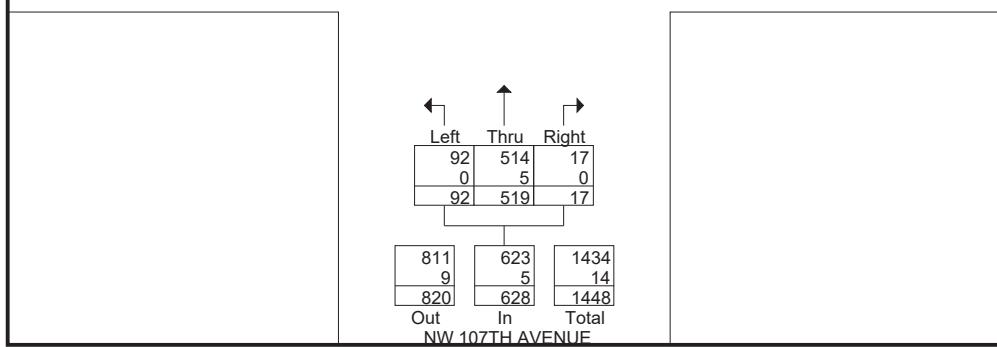
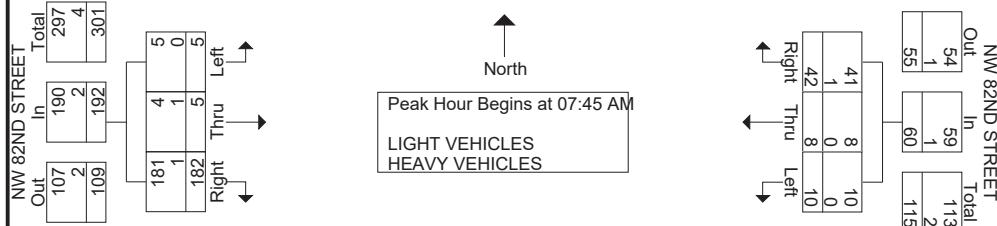
NW 82ND STREET & NW 107TH AVENUE  
DORAL, FLORIDA  
VIDEO COUNT  
NOT SIGNALIZED

File Name : 82ND & 107TH  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 2

	NW 107TH AVENUE From North					NW 82ND STREET From East					NW 107TH AVENUE From South					NW 82ND STREET From West					
Start Time	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	2	147	2	151	0	5	1	8	14	2	20	123	2	147	0	2	2	54	58	370
08:00 AM	0	7	158	3	168	0	4	5	13	22	0	33	142	3	178	0	2	1	30	33	401
08:15 AM	0	12	160	0	172	0	1	1	11	13	1	25	149	4	179	0	0	2	56	58	422
08:30 AM	0	12	163	4	179	0	0	1	10	11	0	11	105	8	124	0	1	0	42	43	357
Total Volume	0	33	628	9	670	0	10	8	42	60	3	89	519	17	628	0	5	5	182	192	1550
% App. Total	0	4.9	93.7	1.3		0	16.7	13.3	70		0.5	14.2	82.6	2.7		0	2.6	2.6	94.8		
PHF	.000	.688	.963	.563	.936	.000	.500	.400	.808	.682	.375	.674	.871	.531	.877	.000	.625	.625	.813	.828	.918
LIGHT VEHICLES	0	100	98.7	77.8	98.5	0	100	100	97.6	98.3	100	100	99.0	100	99.2	0	100	80.0	99.5	99.0	98.8
% LIGHT VEHICLES	0	0	1.3	22.2	1.5	0	0	0	2.4	1.7	0	0	1.0	0	0.8	0	0	20.0	0.5	1.0	1.2
HEAVY VEHICLES																					
% HEAVY VEHICLES																					



Peak Hour Data



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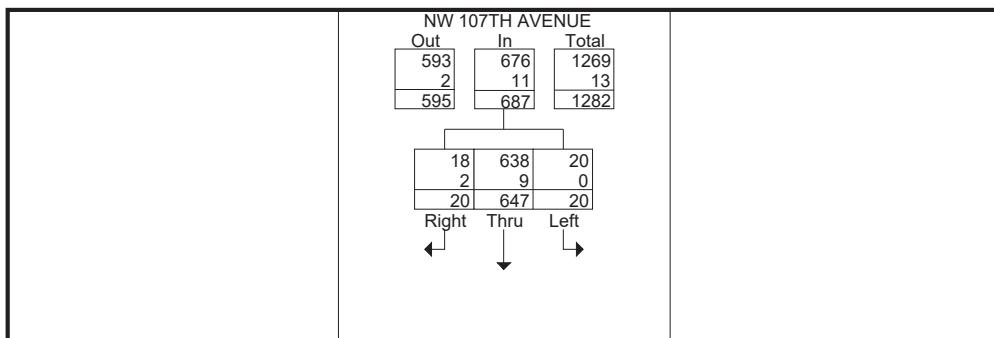
File Name : 82ND & 107TH  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 3

Start Time	NW 107TH AVENUE From North					NW 82ND STREET From East					NW 107TH AVENUE From South					NW 82ND STREET From West				
	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total	UTurn	Left	Thru	Right	App. Total

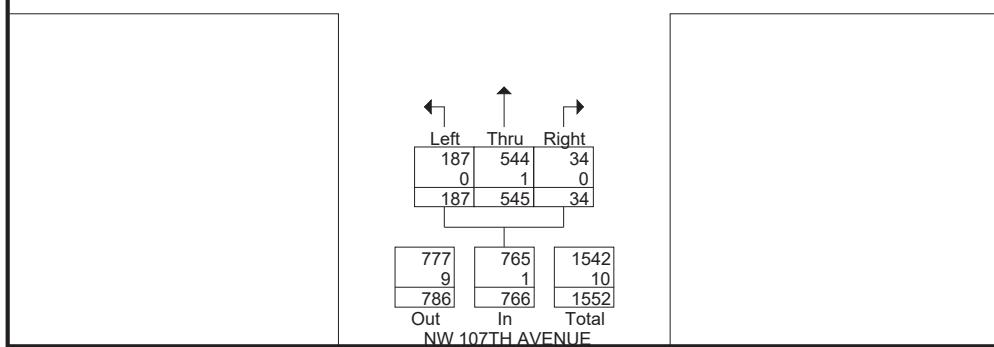
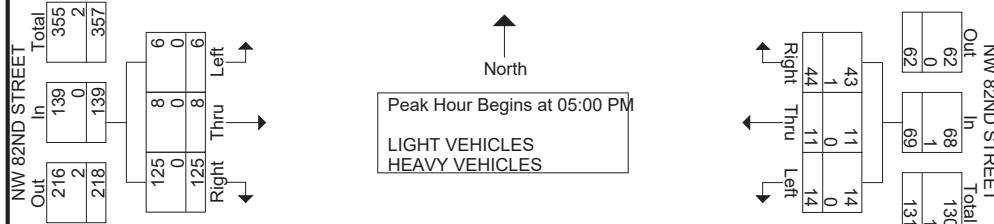
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	0	1	178	5	184	0	5	4	7	16	0	30	116	12	158	0	2	1	33	36	394
05:15 PM	0	7	160	6	173	0	1	3	11	15	3	48	143	7	201	0	0	1	28	29	418
05:30 PM	0	6	154	3	163	0	3	1	12	16	3	38	144	8	193	0	1	2	30	33	405
05:45 PM	0	6	155	6	167	0	5	3	14	22	1	64	142	7	214	0	3	4	34	41	444
Total Volume	0	20	647	20	687	0	14	11	44	69	7	180	545	34	766	0	6	8	125	139	1661
% App. Total	0	2.9	94.2	2.9		0	20.3	15.9	63.8		0.9	23.5	71.1	4.4		0	4.3	5.8	89.9		
PHF	.000	.714	.909	.833	.933	.000	.700	.688	.786	.784	.583	.703	.946	.708	.895	.000	.500	.500	.919	.848	.935
LIGHT VEHICLES																					
% LIGHT VEHICLES	0	100	98.6	90.0	98.4	0	100	100	97.7	98.6	100	100	99.8	100	99.9	0	100	100	100	100	99.2
HEAVY VEHICLES																					
% HEAVY VEHICLES	0	0	1.4	10.0	1.6	0	0	0	2.3	1.4	0	0	0.2	0	0.1	0	0	0	0	0	0.8



Peak Hour Data



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File Name : 82ND & 107TH  
Site Code : 200089  
Start Date : 12/8/2020  
Page No : 1

**Groups Printed- PEDESTRIANS & BIKES**

	NW 107TH AVENUE From North				NW 82ND STREET From East				NW 107TH AVENUE From South				NW 82ND STREET From West				Int. Total
	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	
07:00 AM	0	0	0	0	1	0	1	0	1	0	0	0	4	0	0	0	7
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2
07:30 AM	1	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	4
07:45 AM	0	0	0	0	3	0	0	0	2	0	0	0	1	0	0	0	6
Total	1	0	0	0	6	0	1	0	4	0	0	0	6	0	1	0	19
08:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	1	0	0	0	1	0	1	0	1	0	1	0	5
08:30 AM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
Total	0	0	0	0	2	0	0	0	2	0	2	0	1	0	1	0	8
04:00 PM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	4
Total	1	0	2	0	4	0	0	0	0	0	0	0	0	0	0	0	7
05:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	4	0	1	0	6
05:30 PM	0	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	5
05:45 PM	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	4
Total	0	0	0	0	6	0	2	0	0	0	0	0	6	0	1	0	15
Grand Total	2	0	2	0	18	0	3	0	6	0	2	0	13	0	3	0	49
Apprch %	50	0	50	0	85.7	0	14.3	0	75	0	25	0	81.2	0	18.8	0	
Total %	4.1	0	4.1	0	36.7	0	6.1	0	12.2	0	4.1	0	26.5	0	6.1	0	

**VOLUME**

NW 88th St E/O NW 107th Ave

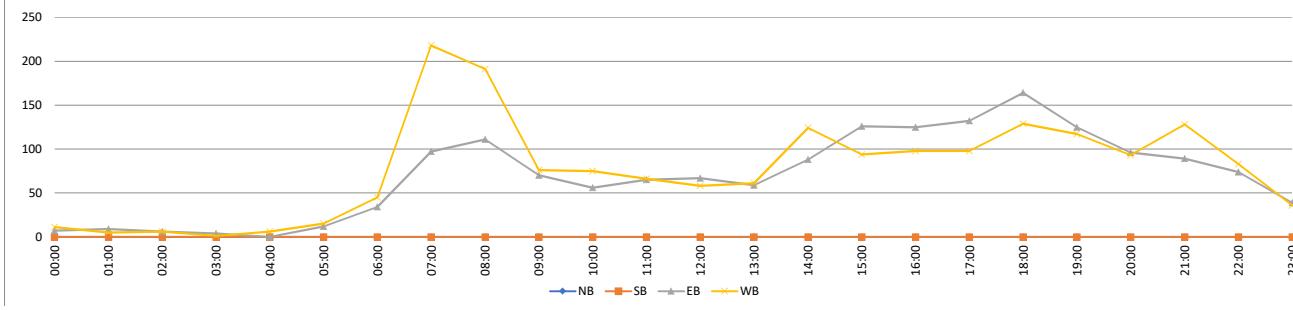
Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_003

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS								
					0	0	1,655	1,834	3,489									
15-Minutes Interval																		
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	
00:00			2	4	6	12:00			13	10	23	00:00	01:00		7	11	18	
00:15			1	2	3	12:15			14	21	35	01:00	02:00		9	5	14	
00:30			0	0	0	12:30			19	16	35	02:00	03:00		6	6	12	
00:45			4	5	9	12:45			21	11	32	03:00	04:00		4	1	5	
01:00			3	0	3	13:00			12	16	28	04:00	05:00		0	6	6	
01:15			4	2	6	13:15			17	14	31	05:00	06:00		12	15	27	
01:30			2	3	5	13:30			14	16	30	06:00	07:00		34	45	79	
01:45			0	0	0	13:45			16	15	31	07:00	08:00		97	218	315	
02:00			1	1	2	14:00			22	27	49	08:00	09:00		111	191	302	
02:15			2	1	3	14:15			17	36	53	09:00	10:00		70	76	146	
02:30			3	2	5	14:30			35	37	72	10:00	11:00		56	75	131	
02:45			0	2	2	14:45			14	24	38	11:00	12:00		65	66	131	
03:00			0	0	0	15:00			26	33	59	12:00	13:00		67	58	125	
03:15			1	0	1	15:15			36	21	57	13:00	14:00		59	61	120	
03:30			1	0	1	15:30			23	20	43	14:00	15:00		88	124	212	
03:45			2	1	3	15:45			41	20	61	15:00	16:00		126	94	220	
04:00			0	2	2	16:00			36	19	55	16:00	17:00		125	98	223	
04:15			0	1	1	16:15			35	18	53	17:00	18:00		132	98	230	
04:30			0	0	0	16:30			26	31	57	18:00	19:00		164	129	293	
04:45			0	3	3	16:45			28	30	58	19:00	20:00		125	117	242	
05:00			1	2	3	17:00			31	26	57	20:00	21:00		96	93	189	
05:15			0	4	4	17:15			34	23	57	21:00	22:00		89	128	217	
05:30			0	5	5	17:30			36	24	60	22:00	23:00		74	83	157	
05:45			11	4	15	17:45			31	25	56	23:00	00:00		39	36	75	
06:00			7	4	11	18:00			42	24	66	STATISTICS						
06:15			6	5	11	18:15			38	31	69		NB	SB	EB	WB	TOTAL	
06:30			7	11	18	18:30			50	32	82		Peak Period	00:00 to 12:00				
06:45			14	25	39	18:45			34	42	76		Volume		471	715	1186	
07:00			31	65	96	19:00			44	37	81		Peak Hour		8:00	7:00	7:45	
07:15			36	53	89	19:15			29	35	64		Peak Volume		111	218	323	
07:30			11	43	54	19:30			33	22	55		Peak Hour Factor		0.661	0.838	0.928	
07:45			19	57	76	19:45			19	23	42		Peak Period	12:00 to 00:00				
08:00			25	62	87	20:00			24	27	51		Volume		1184	1119	2303	
08:15			24	54	78	20:15			22	23	45		Peak Hour		18:15	18:30	18:15	
08:30			42	40	82	20:30			22	26	48		Peak Volume		166	146	308	
08:45			20	35	55	20:45			28	17	45		Peak Hour Factor		0.830	0.869	0.939	
09:00			21	25	46	21:00			22	36	58		Peak Period	07:00 to 09:00				
09:15			11	15	26	21:15			19	35	54		Volume		208	409	617	
09:30			20	18	38	21:30			21	27	48		Peak Hour		8:00	7:00	7:45	
09:45			18	18	36	21:45			27	30	57		Peak Volume		111	218	323	
10:00			13	23	36	22:00			26	38	64		Peak Hour Factor		0.661	0.838	0.928	
10:15			15	18	33	22:15			13	20	33		Peak Period	16:00 to 18:00				
10:30			13	22	35	22:30			18	14	32		Volume		257	196	453	
10:45			15	12	27	22:45			17	11	28		Peak Hour		17:00	16:30	16:45	
11:00			17	18	35	23:00			16	13	29		Peak Volume		132	110	232	
11:15			10	15	25	23:15			9	10	19		Peak Hour Factor		0.917	0.887	0.967	
11:30			24	18	42	23:30			5	7	12							
11:45			14	15	29	23:45			9	6	15							
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>471</b>	<b>715</b>	<b>1186</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1184</b>	<b>1119</b>	<b>2303</b>							
SPLIT %	0%	0%	40%	60%	34%	SPLIT %	0%	0%	51%	49%	66%							



**VOLUME**

NW 88th St E/O NW 107th Ave

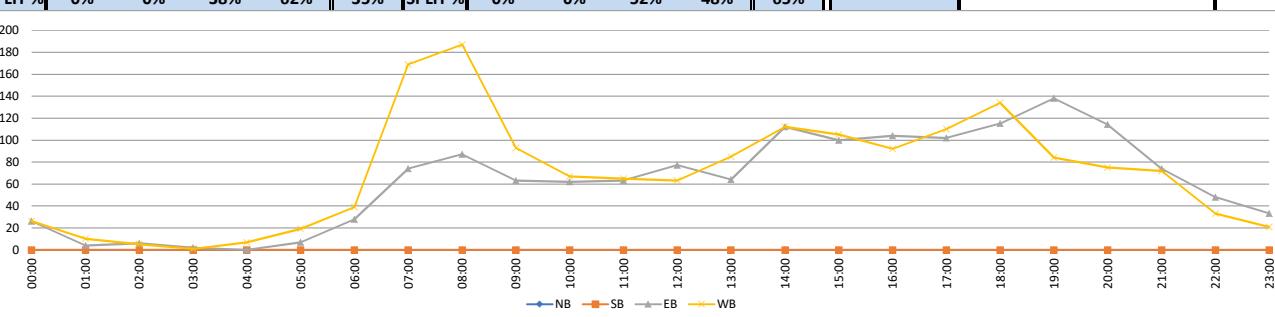
Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_003

DAILY TOTALS					NB 0	SB 0	EB 1,503	WB 1,674	Total 3,177	DAILY TOTALS								
15-Minutes Interval										Hourly Intervals								
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	
00:00			8	6	14	12:00			21	12	33	00:00	01:00		26	26	52	
00:15			9	9	18	12:15			21	19	40	01:00	02:00		4	10	14	
00:30			3	8	11	12:30			24	15	39	02:00	03:00		6	5	11	
00:45			6	3	9	12:45			11	17	28	03:00	04:00		2	1	3	
01:00			1	6	7	13:00			14	18	32	04:00	05:00		0	7	7	
01:15			2	0	2	13:15			17	20	37	05:00	06:00		7	19	26	
01:30			0	2	2	13:30			14	20	34	06:00	07:00		28	39	67	
01:45			1	2	3	13:45			19	27	46	07:00	08:00		74	169	243	
02:00			2	4	6	14:00			34	28	62	08:00	09:00		87	187	274	
02:15			2	1	3	14:15			22	32	54	09:00	10:00		63	93	156	
02:30			2	0	2	14:30			32	29	61	10:00	11:00		62	67	129	
02:45			0	0	0	14:45			24	23	47	11:00	12:00		63	65	128	
03:00			2	1	3	15:00			23	30	53	12:00	13:00		77	63	140	
03:15			0	0	0	15:15			25	28	53	13:00	14:00		64	85	149	
03:30			0	0	0	15:30			21	24	45	14:00	15:00		112	112	224	
03:45			0	0	0	15:45			31	23	54	15:00	16:00		100	105	205	
04:00			0	0	0	16:00			33	21	54	16:00	17:00		104	92	196	
04:15			0	4	4	16:15			26	23	49	17:00	18:00		102	110	212	
04:30			0	2	2	16:30			28	27	55	18:00	19:00		115	134	249	
04:45			0	1	1	16:45			17	21	38	19:00	20:00		138	84	222	
05:00			0	1	1	17:00			23	29	52	20:00	21:00		114	75	189	
05:15			3	5	8	17:15			29	27	56	21:00	22:00		74	72	146	
05:30			4	5	9	17:30			21	29	50	22:00	23:00		48	33	81	
05:45			0	8	8	17:45			29	25	54	23:00	00:00		33	21	54	
06:00			9	3	12	18:00			21	32	53	STATISTICS						
06:15			5	6	11	18:15			31	40	71	NB	SB	EB	WB	TOTAL		
06:30			5	9	14	18:30			32	33	65	Peak Period	00:00	to	12:00			
06:45			9	21	30	18:45			31	29	60	Volume				422	688	1110
07:00			18	52	70	19:00			40	19	59	Peak Hour				8:15	7:45	7:45
07:15			34	35	69	19:15			48	26	74	Peak Volume				94	197	274
07:30			13	44	57	19:30			18	16	34	Peak Hour Factor				0.870	0.895	0.835
07:45			9	38	47	19:45			32	23	55	Peak Period	12:00	to	00:00			
08:00			17	50	67	20:00			36	16	52	Volume				1081	986	2067
08:15			27	55	82	20:15			35	25	60	Peak Hour				18:30	18:00	18:30
08:30			24	54	78	20:30			21	14	35	Peak Volume				151	134	258
08:45			19	28	47	20:45			22	20	42	Peak Hour Factor				0.786	0.838	0.872
09:00			24	24	48	21:00			20	26	46	Peak Period	07:00	to	09:00			
09:15			12	27	39	21:15			24	18	42	Volume				161	356	517
09:30			13	25	38	21:30			22	15	37	Peak Hour				8:00	7:45	7:45
09:45			14	17	31	21:45			8	13	21	Peak Volume				87	197	274
10:00			16	11	27	22:00			13	16	29	Peak Hour Factor				0.806	0.895	0.835
10:15			12	20	32	22:15			13	4	17	Peak Period	16:00	to	18:00			
10:30			19	15	34	22:30			9	5	14	Volume				206	202	408
10:45			15	21	36	22:45			13	8	21	Peak Hour				16:00	17:00	17:00
11:00			19	14	33	23:00			13	4	17	Peak Volume				104	110	212
11:15			11	16	27	23:15			6	4	10	Peak Hour Factor				0.788	0.948	0.946
11:30			17	21	38	23:30			6	5	11							
11:45			16	14	30	23:45			8	8	16							
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>422</b>	<b>688</b>	<b>1110</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1081</b>	<b>986</b>	<b>2067</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>38%</b>	<b>62%</b>	<b>35%</b>	
<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>38%</b>	<b>62%</b>	<b>35%</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>52%</b>	<b>48%</b>	<b>65%</b>							



**VOLUME**

NW 88th St E/O NW 107th Ave

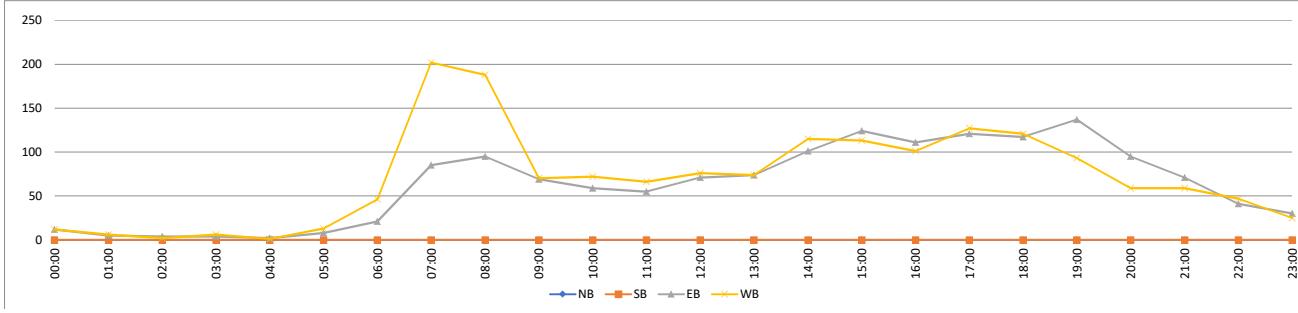
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_003

DAILY TOTALS					NB 0	SB 0	EB 1,512	WB 1,694	Total 3,206	DAILY TOTALS							
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			2	6	8	12:00			16	16	32	00:00	01:00		12	12	24
00:15			5	5	10	12:15			23	31	54	01:00	02:00		5	6	11
00:30			4	0	4	12:30			16	12	28	02:00	03:00		4	2	6
00:45			1	1	2	12:45			16	17	33	03:00	04:00		4	6	10
01:00			2	4	6	13:00			26	20	46	04:00	05:00		2	1	3
01:15			2	0	2	13:15			13	19	32	05:00	06:00		8	13	21
01:30			0	2	2	13:30			20	20	40	06:00	07:00		21	46	67
01:45			1	0	1	13:45			15	15	30	07:00	08:00		85	202	287
02:00			0	0	0	14:00			17	32	49	08:00	09:00		95	188	283
02:15			1	1	2	14:15			23	35	58	09:00	10:00		69	70	139
02:30			1	1	2	14:30			37	18	55	10:00	11:00		59	72	131
02:45			2	0	2	14:45			24	30	54	11:00	12:00		55	66	121
03:00			1	4	5	15:00			36	36	72	12:00	13:00		71	76	147
03:15			1	1	2	15:15			39	31	70	13:00	14:00		74	74	148
03:30			1	1	2	15:30			25	21	46	14:00	15:00		101	115	216
03:45			1	0	1	15:45			24	25	49	15:00	16:00		124	113	237
04:00			1	0	1	16:00			23	16	39	16:00	17:00		111	101	212
04:15			1	0	1	16:15			29	25	54	17:00	18:00		121	127	248
04:30			0	0	0	16:30			29	31	60	18:00	19:00		117	121	238
04:45			0	1	1	16:45			30	29	59	19:00	20:00		137	93	230
05:00			1	0	1	17:00			38	28	66	20:00	21:00		95	59	154
05:15			0	4	4	17:15			28	23	51	21:00	22:00		71	59	130
05:30			0	4	4	17:30			26	43	69	22:00	23:00		41	47	88
05:45			7	5	12	17:45			29	33	62	23:00	00:00		30	25	55
06:00			4	3	7	18:00			39	35	74	STATISTICS					
06:15			2	5	7	18:15			35	36	71	NB SB EB WB TOTAL					
06:30			3	7	10	18:30			18	21	39	Peak Period	00:00 to 12:00		419	684	1103
06:45			12	31	43	18:45			25	29	54	Volume			7:45	7:30	7:45
07:00			24	55	79	19:00			27	26	53	Peak Hour			95	229	317
07:15			34	39	73	19:15			46	27	73	Peak Volume			0.819	0.881	0.871
07:30			13	52	65	19:30			42	15	57	Peak Hour Factor					
07:45			14	56	70	19:45			22	25	47	Peak Period					
08:00			26	65	91	20:00			26	14	40	Peak Period	12:00 to 00:00		1093	1010	2103
08:15			26	56	82	20:15			28	14	42	Volume			18:45	17:30	17:30
08:30			29	45	74	20:30			23	13	36	Peak Hour			140	147	276
08:45			14	22	36	20:45			18	18	36	Peak Volume			0.761	0.855	0.932
09:00			16	18	34	21:00			18	15	33	Peak Hour Factor					
09:15			23	14	37	21:15			19	12	31	Peak Period					
09:30			14	17	31	21:30			12	18	30	Peak Period	07:00 to 09:00		180	390	570
09:45			16	21	37	21:45			22	14	36	Volume			7:45	7:30	7:45
10:00			12	21	33	22:00			15	12	27	Peak Hour			95	229	317
10:15			11	14	25	22:15			11	17	28	Peak Volume			0.819	0.881	0.871
10:30			22	22	44	22:30			8	10	18	Peak Hour Factor					
10:45			14	15	29	22:45			7	8	15	Peak Period					
11:00			16	14	30	23:00			8	7	15	Peak Period	16:00 to 18:00		232	228	460
11:15			15	16	31	23:15			8	7	15	Volume			16:15	17:00	17:00
11:30			12	19	31	23:30			8	5	13	Peak Hour			126	127	248
11:45			12	17	29	23:45			6	6	12	Peak Volume			0.829	0.738	0.899
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>419</b>	<b>684</b>	<b>1103</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1093</b>	<b>1010</b>	<b>2103</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>38%</b>	<b>62%</b>	<b>34%</b>
<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>38%</b>	<b>62%</b>	<b>34%</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>52%</b>	<b>48%</b>	<b>66%</b>						



**VOLUME****NW 107th Ave Bet. NW 86th St & NW 88th St**

Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_004

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					7,195	6,958	0	0	14,153								
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	12	23			35	12:00	76	124			200	00:00	01:00	51	56		107
00:15	12	9			21	12:15	81	117			198	01:00	02:00	21	21		42
00:30	13	10			23	12:30	105	125			230	02:00	03:00	27	11		38
00:45	14	14			28	12:45	100	101			201	03:00	04:00	26	12		38
01:00	11	5			16	13:00	72	95			167	04:00	05:00	63	32		95
01:15	6	6			12	13:15	98	85			183	05:00	06:00	161	77		238
01:30	2	4			6	13:30	84	101			185	06:00	07:00	273	236		509
01:45	2	6			8	13:45	98	72			170	07:00	08:00	495	554		1049
02:00	2	5			7	14:00	117	88			205	08:00	09:00	545	593		1138
02:15	8	4			12	14:15	88	106			194	09:00	10:00	337	398		735
02:30	6	0			6	14:30	127	150			277	10:00	11:00	257	268		525
02:45	11	2			13	14:45	94	108			202	11:00	12:00	313	306		619
03:00	4	2			6	15:00	96	114			210	12:00	13:00	362	467		829
03:15	7	2			9	15:15	92	114			206	13:00	14:00	352	353		705
03:30	6	5			11	15:30	105	123			228	14:00	15:00	426	452		878
03:45	9	3			12	15:45	112	89			201	15:00	16:00	405	440		845
04:00	7	5			12	16:00	102	107			209	16:00	17:00	507	443		950
04:15	15	4			19	16:15	126	91			217	17:00	18:00	660	511		1171
04:30	18	12			30	16:30	133	136			269	18:00	19:00	568	474		1042
04:45	23	11			34	16:45	146	109			255	19:00	20:00	358	347		705
05:00	31	12			43	17:00	150	143			293	20:00	21:00	307	273		580
05:15	20	18			38	17:15	170	128			298	21:00	22:00	308	298		606
05:30	55	18			73	17:30	181	122			303	22:00	23:00	228	227		455
05:45	55	29			84	17:45	159	118			277	23:00	00:00	145	109		254
06:00	47	26			73	18:00	167	135			302	STATISTICS					
06:15	55	49			104	18:15	146	123			269	Peak Period	00:00	to	12:00		
06:30	83	63			146	18:30	132	111			243	Volume	2569	2564		5133	
06:45	88	98			186	18:45	123	105			228	Peak Hour	7:45	7:45		7:45	
07:00	119	132			251	19:00	115	105			220	Peak Volume	575	594		1169	
07:15	120	177			297	19:15	84	104			188	Peak Hour Factor	0.910	0.874		0.958	
07:30	117	122			239	19:30	79	77			156	Peak Period					
07:45	139	123			262	19:45	80	61			141	Volume	12:00	to	00:00		
08:00	133	170			303	20:00	67	72			139	Peak Hour	17:15	16:30		17:15	
08:15	145	154			299	20:15	77	66			143	Peak Volume	677	516		1180	
08:30	158	147			305	20:30	81	72			153	Peak Hour Factor	0.935	0.902		0.974	
08:45	109	122			231	20:45	82	63			145	Peak Period					
09:00	93	113			206	21:00	76	88			164	Volume	07:00	to	09:00		
09:15	75	117			192	21:15	75	72			147	Peak Hour	7:45	7:45		7:45	
09:30	84	93			177	21:30	73	74			147	Peak Volume	575	594		1169	
09:45	85	75			160	21:45	84	64			148	Peak Hour Factor	0.910	0.874		0.958	
10:00	69	83			152	22:00	69	70			139	Peak Period					
10:15	65	67			132	22:15	57	76			133	Volume	16:00	to	18:00		
10:30	54	59			113	22:30	47	48			95	Peak Hour	17:00	16:30		17:00	
10:45	69	59			128	22:45	55	33			88	Peak Volume	660	516		1171	
11:00	78	83			161	23:00	40	41			81	Peak Hour Factor	0.912	0.902		0.966	
11:15	70	65			135	23:15	40	25			65						
11:30	95	69			164	23:30	32	24			56						
11:45	70	89			159	23:45	33	19			52						
<b>TOTALS</b>	<b>2569</b>	<b>2564</b>	<b>0</b>	<b>0</b>	<b>5133</b>	<b>TOTALS</b>	<b>4626</b>	<b>4394</b>	<b>0</b>	<b>0</b>	<b>9020</b>						
SPLIT %	50%	50%	0%	0%	36%	SPLIT %	51%	49%	0%	0%	64%						



**VOLUME****NW 107th Ave Bet. NW 86th St & NW 88th St**

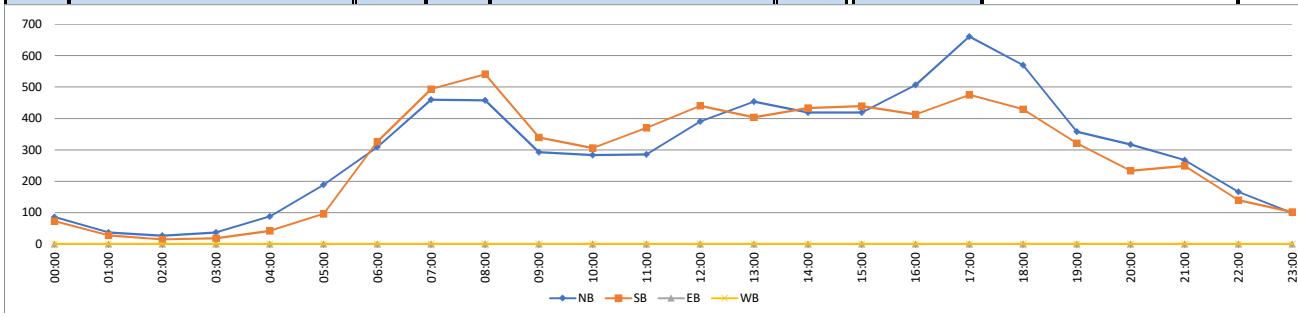
Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_004

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					7,172	6,720	0	0	13,892								
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	30	26			56	12:00	100	107			207	00:00	85	72			157
00:15	23	13			36	12:15	109	120			229	01:00	36	27			63
00:30	11	17			28	12:30	84	113			197	02:00	26	14			40
00:45	21	16			37	12:45	97	100			197	03:00	36	18			54
01:00	9	7			16	13:00	117	90			207	04:00	87	41			128
01:15	12	11			23	13:15	99	92			191	05:00	188	96			284
01:30	10	5			15	13:30	124	95			219	06:00	309	326			635
01:45	5	4			9	13:45	114	127			241	07:00	460	493			953
02:00	5	5			10	14:00	103	115			218	08:00	458	541			999
02:15	7	8			15	14:15	121	120			241	09:00	292	339			631
02:30	7	0			7	14:30	94	96			190	10:00	283	306			589
02:45	7	1			8	14:45	101	102			203	11:00	285	370			655
03:00	7	8			15	15:00	94	101			195	12:00	390	440			830
03:15	7	2			9	15:15	92	136			228	13:00	454	404			858
03:30	12	2			14	15:30	121	121			242	14:00	419	433			852
03:45	10	6			16	15:45	112	81			193	15:00	419	439			858
04:00	14	10			24	16:00	102	101			203	16:00	507	413			920
04:15	18	10			28	16:15	126	83			209	17:00	661	475			1136
04:30	36	6			42	16:30	133	130			263	18:00	570	429			999
04:45	19	15			34	16:45	146	99			245	19:00	358	321			679
05:00	39	14			53	17:00	150	132			282	20:00	317	233			550
05:15	56	25			81	17:15	170	122			292	21:00	267	249			516
05:30	43	22			65	17:30	182	114			296	22:00	166	139			305
05:45	50	35			85	17:45	159	107			266	23:00	99	102			201
06:00	62	48			110	18:00	167	117			284	STATISTICS					
06:15	58	65			123	18:15	146	109			255	Peak Period	00:00	to	12:00		
06:30	91	95			186	18:30	133	107			240	Volume	2545	2643			5188
06:45	98	118			216	18:45	124	96			220	Peak Hour	7:15	7:45			7:30
07:00	118	109			227	19:00	115	95			210	Peak Volume	506	592			1082
07:15	122	125			247	19:15	84	95			179	Peak Hour Factor	0.771	0.851			0.843
07:30	123	101			224	19:30	79	74			153	Peak Period					
07:45	97	158			255	19:45	80	57			137	Peak Period	12:00	to	00:00		
08:00	164	157			321	20:00	77	67			144	Volume	4627	4077			8704
08:15	108	174			282	20:15	97	62			159	Peak Hour	17:15	16:30			17:15
08:30	106	103			209	20:30	80	50			130	Peak Volume	678	483			1138
08:45	80	107			187	20:45	63	54			117	Peak Hour Factor	0.931	0.915			0.961
09:00	75	95			170	21:00	73	71			144	Peak Period					
09:15	68	86			154	21:15	79	70			149	Peak Period	07:00	to	09:00		
09:30	70	76			146	21:30	59	61			120	Volume	918	1034			1952
09:45	79	82			161	21:45	56	47			103	Peak Hour	7:15	7:45			7:30
10:00	61	88			149	22:00	47	43			90	Peak Volume	506	592			1082
10:15	80	78			158	22:15	50	33			83	Peak Hour Factor	0.771	0.851			0.843
10:30	72	84			156	22:30	34	33			67	Peak Period					
10:45	70	56			126	22:45	35	30			65	Peak Period	16:00	to	18:00		
11:00	57	89			146	23:00	22	34			56	Volume	1168	888			2056
11:15	71	87			158	23:15	33	27			60	Peak Hour	17:00	16:30			17:00
11:30	64	76			140	23:30	24	23			47	Peak Volume	661	483			1136
11:45	93	118			211	23:45	20	18			38	Peak Hour Factor	0.908	0.915			0.959
<b>TOTALS</b>	<b>2545</b>	<b>2643</b>	<b>0</b>	<b>0</b>	<b>5188</b>	<b>TOTALS</b>	<b>4627</b>	<b>4077</b>	<b>0</b>	<b>0</b>	<b>8704</b>	<b>SPLIT %</b>	<b>49%</b>	<b>51%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>
<b>SPLIT %</b>	<b>49%</b>	<b>51%</b>	<b>0%</b>	<b>0%</b>	<b>37%</b>	<b>SPLIT %</b>	<b>53%</b>	<b>47%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>						



**VOLUME****NW 107th Ave Bet. NW 86th St & NW 88th St**

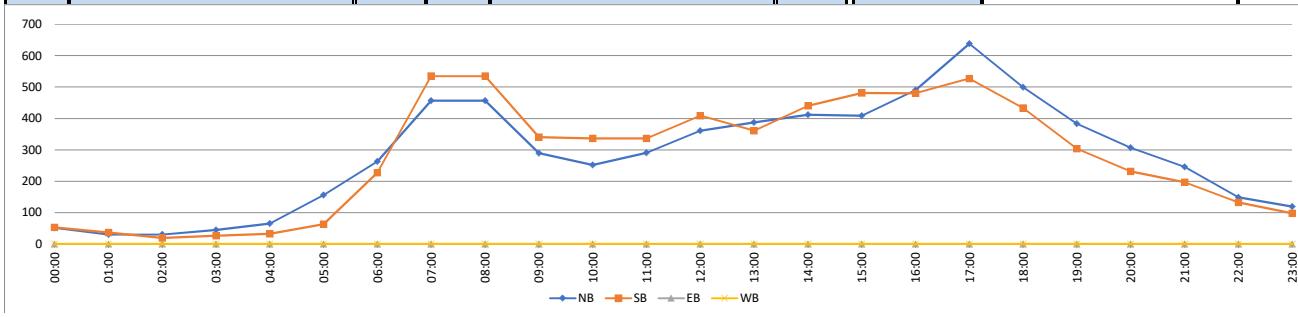
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_004

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					6,784	6,631	0	0	13,415								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	13	14			27	12:00	76	114			190	00:00	01:00	52	53		105
00:15	19	13			32	12:15	91	96			187	01:00	02:00	30	36		66
00:30	14	9			23	12:30	95	90			185	02:00	03:00	30	19		49
00:45	6	17			23	12:45	99	109			208	03:00	04:00	44	26		70
01:00	13	11			24	13:00	107	103			210	04:00	05:00	65	32		97
01:15	5	17			22	13:15	94	79			173	05:00	06:00	156	63		219
01:30	5	4			9	13:30	82	98			180	06:00	07:00	263	227		490
01:45	7	4			11	13:45	104	81			185	07:00	08:00	457	535		992
02:00	10	6			16	14:00	97	93			190	08:00	09:00	457	535		992
02:15	4	5			9	14:15	116	108			224	09:00	10:00	289	340		629
02:30	6	3			9	14:30	90	126			216	10:00	11:00	252	336		588
02:45	10	5			15	14:45	109	113			222	11:00	12:00	290	336		626
03:00	12	5			17	15:00	122	117			239	12:00	13:00	361	409		770
03:15	12	6			18	15:15	77	137			214	13:00	14:00	387	361		748
03:30	8	12			20	15:30	104	115			219	14:00	15:00	412	440		852
03:45	12	3			15	15:45	106	112			218	15:00	16:00	409	481		890
04:00	7	8			15	16:00	111	101			212	16:00	17:00	490	480		970
04:15	12	6			18	16:15	126	115			241	17:00	18:00	638	527		1165
04:30	19	7			26	16:30	113	125			238	18:00	19:00	499	433		932
04:45	27	11			38	16:45	140	139			279	19:00	20:00	383	304		687
05:00	25	11			36	17:00	155	122			277	20:00	21:00	307	231		538
05:15	30	12			42	17:15	174	124			298	21:00	22:00	245	197		442
05:30	43	13			56	17:30	143	150			293	22:00	23:00	149	132		281
05:45	58	27			85	17:45	166	131			297	23:00	00:00	119	98		217
06:00	41	25			66	18:00	148	123			271	STATISTICS					
06:15	57	41			98	18:15	139	130			269	NB	SB	EB	WB	TOTAL	
06:30	72	50			122	18:30	115	97			212	Peak Period	00:00	to	12:00		
06:45	93	111			204	18:45	97	83			180	Volume	2385	2538			4923
07:00	117	153			270	19:00	87	85			172	Peak Hour	7:15	7:30			7:30
07:15	120	127			247	19:15	120	70			190	Peak Volume	507	584			1076
07:30	122	100			222	19:30	97	57			154	Peak Hour Factor	0.759	0.854			0.828
07:45	98	155			253	19:45	79	92			171	Peak Period	12:00	to	00:00		
08:00	167	158			325	20:00	73	66			139	Volume	4399	4093			8492
08:15	105	171			276	20:15	93	61			154	Peak Hour	17:00	16:45			17:00
08:30	108	100			208	20:30	79	56			135	Peak Volume	638	535			1165
08:45	77	106			183	20:45	62	48			110	Peak Hour Factor	0.917	0.892			0.977
09:00	78	92			170	21:00	66	55			121	Peak Period	07:00	to	09:00		
09:15	67	88			155	21:15	67	44			111	Volume	914	1070			1984
09:30	68	79			147	21:30	60	48			108	Peak Hour	7:15	7:30			7:30
09:45	76	81			157	21:45	52	50			102	Peak Volume	507	584			1076
10:00	69	90			159	22:00	45	34			79	Peak Hour Factor	0.759	0.854			0.828
10:15	61	85			146	22:15	34	51			85	Peak Period	16:00	to	18:00		
10:30	61	77			138	22:30	39	16			55	Volume	1128	1007			2135
10:45	61	84			145	22:45	31	31			62	Peak Hour	17:00	16:45			17:00
11:00	55	70			125	23:00	37	26			63	Peak Volume	638	535			1165
11:15	73	81			154	23:15	39	31			70	Peak Hour Factor	0.917	0.892			0.977
11:30	83	93			176	23:30	20	22			42						
11:45	79	92			171	23:45	23	19			42						
<b>TOTALS</b>	<b>2385</b>	<b>2538</b>	<b>0</b>	<b>0</b>	<b>4923</b>	<b>TOTALS</b>	<b>4399</b>	<b>4093</b>	<b>0</b>	<b>0</b>	<b>8492</b>						
<b>SPLIT %</b>	<b>48%</b>	<b>52%</b>	<b>0%</b>	<b>0%</b>	<b>37%</b>	<b>SPLIT %</b>	<b>52%</b>	<b>48%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>						



**VOLUME**

NW 86th St W/O NW 107th Ave

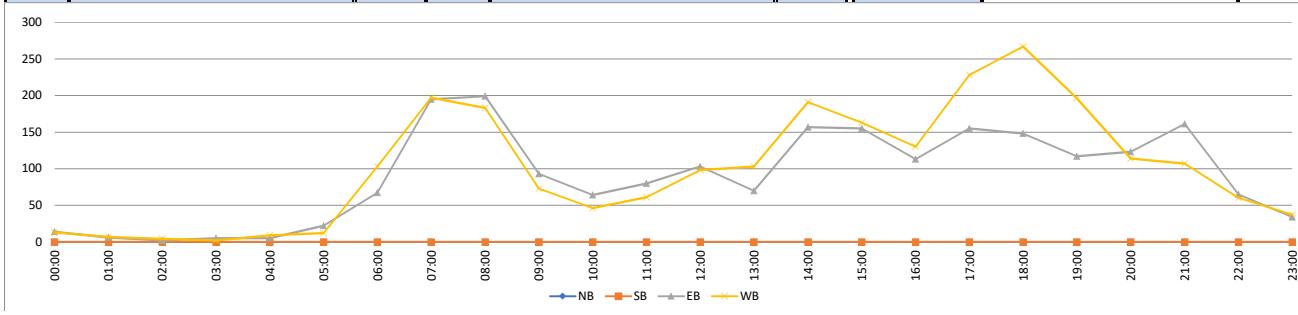
Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_005

DAILY TOTALS					NB 0	SB 0	EB 2,153	WB 2,404	Total 4,557	DAILY TOTALS							
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			4	3	7	12:00			29	23	52	00:00	01:00		14	13	27
00:15			0	3	3	12:15			16	32	48	01:00	02:00		6	7	13
00:30			2	3	5	12:30			35	29	64	02:00	03:00		2	4	6
00:45			8	4	12	12:45			23	14	37	03:00	04:00		5	2	7
01:00			1	4	5	13:00			11	19	30	04:00	05:00		5	9	14
01:15			1	1	2	13:15			16	21	37	05:00	06:00		22	12	34
01:30			3	2	5	13:30			17	33	50	06:00	07:00		67	103	170
01:45			1	0	1	13:45			26	30	56	07:00	08:00		195	197	392
02:00			1	3	4	14:00			21	46	67	08:00	09:00		199	183	382
02:15			1	0	1	14:15			33	45	78	09:00	10:00		93	73	166
02:30			0	0	0	14:30			75	55	130	10:00	11:00		64	46	110
02:45			0	1	1	14:45			28	45	73	11:00	12:00		80	61	141
03:00			0	1	1	15:00			39	63	102	12:00	13:00		103	98	201
03:15			0	1	1	15:15			57	35	92	13:00	14:00		70	103	173
03:30			3	0	3	15:30			32	29	61	14:00	15:00		157	191	348
03:45			2	0	2	15:45			27	36	63	15:00	16:00		155	163	318
04:00			0	1	1	16:00			23	29	52	16:00	17:00		113	130	243
04:15			0	1	1	16:15			25	30	55	17:00	18:00		155	228	383
04:30			2	2	4	16:30			32	36	68	18:00	19:00		148	267	415
04:45			3	5	8	16:45			33	35	68	19:00	20:00		117	196	313
05:00			5	2	7	17:00			29	42	71	20:00	21:00		123	114	237
05:15			3	4	7	17:15			32	54	86	21:00	22:00		161	107	268
05:30			8	2	10	17:30			36	59	95	22:00	23:00		65	60	125
05:45			6	4	10	17:45			58	73	131	23:00	00:00		34	37	71
06:00			6	10	16	18:00			36	69	105	STATISTICS					
06:15			8	16	24	18:15			35	76	111	NB	SB	EB	WB	TOTAL	
06:30			19	17	36	18:30			50	61	111	Peak Period	00:00	to	12:00		
06:45			34	60	94	18:45			27	61	88	Volume			752	710	1462
07:00			62	94	156	19:00			32	57	89	Peak Hour			8:00	6:45	6:45
07:15			55	54	109	19:15			30	55	85	Peak Volume			199	227	424
07:30			46	19	65	19:30			28	38	66	Peak Hour Factor			0.843	0.604	0.679
07:45			32	30	62	19:45			27	46	73	Peak Period	12:00	to	00:00		
08:00			55	69	124	20:00			26	30	56	Volume			1401	1694	3095
08:15			59	55	114	20:15			31	20	51	Peak Hour			14:30	17:45	17:45
08:30			47	31	78	20:30			31	31	62	Peak Volume			199	279	458
08:45			38	28	66	20:45			35	33	68	Peak Hour Factor			0.663	0.918	0.874
09:00			33	19	52	21:00			44	34	78	Peak Period	07:00	to	09:00		
09:15			24	19	43	21:15			67	17	84	Volume			394	380	774
09:30			26	22	48	21:30			28	23	51	Peak Hour			8:00	7:00	7:00
09:45			10	13	23	21:45			22	33	55	Peak Volume			199	197	392
10:00			22	12	34	22:00			19	18	37	Peak Hour Factor			0.843	0.524	0.628
10:15			12	7	19	22:15			17	15	32	Peak Period	16:00	to	18:00		
10:30			17	11	28	22:30			16	15	31	Volume			268	358	626
10:45			13	16	29	22:45			13	12	25	Peak Hour			17:00	17:00	17:00
11:00			26	12	38	23:00			12	6	18	Peak Volume			155	228	383
11:15			13	16	29	23:15			7	6	13	Peak Hour Factor			0.668	0.781	0.731
11:30			21	18	39	23:30			4	16	20						
11:45			20	15	35	23:45			11	9	20						
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>752</b>	<b>710</b>	<b>1462</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1401</b>	<b>1694</b>	<b>3095</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>51%</b>	<b>49%</b>	<b>32%</b>
<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>51%</b>	<b>49%</b>	<b>32%</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>45%</b>	<b>55%</b>	<b>68%</b>						



**VOLUME**

NW 86th St W/O NW 107th Ave

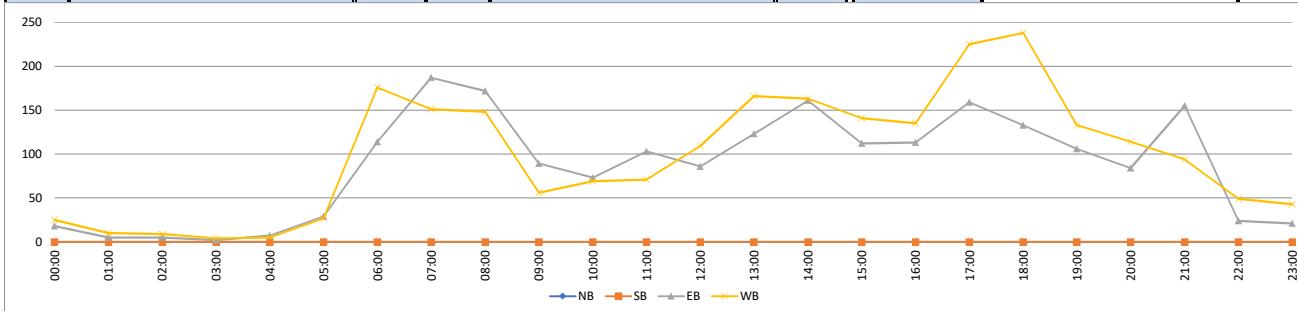
Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_005

DAILY TOTALS					NB 0	SB 0	EB 2,081	WB 2,361	Total 4,442	DAILY TOTALS							
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			6	6	12	12:00			19	28	47	00:00	01:00		18	25	43
00:15			1	8	9	12:15			20	22	42	01:00	02:00		5	10	15
00:30			5	5	10	12:30			26	32	58	02:00	03:00		5	9	14
00:45			6	6	12	12:45			21	27	48	03:00	04:00		2	4	6
01:00			1	2	3	13:00			23	30	53	04:00	05:00		7	5	12
01:15			1	3	4	13:15			20	37	57	05:00	06:00		29	27	56
01:30			0	4	4	13:30			27	49	76	06:00	07:00		114	176	290
01:45			3	1	4	13:45			53	50	103	07:00	08:00		187	151	338
02:00			1	3	4	14:00			48	55	103	08:00	09:00		172	148	320
02:15			1	4	5	14:15			56	57	113	09:00	10:00		89	56	145
02:30			1	1	2	14:30			28	18	46	10:00	11:00		73	69	142
02:45			2	1	3	14:45			29	33	62	11:00	12:00		103	71	174
03:00			1	1	2	15:00			34	43	77	12:00	13:00		86	109	195
03:15			1	0	1	15:15			28	43	71	13:00	14:00		123	166	289
03:30			0	2	2	15:30			23	30	53	14:00	15:00		161	163	324
03:45			0	1	1	15:45			27	25	52	15:00	16:00		112	141	253
04:00			0	0	0	16:00			31	38	69	16:00	17:00		113	135	248
04:15			1	2	3	16:15			25	35	60	17:00	18:00		159	225	384
04:30			1	1	2	16:30			35	35	70	18:00	19:00		133	238	371
04:45			5	2	7	16:45			22	27	49	19:00	20:00		106	133	239
05:00			10	11	21	17:00			26	39	65	20:00	21:00		84	114	198
05:15			8	7	15	17:15			39	49	88	21:00	22:00		155	94	249
05:30			5	4	9	17:30			42	58	100	22:00	23:00		24	49	73
05:45			6	5	11	17:45			52	79	131	23:00	00:00		21	43	64
06:00			8	18	26	18:00			34	73	107	STATISTICS					
06:15			13	14	27	18:15			34	70	104	NB	SB	EB	WB	TOTAL	
06:30			31	52	83	18:30			34	46	80	Peak Period	00:00 to 12:00				
06:45			62	92	154	18:45			31	49	80	Volume			804	751	1555
07:00			57	51	108	19:00			23	42	65	Peak Hour			7:30	6:30	6:30
07:15			35	23	58	19:15			34	33	67	Peak Volume			215	218	403
07:30			35	20	55	19:30			27	34	61	Peak Hour Factor			0.814	0.592	0.654
07:45			60	57	117	19:45			22	24	46	Peak Period	12:00 to 00:00				
08:00			54	62	116	20:00			23	33	56	Volume			1277	1610	2887
08:15			66	42	108	20:15			19	28	47	Peak Hour			13:45	17:30	17:30
08:30			29	18	47	20:30			22	25	47	Peak Volume			185	280	442
08:45			23	26	49	20:45			20	28	48	Peak Hour Factor			0.826	0.886	0.844
09:00			37	17	54	21:00			42	34	76	Peak Period	07:00 to 09:00				
09:15			20	12	32	21:15			81	19	100	Volume			359	299	658
09:30			14	10	24	21:30			15	25	40	Peak Hour			7:30	7:30	7:30
09:45			18	17	35	21:45			17	16	33	Peak Volume			215	181	396
10:00			13	14	27	22:00			3	16	19	Peak Hour Factor			0.814	0.730	0.846
10:15			20	15	35	22:15			7	14	21	Peak Period	16:00 to 18:00				
10:30			18	17	35	22:30			10	12	22	Volume			272	360	632
10:45			22	23	45	22:45			4	7	11	Peak Hour			17:00	17:00	17:00
11:00			18	15	33	23:00			6	15	21	Peak Volume			159	225	384
11:15			29	19	48	23:15			5	9	14	Peak Hour Factor			0.764	0.712	0.733
11:30			23	19	42	23:30			6	11	17						
11:45			33	18	51	23:45			4	8	12						
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>804</b>	<b>751</b>	<b>1555</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1277</b>	<b>1610</b>	<b>2887</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>52%</b>	<b>48%</b>	<b>35%</b>
<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>52%</b>	<b>48%</b>	<b>35%</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>44%</b>	<b>56%</b>	<b>65%</b>						



**VOLUME**

NW 86th St W/O NW 107th Ave

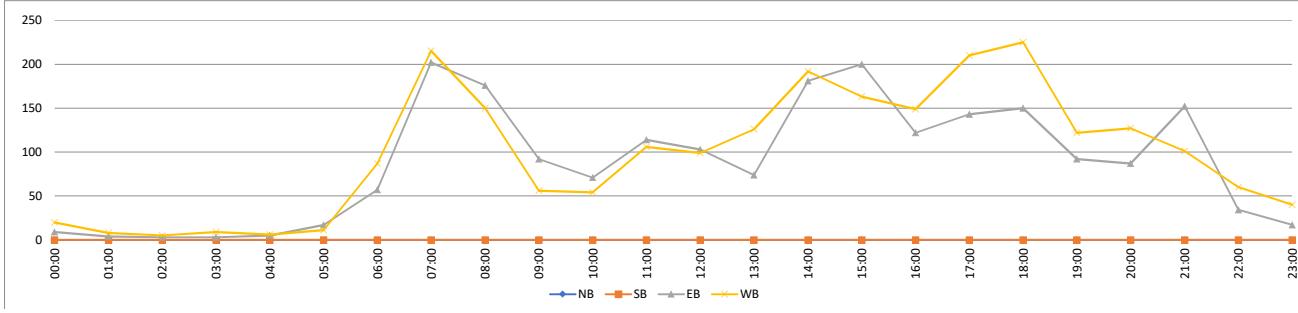
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_005

DAILY TOTALS					NB 0	SB 0	EB 2,108	WB 2,341	Total 4,449	DAILY TOTALS							
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			4	10	14	12:00			27	24	51	00:00	01:00		9	20	29
00:15			4	1	5	12:15			27	19	46	01:00	02:00		4	8	12
00:30			0	4	4	12:30			25	24	49	02:00	03:00		3	5	8
00:45			1	5	6	12:45			24	32	56	03:00	04:00		3	9	12
01:00			1	3	4	13:00			25	22	47	04:00	05:00		5	6	11
01:15			3	2	5	13:15			14	32	46	05:00	06:00		17	11	28
01:30			0	1	1	13:30			16	37	53	06:00	07:00		57	87	144
01:45			0	2	2	13:45			19	35	54	07:00	08:00		202	215	417
02:00			0	2	2	14:00			25	39	64	08:00	09:00		176	150	326
02:15			2	2	4	14:15			51	53	104	09:00	10:00		92	56	148
02:30			1	1	2	14:30			52	48	100	10:00	11:00		71	54	125
02:45			0	0	0	14:45			53	52	105	11:00	12:00		114	106	220
03:00			0	5	5	15:00			77	58	135	12:00	13:00		103	99	202
03:15			0	1	1	15:15			63	32	95	13:00	14:00		74	126	200
03:30			0	2	2	15:30			32	38	70	14:00	15:00		181	192	373
03:45			3	1	4	15:45			28	35	63	15:00	16:00		200	163	363
04:00			1	2	3	16:00			31	36	67	16:00	17:00		122	149	271
04:15			0	2	2	16:15			38	37	75	17:00	18:00		143	210	353
04:30			3	1	4	16:30			21	39	60	18:00	19:00		150	225	375
04:45			1	1	2	16:45			32	37	69	19:00	20:00		92	122	214
05:00			5	1	6	17:00			31	27	58	20:00	21:00		87	127	214
05:15			2	2	4	17:15			22	53	75	21:00	22:00		152	101	253
05:30			4	3	7	17:30			37	68	105	22:00	23:00		34	60	94
05:45			6	5	11	17:45			53	62	115	23:00	00:00		17	40	57
06:00			6	5	11	18:00			28	64	92	STATISTICS					
06:15			7	13	20	18:15			45	70	115	NB SB EB WB TOTAL					
06:30			15	14	29	18:30			37	49	86	Peak Period	00:00 to 12:00		753	727	1480
06:45			29	55	84	18:45			40	42	82	Volume			7:30	7:00	7:00
07:00			68	98	166	19:00			21	40	61	Peak Hour			220	215	417
07:15			37	39	76	19:15			26	33	59	Peak Volume			0.809	0.548	0.628
07:30			34	19	53	19:30			21	33	54	Peak Hour Factor					
07:45			63	59	122	19:45			24	16	40	Peak Period	12:00 to 00:00		1355	1614	2969
08:00			55	64	119	20:00			16	33	49	Volume			14:30	17:30	14:15
08:15			68	41	109	20:15			22	39	61	Peak Hour			245	264	444
08:30			32	16	48	20:30			17	25	42	Peak Volume			0.795	0.943	0.822
08:45			21	29	50	20:45			32	30	62	Peak Hour Factor	07:00 to 09:00		378	365	743
09:00			38	15	53	21:00			38	35	73	Volume			7:30	7:00	7:00
09:15			23	13	36	21:15			83	34	117	Peak Hour			220	215	417
09:30			16	11	27	21:30			21	19	40	Peak Volume			0.809	0.548	0.628
09:45			15	17	32	21:45			10	13	23	Peak Hour Factor	16:00 to 18:00		265	359	624
10:00			18	12	30	22:00			8	16	24	Volume			17:00	17:00	17:00
10:15			17	16	33	22:15			8	21	29	Peak Hour			143	210	353
10:30			16	13	29	22:30			9	14	23	Peak Volume			0.675	0.772	0.767
10:45			20	13	33	22:45			9	9	18	Peak Hour Factor					
11:00			18	15	33	23:00			10	8	18						
11:15			23	27	50	23:15			3	14	17						
11:30			20	31	51	23:30			1	12	13						
11:45			53	33	86	23:45			3	6	9						
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>753</b>	<b>727</b>	<b>1480</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1355</b>	<b>1614</b>	<b>2969</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>51%</b>	<b>49%</b>	<b>33%</b>
<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>51%</b>	<b>49%</b>	<b>33%</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>46%</b>	<b>54%</b>	<b>67%</b>						



**VOLUME**

NW 107th Ave S/O NW 86th St

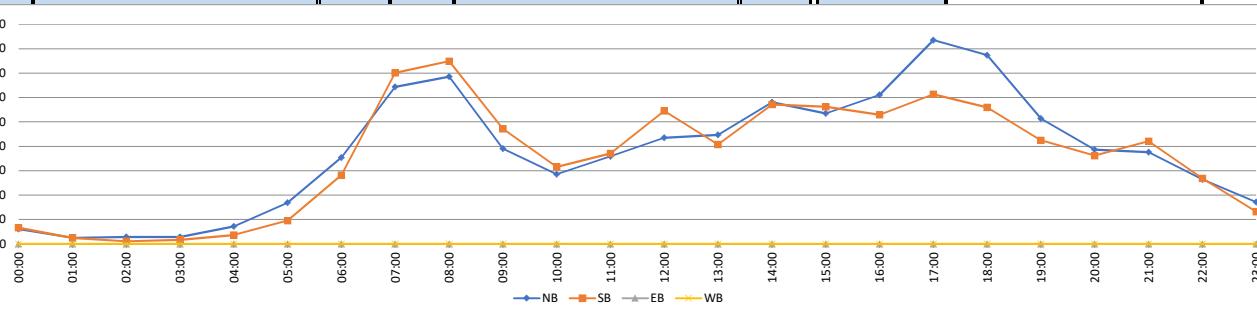
Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_006

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					9,030	8,534	0	0	17,564								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	14	26			40	12:00	94	148			242	00:00	61	67			128
00:15	15	9			24	12:15	104	124			228	01:00	25	24			49
00:30	15	11			26	12:30	127	153			280	02:00	29	11			40
00:45	17	21			38	12:45	110	120			230	03:00	28	17			45
01:00	14	5			19	13:00	96	103			199	04:00	71	36			107
01:15	6	6			12	13:15	115	97			212	05:00	169	95			264
01:30	4	7			11	13:30	113	114			227	06:00	354	281			635
01:45	1	6			7	13:45	123	93			216	07:00	644	701			1345
02:00	4	5			9	14:00	159	105			264	08:00	685	749			1434
02:15	7	4			11	14:15	129	135			264	09:00	391	472			863
02:30	6	0			6	14:30	165	208			373	10:00	286	315			601
02:45	12	2			14	14:45	127	124			251	11:00	359	371			730
03:00	5	2			7	15:00	153	147			300	12:00	435	545			980
03:15	8	2			10	15:15	117	161			278	13:00	447	407			854
03:30	6	8			14	15:30	121	142			263	14:00	580	572			1152
03:45	9	5			14	15:45	144	112			256	15:00	535	562			1097
04:00	8	5			13	16:00	123	122			245	16:00	611	530			1141
04:15	16	4			20	16:15	154	114			268	17:00	835	613			1448
04:30	20	14			34	16:30	162	161			323	18:00	773	560			1333
04:45	27	13			40	16:45	172	133			305	19:00	514	424			938
05:00	33	17			50	17:00	179	159			338	20:00	386	361			747
05:15	23	20			43	17:15	215	151			366	21:00	376	420			796
05:30	56	25			81	17:30	226	144			370	22:00	265	269			534
05:45	57	33			90	17:45	215	159			374	23:00	171	132			303
06:00	56	31			87	18:00	214	149			363	STATISTICS					
06:15	65	51			116	18:15	207	143			350	Peak Period	00:00 to 12:00				
06:30	92	74			166	18:30	182	150			332	Volume	3102	3139			6241
06:45	141	125			266	18:45	170	118			288	Peak Hour	7:45	7:45			7:45
07:00	194	175			369	19:00	157	122			279	Peak Volume	726	753			1479
07:15	155	213			368	19:15	126	121			247	Peak Hour Factor	0.945	0.884			0.917
07:30	129	161			290	19:30	109	97			206	12:00 to 00:00					
07:45	166	152			318	19:45	122	84			206	Peak Period	12:00 to 00:00				
08:00	190	213			403	20:00	90	91			181	Volume	5928	5395			11323
08:15	192	205			397	20:15	86	86			172	Peak Hour	17:15	14:30			17:15
08:30	178	183			361	20:30	105	96			201	Peak Volume	870	640			1473
08:45	125	148			273	20:45	105	88			193	Peak Hour Factor	0.962	0.769			0.985
09:00	109	143			252	21:00	98	120			218	07:00 to 09:00					
09:15	86	133			219	21:15	81	128			209	Peak Period	07:00 to 09:00				
09:30	101	114			215	21:30	90	96			186	Volume	1329	1450			2779
09:45	95	82			177	21:45	107	76			183	Peak Hour	7:45	7:45			7:45
10:00	76	100			176	22:00	79	81			160	Peak Volume	726	753			1479
10:15	68	75			143	22:15	63	84			147	Peak Hour Factor	0.945	0.884			0.917
10:30	62	73			135	22:30	61	63			124	16:00 to 18:00					
10:45	80	67			147	22:45	62	41			103	Peak Period	16:00 to 18:00				
11:00	87	106			193	23:00	41	48			89	Volume	1446	1143			2589
11:15	85	77			162	23:15	43	29			72	Peak Hour	17:00	17:00			17:00
11:30	107	84			191	23:30	45	25			70	Peak Volume	835	613			1448
11:45	80	104			184	23:45	42	30			72	Peak Hour Factor	0.924	0.964			0.968
<b>TOTALS</b>	<b>3102</b>	<b>3139</b>	<b>0</b>	<b>0</b>	<b>6241</b>	<b>TOTALS</b>	<b>5928</b>	<b>5395</b>	<b>0</b>	<b>0</b>	<b>11323</b>	<b>SPLIT %</b>	<b>50%</b>	<b>50%</b>	<b>0%</b>	<b>0%</b>	<b>64%</b>
<b>SPLIT %</b>	<b>50%</b>	<b>50%</b>	<b>0%</b>	<b>0%</b>	<b>36%</b>	<b>SPLIT %</b>	<b>52%</b>	<b>48%</b>	<b>0%</b>	<b>0%</b>	<b>64%</b>						



**VOLUME**

NW 107th Ave S/O NW 86th St

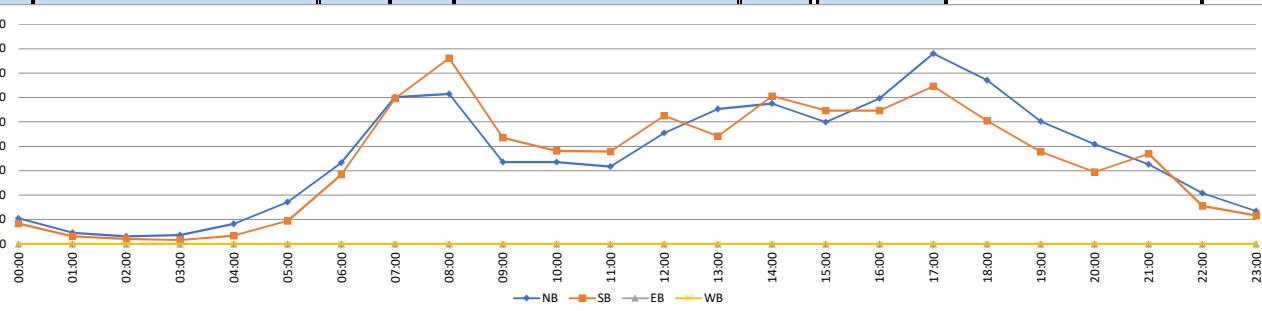
Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_006

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					8,713	8,243	0	0	16,956								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	35	31			66	12:00	105	145			250	00:00	104	84			188
00:15	29	12			41	12:15	120	118			238	01:00	45	31			76
00:30	15	21			36	12:30	128	137			265	02:00	31	21			52
00:45	25	20			45	12:45	102	125			227	03:00	36	16			52
01:00	12	9			21	13:00	115	112			227	04:00	82	34			116
01:15	5	7			12	13:15	143	109			252	05:00	171	94			265
01:30	15	11			26	13:30	130	106			236	06:00	333	284			617
01:45	13	4			17	13:45	165	114			279	07:00	601	596			1197
02:00	6	7			13	14:00	153	169			322	08:00	614	761			1375
02:15	8	6			14	14:15	145	150			295	09:00	335	435			770
02:30	9	7			16	14:30	170	168			338	10:00	335	381			716
02:45	8	1			9	14:45	107	119			226	11:00	317	379			696
03:00	8	3			11	15:00	128	125			253	12:00	455	525			980
03:15	7	8			15	15:15	125	124			249	13:00	553	441			994
03:30	7	3			10	15:30	112	157			269	14:00	575	606			1181
03:45	14	2			16	15:45	134	140			274	15:00	499	546			1045
04:00	11	6			17	16:00	129	136			265	16:00	596	547			1143
04:15	14	10			24	16:15	160	123			283	17:00	780	646			1426
04:30	20	11			31	16:30	158	159			317	18:00	671	504			1175
04:45	37	7			44	16:45	149	129			278	19:00	502	377			879
05:00	21	20			41	17:00	168	157			325	20:00	409	294			703
05:15	47	21			68	17:15	196	186			382	21:00	326	369			695
05:30	58	28			86	17:30	199	142			341	22:00	208	156			364
05:45	45	25			70	17:45	217	161			378	23:00	135	116			251
06:00	54	40			94	18:00	187	147			334	STATISTICS					
06:15	74	50			124	18:15	183	124			307	Peak Period	00:00	to	12:00		
06:30	71	77			148	18:30	150	115			265	Volume	3004	3116			6120
06:45	134	117			251	18:45	151	118			269	Peak Hour	7:30	7:45			7:45
07:00	168	158			326	19:00	127	98			225	Peak Volume	645	767			1402
07:15	151	148			299	19:15	146	97			243	Peak Hour Factor	0.743	0.864			0.837
07:30	142	157			299	19:30	112	93			205	Peak Period					
07:45	140	133			273	19:45	117	89			206	Volume	5709	5127			10836
08:00	146	210			356	20:00	102	83			185	Peak Hour	17:15	17:00			17:15
08:15	217	202			419	20:15	122	76			198	Peak Volume	799	646			1435
08:30	132	222			354	20:30	102	69			171	Peak Hour Factor	0.921	0.868			0.939
08:45	119	127			246	20:45	83	66			149	Peak Period					
09:00	94	118			212	21:00	93	99			192	Volume	1215	1357			2572
09:15	87	127			214	21:15	83	136			219	Peak Hour	7:30	7:45			7:45
09:30	76	102			178	21:30	80	72			152	Peak Volume	645	767			1402
09:45	78	88			166	21:45	70	62			132	Peak Hour Factor	0.743	0.864			0.837
10:00	90	94			184	22:00	61	44			105	Peak Period					
10:15	73	99			172	22:15	62	38			100	Volume	1376	1193			2569
10:30	91	94			185	22:30	43	40			83	Peak Hour	17:00	17:00			17:00
10:45	81	94			175	22:45	42	34			76	Peak Volume	780	646			1426
11:00	89	74			163	23:00	36	39			75	Peak Hour Factor	0.899	0.868			0.933
11:15	64	99			163	23:15	39	29			68	Peak Period					
11:30	82	108			190	23:30	33	27			60	Volume	0	0			0
11:45	82	98			180	23:45	27	21			48	Peak Hour	0	0			0
<b>TOTALS</b>	<b>3004</b>	<b>3116</b>	<b>0</b>	<b>0</b>	<b>6120</b>	<b>TOTALS</b>	<b>5709</b>	<b>5127</b>	<b>0</b>	<b>0</b>	<b>10836</b>	<b>SPLIT %</b>	<b>49%</b>	<b>51%</b>	<b>0%</b>	<b>0%</b>	<b>64%</b>
<b>SPLIT %</b>	<b>49%</b>	<b>51%</b>	<b>0%</b>	<b>0%</b>	<b>36%</b>	<b>SPLIT %</b>	<b>53%</b>	<b>47%</b>	<b>0%</b>	<b>0%</b>	<b>64%</b>						



**VOLUME**

NW 107th Ave S/O NW 86th St

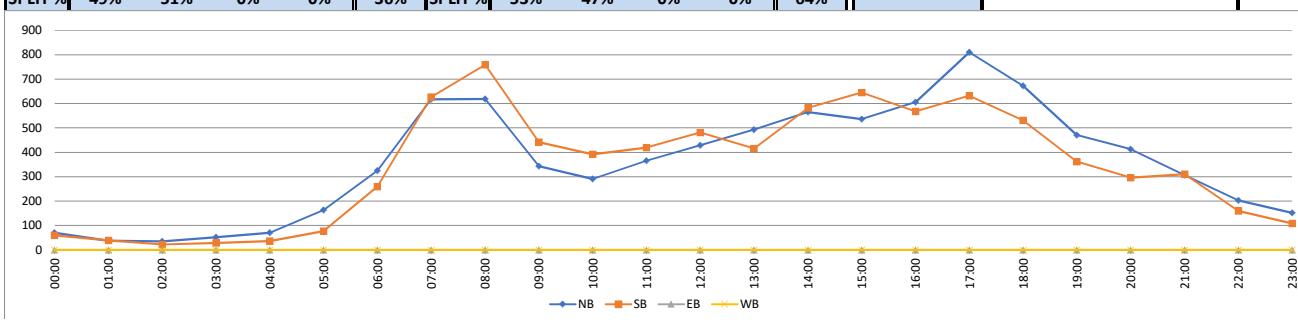
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_006

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					8,642	8,249	0	0	16,891								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	22	17			39	12:00	92	133			225	00:00	70	60			130
00:15	20	17			37	12:15	100	113			213	01:00	37	39			76
00:30	18	9			27	12:30	113	109			222	02:00	35	22			57
00:45	10	17			27	12:45	124	126			250	03:00	52	28			80
01:00	16	12			28	13:00	126	125			251	04:00	70	36			106
01:15	6	19			25	13:15	119	86			205	05:00	164	77			241
01:30	6	4			10	13:30	115	110			225	06:00	325	259			584
01:45	9	4			13	13:45	133	94			227	07:00	617	627			1244
02:00	12	6			18	14:00	133	115			248	08:00	618	759			1377
02:15	6	7			13	14:15	157	147			304	09:00	343	441			784
02:30	7	4			11	14:30	129	169			298	10:00	291	392			683
02:45	10	5			15	14:45	146	151			297	11:00	365	419			784
03:00	17	5			22	15:00	166	180			346	12:00	429	481			910
03:15	13	6			19	15:15	104	195			299	13:00	493	415			908
03:30	9	11			20	15:30	133	138			271	14:00	565	582			1147
03:45	13	6			19	15:45	133	132			265	15:00	536	645			1181
04:00	9	9			18	16:00	132	117			249	16:00	605	568			1173
04:15	14	6			20	16:15	157	147			304	17:00	810	632			1442
04:30	19	9			28	16:30	148	142			290	18:00	672	531			1203
04:45	28	12			40	16:45	168	162			330	19:00	471	362			833
05:00	26	16			42	17:00	177	148			325	20:00	412	296			708
05:15	31	13			44	17:15	223	142			365	21:00	307	310			617
05:30	44	15			59	17:30	199	175			374	22:00	203	160			363
05:45	63	33			96	17:45	211	167			378	23:00	152	108			260
06:00	44	29			73	18:00	201	140			341	STATISTICS					
06:15	65	43			108	18:15	193	159			352	Peak Period	00:00	to	12:00		
06:30	81	60			141	18:30	150	120			270	Volume	2987	3159			6146
06:45	135	127			262	18:45	128	112			240	Peak Hour	7:30	7:45			7:45
07:00	186	192			378	19:00	119	98			217	Peak Volume	641	765			1399
07:15	153	147			300	19:15	140	83			223	Peak Hour Factor	0.732	0.873			0.837
07:30	140	154			294	19:30	119	67			186	Peak Period					
07:45	138	134			272	19:45	93	114			207	Volume	5655	5090			10745
08:00	144	213			357	20:00	103	79			182	Peak Hour	17:15	14:30			17:15
08:15	219	199			418	20:15	126	77			203	Peak Volume	834	695			1458
08:30	133	219			352	20:30	96	65			161	Peak Hour Factor	0.935	0.891			0.964
08:45	122	128			250	20:45	87	75			162	Peak Period					
09:00	96	119			215	21:00	87	79			166	Volume	1235	1386			2621
09:15	89	128			217	21:15	88	114			202	Peak Hour	7:30	7:45			7:45
09:30	78	105			183	21:30	71	61			132	Peak Volume	641	765			1399
09:45	80	89			169	21:45	61	56			117	Peak Hour Factor	0.732	0.873			0.837
10:00	76	103			179	22:00	59	40			99	Peak Period					
10:15	75	100			175	22:15	54	58			112	Volume	1415	1200			2615
10:30	69	88			157	22:30	52	24			76	Peak Hour	17:00	17:00			17:00
10:45	71	101			172	22:45	38	38			76	Peak Volume	810	632			1442
11:00	68	86			154	23:00	43	34			77	Peak Hour Factor	0.908	0.903			0.954
11:15	95	99			194	23:15	51	32			83						
11:30	105	104			209	23:30	30	21			51						
11:45	97	130			227	23:45	28	21			49						
<b>TOTALS</b>	<b>2987</b>	<b>3159</b>	<b>0</b>	<b>0</b>	<b>6146</b>	<b>TOTALS</b>	<b>5655</b>	<b>5090</b>	<b>0</b>	<b>0</b>	<b>10745</b>						
<b>SPLIT %</b>	<b>49%</b>	<b>51%</b>	<b>0%</b>	<b>0%</b>	<b>36%</b>	<b>SPLIT %</b>	<b>53%</b>	<b>47%</b>	<b>0%</b>	<b>0%</b>	<b>64%</b>						



# **Seasonal Factors**

2022 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 8700 MIAMI-DADE NORTH

MOCF: 0.96  
 PSCF

WEEK	DATES	SF	
=====			
1	01/01/2022 - 01/01/2022	1.06	1.10
2	01/02/2022 - 01/08/2022	1.04	1.08
3	01/09/2022 - 01/15/2022	1.02	1.06
4	01/16/2022 - 01/22/2022	1.01	1.05
5	01/23/2022 - 01/29/2022	1.00	1.04
6	01/30/2022 - 02/05/2022	0.98	1.02
7	02/06/2022 - 02/12/2022	0.97	1.01
* 8	02/13/2022 - 02/19/2022	0.96	1.00
* 9	02/20/2022 - 02/26/2022	0.96	1.00
*10	02/27/2022 - 03/05/2022	0.96	1.00
*11	03/06/2022 - 03/12/2022	0.96	1.00
*12	03/13/2022 - 03/19/2022	0.96	1.00
*13	03/20/2022 - 03/26/2022	0.96	1.00
*14	03/27/2022 - 04/02/2022	0.96	1.00
*15	04/03/2022 - 04/09/2022	0.96	1.00
*16	04/10/2022 - 04/16/2022	0.95	0.99
*17	04/17/2022 - 04/23/2022	0.96	1.00
*18	04/24/2022 - 04/30/2022	0.96	1.00
*19	05/01/2022 - 05/07/2022	0.97	1.01
*20	05/08/2022 - 05/14/2022	0.97	1.01
21	05/15/2022 - 05/21/2022	0.98	1.02
22	05/22/2022 - 05/28/2022	0.99	1.03
23	05/29/2022 - 06/04/2022	0.99	1.03
24	06/05/2022 - 06/11/2022	1.00	1.04
25	06/12/2022 - 06/18/2022	1.01	1.05
26	06/19/2022 - 06/25/2022	1.01	1.05
27	06/26/2022 - 07/02/2022	1.01	1.05
28	07/03/2022 - 07/09/2022	1.02	1.06
29	07/10/2022 - 07/16/2022	1.02	1.06
30	07/17/2022 - 07/23/2022	1.02	1.06
31	07/24/2022 - 07/30/2022	1.02	1.06
32	07/31/2022 - 08/06/2022	1.01	1.05
33	08/07/2022 - 08/13/2022	1.01	1.05
34	08/14/2022 - 08/20/2022	1.01	1.05
35	08/21/2022 - 08/27/2022	1.03	1.07
36	08/28/2022 - 09/03/2022	1.04	1.08
37	09/04/2022 - 09/10/2022	1.05	1.09
38	09/11/2022 - 09/17/2022	1.07	1.11
39	09/18/2022 - 09/24/2022	1.05	1.09
40	09/25/2022 - 10/01/2022	1.03	1.07
41	10/02/2022 - 10/08/2022	1.01	1.05
42	10/09/2022 - 10/15/2022	0.99	1.03
43	10/16/2022 - 10/22/2022	1.00	1.04
44	10/23/2022 - 10/29/2022	1.01	1.05
45	10/30/2022 - 11/05/2022	1.01	1.05
46	11/06/2022 - 11/12/2022	1.02	1.06
47	11/13/2022 - 11/19/2022	1.03	1.07
48	11/20/2022 - 11/26/2022	1.04	1.08
49	11/27/2022 - 12/03/2022	1.05	1.09
50	12/04/2022 - 12/10/2022	1.05	1.09
51	12/11/2022 - 12/17/2022	1.06	1.10
52	12/18/2022 - 12/24/2022	1.04	1.08
53	12/25/2022 - 12/31/2022	1.02	1.06

\* PEAK SEASON

23-FEB-2023 09:11:23

830UPD

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2020 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL  
 CATEGORY: 8700 MIAMI-DADE NORTH

MOCF: 0.92  
 PSCF

WEEK	DATES	SF	
=====			
* 1	01/01/2020 - 01/04/2020	0.99	1.08
* 2	01/05/2020 - 01/11/2020	0.94	1.02
* 3	01/12/2020 - 01/18/2020	0.88	0.96
* 4	01/19/2020 - 01/25/2020	0.88	0.96
* 5	01/26/2020 - 02/01/2020	0.87	0.95
* 6	02/02/2020 - 02/08/2020	0.86	0.93
* 7	02/09/2020 - 02/15/2020	0.85	0.92
* 8	02/16/2020 - 02/22/2020	0.88	0.96
* 9	02/23/2020 - 02/29/2020	0.90	0.98
*10	03/01/2020 - 03/07/2020	0.93	1.01
*11	03/08/2020 - 03/14/2020	0.95	1.03
*12	03/15/2020 - 03/21/2020	0.98	1.07
*13	03/22/2020 - 03/28/2020	1.06	1.15
14	03/29/2020 - 04/04/2020	1.13	1.23
15	04/05/2020 - 04/11/2020	1.21	1.32
16	04/12/2020 - 04/18/2020	1.28	1.39
17	04/19/2020 - 04/25/2020	1.24	1.35
18	04/26/2020 - 05/02/2020	1.19	1.29
19	05/03/2020 - 05/09/2020	1.15	1.25
20	05/10/2020 - 05/16/2020	1.11	1.21
21	05/17/2020 - 05/23/2020	1.09	1.18
22	05/24/2020 - 05/30/2020	1.07	1.16
23	05/31/2020 - 06/06/2020	1.05	1.14
24	06/07/2020 - 06/13/2020	1.04	1.13
25	06/14/2020 - 06/20/2020	1.02	1.11
26	06/21/2020 - 06/27/2020	1.03	1.12
27	06/28/2020 - 07/04/2020	1.04	1.13
28	07/05/2020 - 07/11/2020	1.05	1.14
29	07/12/2020 - 07/18/2020	1.05	1.14
30	07/19/2020 - 07/25/2020	1.04	1.13
31	07/26/2020 - 08/01/2020	1.03	1.12
32	08/02/2020 - 08/08/2020	1.02	1.11
33	08/09/2020 - 08/15/2020	1.01	1.10
34	08/16/2020 - 08/22/2020	1.01	1.10
35	08/23/2020 - 08/29/2020	1.01	1.10
36	08/30/2020 - 09/05/2020	1.01	1.10
37	09/06/2020 - 09/12/2020	1.01	1.10
38	09/13/2020 - 09/19/2020	1.01	1.10
39	09/20/2020 - 09/26/2020	1.00	1.09
40	09/27/2020 - 10/03/2020	0.99	1.08
41	10/04/2020 - 10/10/2020	0.98	1.07
42	10/11/2020 - 10/17/2020	0.97	1.05
43	10/18/2020 - 10/24/2020	0.97	1.05
44	10/25/2020 - 10/31/2020	0.98	1.07
45	11/01/2020 - 11/07/2020	0.98	1.07
46	11/08/2020 - 11/14/2020	0.99	1.08
47	11/15/2020 - 11/21/2020	0.99	1.08
48	11/22/2020 - 11/28/2020	0.99	1.08
49	11/29/2020 - 12/05/2020	0.99	1.08
50	12/06/2020 - 12/12/2020	0.99	1.08
51	12/13/2020 - 12/19/2020	0.99	1.08
52	12/20/2020 - 12/26/2020	0.94	1.02
53	12/27/2020 - 12/31/2020	0.88	0.96

\* PEAK SEASON

27-FEB-2021 10:30:06

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## **Historic Background Growth**

## Midtown Doral Phases IV, V, and VI

23188

Background Growth Rate

Station*	Location	Linear	Exponential
878618	NW 74 ST, 200' EAST OF NW 102 AVE	Rate = 2.79% $R^2$ = 36.99%	Rate = 2.68% $R^2$ = 38.39%
878682	NW 107 AVENUE, 1000; SOUTH OF NW 74 STREET	Rate = 5.23% $R^2$ = 93.56%	Rate = 4.84% $R^2$ = 94.00%
970311	TURNPIKE EXT NB OFF RAMP TO NW 74TH ST, M30A	Rate = -1.32% $R^2$ = 4.56%	Rate = -1.34% $R^2$ = 3.16%
973014	TURNPIKE EX SB ON RAMP FROM NW 74TH ST, M30D	Rate = -1.45% $R^2$ = 0.75%	Rate = -1.58% $R^2$ = 0.24%
973043	TURNPIKE EXT SB OFF RAMP TO NW 106TH ST, M34C	Rate = 5.56% $R^2$ = 80.00%	Rate = 5.14% $R^2$ = 77.74%
<b>Average:</b>		<b>2.16%</b>	<b>1.95%</b>

\*Based on data for years 2015 - 2019 (Five years)

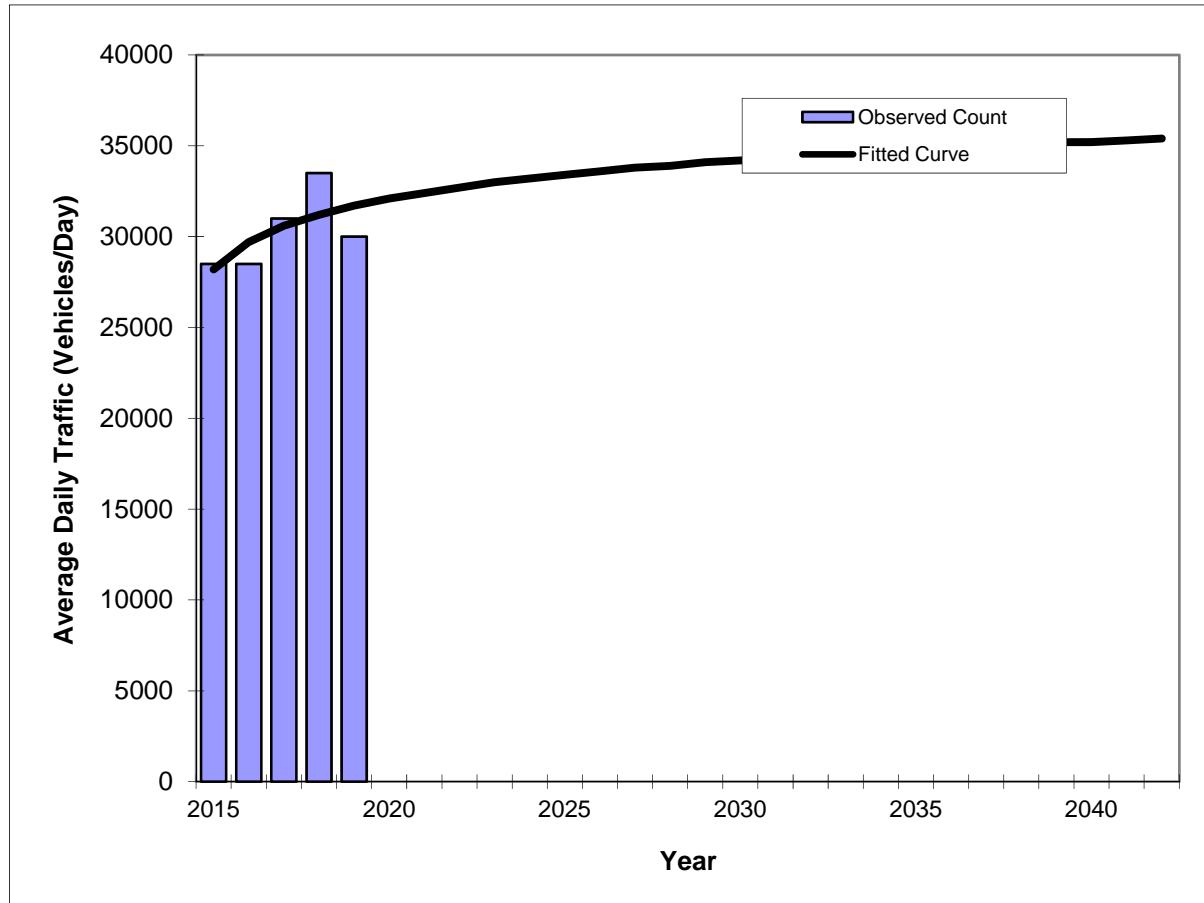
\*Decaying was excluded since site is not in a built out area

## Traffic Trends - V03.a

NW 74 ST, 200' EAST OF NW 102 AVE -- 87104000

FIN#	1234
Location	1

County:	Miami-Dade (87)
Station #:	8618
Highway:	NW 74 ST, 200' EAST OF NW 102 AVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	28500	28200
2016	28500	29700
2017	31000	30600
2018	33500	31200
2019	30000	31700
2025 Opening Year Trend		
2025	N/A	33400
2023 Mid-Year Trend		
2023	N/A	33000
2033 Design Year Trend		
2033	N/A	34600
TRANPLAN Forecasts/Trends		

Trend R-squared:	43.20%
Compounded Annual Historic Growth Rate:	2.97%
Compounded Growth Rate (2019 to Design Year):	0.63%
Printed:	1-Nov-23

Decaying Exponential Growth Option

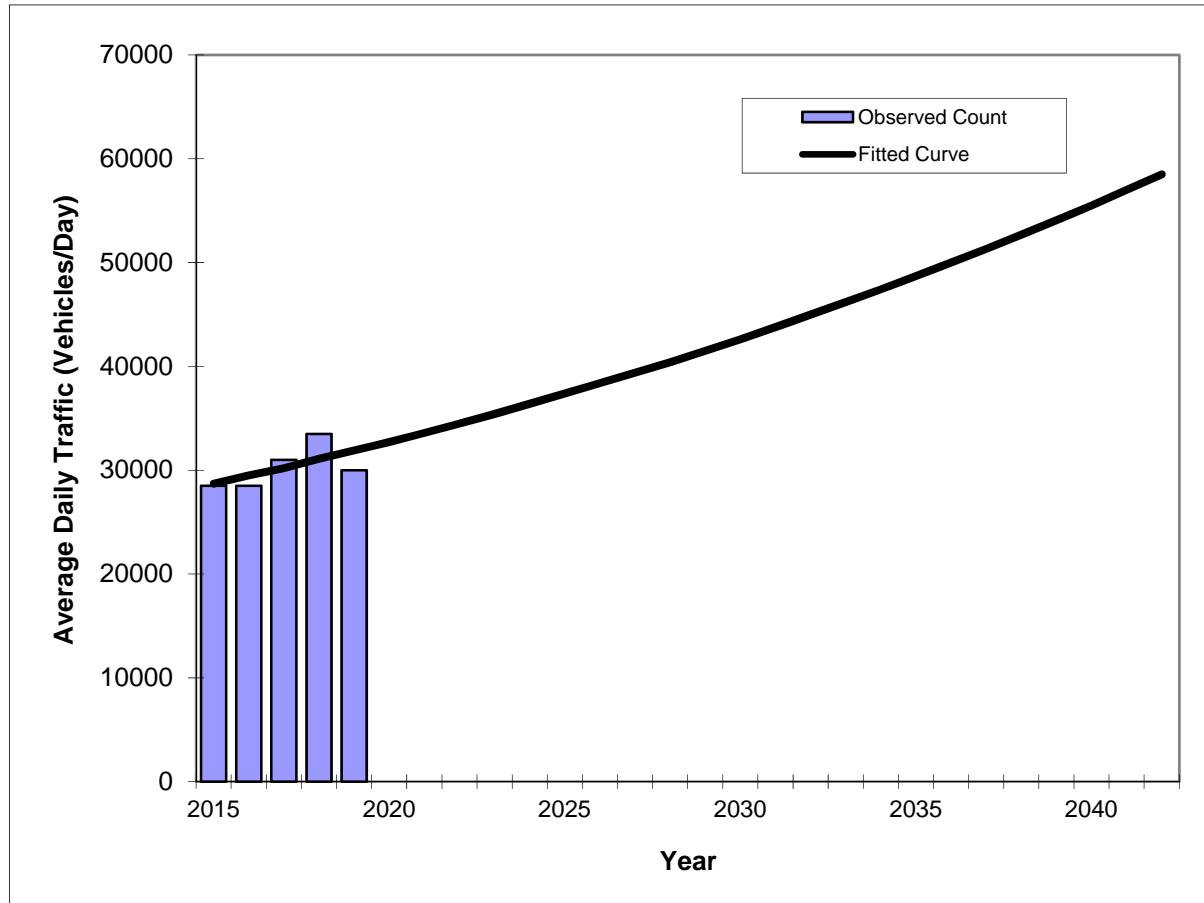
\*Axle-Adjusted

## Traffic Trends - V03.a

NW 74 ST, 200' EAST OF NW 102 AVE -- 87104000

FIN#	1234
Location	1

County:	Miami-Dade (87)
Station #:	8618
Highway:	NW 74 ST, 200' EAST OF NW 102 AVE



Trend R-squared:	38.39%
Compounded Annual Historic Growth Rate:	2.68%
Compounded Growth Rate (2019 to Design Year):	2.68%
Printed:	1-Nov-23

Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	28500	28700
2016	28500	29500
2017	31000	30200
2018	33500	31100
2019	30000	31900
<b>2025 Opening Year Trend</b>		
2025	N/A	37400
<b>2023 Mid-Year Trend</b>		
2023	N/A	35400
<b>2033 Design Year Trend</b>		
2033	N/A	46200
<b>TRANPLAN Forecasts/Trends</b>		

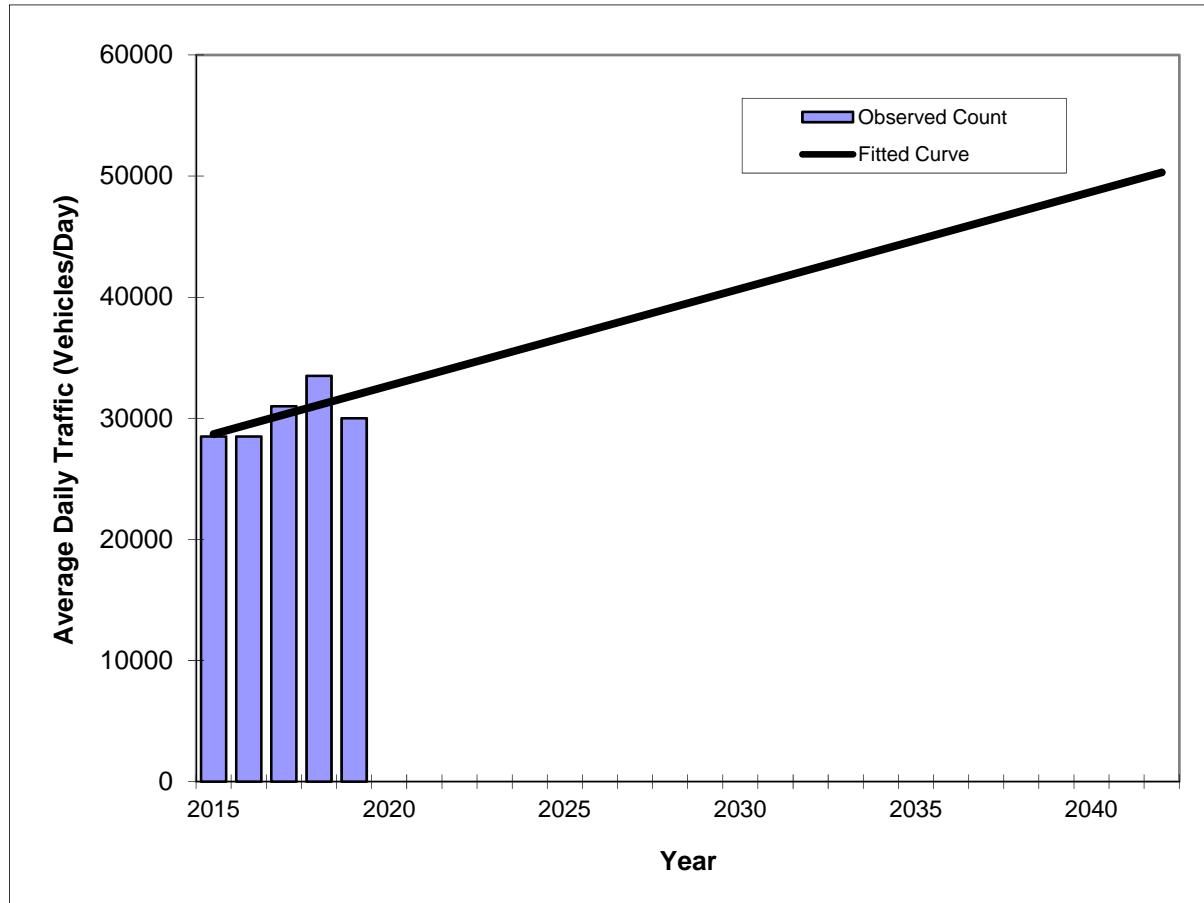
\*Axle-Adjusted

## Traffic Trends - V03.a

NW 74 ST, 200' EAST OF NW 102 AVE -- 87104000

FIN#	1234
Location	1

County:	Miami-Dade (87)
Station #:	8618
Highway:	NW 74 ST, 200' EAST OF NW 102 AVE



** Annual Trend Increase:	800
Trend R-squared:	36.99%
Trend Annual Historic Growth Rate:	2.79%
Trend Growth Rate (2019 to Design Year):	2.51%
Printed:	1-Nov-23

Straight Line Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	28500	28700
2016	28500	29500
2017	31000	30300
2018	33500	31100
2019	30000	31900
2020	30000	32700
2025	N/A	36700
2023	N/A	35100
2033	N/A	43100
TRANPLAN Forecasts/Trends		

\*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2022 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8618 - NW 74 ST, 200' EAST OF NW 102 AVE (2011 OFF SYSTEM CYCLE)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	42500 C	E 21000	W 21500	9.00	56.50	7.00
2021	44000 C	E 21500	W 22500	9.00	55.00	7.10
2020	33500 C	E 16500	W 17000	9.00	56.00	9.40
2019	30000 C	E 14500	W 15500	9.00	56.00	7.40
2018	33500 C	E 17500	W 16000	9.00	54.30	6.60
2017	31000 C	E 16000	W 15000	9.00	54.00	8.30
2016	28500 C	E 13500	W 15000	9.00	56.10	8.70
2015	28500 C	E 14000	W 14500	9.00	57.40	15.80
2014	23400 C	E 9900	W 13500	9.00	59.30	14.90
2013	22500 F	E 11500	W 11000	9.00	58.90	16.20
2012	22500 C	E 11500	W 11000	9.00	59.70	16.00

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

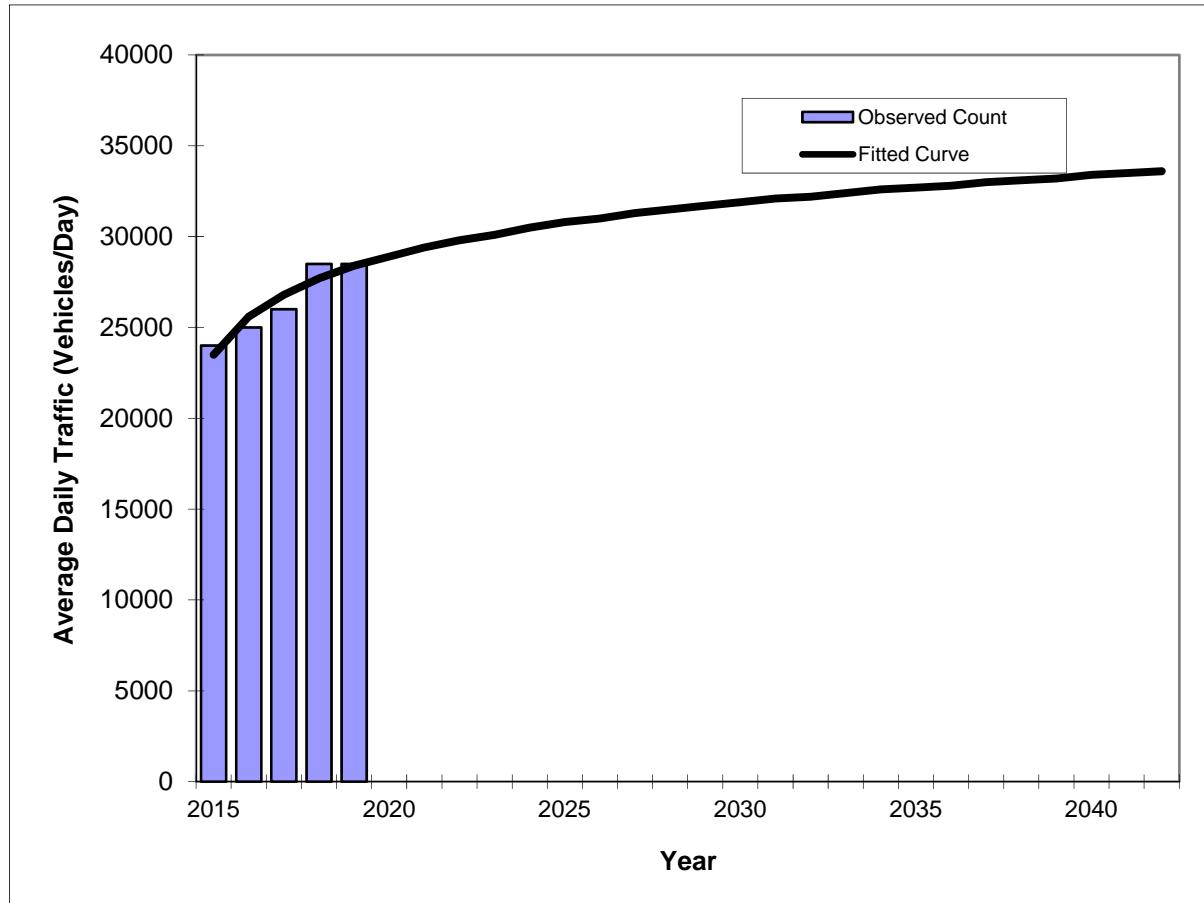
\*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

## Traffic Trends - V03.a

NW 107 AVENUE, 1000' SOUTH OF NW 74 STREET -- 87000953

FIN#	1234
Location	2

County:	Miami-Dade (87)
Station #:	8682
Highway:	107 AVENUE, 1000' SOUTH OF NW 74 STR



Trend R-squared:	88.31%
Compounded Annual Historic Growth Rate:	4.85%
Compounded Growth Rate (2019 to Design Year):	0.95%
Printed:	1-Nov-23

Decaying Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	24000	23500
2016	25000	25600
2017	26000	26800
2018	28500	27700
2019	28500	28400
<b>2025 Opening Year Trend</b>		
2025	N/A	30800
<b>2023 Mid-Year Trend</b>		
2023	N/A	30100
<b>2033 Design Year Trend</b>		
2033	N/A	32400
<b>TRANPLAN Forecasts/Trends</b>		

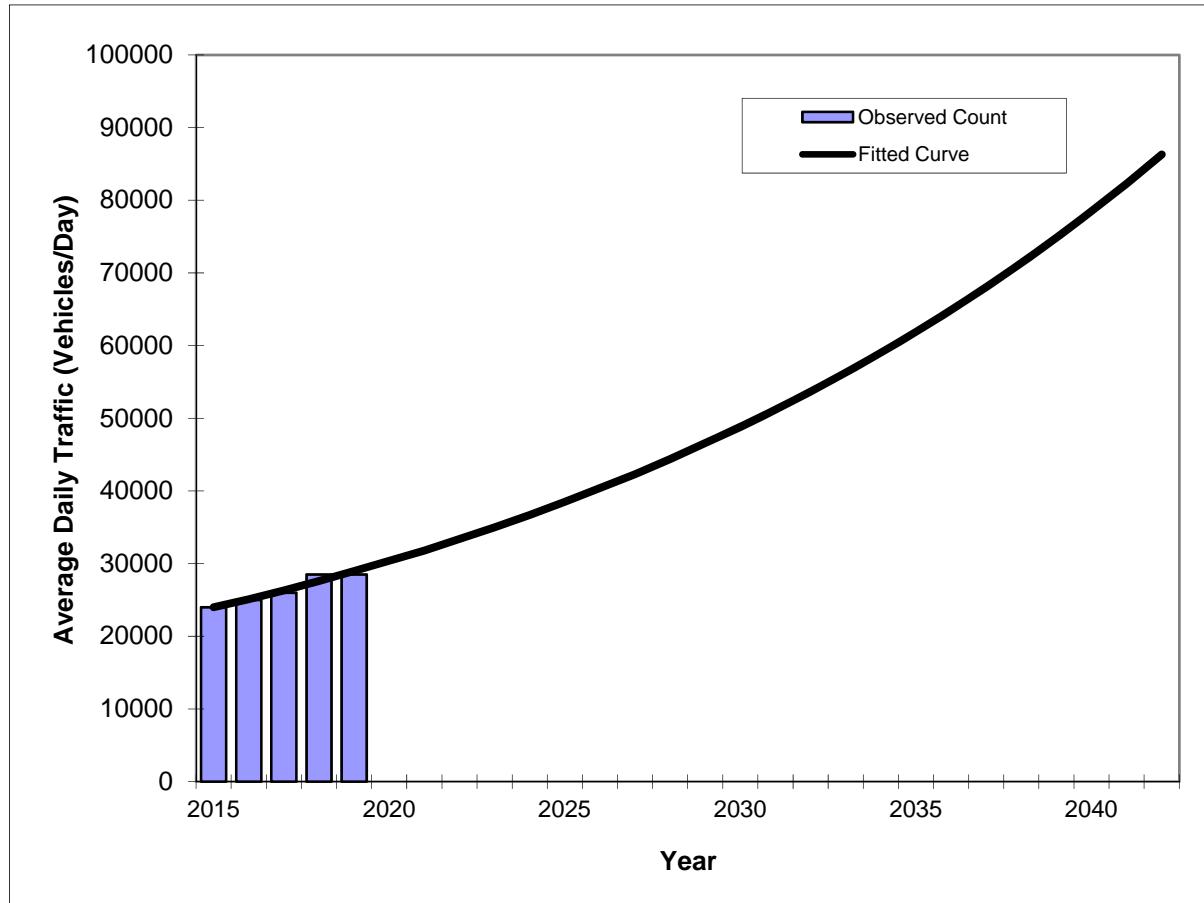
\*Axle-Adjusted

## Traffic Trends - V03.a

NW 107 AVENUE, 1000' SOUTH OF NW 74 STREET -- 87000953

FIN#	1234
Location	2

County:	Miami-Dade (87)
Station #:	8682
Highway:	107 AVENUE, 1000' SOUTH OF NW 74 STR



Trend R-squared:	94.00%
Compounded Annual Historic Growth Rate:	4.84%
Compounded Growth Rate (2019 to Design Year):	4.85%
Printed:	1-Nov-23

Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	24000	24000
2016	25000	25100
2017	26000	26300
2018	28500	27600
2019	28500	29000
2025 Opening Year Trend		
2025	N/A	38500
2023 Mid-Year Trend		
2023	N/A	35000
2033 Design Year Trend		
2033	N/A	56300
TRANPLAN Forecasts/Trends		

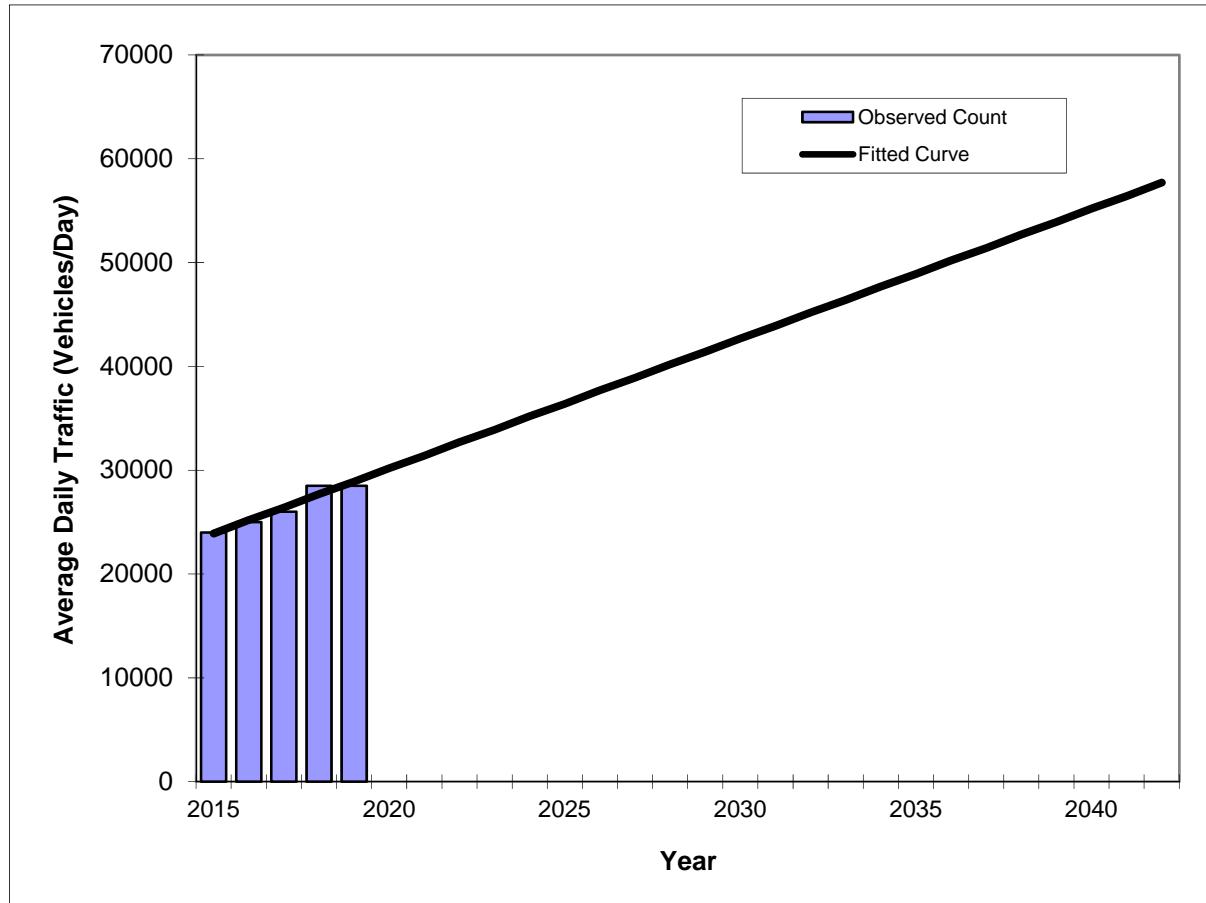
\*Axle-Adjusted

## Traffic Trends - V03.a

NW 107 AVENUE, 1000' SOUTH OF NW 74 STREET -- 87000953

FIN#	1234
Location	2

County:	Miami-Dade (87)
Station #:	8682
Highway:	107 AVENUE, 1000' SOUTH OF NW 74 STR



** Annual Trend Increase:	1,250
Trend R-squared:	93.56%
Trend Annual Historic Growth Rate:	5.23%
Trend Growth Rate (2019 to Design Year):	4.33%
Printed:	1-Nov-23

Straight Line Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	24000	23900
2016	25000	25200
2017	26000	26400
2018	28500	27700
2019	28500	28900
2020	29000	30000
2025	N/A	36400
2023	N/A	33900
2033	N/A	46400
TRANPLAN Forecasts/Trends		

\*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2022 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 8682 - NW 107 AVENUE 1000' SOUTH OF NW 74 STREET

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	30000 C	N 16000	S 14000	9.00	54.70	7.60
2021	26500 T	N 13500	S 13000	9.00	54.30	7.00
2020	27500 S	N 14000	S 13500	9.00	54.20	8.90
2019	28500 F	N 14500	S 14000	9.00	54.60	8.70
2018	28500 C	N 14500	S 14000	9.00	54.30	8.80
2017	26000 T	N 13000	S 13000	9.00	55.00	8.50
2016	25000 S	N 12500	S 12500	9.00	54.50	8.00
2015	24000 F	N 12000	S 12000	9.00	54.70	10.20
2014	23000 C	N 11500	S 11500	9.00	54.50	12.00

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

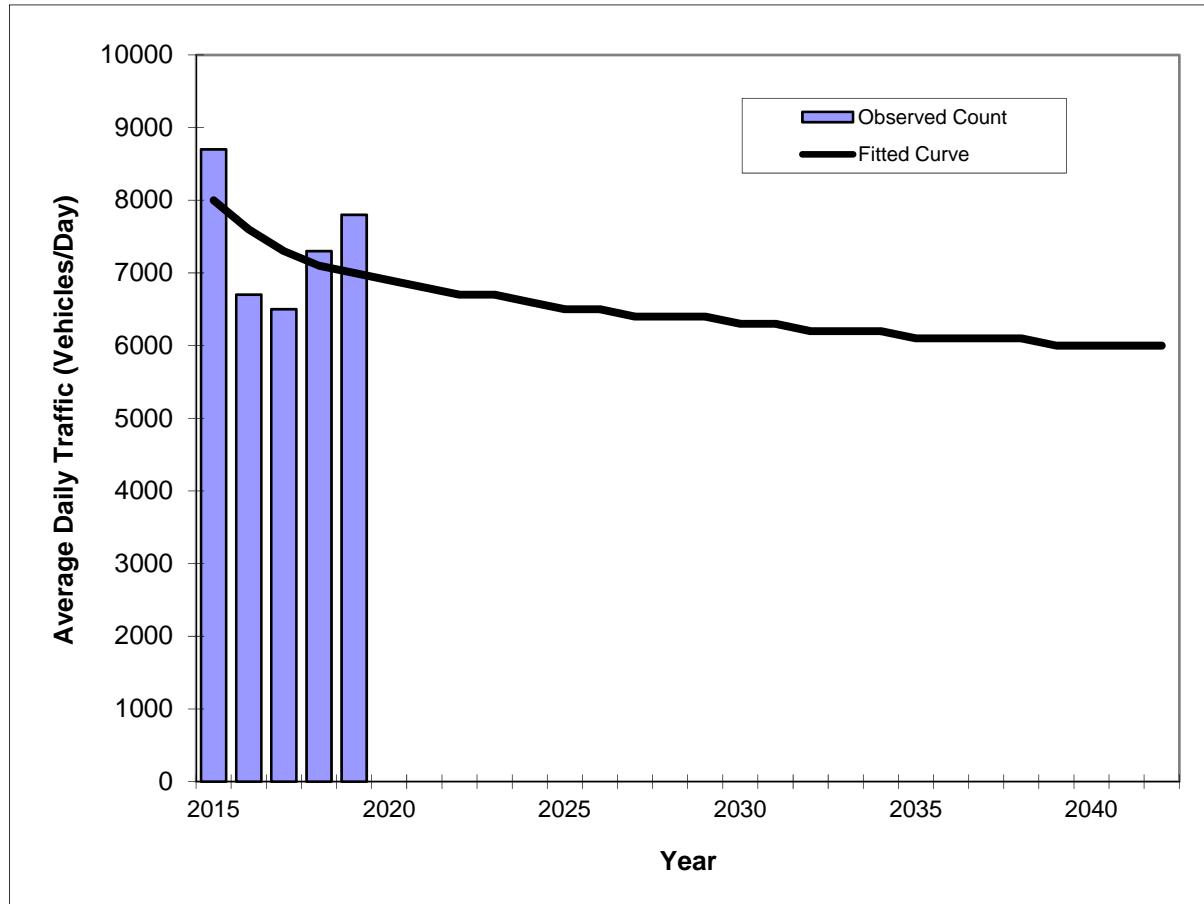
\*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

## Traffic Trends - V03.a

TURNPIKE EXT NB OFF RAMP TO NW 74TH ST, M30A -- 87471514

FIN#	1234
Location	3

County:	Turnpike (97)
Station #:	0311
Highway:	PIKE EXT NB OFF RAMP TO NW 74TH ST,



Trend R-squared:	18.39%
Compounded Annual Historic Growth Rate:	-3.28%
Compounded Growth Rate (2019 to Design Year):	-0.86%
Printed:	1-Nov-23

Decaying Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8700	8000
2016	6700	7600
2017	6500	7300
2018	7300	7100
2019	7800	7000
2025 Opening Year Trend		
2025	N/A	6500
2023 Mid-Year Trend		
2023	N/A	6700
2033 Design Year Trend		
2033	N/A	6200
TRANPLAN Forecasts/Trends		

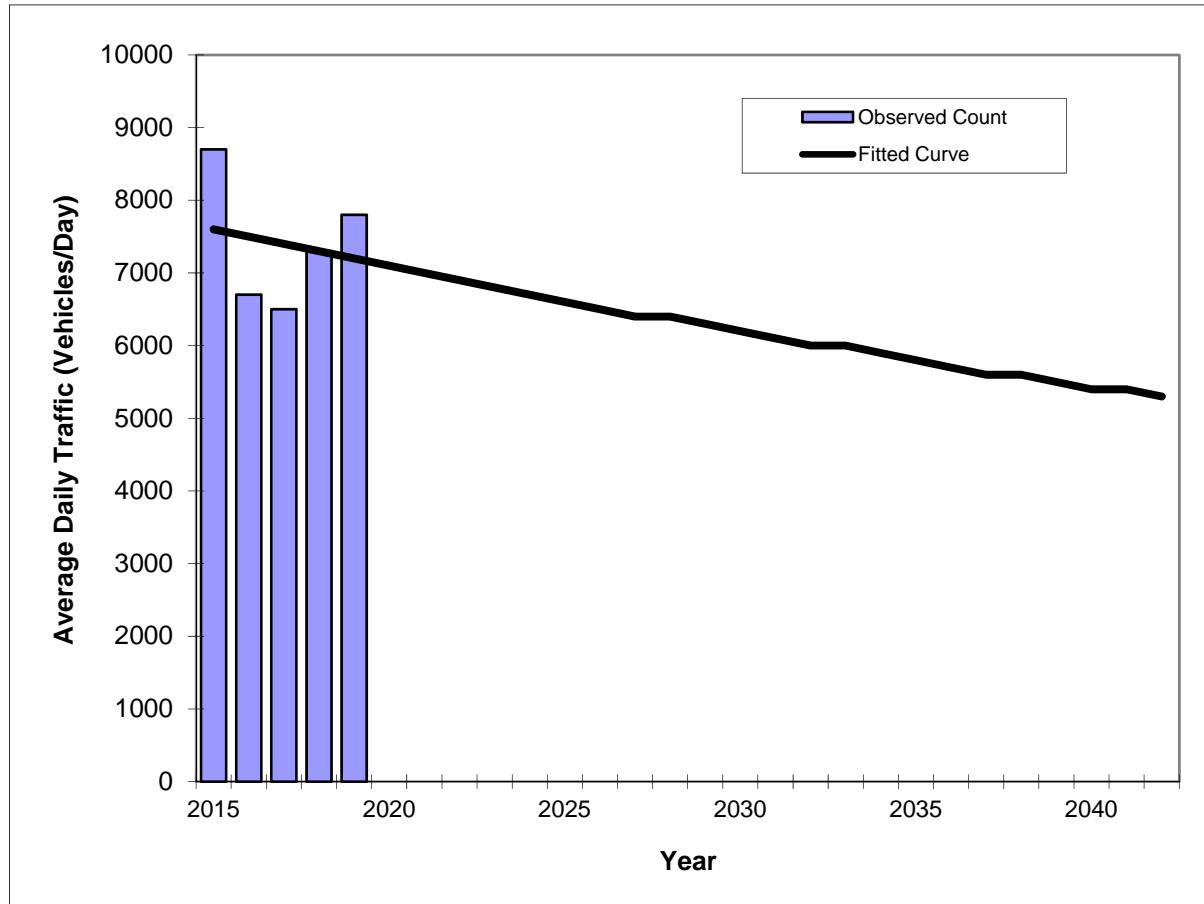
\*Axle-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT NB OFF RAMP TO NW 74TH ST, M30A -- 87471514

FIN#	1234
Location	3

County:	Turnpike (97)
Station #:	0311
Highway:	PIKE EXT NB OFF RAMP TO NW 74TH ST,



Trend R-squared:	3.16%
Compounded Annual Historic Growth Rate:	-1.34%
Compounded Growth Rate (2019 to Design Year):	-1.29%
Printed:	1-Nov-23

Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8700	7600
2016	6700	7500
2017	6500	7400
2018	7300	7300
2019	7800	7200
2020	7200	7100
2025	N/A	6600
2023	N/A	6800
2033	N/A	6000

2025 Opening Year Trend  
2023 Mid-Year Trend  
2033 Design Year Trend  
TRANPLAN Forecasts/Trends

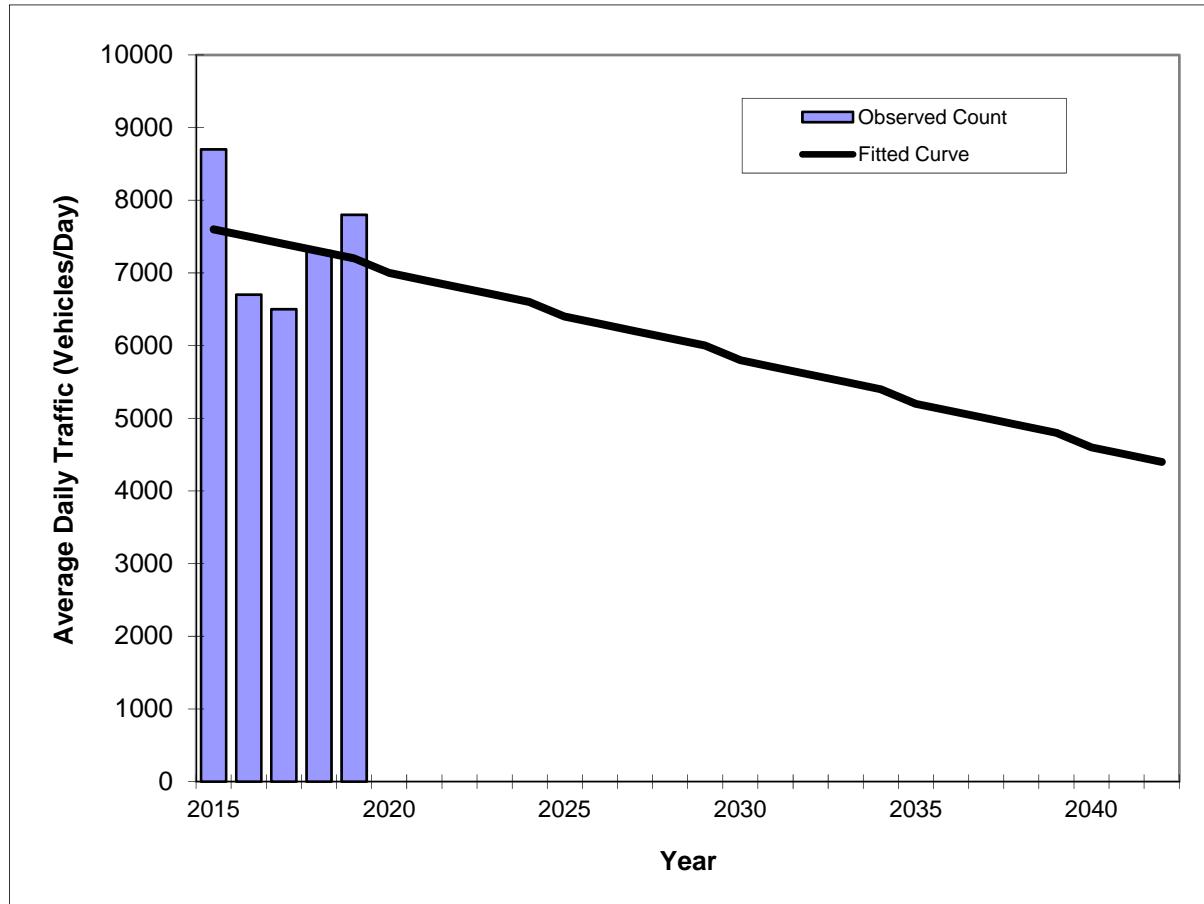
\*Axle-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT NB OFF RAMP TO NW 74TH ST, M30A -- 87471514

FIN#	1234
Location	3

County:	Turnpike (97)
Station #:	0311
Highway:	PIKE EXT NB OFF RAMP TO NW 74TH ST,



** Annual Trend Increase:	-120
Trend R-squared:	4.56%
Trend Annual Historic Growth Rate:	-1.32%
Trend Growth Rate (2019 to Design Year):	-1.69%
Printed:	1-Nov-23

Straight Line Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8700	7600
2016	6700	7500
2017	6500	7400
2018	7300	7300
2019	7800	7200
2020	7000	6800
2025	N/A	6400
2023	N/A	6700
2033	N/A	5500

2025 Opening Year Trend

2023 Mid-Year Trend

2033 Design Year Trend

TRANPLAN Forecasts/Trends

\*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2022 HISTORICAL AADT REPORT

COUNTY: 97 - FL. TURNPIKE

SITE: 0311 - TURNPIKE EXT NB OFF RAMP TO NW 74TH ST, M30A

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	6400 C	0	0	8.00		5.80
2021	6400 C	N 6400	0	8.00	99.90	5.90
2020	7050 C	N 7050	0	8.00	99.90	8.00
2019	7800 C	N 7800	0	8.00		6.80
2018	7300 C	N 7300	0	9.00	99.90	7.50
2017	6500 C	N 6500	0	9.00	99.90	7.00
2016	6700 C	N 6700	0	9.00	99.90	7.70
2015	8700 C	N 8700	0	9.00	99.90	7.30
2014	8100 C	N 8100		9.00		7.40
2013	7900 C	N 7900	0	9.00		7.60
2012	8000 E	N 8000	0	9.00		6.30

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

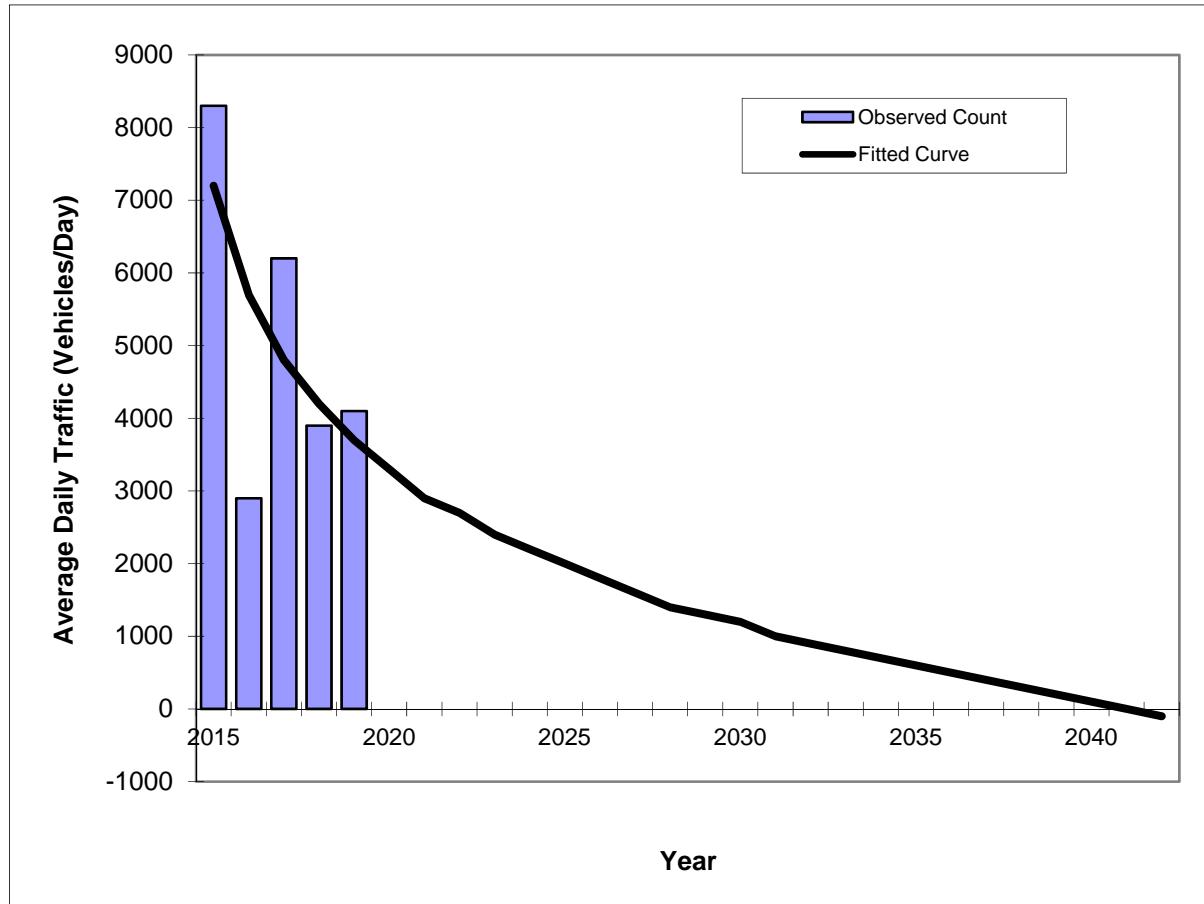
\*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

## Traffic Trends - V03.a

TURNPIKE EXT NB OFF RAMP FROM NW 74TH ST, M30B -- 87471516

FIN#	1234
Location	4

County:	Turnpike (97)
Station #:	0312
Highway:	KE EXT NB OFF RAMP FROM NW 74TH S



Trend R-squared:	40.34%
Compounded Annual Historic Growth Rate:	-15.33%
Compounded Growth Rate (2019 to Design Year):	-10.36%
Printed:	1-Nov-23

Decaying Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8300	7200
2016	2900	5700
2017	6200	4800
2018	3900	4200
2019	4100	3700
2020	2900	2800
2030	1200	1200
2040	0	0

2025 Opening Year Trend		
2025	N/A	2000
2023 Mid-Year Trend		
2023	N/A	2400
2033 Design Year Trend		
2033	N/A	800
TRANPLAN Forecasts/Trends		

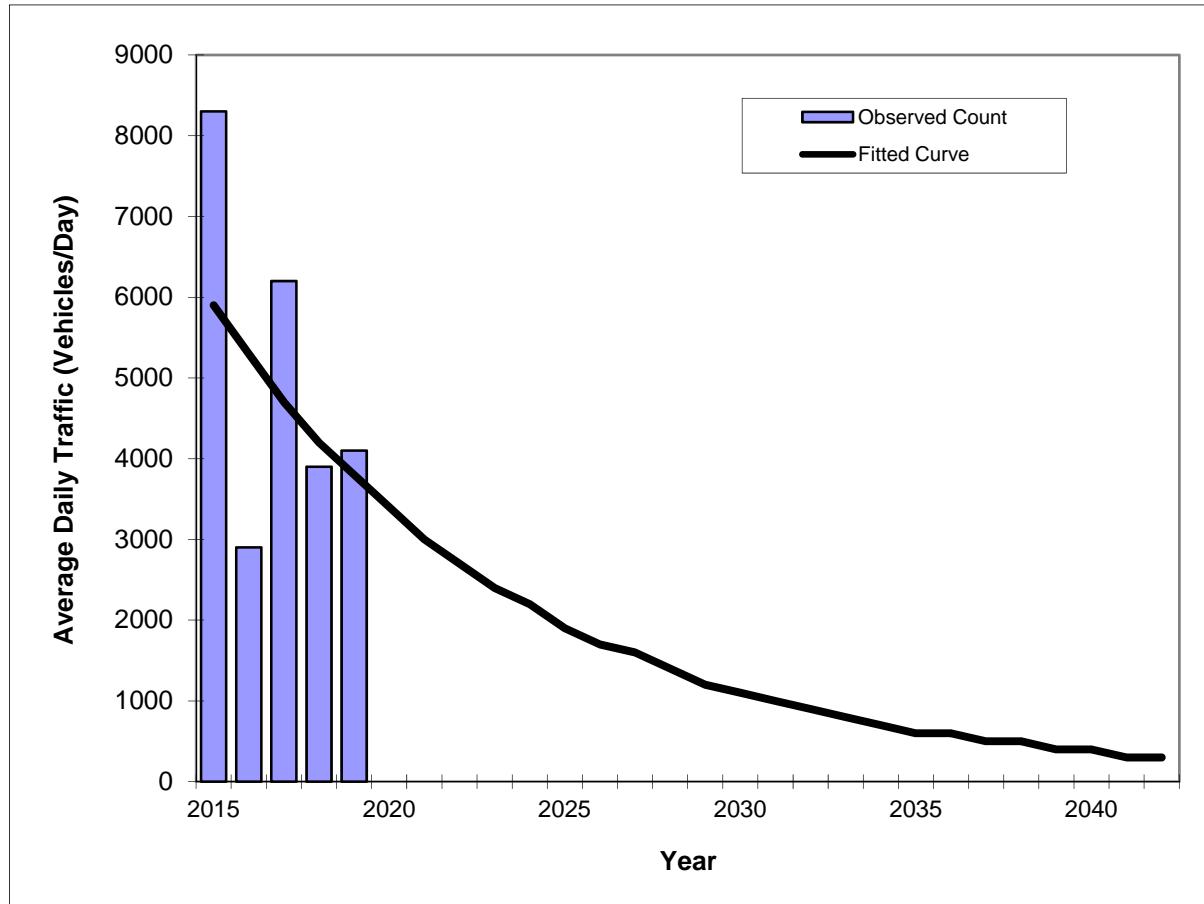
\*Axle-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT NB OFF RAMP FROM NW 74TH ST, M30B -- 87471516

FIN#	1234
Location	4

County:	Turnpike (97)
Station #:	0312
Highway:	KE EXT NB OFF RAMP FROM NW 74TH S



Trend R-squared:	18.09%
Compounded Annual Historic Growth Rate:	-10.42%
Compounded Growth Rate (2019 to Design Year):	-10.53%
Printed:	1-Nov-23

Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8300	5900
2016	2900	5300
2017	6200	4700
2018	3900	4200
2019	4100	3800
2020	3500	3500
2025	N/A	1900
2023	N/A	2400
2033	N/A	800
TRANPLAN Forecasts/Trends		

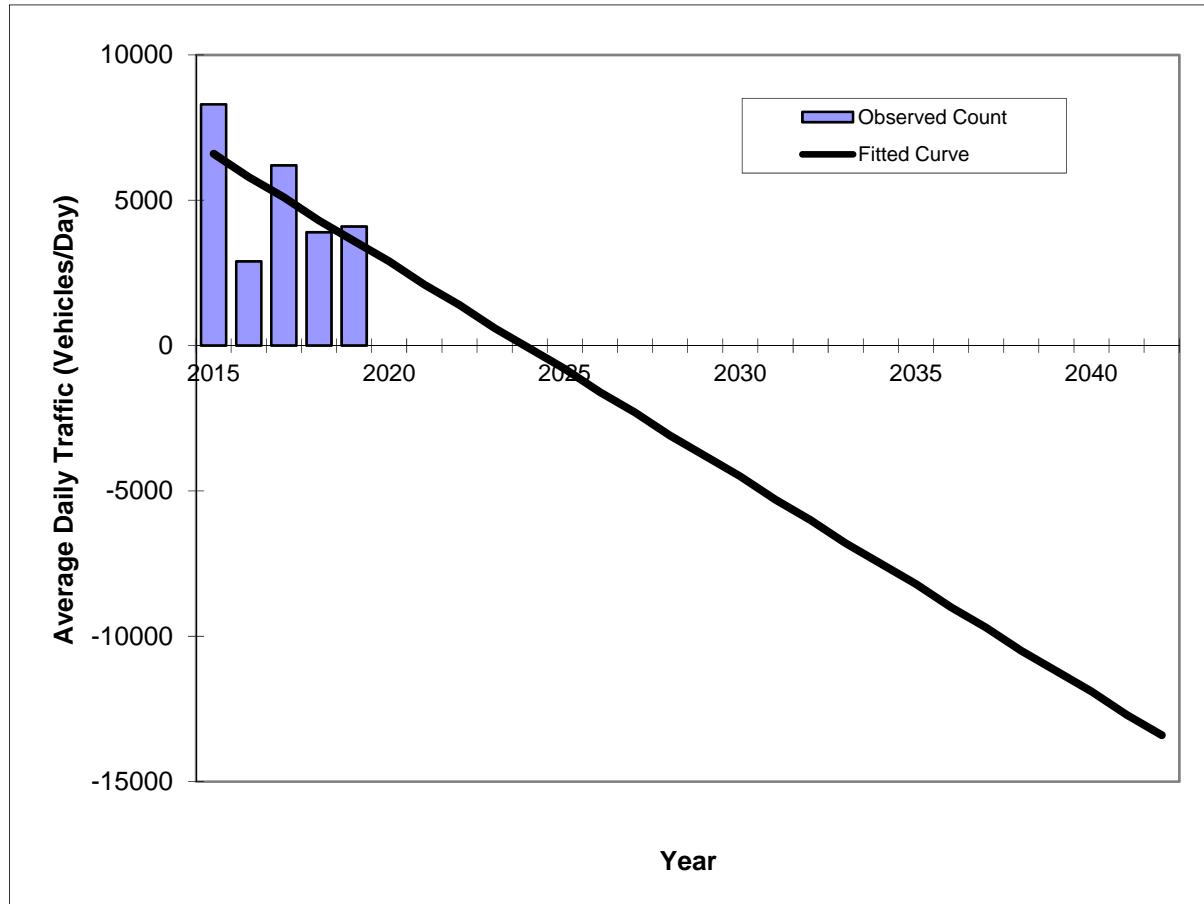
\*Axle-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT NB OFF RAMP FROM NW 74TH ST, M30B -- 87471516

FIN#	1234
Location	4

County:	Turnpike (97)
Station #:	0312
Highway:	KE EXT NB OFF RAMP FROM NW 74TH S



** Annual Trend Increase:	-740
Trend R-squared:	29.24%
Trend Annual Historic Growth Rate:	-11.36%
Trend Growth Rate (2019 to Design Year):	-20.63%

Printed: 1-Nov-23

Straight Line Growth Option

Traffic (ADT/AADT)		
Year	Count*	Trend**
2015	8300	6600
2016	2900	5800
2017	6200	5100
2018	3900	4300
2019	4100	3600

2025 Opening Year Trend		
2025	N/A	-800
2023 Mid-Year Trend		
2023	N/A	600
2033 Design Year Trend		
2033	N/A	-6800
TRANPLAN Forecasts/Trends		

\*Axe-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2022 HISTORICAL AADT REPORT

COUNTY: 97 - FL. TURNPIKE

SITE: 0312 - TURNPIKE EXT NB ON RAMP FROM NW 74TH ST, M30B

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	4000 C	N 4000	0	8.00	99.90	5.80
2021	3300 C	N 3300	0	8.00	99.90	5.90
2020	2900 C	N 2900	0	8.00	99.90	8.00
2019	4100 C	N 4100	0	8.00	99.90	6.80
2018	3900 C	N 3900	0	9.00	99.90	7.50
2017	6200 C	N 6200	0	9.00	99.90	7.00
2016	2900 C	N 2900	0	9.00	99.90	7.70
2015	8300 C	N 8300	0	9.00	99.90	7.30
2014	8100 C	N 8100		9.00	99.90	7.40
2013	7000 C	N 7000	0	9.00	99.90	7.60
2012	2200 C	N 2200	0	9.00	99.90	6.30
2011	1800 C	N 1800	0	9.00	99.90	5.90

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

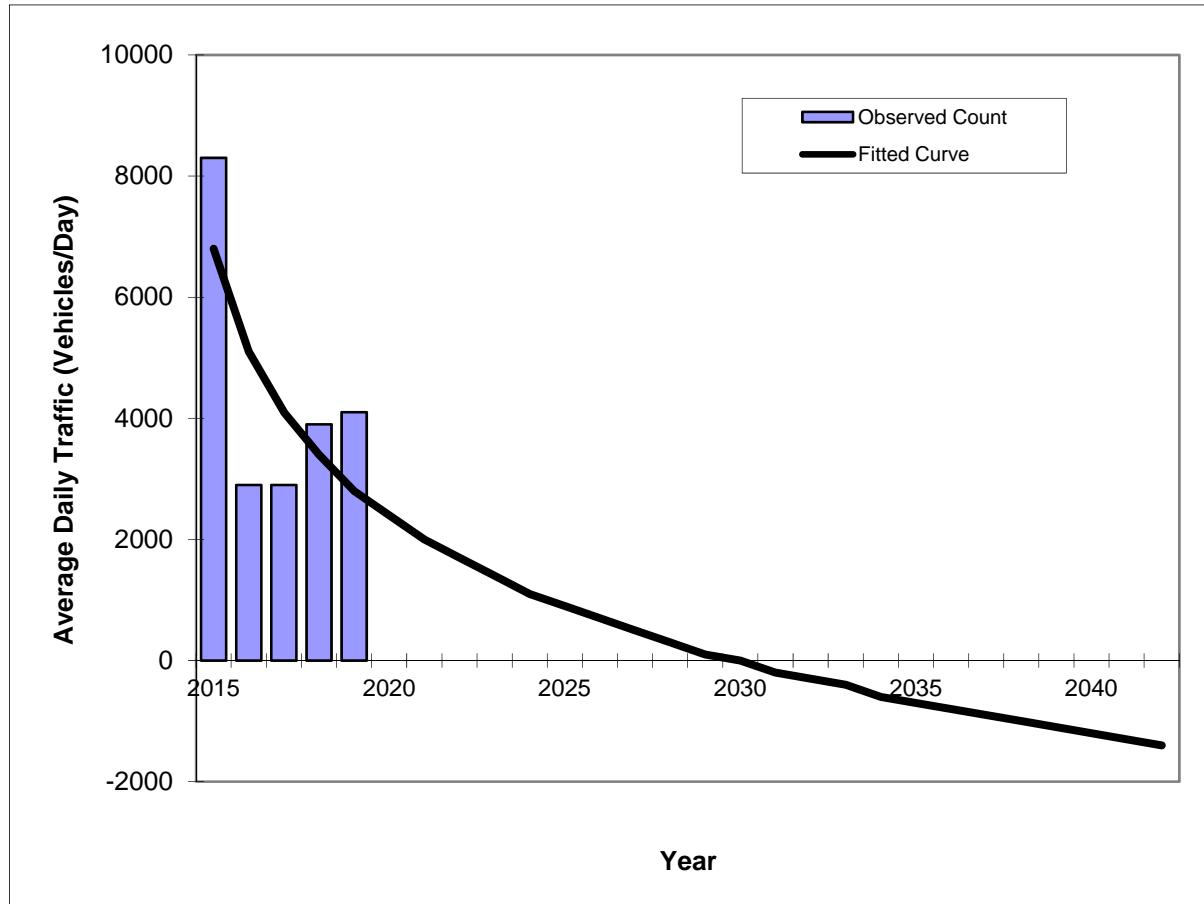
\*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

## Traffic Trends - V03.a

TURNPIKE EXT SB OFF RAMP TO NW 74TH ST, M30C -- 87471517

FIN#	1234
Location	5

County:	Turnpike (97)
Station #:	0313
Highway:	PIKE EXT SB OFF RAMP TO NW 74TH ST,



Trend R-squared:	48.40%
Compounded Annual Historic Growth Rate:	-19.89%
Compounded Growth Rate (2019 to Design Year):	#NUM!
Printed:	1-Nov-23

Decaying Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8300	6800
2016	2900	5100
2017	2900	4100
2018	3900	3400
2019	4100	2800

2025 Opening Year Trend		
2025	N/A	900
2023 Mid-Year Trend		
2023	N/A	1400
2033 Design Year Trend		
2033	N/A	-400
TRANPLAN Forecasts/Trends		

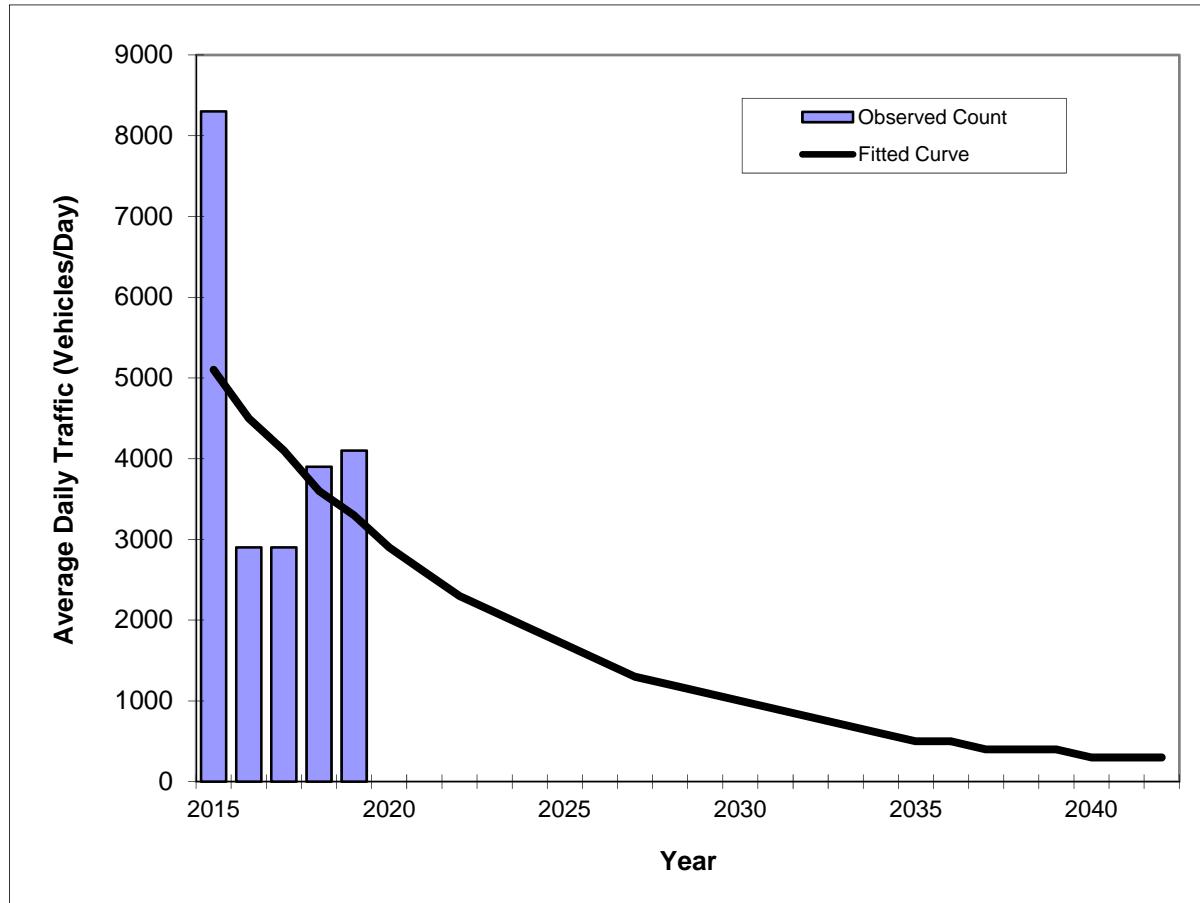
\*Axle-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT SB OFF RAMP TO NW 74TH ST, M30C -- 87471517

FIN#	1234
Location	5

County:	Turnpike (97)
Station #:	0313
Highway:	PIKE EXT SB OFF RAMP TO NW 74TH ST,



Trend R-squared:	16.79%
Compounded Annual Historic Growth Rate:	-10.31%
Compounded Growth Rate (2019 to Design Year):	-10.48%
Printed:	1-Nov-23

Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8300	5100
2016	2900	4500
2017	2900	4100
2018	3900	3600
2019	4100	3300
2020	2900	2800
2025	N/A	1700
2023	N/A	2100
2033	N/A	700

2025 Opening Year Trend

2023 Mid-Year Trend

2033 Design Year Trend

TRANPLAN Forecasts/Trends

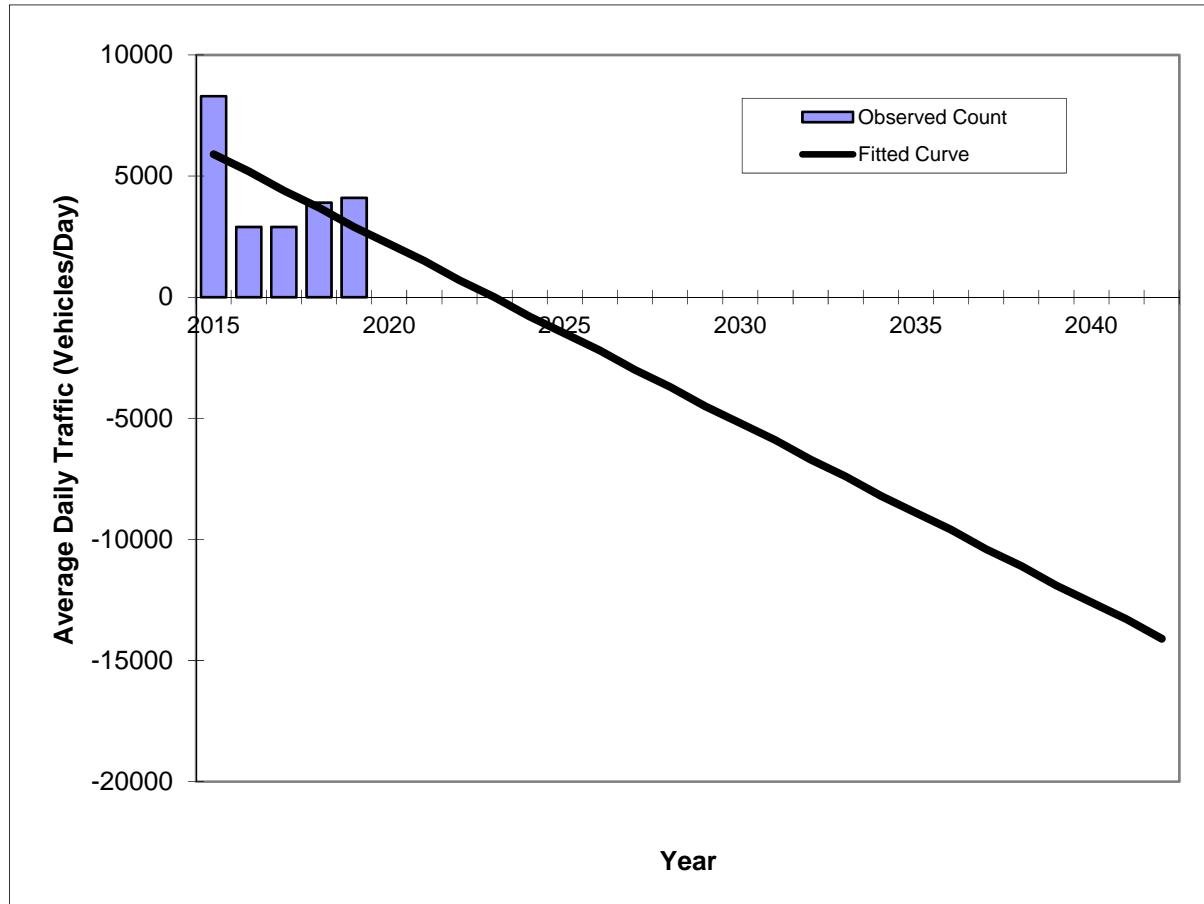
\*Axe-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT SB OFF RAMP TO NW 74TH ST, M30C -- 87471517

FIN#	1234
Location	5

County:	Turnpike (97)
Station #:	0313
Highway:	PIKE EXT SB OFF RAMP TO NW 74TH ST,



** Annual Trend Increase:	-740
Trend R-squared:	27.31%
Trend Annual Historic Growth Rate:	-12.71%
Trend Growth Rate (2019 to Design Year):	-25.37%
Printed:	1-Nov-23

Straight Line Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8300	5900
2016	2900	5200
2017	2900	4400
2018	3900	3700
2019	4100	2900
2020	N/A	-
2025	N/A	-1500
2023	N/A	0
2033	N/A	-7400
TRANPLAN Forecasts/Trends		

\*Axe-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2022 HISTORICAL AADT REPORT

COUNTY: 97 - FL. TURNPIKE

SITE: 0313 - TURNPIKE EXT SB OFF RAMP TO NW 74TH ST, M30C

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	4000 C	S 4000	0	8.00	99.90	5.80
2021	3300 C	S 3300	0	8.00	99.90	5.90
2020	2900 C	S 2900	0	8.00	99.90	8.00
2019	4100 C	S 4100	0	8.00	99.90	6.80
2018	3900 C	S 3900	0	9.00	99.90	7.50
2017	2900 C	S 2900	0	9.00	99.90	7.00
2016	2900 C	S 2900	0	9.00	99.90	7.70
2015	8300 C	S 8300	0	9.00	99.90	7.30
2014	8100 C	S 8100		9.00	99.90	7.40
2013	7000 C	S 7000	0	9.00	99.90	7.60
2012	2300 C	S 2300	0	9.00	99.90	6.30
2011	1700 C	S 1700	0	9.00	99.90	5.90

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

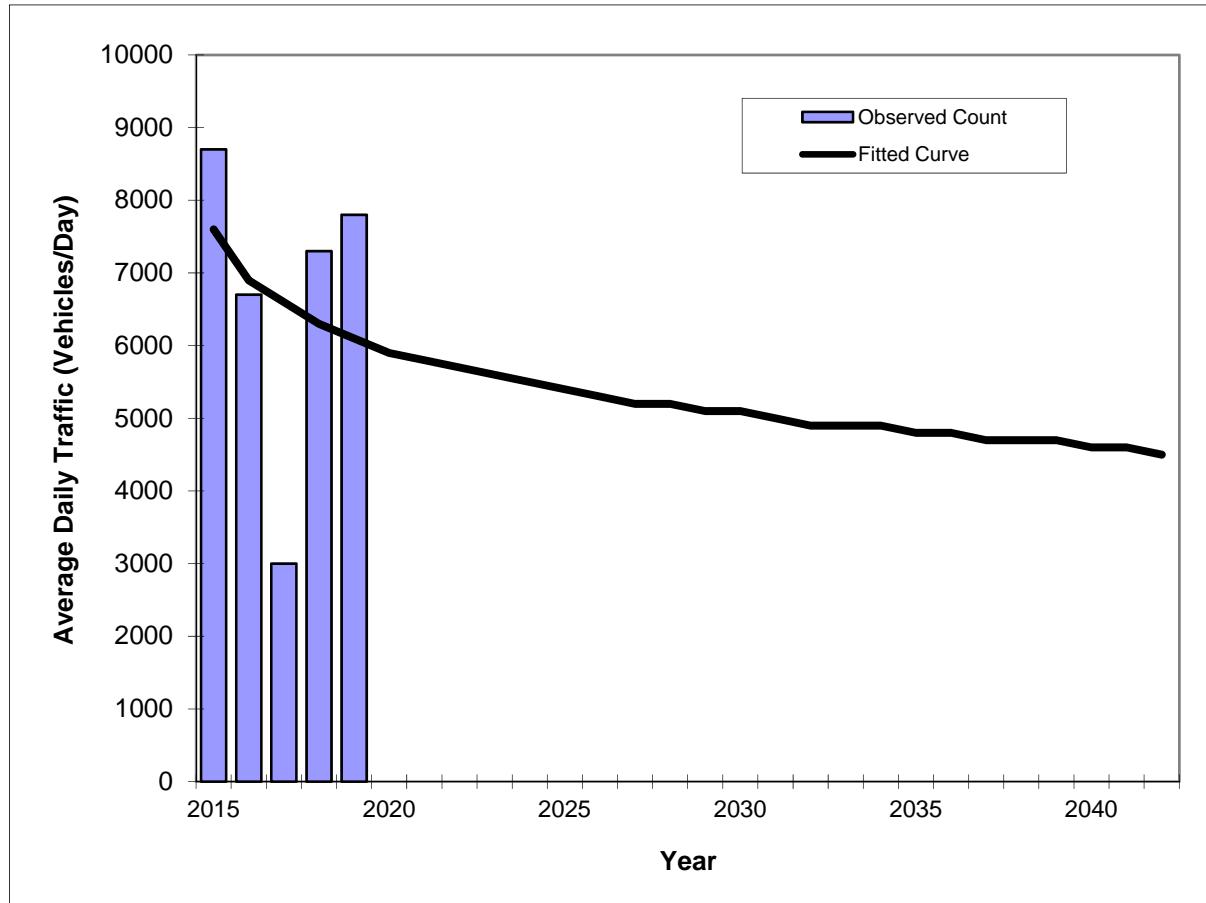
\*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

## Traffic Trends - V03.a

TURNPIKE EXT SB ON RAMP FROM NW 74TH ST, M30D -- 87471515

FIN#	1234
Location	6

County:	Turnpike (97)
Station #:	0314
Highway:	IKE EXT SB ON RAMP FROM NW 74TH ST



Trend R-squared:	6.88%
Compounded Annual Historic Growth Rate:	-5.35%
Compounded Growth Rate (2019 to Design Year):	-1.55%
Printed:	1-Nov-23

Decaying Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8700	7600
2016	6700	6900
2017	3000	6600
2018	7300	6300
2019	7800	6100
2025 Opening Year Trend		
2025	N/A	5400
2023 Mid-Year Trend		
2023	N/A	5600
2033 Design Year Trend		
2033	N/A	4900
TRANPLAN Forecasts/Trends		

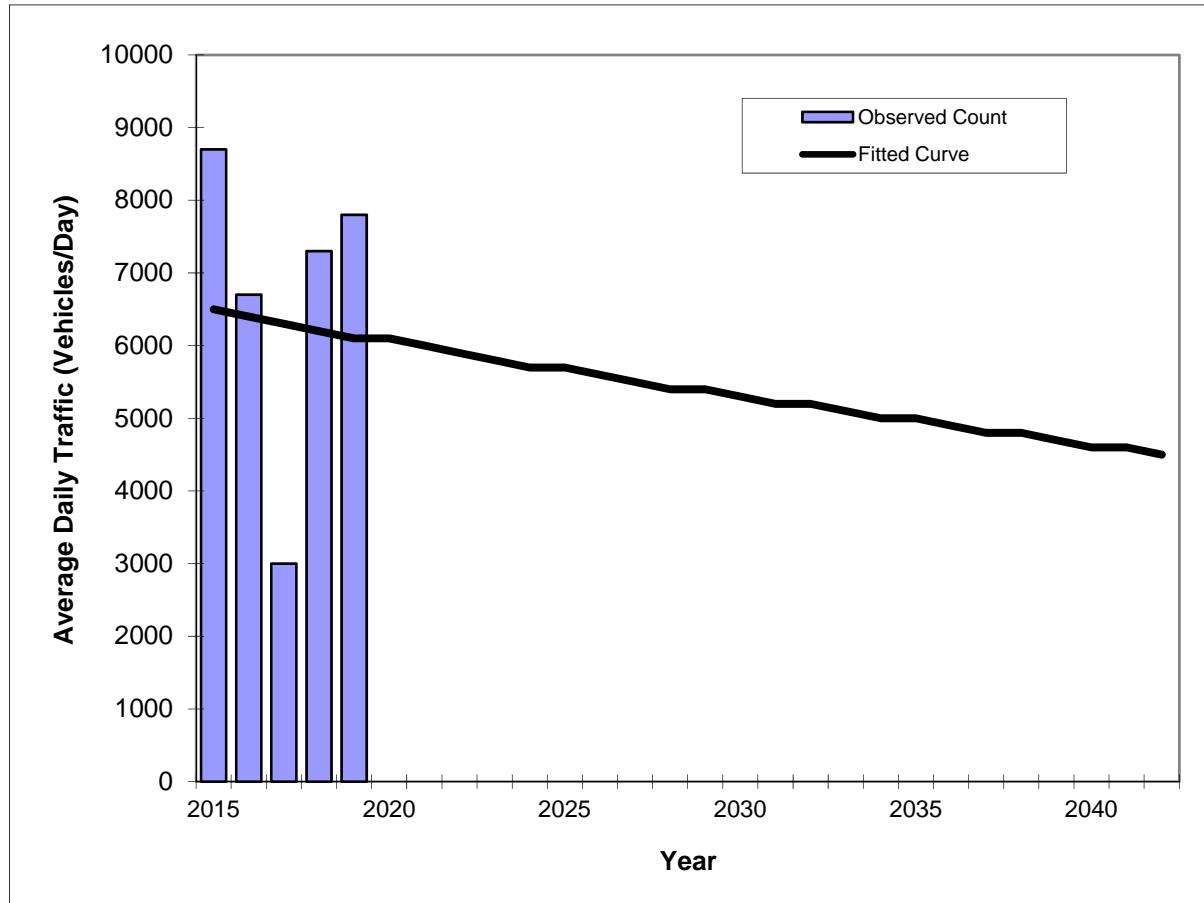
\*Axle-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT SB ON RAMP FROM NW 74TH ST, M30D -- 87471515

FIN#	1234
Location	6

County:	Turnpike (97)
Station #:	0314
Highway:	TURNPIKE EXT SB ON RAMP FROM NW 74TH ST



Trend R-squared:	0.24%
Compounded Annual Historic Growth Rate:	-1.58%
Compounded Growth Rate (2019 to Design Year):	-1.27%
Printed:	1-Nov-23

Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8700	6500
2016	6700	6400
2017	3000	6300
2018	7300	6200
2019	7800	6100
2025 Opening Year Trend		
2025	N/A	5700
2023 Mid-Year Trend		
2023	N/A	5800
2033 Design Year Trend		
2033	N/A	5100
TRANPLAN Forecasts/Trends		

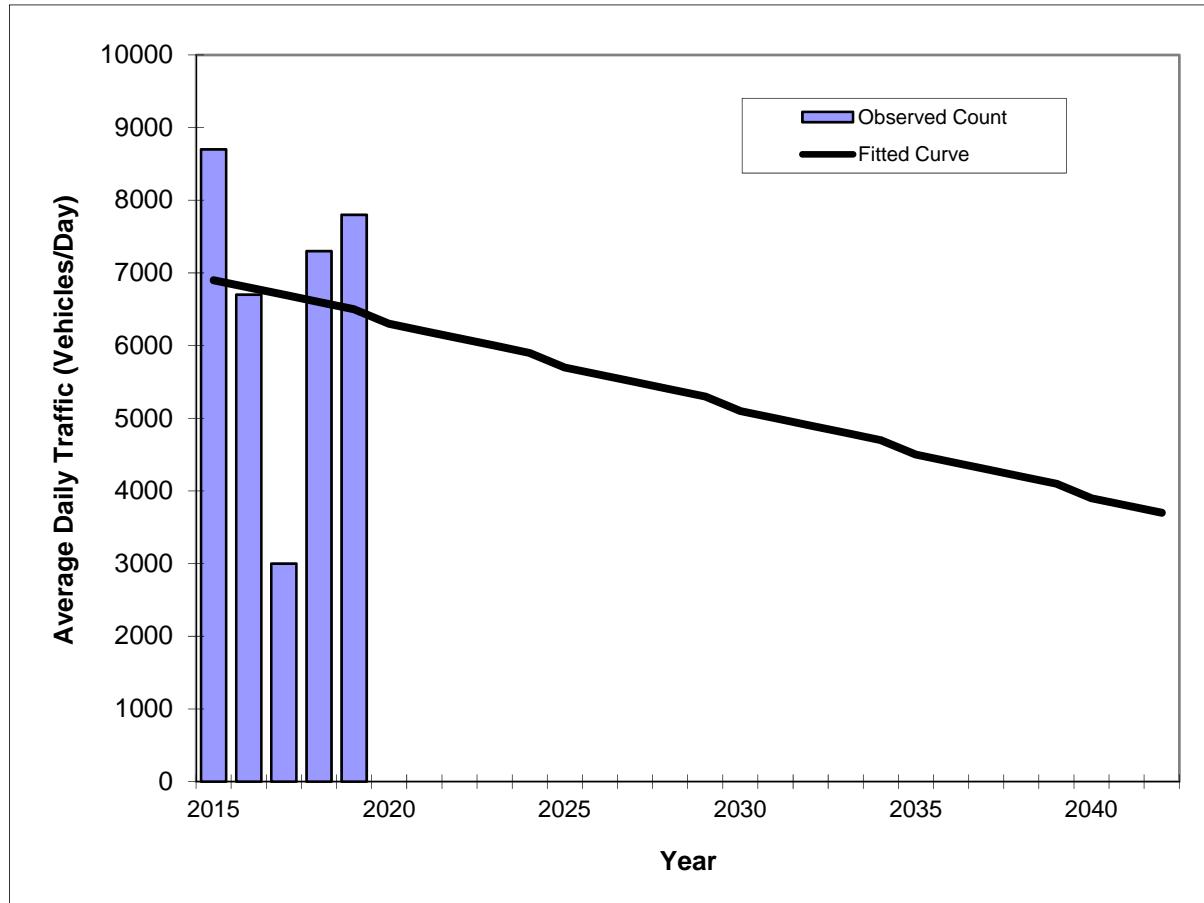
\*Axe-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT SB ON RAMP FROM NW 74TH ST, M30D -- 87471515

FIN#	1234
Location	6

County:	Turnpike (97)
Station #:	0314
Highway:	IKE EXT SB ON RAMP FROM NW 74TH ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	8700	6900
2016	6700	6800
2017	3000	6700
2018	7300	6600
2019	7800	6500
2025 Opening Year Trend	N/A	5700
2023 Mid-Year Trend	N/A	6000
2033 Design Year Trend	N/A	4800
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-120
Trend R-squared:	0.75%
Trend Annual Historic Growth Rate:	-1.45%
Trend Growth Rate (2019 to Design Year):	-1.87%
Printed:	1-Nov-23

Straight Line Growth Option

\*Axe-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2022 HISTORICAL AADT REPORT

COUNTY: 97 - FL. TURNPIKE

SITE: 0314 - TURNPIKE EXT SB ON RAMP FROM NW 74TH ST, M30D

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	6400 C	0	0	8.00		5.80
2021	6400 C	S 6400	0	8.00	99.90	5.90
2020	7050 C	S 7050	0	8.00	99.90	8.00
2019	7800 C	S 7800	0	8.00		6.80
2018	7300 C	S 7300	0	9.00	99.90	7.50
2017	3000 C	S 3000	0	9.00	99.90	7.00
2016	6700 C	S 6700	0	9.00	99.90	7.70
2015	8700 C	S 8700	0	9.00	99.90	7.30
2014	8100 C	S 8100		9.00		7.40
2013	7900 C	S 7900	0	9.00		7.60
2012	8000 E	S 8000	0	9.00		6.30

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

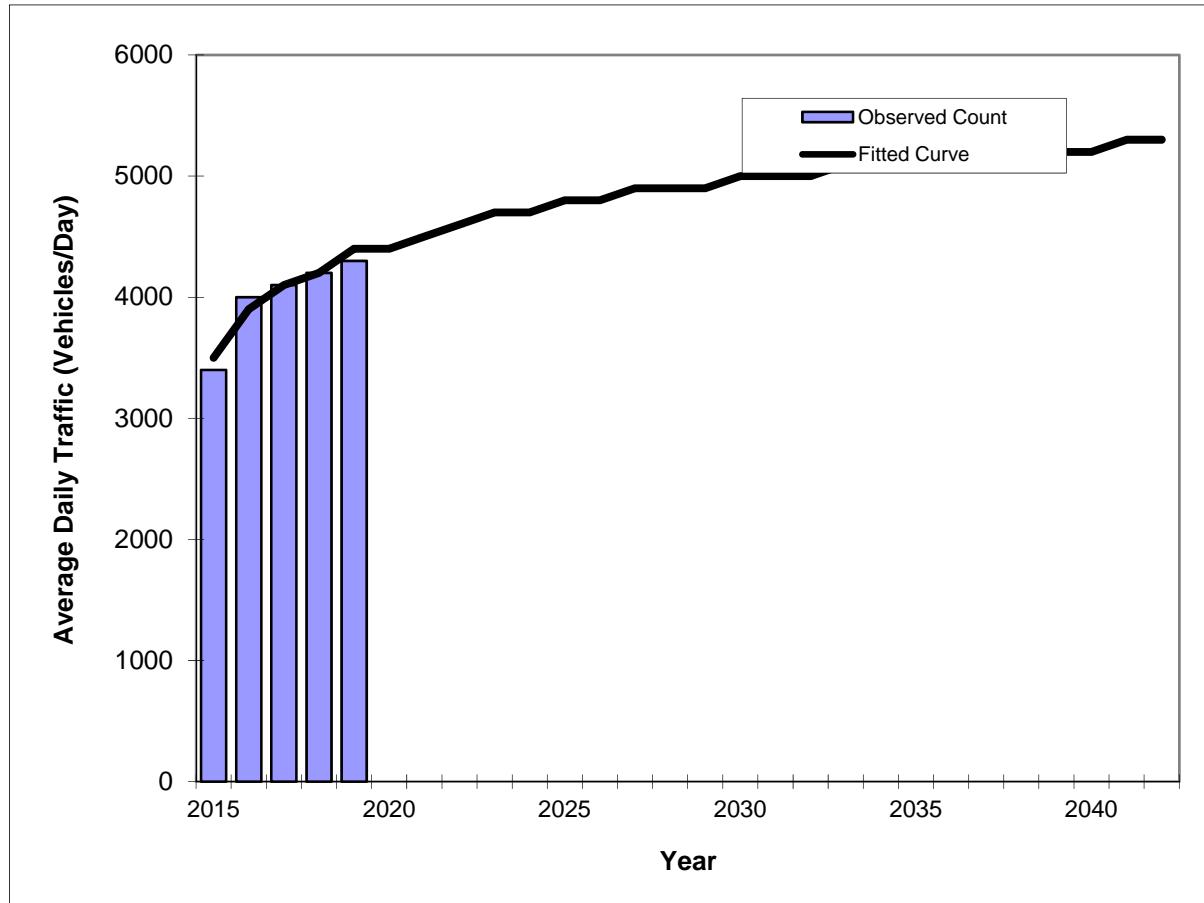
\*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

## Traffic Trends - V03.a

TURNPIKE EXT SB OFF RAMP TO NW 106TH ST, M34C -- 87471507

FIN#	1234
Location	8

County:	Turnpike (97)
Station #:	0343
Highway:	PIKE EXT SB OFF RAMP TO NW 106TH ST



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	3400	3500
2016	4000	3900
2017	4100	4100
2018	4200	4200
2019	4300	4400
2025	N/A	4800
2023	N/A	4700
2033	N/A	5100

2025 Opening Year Trend

2023 Mid-Year Trend

2033 Design Year Trend

TRANPLAN Forecasts/Trends

Trend R-squared: 93.69%  
 Compounded Annual Historic Growth Rate: 5.89%  
 Compounded Growth Rate (2019 to Design Year): 1.06%  
 Printed: 1-Nov-23

Decaying Exponential Growth Option

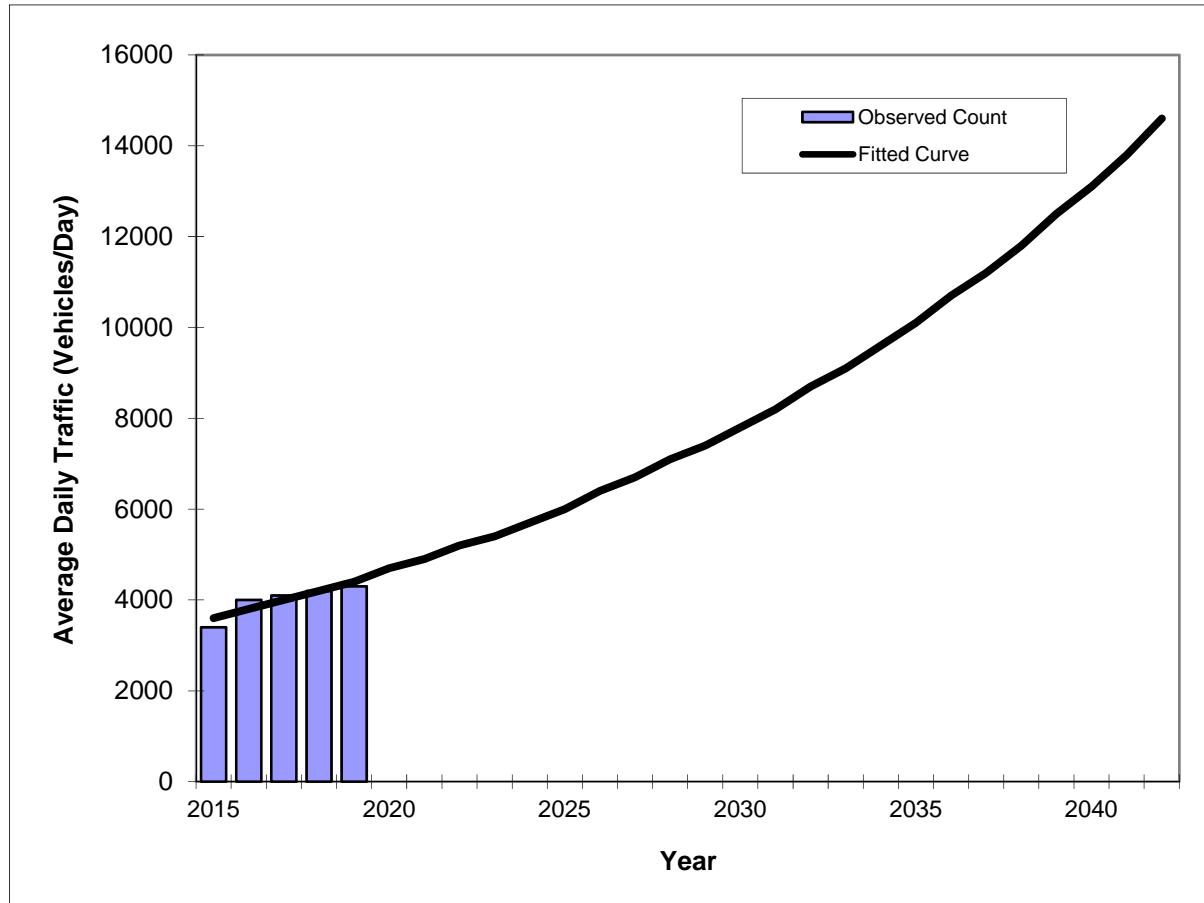
\*Axle-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT SB OFF RAMP TO NW 106TH ST, M34C -- 87471507

FIN#	1234
Location	8

County:	Turnpike (97)
Station #:	0343
Highway:	PIKE EXT SB OFF RAMP TO NW 106TH ST



Trend R-squared:	77.74%
Compounded Annual Historic Growth Rate:	5.14%
Compounded Growth Rate (2019 to Design Year):	5.33%
Printed:	1-Nov-23

Exponential Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	3400	3600
2016	4000	3800
2017	4100	4000
2018	4200	4200
2019	4300	4400
2025 Opening Year Trend	N/A	6000
2025 Mid-Year Trend	N/A	5400
2033 Design Year Trend	N/A	9100
TRANPLAN Forecasts/Trends		

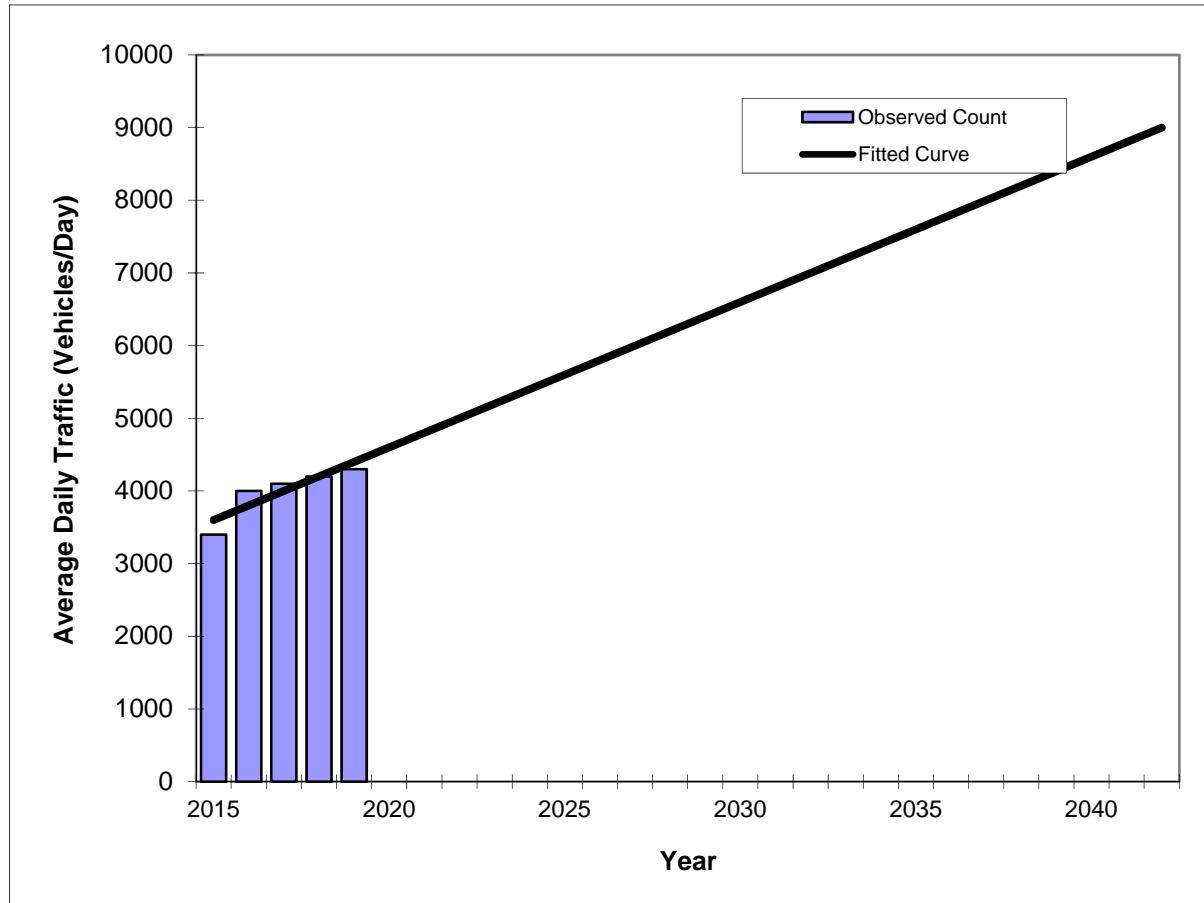
\*Axle-Adjusted

## Traffic Trends - V03.a

TURNPIKE EXT SB OFF RAMP TO NW 106TH ST, M34C -- 87471507

FIN#	1234
Location	8

County:	Turnpike (97)
Station #:	0343
Highway:	PIKE EXT SB OFF RAMP TO NW 106TH ST



** Annual Trend Increase:	200
Trend R-squared:	80.00%
Trend Annual Historic Growth Rate:	5.56%
Trend Growth Rate (2019 to Design Year):	4.55%
Printed:	1-Nov-23

Straight Line Growth Option

Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	3400	3600
2016	4000	3800
2017	4100	4000
2018	4200	4200
2019	4300	4400
2020	4400	4600
2025	N/A	5600
2023	N/A	5200
2033	N/A	7200
TRANPLAN Forecasts/Trends		

\*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION  
 TRANSPORTATION STATISTICS OFFICE  
 2022 HISTORICAL AADT REPORT

COUNTY: 97 - FL. TURNPIKE

SITE: 0343 - TURNPIKE EXT SB OFF RAMP TO NW 106TH ST, M34C

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2022	2850 C	0	0	8.00		5.80
2021	2850 C	S 2850	0	8.00	99.90	5.90
2020	3500 C	S 3500	0	8.00	99.90	8.00
2019	4250 C	S 4250	0	8.00		6.80
2018	4150 C	S 4150	0	9.00	99.90	7.50
2017	4100 C	S 4100	0	9.00	99.90	7.00
2016	3950 C	S 3950	0	9.00	99.90	7.70
2015	3350 C	S 3350	0	9.00	99.90	7.30
2014	2950 C	S 2950		9.00		7.40
2013	2600 C	S 2600	0	9.00		7.60
2012	2400 E	S 2400	0	9.00		6.30

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

## Chapter 4. Multimodal Transportation Impact Analysis

**Table 8** summarizes the historical AADT on the roadway facility.

**Table 8 | Example Application of Trends Spreadsheet, Historical Volumes (Duval County, Site 0949)**

Year	Volume (AADT)
2010	109,000
2011	119,500
2012	113,000
2013	115,500
2014	117,000
2015	127,000
2016	129,000
2017	128,000
2018	132,500
2019	141,500

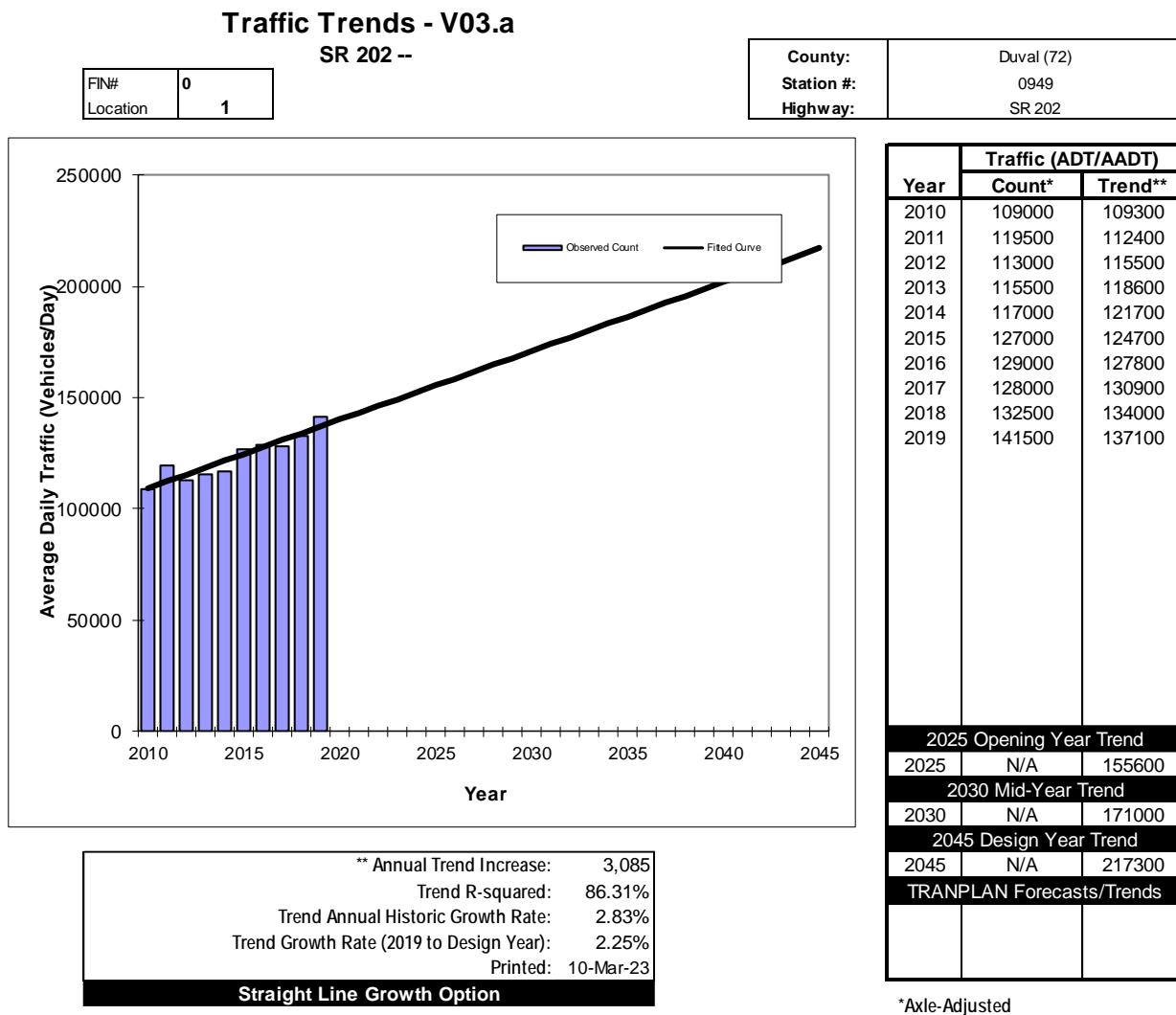
### Linear Growth

Linear growth predicts the future traffic based on a straight line developed from historic traffic growth. This model assumes a constant amount of growth in each year and does not consider a capacity restraint.

Using the Duval County example data, the results of the linear growth rate estimated an average growth of 3,085 vehicles per year as shown in *Figure 11*. The software allows users to select three analysis horizon years per evaluation run. In this example, an opening year of 2025 was evaluated along with a mid-year of 2030, and a long-term horizon of 2045.

## Chapter 4. Multimodal Transportation Impact Analysis

Figure 11 | Linear Growth Projection Using Traffic Trends Spreadsheet

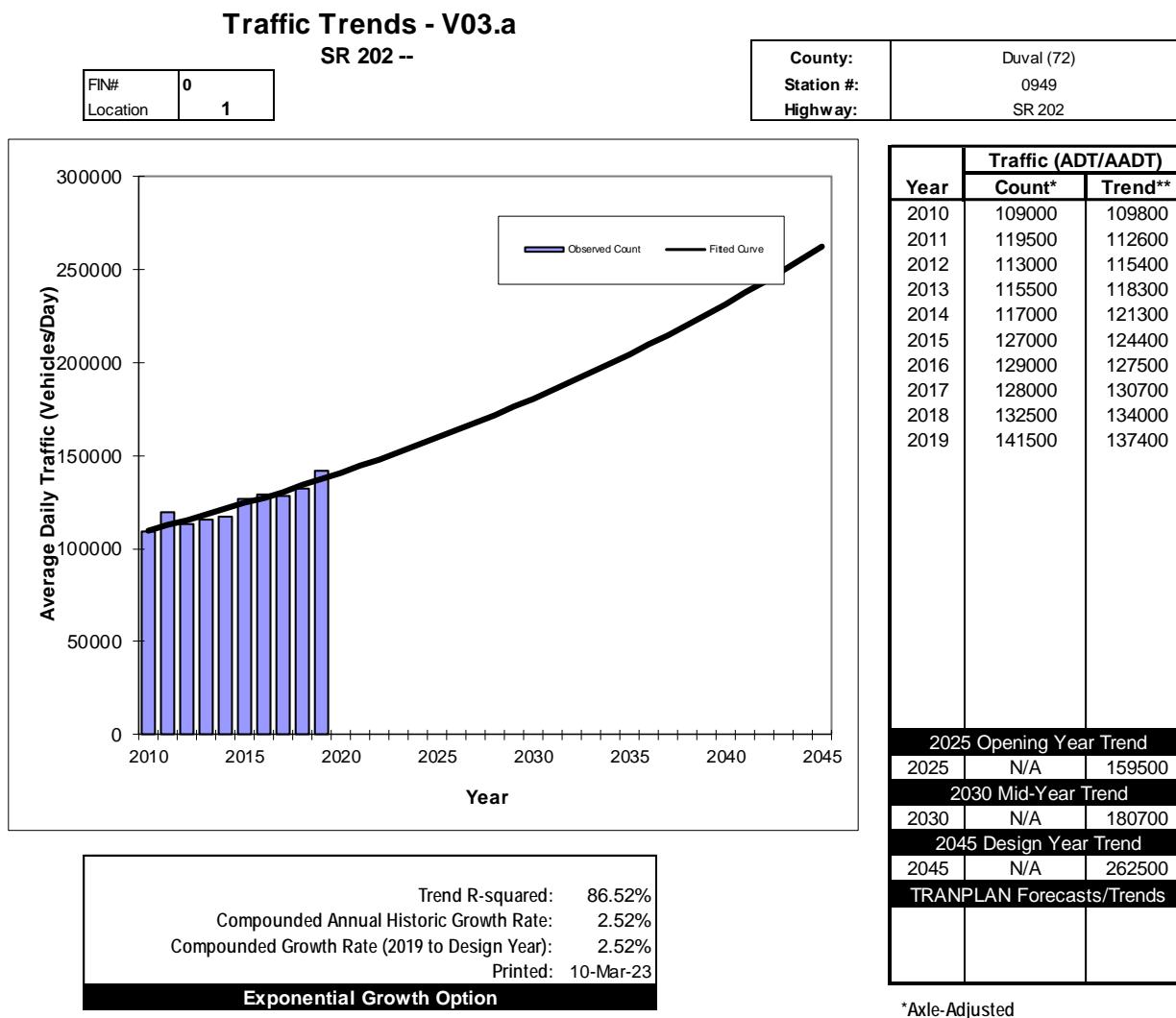


## Chapter 4. Multimodal Transportation Impact Analysis

### Exponential Growth

Exponential growth predicts the future traffic based on a percentage of growth from the previous year. This model is most applicable where there is rapid growth and capacity available. **Figure 12** illustrates application of exponential growth projection to the Duval County data.

**Figure 12 | Exponential Growth Projection Using Traffic Trends Spreadsheet**

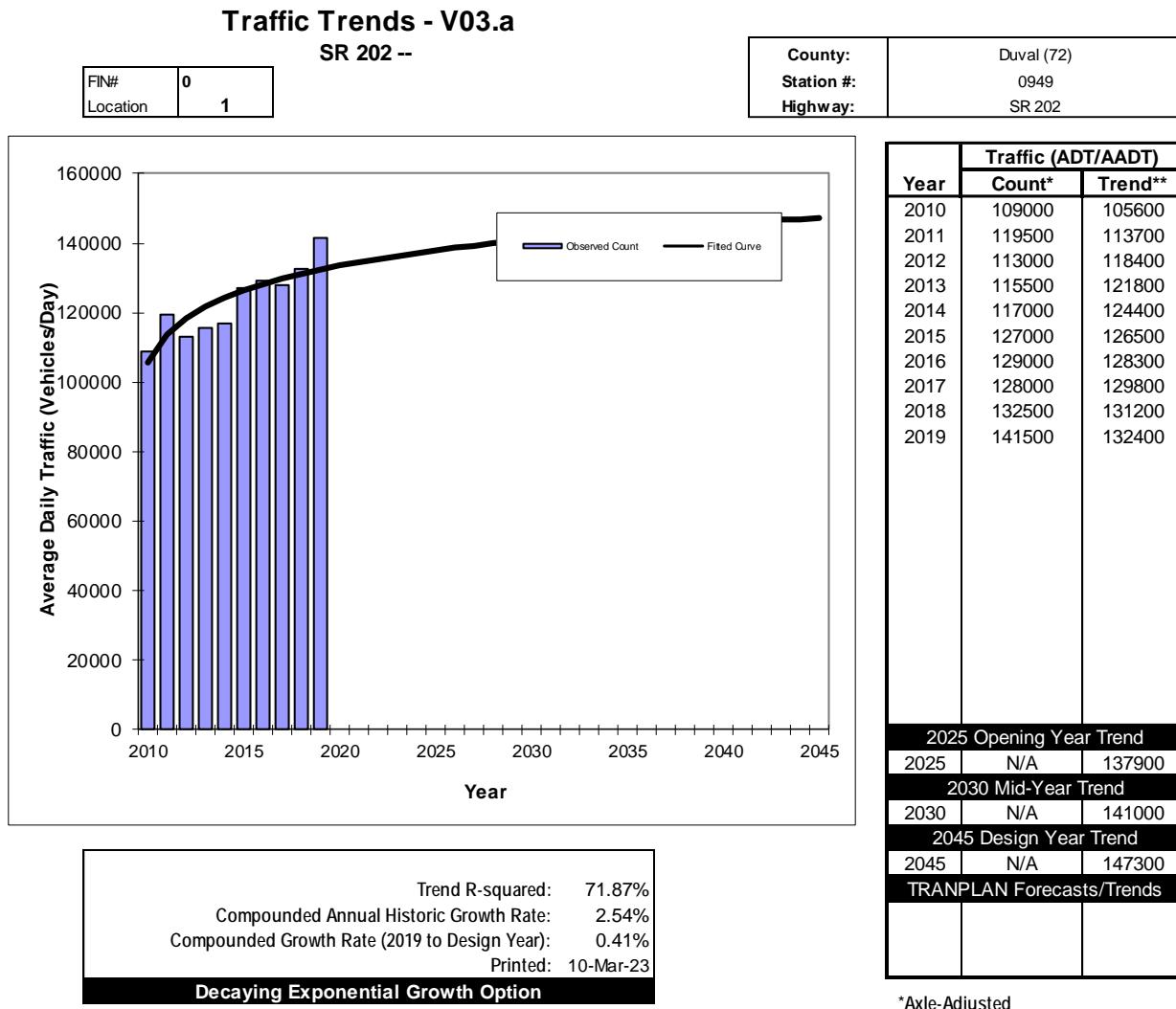


## Chapter 4. Multimodal Transportation Impact Analysis

### Decaying Exponential Growth

Decaying Exponential Growth is used to project future traffic in areas with a declining rate of growth over the analysis period. This model form is recommended for site impact analysis in more built out areas. **Figure 13** illustrates application of exponential growth projection to the Duval County data.

Figure 13 | Decaying Exponential Growth Projection Using Traffic Trends Spreadsheet



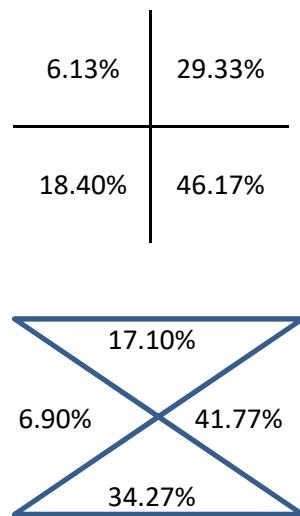
# **Cardinal Distribution**

**Cardinal Distribution**  
**Midtown Doral Phases IV, V, and VI**

23188

TAZ 687

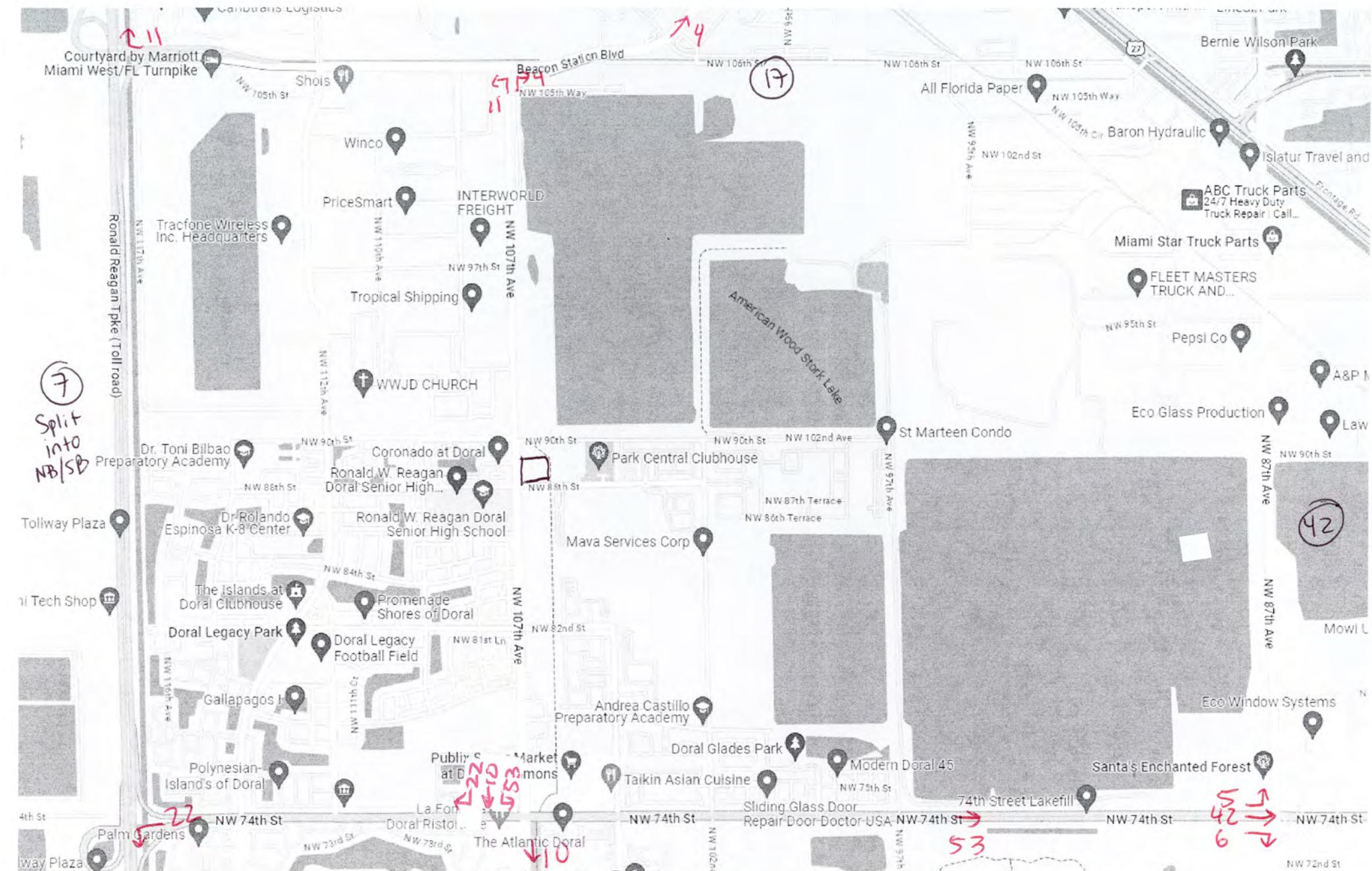
DIRECTION	2015	2045	2025
NNE	12.2%	14.8%	13.1%
ENE	17.2%	14.4%	16.3%
ESE	27.1%	22.3%	25.5%
SSE	20.5%	21.0%	20.7%
SSW	12.5%	15.8%	13.6%
WSW	5.4%	3.6%	4.8%
WNW	2.1%	2.1%	2.1%
NNW	3.0%	6.1%	4.0%











## Phase VI

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# **Appendix D**

## **2023 FDOT Directional Volumes Table**

## **Volume Development Worksheets**

## **Intersection Capacity Analysis Worksheets**

# **2023 FDOT Directional Volumes Table**

# C2T, C4, C5, & C6

## Motor Vehicle Arterial Generalized Service Volume Tables



### Peak Hour Directional

	B	C	D	E
1 Lane	*	720	940	**
2 Lane	*	1,140	1,640	**
3 Lane	*	2,120	2,510	**

### Peak Hour Two-Way

	B	C	D	E
2 Lane	*	1,310	1,710	**
4 Lane	*	2,070	2,980	**
6 Lane	*	3,850	4,560	**

### AADT

	B	C	D	E
2 Lane	*	13,800	18,000	**
4 Lane	*	21,800	31,400	**
6 Lane	*	40,500	48,000	**



	B	C	D	E
1 Lane	*	*	870	1,190
2 Lane	*	1,210	1,790	2,020
3 Lane	*	2,210	2,810	2,990
4 Lane	*	2,590	3,310	3,510

	B	C	D	E
2 Lane	*	*	1,580	2,160
4 Lane	*	2,200	3,250	3,670
6 Lane	*	4,020	5,110	5,440
8 Lane	*	4,710	6,020	6,380

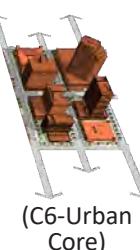
	B	C	D	E
2 Lane	*	*	17,600	24,000
4 Lane	*	24,400	36,100	40,800
6 Lane	*	44,700	56,800	60,400
8 Lane	*	52,300	66,900	70,900



	B	C	D	E
1 Lane	*	*	690	1,080
2 Lane	*	1,290	1,900	2,130
3 Lane	*	1,410	2,670	3,110
4 Lane	*	2,910	3,560	3,640

	B	C	D	E
2 Lane	*	*	1,250	1,960
4 Lane	*	2,350	3,450	3,870
6 Lane	*	2,560	4,850	5,650
8 Lane	*	5,290	6,470	6,620

	B	C	D	E
2 Lane	*	*	13,900	21,800
4 Lane	*	26,100	38,300	43,000
6 Lane	*	28,400	53,900	62,800
8 Lane	*	58,800	71,900	73,600



	B	C	D	E
1 Lane	*	***	790	1,030
2 Lane	*	***	1,490	1,920
3 Lane	*	***	2,730	2,940
4 Lane	*	***	3,250	3,490

	B	C	D	E
2 Lane	*	***	1,440	1,870
4 Lane	*	***	2,710	3,490
6 Lane	*	***	4,960	5,350
8 Lane	*	***	5,910	6,350

	B	C	D	E
2 Lane	*	***	16,000	20,800
4 Lane	*	***	30,100	38,800
6 Lane	*	***	55,100	59,400
8 Lane	*	***	65,700	70,600

### Adjustment Factors

The peak hour directional service volumes should be adjusted by multiplying by 1.2 for one-way facilities  
The AADT service volumes should be adjusted by multiplying 0.6 for one way facilities  
Roadway with an Exclusive Left Turn Lane(s): Multiply by 1.05  
2 lane Undivided Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.80

Exclusive right turn lane(s): Multiply by 1.05  
Multilane Undivided Roadway with an Exclusive Left Turn Lane(s): Multiply by 0.95  
Multilane Roadway with No Exclusive Left Turn Lane(s): Multiply by 0.75  
Non-State Signalized Roadway: Multiply by 0.90

This table does not constitute a standard and should be used only for general planning applications. The table should not be used for corridor or intersection design, where more refined techniques exist.

\*Cannot be achieved using table input value defaults. \*\*Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached.

\*\*\*LOS C thresholds are not applicable for C6 as C6 roadway facilities are neither planned nor designed to achieve automobile LOS C.

# **Volume Development Worksheets**

Midtown Doral Phases IV, V, and VI - AM Intersection Assignment

2019-2020 growth years: 0

INTERSECTION	MOVEMENT	Raw Traffic Volumes	adjusted to PSCF 1.05	adjusted to PSCF 1.08	Grown to 2023	Adjusted 2023 1.16	Existing (2023)	BACKGROUND Growth rate: 2.16% No. of years: 2	COMMITTED DEVELOPMENTS	FUTURE W/O PROJ (2025)	Phases IV and V			Phase VI			FUTURE WITH PROJECT (2025)	
											IN 46	OUT 114	Total 160	IN 32	OUT 68	Total 100		
1) NW 107th Avenue / NW 88th Street (U)	NBL	18	19			19	20		12	31	0%	0%	0	0%	0%	0	31	
	NBT	465	488			488	509		61	570	0%	15%	17	60%	0%	19	607	
	NBR	91	96			96	100		0	107	0%	0%	0	0%	0%	0	107	
	SBU	0	0			0	0		0	0	0%	0%	0	10%	0%	5	5	
	SBL	3	3			3	3		0	3	10%	0%	5	0%	0%	0	8	
	SBT	414	435			435	454		35	489	5%	0%	2	0%	0%	0	491	
	SBR	12	13			13	14		0	14	0%	0%	0	0%	0%	0	14	
	EBU	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	EBL	4	4			4	4		0	4	0%	0%	0	0%	0%	0	4	
	EBT	16	17			17	18		0	18	0%	0%	0	0%	0%	0	18	
PHF = 0.94	EBC	18	19			19	20		9	29	0%	0%	0	0%	0%	0	29	
	WBU	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	WBL	166	174			174	182		5	197	0%	0%	0	0%	0%	58	245	
	WBT	23	24			24	25		0	26	0%	0%	0	0%	0%	0	25	
	WBR	24	25			25	26		0	26	0%	0%	0	0%	0%	0	26	
	TOTAL	1,254	1,317				1,317	1,375		128	1,503	15%	15%	24	75%	85%	82	1,609
2) NW 107th Avenue / NW 86th Street (U)	NBL	178	187			187	195		0	195	0%	0%	0	0%	0%	0	195	
	NBT	550	578			578	603		80	683	70%	0%	32	60%	0%	19	734	
	NBR	0	0			0	0		0	0	15%	0%	7	0%	0%	0	7	
	SBL	0	0			0	0		0	0	5%	0%	2	0%	0%	0	2	
	SBT	587	616			616	643		49	692	0%	0%	0	0%	85%	58	750	
	SBR	11	12			12	13		0	13	0%	0%	0	0%	0%	0	13	
	EBL	21	22			22	23		0	23	0%	0%	0	0%	0%	0	23	
	EBT	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	EBC	172	181			181	189		0	199	0%	0%	0	0%	0%	0	189	
	WBU	0	0			0	0		0	0	0%	40%	46	0%	0%	0	46	
PHF = 0.92	WBL	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	WBT	0	0			0	0		0	0	0%	5%	6	0%	0%	0	6	
	WBR	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	TOTAL	1,519	1,596				1,596	1,666		128	1,794	90%	45%	93	60%	85%	77	1,964
3) NW 107th Avenue / NW 82nd Street (U)	NBL	0	0			0	0		37	37	0%	0%	0	0%	0%	0	37	
	NBT	96	101			101	105		9	115	0%	0%	0	0%	0%	0	115	
	NBR	673	707			707	738		121	859	85%	0%	39	60%	0%	19	917	
	NBR	60	63			63	66		48	114	0%	0%	0	0%	0%	0	114	
	SBU	0	0			0	0		28	26	0%	0%	0	0%	0%	0	28	
	SBL	68	71			71	74		9	83	0%	0%	0	0%	0%	0	63	
	SBT	839	881			881	919		174	1,094	0%	40%	46	0%	85%	58	1,197	
	SBR	28	29			29	30		5	35	0%	0%	0	0%	0%	0	35	
	EBU	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	EBL	2	2			2	2		7	9	0%	0%	0	0%	0%	0	9	
PHF = 0.81	EBT	7	7			7	7		3	11	0%	0%	0	0%	0%	0	11	
	EBC	204	214			214	223		3	227	0%	0%	0	0%	0%	0	227	
	WBU	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	WBL	14	15			15	16		0	25	0%	0%	0	0%	0%	0	141	
	WBT	8	8			8	8		5	13	0%	0%	0	0%	0%	0	13	
	WBR	86	90			90	94		0	94	0%	0%	0	0%	0%	0	94	
TOTAL		2085	2188				2,188	2,284		439	2,722	85%	40%	85	60%	85%	77	2,884
4) NW 107th Avenue / NW 90th Street (U)	NBL	152	160			160	167		0	167	0%	0%	0	0%	0%	0	167	
	NBT	331	348			348	363		61	424	0%	15%	17	0%	15%	10	451	
	NBR	10	11			11	11		0	11	0%	0%	0	0%	0%	0	11	
	SBL	29	30			30	31		0	31	0%	0%	0	0%	0%	0	31	
	SBT	196	206			206	215		35	250	15%	0%	7	15%	0%	5	262	
	SBR	22	23			23	24		0	24	0%	0%	0	0%	0%	0	24	
	EBU	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	EBL	46	48			48	50		0	50	0%	0%	0	0%	0%	0	50	
	EBT	57	60			60	63		0	63	0%	0%	0	0%	0%	0	63	
	EBC	132	139			139	145		0	145	0%	0%	0	0%	0%	0	145	
PHF = 0.83	WBU	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	WBL	23	24			24	25		0	25	0%	0%	0	0%	0%	0	25	
	WBT	118	124			124	129		0	129	0%	0%	0	0%	0%	0	129	
	WBR	139	146			146	152		0	152	0%	0%	0	0%	0%	0	152	
	TOTAL	1255	1319				1,319	1,377		96	1,472	15%	15%	24	15%	15%	15	1,511
5) NW 86th Street / Project Driveway (U)	NBL	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	NBT	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	NBR	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	SBL	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	SBT	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	SBR	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	EBL	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	EBT	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	EBC	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	WBL	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
PHF = N/A	WBT	213	224			224	234		5	239	0%	0%	0	0%	0%	0	239	
	WBR	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	TOTAL	323	340				340	355		12	367	0%	0%	0	25%	85%	66	433
8) NW 88th Street / North Project Driveway (U)	NBL	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	NBT	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	NBR	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	SBL	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	SBT	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	SBR	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	EBL	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	EBT	110	116			116	121		7	128	10%	0%	5	5%	0%	0	128	
	EBC	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
	WBL	0	0			0	0		0	0	0%	0%	0	0%	0%	0	0	
PHF = N																		

**Midtown Doral Phases IV, V, and VI - PM Intersection Assignment**

2019-2020 growth years: 0

INTERSECTION	MOVEMENT	Raw Traffic Volumes	adjusted to PSCF 1.05	adjusted to PSCF 1.08	Grown to 2023	Adjusted 2023 1.12	Existing (2023)	BACKGROUND Growth rate: 2.16% No. of years: 2	COMMITTED DEVELOPMENTS	FUTURE W/O PROJ (2025)	Phases IV and V			Phase VI			FUTURE WITH PROJECT (2025)
											IN 108	OUT 79	Total 187	IN 74	OUT 58	Total 132	
1) NW 107th Avenue / NW 88th Street (U)	NBL	32	34				34	35	10	46	0%	0%	0	0%	0%	0	46
	NBT	511	537				537	560	44	604	0%	15%	12	60%	0%	44	661
	NBR	109	114				114	119	6	125	0%	0%	0	0%	0%	0	125
	SBU	0	0				0	0	0	0	0%	0%	0	15%	0%	11	11
	SLB	3	3				3	3	0	3	10%	0%	11	0%	0%	0	14
	SBT	432	454				454	474	56	529	5%	0%	5	0%	0%	0	535
	SBR	10	11				11	11	0	11	0%	0%	0	0%	0%	0	11
	EBU	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	3	3				3	3	0	3	0%	0%	0	0%	0%	0	3
	EBT	20	21				21	22	0	22	0%	0%	0	0%	0%	0	22
	EBC	12	13				13	14	12	25	0%	0%	0	0%	0%	0	25
	WBU	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
PHF = 0.96	WBL	62	65				65	68	7	75	0%	0%	0	0%	85%	49	124
	WBT	19	20				20	21	0	21	0%	0%	0	0%	0%	0	21
	WBR	17	18				18	19	0	19	0%	0%	0	0%	0%	0	19
	TOTAL	1,230	1,293				1,293	1,349	135	1,484	15%	15%	28	75%	85%	105	1,617
2) NW 107th Avenue / NW 86th Street (U)	NBL	203	213				213	222	0	222	0%	0%	0	0%	0%	0	222
	NBT	621	652				652	680	69	747	70%	76%	60	60%	0%	44	880
	NBR	0	0				0	0	0	0	15%	0%	16	0%	0%	0	16
	SLB	0	0				0	0	0	0	5%	0%	5	0%	0%	0	5
	SBT	481	505				505	527	75	602	0%	0%	0	0%	85%	49	651
	SBR	25	26				26	27	0	27	0%	0%	0	0%	0%	0	27
	EBU	28	29				29	30	0	30	0%	0%	0	0%	0%	0	30
	EBT	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	EBC	128	134				134	140	0	140	0%	0%	0	0%	0%	0	140
	WBU	0	0				0	0	0	0	0%	40%	32	0%	0%	0	32
	WBL	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	WBT	0	0				0	0	0	0	0%	0%	4	0%	0%	0	4
PHF = 0.95	WBR	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	TOTAL	1,498	1,559				1,559	1,637	135	1,762	60%	45%	133	60%	85%	93	1,988
3) NW 107th Avenue / NW 82nd Street (U)	NBL	14	15				15	16	33	48	0%	0%	0	0%	0%	0	48
	NBT	258	271				271	283	8	291	0%	0%	0	0%	0%	0	291
	NBR	900	945				945	986	198	1,184	85%	90%	92	60%	0%	44	1,320
	SLB	47	49				49	51	47	98	0%	0%	0	0%	0%	0	98
	SBT	40	42				42	44	12	56	0%	0%	0	0%	0%	0	56
	SBR	30	32				32	33	4	37	0%	0%	0	0%	0%	0	37
	EBU	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	EBL	10	11				11	11	10	21	0%	0%	0	0%	0%	0	21
	EBT	14	15				15	16	5	20	0%	0%	0	0%	0%	0	20
	EBC	139	146				146	152	5	157	0%	0%	0	0%	0%	0	157
	WBU	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	WBL	10	11				11	11	22	34	0%	0%	0	0%	0%	0	34
PHF = 0.94	WBT	15	16				16	17	4	21	0%	0%	0	0%	0%	0	21
	WBR	54	57				57	59	0	59	0%	0%	0	0%	0%	0	59
	TOTAL	2,147	2,242				2,242	2,340	454	2,794	85%	40%	123	60%	85%	93	3,010
4) NW 107th Avenue / NW 90th Street (U)	NBL	92	97				97	101	0	104	0%	0%	0	0%	0%	0	104
	NBT	373	392				392	409	44	453	0%	15%	12	0%	15%	9	474
	NBR	17	18				18	19	0	19	0%	0%	0	0%	0%	0	19
	SLB	78	82				82	86	0	86	0%	0%	0	0%	0%	0	86
	SBT	339	356				356	372	56	427	15%	0%	16	15%	0%	11	454
	SBR	13	14				14	15	0	15	0%	0%	0	0%	0%	0	15
	EBU	26	27				27	28	0	28	0%	0%	0	0%	0%	0	28
	EBL	66	69				69	72	0	72	0%	0%	0	0%	0%	0	72
	EBT	74	76				76	81	0	81	0%	0%	0	0%	0%	0	81
	EBR	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	WBU	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
PHF = 0.93	WBL	14	15				15	16	0	16	0%	0%	0	0%	0%	0	16
	WBT	73	77				77	80	0	80	0%	0%	0	0%	0%	0	80
	WBR	54	57				57	59	0	59	0%	0%	0	0%	0%	0	59
	TOTAL	1,129	1,282				1,282	1,338	100	1,428	15%	15%	28	15%	20	1486	
5) NW 86th Street / Project Driveway (U)	NBL	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	NBT	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	NBR	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	SLB	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	SBT	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	SBR	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	EBU	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	EBT	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	EBR	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	WBU	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	WBL	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
PHF = N/A	WBT	98	103				103	107	7	115	0%	0%	0	0%	0%	0	115
	WBR	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	TOTAL	230	242				242	253	13	266	10%	45%	46	0%	0%	0	312
6) NW 88th Street / South Project Driveway (U)	NBL	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	NBT	0	0				0	0	0	0	0%	45%	36	0%	0%	0	36
	NBR	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	SLB	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	SBT	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	SBR	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	EBU	132	139				139	145	6	151	0%	0%	0	0%	0%	0	151
	EBT	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	EBR	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	WBU	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
	WBL	0	0				0	0	0	0	0%	0%	0	0%	0%	0	0
PHF = 0.94	WBT	98	103				103	107	7	115	0%	0%	0	0%	0%	0	115

# **Existing Conditions**

Intersection

Intersection Delay, s/veh 19.1

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	17	19	174	24	25	19	488	96	3	435	13
Future Vol, veh/h	4	17	19	174	24	25	19	488	96	3	435	13
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	22	0	0	4	6	1	1	0	2	17
Mvmt Flow	4	18	20	185	26	27	20	519	102	3	463	14
Number of Lanes	0	1	0	0	1	1	1	2	0	0	2	0
Approach												
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			1			2			3		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			3			1			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	3			2			2			1		
HCM Control Delay	12.4			18.7			20.9			17.4		
HCM LOS	B			C			C			C		

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	10%	88%	0%	1%	0%
Vol Thru, %	0%	100%	63%	43%	12%	0%	99%	94%
Vol Right, %	0%	0%	37%	47%	0%	100%	0%	6%
Sign Control	Stop							
Traffic Vol by Lane	19	325	259	40	198	25	221	231
LT Vol	19	0	0	4	174	0	3	0
Through Vol	0	325	163	17	24	0	218	218
RT Vol	0	0	96	19	0	25	0	13
Lane Flow Rate	20	346	275	43	211	27	235	245
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.044	0.69	0.529	0.102	0.502	0.055	0.486	0.507
Departure Headway (Hd)	7.778	7.181	6.916	8.666	8.573	7.411	7.461	7.448
Convergence, Y/N	Yes							
Cap	460	502	520	412	421	483	483	483
Service Time	5.527	4.93	4.665	6.443	6.329	5.166	5.214	5.201
HCM Lane V/C Ratio	0.043	0.689	0.529	0.104	0.501	0.056	0.487	0.507
HCM Control Delay	10.9	24.5	17.2	12.4	19.7	10.6	17.1	17.7
HCM Lane LOS	B	C	C	B	C	B	C	C
HCM 95th-tile Q	0.1	5.2	3.1	0.3	2.7	0.2	2.6	2.8

Intersection

Intersection Delay, s/veh 16.8

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	21	13	65	20	18	34	537	114	3	454	11
Future Vol, veh/h	3	21	13	65	20	18	34	537	114	3	454	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	42	0	0	0	0	2	1	33	1	0
Mvmt Flow	3	22	14	68	21	19	35	559	119	3	473	11
Number of Lanes	0	1	0	0	1	1	1	2	0	0	2	0
Approach												
Opposing Approach	WB			WB			NB			SB		
Opposing Lanes	2			1			2			3		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			3			1			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	3			2			2			1		
HCM Control Delay	11.6			12.9			18.3			16		
HCM LOS	B			B			C			C		

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	8%	76%	0%	1%	0%
Vol Thru, %	0%	100%	61%	57%	24%	0%	99%	95%
Vol Right, %	0%	0%	39%	35%	0%	100%	0%	5%
Sign Control	Stop							
Traffic Vol by Lane	34	358	293	37	85	18	230	238
LT Vol	34	0	0	3	65	0	3	0
Through Vol	0	358	179	21	20	0	227	227
RT Vol	0	0	114	13	0	18	0	11
Lane Flow Rate	35	373	305	39	89	19	240	248
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.068	0.667	0.521	0.087	0.208	0.038	0.485	0.461
Departure Headway (Hd)	6.91	6.438	6.146	8.151	8.468	7.365	7.29	6.701
Convergence, Y/N	Yes							
Cap	516	559	583	442	427	489	491	533
Service Time	4.69	4.218	3.925	5.855	6.17	5.067	5.077	4.488
HCM Lane V/C Ratio	0.068	0.667	0.523	0.088	0.208	0.039	0.489	0.465
HCM Control Delay	10.2	21.3	15.5	11.6	13.4	10.4	16.8	15.2
HCM Lane LOS	B	C	C	B	B	B	C	C
HCM 95th-tile Q	0.2	4.9	3	0.3	0.8	0.1	2.6	2.4

Intersection

Intersection Delay, s/veh 22.7

Intersection LOS C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	181	187	578	616	12
Future Vol, veh/h	22	181	187	578	616	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	1	1	1	2	0
Mvmt Flow	24	197	203	628	670	13
Number of Lanes	1	0	1	2	2	0
Approach	EB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		2		3	
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	2		1		0	
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	3		0		1	
HCM Control Delay	16		14.3		35	
HCM LOS	C		B		D	

Lane	NBLn1	NBLn2	NBLn3	EBln1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	11%	0%	0%
Vol Thru, %	0%	100%	100%	0%	100%	94%
Vol Right, %	0%	0%	0%	89%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	187	289	289	203	411	217
LT Vol	187	0	0	22	0	0
Through Vol	0	289	289	0	411	205
RT Vol	0	0	0	181	0	12
Lane Flow Rate	203	314	314	221	446	236
Geometry Grp	7	7	7	7	8	8
Degree of Util (X)	0.398	0.57	0.417	0.451	0.894	0.467
Departure Headway (Hd)	7.044	6.534	4.783	7.36	7.208	7.12
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	514	556	757	490	504	506
Service Time	4.755	4.246	2.495	5.099	4.933	4.858
HCM Lane V/C Ratio	0.395	0.565	0.415	0.451	0.885	0.466
HCM Control Delay	14.3	17.6	10.9	16	45.1	16
HCM Lane LOS	B	C	B	C	E	C
HCM 95th-tile Q	1.9	3.6	2.1	2.3	10	2.4

Intersection

Intersection Delay, s/veh 15.5  
Intersection LOS C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	134	213	652	505	26
Future Vol, veh/h	29	134	213	652	505	26
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	31	141	224	686	532	27
Number of Lanes	1	0	1	2	2	0
Approach	EB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		2		3	
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	2		1		0	
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	3		0		1	
HCM Control Delay	13.4		13.3		19.7	
HCM LOS	B		B		C	

Lane	NBLn1	NBLn2	NBLn3	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	18%	0%	0%
Vol Thru, %	0%	100%	100%	0%	100%	87%
Vol Right, %	0%	0%	0%	82%	0%	13%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	213	326	326	163	337	194
LT Vol	213	0	0	29	0	0
Through Vol	0	326	326	0	337	168
RT Vol	0	0	0	134	0	26
Lane Flow Rate	224	343	343	172	354	205
Geometry Grp	7	7	7	7	8	8
Degree of Util (X)	0.405	0.572	0.404	0.337	0.679	0.387
Departure Headway (Hd)	6.507	6	4.241	7.078	6.898	6.803
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	552	601	844	506	521	528
Service Time	4.266	3.759	1.999	4.854	4.668	4.573
HCM Lane V/C Ratio	0.406	0.571	0.406	0.34	0.679	0.388
HCM Control Delay	13.7	16.5	9.9	13.4	23.1	13.8
HCM Lane LOS	B	C	A	B	C	B
HCM 95th-tile Q	1.9	3.6	2	1.5	5.1	1.8

Intersection

Int Delay, s/veh 10.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		↑	↓		↑	↑↓		↑	↑↑	
Traffic Vol, veh/h	2	7	214	15	8	90	101	707	63	71	881	29
Future Vol, veh/h	2	7	214	15	8	90	101	707	63	71	881	29
Conflicting Peds, #/hr	6	0	1	1	0	6	9	0	6	6	0	9
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	160	-	-	300	-	-	165	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	0	0	1	0	0	0	0	1	3	0	1	11
Mvmt Flow	2	9	264	19	10	111	125	873	78	88	1088	36

Major/Minor	Minor2	Minor1			Major1			Major2			
Conflicting Flow All	1989	2498	572	1894	2477	488	1133	0	0	957	0
Stage 1	1291	1291	-	1168	1168	-	-	-	-	-	-
Stage 2	698	1207	-	726	1309	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.92	7.5	6.5	6.9	4.1	-	-	4.1	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.31	3.5	4	3.3	2.2	-	-	2.2	-
Pot Cap-1 Maneuver	37	29	466	44	30	531	624	-	-	727	-
Stage 1	176	236	-	209	270	-	-	-	-	-	-
Stage 2	402	259	-	387	231	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-
Mov Cap-1 Maneuver	19	20	462	~ 13	21	525	619	-	-	723	-
Mov Cap-2 Maneuver	75	76	-	~ 13	58	-	-	-	-	-	-
Stage 1	139	205	-	166	214	-	-	-	-	-	-
Stage 2	240	205	-	139	201	-	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	31.8	127.6			1.4			0.8		
HCM LOS	D	F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	619	-	-	75	398	13	317	723	-	-
HCM Lane V/C Ratio	0.201	-	-	0.033	0.686	1.425	0.382	0.121	-	-
HCM Control Delay (s)	12.3	-	-	54.6	31.6\$	809.5	23.2	10.7	-	-
HCM Lane LOS	B	-	-	F	D	F	C	B	-	-
HCM 95th %tile Q(veh)	0.7	-	-	0.1	5	3	1.7	0.4	-	-

Notes

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

Intersection

Int Delay, s/veh 7.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↑ ↗	↑ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Vol, veh/h	11	15	146	11	16	57	15	271	945	49	42	647	32
Future Vol, veh/h	11	15	146	11	16	57	15	271	945	49	42	647	32
Conflicting Peds, #/hr	0	0	3	3	0	0	2	10	0	4	4	0	10
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free						
RT Channelized	-	-	None	-	-	None	-	-	-	None	-	-	None
Storage Length	160	-	-	300	-	-	-	165	-	-	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	2	0	1	1	2	3	1	10
Mvmt Flow	12	16	155	12	17	61	16	288	1005	52	45	688	34

Major/Minor	Minor2	Minor1			Major1			Major2		
Conflicting Flow All	1924	2474	374	2088	2465	533	722	732	0	0
Stage 1	805	805	-	1643	1643	-	-	-	-	-
Stage 2	1119	1669	-	445	822	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.94	6.4	4.12	-	4.16
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.32	2.5	2.21	-	2.23
Pot Cap-1 Maneuver	41	30	629	31	31	491	507	875	-	646
Stage 1	347	398	-	106	159	-	-	-	-	-
Stage 2	224	155	-	567	391	-	-	-	-	-
Platoon blocked, %									-	-
Mov Cap-1 Maneuver	17	17	621	12	18	489	814	814	-	644
Mov Cap-2 Maneuver	46	45	-	37	40	-	-	-	-	-
Stage 1	215	367	-	66	99	-	-	-	-	-
Stage 2	102	97	-	377	360	-	-	-	-	-

Approach	EB	WB			NB			SB		
HCM Control Delay, s	40.1	69.1			2.7			0.6		
HCM LOS	E	F								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	814	-	-	46	283	37	141	644	-	-
HCM Lane V/C Ratio	0.374	-	-	0.254	0.605	0.316	0.551	0.069	-	-
HCM Control Delay (s)	12	-	-	108.1	35.5	142.1	58.1	11	-	-
HCM Lane LOS	B	-	-	F	E	F	F	B	-	-
HCM 95th %tile Q(veh)	1.7	-	-	0.9	3.6	1	2.7	0.2	-	-

Intersection

Intersection Delay, s/veh 55.7

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↔		↑	↑	↑		↔	
Traffic Vol, veh/h	48	60	139	24	124	146	160	348	11	30	206	23
Future Vol, veh/h	48	60	139	24	124	146	160	348	11	30	206	23
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	4	0	2	4	0	0	1	1	10	0	2	0
Mvmt Flow	58	72	167	29	149	176	193	419	13	36	248	28
Number of Lanes	1	1	0	0	1	0	1	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				2			1			3	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				3			2			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	3				1			1			2	
HCM Control Delay	27				64.8			65.5			52.9	
HCM LOS	D				F			F			F	

Lane	NBLn1	NBLn2	NBLn3	EBln1	EBln2	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	100%	0%	8%	12%
Vol Thru, %	0%	100%	0%	0%	30%	42%	80%
Vol Right, %	0%	0%	100%	0%	70%	50%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	160	348	11	48	199	294	259
LT Vol	160	0	0	48	0	24	30
Through Vol	0	348	0	0	60	124	206
RT Vol	0	0	11	0	139	146	23
Lane Flow Rate	193	419	13	58	240	354	312
Geometry Grp	7	7	7	8	8	8	8
Degree of Util (X)	0.508	1.045	0.031	0.173	0.653	0.94	0.866
Departure Headway (Hd)	9.495	8.974	8.404	11.079	9.968	9.815	10.274
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	384	411	430	326	364	372	356
Service Time	7.157	6.636	6.067	8.779	7.668	7.515	7.974
HCM Lane V/C Ratio	0.503	1.019	0.03	0.178	0.659	0.952	0.876
HCM Control Delay	21.5	87.4	11.3	16.1	29.6	64.8	52.9
HCM Lane LOS	C	F	B	C	D	F	F
HCM 95th-tile Q	2.8	13.7	0.1	0.6	4.4	10.1	8.1

Intersection

Intersection Delay, s/veh 45.4

Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↔		↑	↑	↑		↔	
Traffic Vol, veh/h	27	69	78	15	77	57	97	392	18	82	356	14
Future Vol, veh/h	27	69	78	15	77	57	97	392	18	82	356	14
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	8	2	1	0	1	11	0	2	0	1	1	8
Mvmt Flow	29	74	84	16	83	61	104	422	19	88	383	15
Number of Lanes	1	1	0	0	1	0	1	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			2			1			3		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			3			2			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	3			1			1			2		
HCM Control Delay	15.8			16.9			29.2			84.4		
HCM LOS	C			C			D			F		

Lane	NBLn1	NBLn2	NBLn3	EBln1	EBln2	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	100%	0%	10%	18%
Vol Thru, %	0%	100%	0%	0%	47%	52%	79%
Vol Right, %	0%	0%	100%	0%	53%	38%	3%
Sign Control	Stop						
Traffic Vol by Lane	97	392	18	27	147	149	452
LT Vol	97	0	0	27	0	15	82
Through Vol	0	392	0	0	69	77	356
RT Vol	0	0	18	0	78	57	14
Lane Flow Rate	104	422	19	29	158	160	486
Geometry Grp	7	7	7	8	8	8	8
Degree of Util (X)	0.215	0.813	0.033	0.075	0.365	0.379	1.053
Departure Headway (Hd)	7.679	7.2	6.446	9.674	8.663	8.878	7.796
Convergence, Y/N	Yes						
Cap	470	506	559	372	417	409	471
Service Time	5.379	4.9	4.146	7.374	6.363	6.578	5.496
HCM Lane V/C Ratio	0.221	0.834	0.034	0.078	0.379	0.391	1.032
HCM Control Delay	12.5	34.2	9.4	13.2	16.3	16.9	84.4
HCM Lane LOS	B	D	A	B	C	C	F
HCM 95th-tile Q	0.8	7.8	0.1	0.2	1.6	1.7	15.1

HCM 7th Signalized Intersection Summary  
10: NW 107th Avenue & NW 74th Street

Existing AM  
03/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	134	1365	237	256	497	278	179	534	331	581	684	122
Future Volume (veh/h)	134	1365	237	256	497	278	179	534	331	581	684	122
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1870	1811	1870	1856	1618	1885	1870	1885	1870	1885	1885	1885
Adj Flow Rate, veh/h	144	1468	255	275	534	299	192	574	0	625	735	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	6	2	3	19	1	2	1	2	1	1	1
Cap, veh/h	182	1893	598	299	1843	657	240	675		637	1080	
Arrive On Green	0.05	0.38	0.38	0.09	0.42	0.42	0.07	0.19	0.00	0.18	0.30	0.00
Sat Flow, veh/h	3456	4944	1562	3428	4418	1574	3456	3582	1585	3483	3582	1598
Grp Volume(v), veh/h	144	1468	255	275	534	299	192	574	0	625	735	0
Grp Sat Flow(s), veh/h/ln	1728	1648	1562	1714	1473	1574	1728	1791	1585	1742	1791	1598
Q Serve(g_s), s	7.4	46.9	21.7	14.3	14.4	24.6	9.9	27.9	0.0	32.2	32.5	0.0
Cycle Q Clear(g_c), s	7.4	46.9	21.7	14.3	14.4	24.6	9.9	27.9	0.0	32.2	32.5	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	1893	598	299	1843	657	240	675		637	1080	
V/C Ratio(X)	0.79	0.78	0.43	0.92	0.29	0.46	0.80	0.85		0.98	0.68	
Avail Cap(c_a), veh/h	244	1893	598	299	1843	657	363	675		637	1080	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	84.3	48.8	41.0	81.5	34.8	37.7	82.5	70.6	0.0	73.3	55.2	0.0
Incr Delay (d2), s/veh	10.4	3.2	2.2	31.7	0.4	2.3	12.9	12.8	0.0	31.1	3.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	6.4	27.0	13.6	12.2	9.1	15.1	8.4	20.0	0.0	23.8	21.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.7	52.0	43.2	113.3	35.2	40.0	95.4	83.4	0.0	104.4	58.7	0.0
LnGrp LOS	F	D	D	F	D	D	F	F		F	E	
Approach Vol, veh/h		1867			1108			766		1360		
Approach Delay, s/veh		54.1			55.9			86.4		79.7		
Approach LOS		D			E			F		E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.8	82.2	40.0	41.0	23.0	76.0	19.6	61.4				
Change Period (Y+Rc), s	7.3	* 7.1	* 7.1	* 7.1	7.3	* 7.1	* 7.1	* 7.1				
Max Green Setting (Gmax), s	12.7	* 72	* 33	* 34	15.7	* 69	* 19	* 48				
Max Q Clear Time (g_c+l1), s	9.4	26.6	34.2	29.9	16.3	48.9	11.9	34.5				
Green Ext Time (p_c), s	0.1	1.4	0.0	1.5	0.0	4.2	0.7	4.6				

Intersection Summary

HCM 7th Control Delay, s/veh

66.1

HCM 7th LOS

E

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: NW 107th Avenue & NW 74th Street

Existing AM

03/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	1365	237	256	497	278	179	534	331	581	684	122
Future Volume (vph)	134	1365	237	256	497	278	179	534	331	581	684	122
Lane Group Flow (vph)	144	1468	255	275	534	299	192	574	356	625	735	131
Turn Type	Prot	NA	Perm									
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases				6		2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.3	34.1	34.1	14.3	34.1	34.1	14.1	41.0	41.0	14.1	43.1	43.1
Total Split (s)	20.0	76.0	76.0	23.0	79.0	79.0	26.0	41.0	41.0	40.0	55.0	55.0
Total Split (%)	11.1%	42.2%	42.2%	12.8%	43.9%	43.9%	14.4%	22.8%	22.8%	22.2%	30.6%	30.6%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.9	2.7	2.7	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.1	7.1	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max
Act Effct Green (s)	11.5	68.9	68.9	15.7	73.1	73.1	16.8	33.9	33.9	32.9	50.0	50.0
Actuated g/C Ratio	0.06	0.38	0.38	0.09	0.41	0.41	0.09	0.19	0.19	0.18	0.28	0.28
v/c Ratio	0.65	0.78	0.35	0.92	0.30	0.36	0.60	0.85	0.84	0.98	0.74	0.24
Control Delay (s/veh)	96.6	52.6	11.2	116.7	36.9	4.5	86.3	83.5	58.2	104.5	64.7	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	96.6	52.6	11.2	116.7	36.9	4.5	86.3	83.5	58.2	104.5	64.7	12.7
LOS	F	D	B	F	D	A	F	F	E	F	E	B
Approach Delay (s/veh)		50.4			48.0			76.0			76.9	
Approach LOS		D			D			E			E	
Queue Length 50th (ft)	87	561	46	169	157	0	114	350	245	385	421	17
Queue Length 95th (ft)	128	621	121	#262	192	63	159	#427	#421	#518	506	77
Internal Link Dist (ft)		441			364			695			615	
Turn Bay Length (ft)	300		290	500		300	485		530	365		230
Base Capacity (vph)	242	1872	716	296	1769	815	360	673	419	633	993	525
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.78	0.36	0.93	0.30	0.37	0.53	0.85	0.85	0.99	0.74	0.25

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay (s/veh): 62.1

Intersection LOS: E

Intersection Capacity Utilization 88.8%

ICU Level of Service E

Analysis Period (min) 15

## Timings

10: NW 107th Avenue & NW 74th Street

Existing AM

03/22/2024

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: NW 107th Avenue & NW 74th Street



HCM 7th Signalized Intersection Summary  
10: NW 107th Avenue & NW 74th Street

Existing PM  
03/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	225	831	223	441	1503	383	300	639	332	333	623	125
Future Volume (veh/h)	225	831	223	441	1503	383	300	639	332	333	623	125
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1885	1796	1885	1900	1856	1900	1885	1900	1900	1900	1885	1870
Adj Flow Rate, veh/h	230	848	228	450	1534	391	306	652	0	340	636	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	7	1	0	3	0	1	0	0	0	1	2
Cap, veh/h	267	2041	653	482	2414	750	353	720		310	668	
Arrive On Green	0.08	0.42	0.42	0.14	0.48	0.48	0.10	0.20	0.00	0.09	0.19	0.00
Sat Flow, veh/h	3483	4904	1570	3510	5066	1573	3483	3610	1610	3510	3582	1585
Grp Volume(v), veh/h	230	848	228	450	1534	391	306	652	0	340	636	0
Grp Sat Flow(s), veh/h/ln	1742	1635	1570	1755	1689	1573	1742	1805	1610	1755	1791	1585
Q Serve(g_s), s	11.8	22.0	17.9	22.8	40.9	31.2	15.6	31.8	0.0	15.9	31.6	0.0
Cycle Q Clear(g_c), s	11.8	22.0	17.9	22.8	40.9	31.2	15.6	31.8	0.0	15.9	31.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	267	2041	653	482	2414	750	353	720		310	668	
V/C Ratio(X)	0.86	0.42	0.35	0.93	0.64	0.52	0.87	0.91		1.10	0.95	
Avail Cap(c_a), veh/h	284	2041	653	482	2414	750	404	720		310	668	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	82.1	37.1	35.9	76.8	35.4	32.8	79.7	70.4	0.0	82.1	72.4	0.0
Incr Delay (d2), s/veh	21.1	0.6	1.5	25.4	1.3	2.6	18.8	17.1	0.0	79.5	24.9	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%), veh/ln	10.1	13.8	11.6	17.6	23.8	18.2	12.5	22.9	0.0	16.5	23.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	103.3	37.7	37.4	102.2	36.7	35.4	98.4	87.5	0.0	161.5	97.3	0.0
LnGrp LOS	F	D	D	F	D	D	F	F		F	F	
Approach Vol, veh/h		1306			2375			958			976	
Approach Delay, s/veh		49.2			48.9			91.0			119.7	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.1	92.9	23.0	43.0	32.0	82.0	25.3	40.7				
Change Period (Y+Rc), s	7.3	* 7.1	* 7.1	* 7.1	7.3	* 7.1	* 7.1	* 7.1				
Max Green Setting (Gmax), s	14.7	* 85	* 16	* 36	24.7	* 75	* 21	* 31				
Max Q Clear Time (g_c+l1), s	13.8	42.9	17.9	33.8	24.8	24.0	17.6	33.6				
Green Ext Time (p_c), s	0.1	4.8	0.0	1.0	0.0	2.2	0.7	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh

68.4

HCM 7th LOS

E

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: NW 107th Avenue & NW 74th Street

Existing PM

03/22/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	225	831	223	441	1503	383	300	639	332	333	623	125
Future Volume (vph)	225	831	223	441	1503	383	300	639	332	333	623	125
Lane Group Flow (vph)	230	848	228	450	1534	391	306	652	339	340	636	128
Turn Type	Prot	NA	Perm									
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases				6		2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.3	34.1	34.1	14.3	34.1	34.1	14.1	43.0	43.0	14.1	38.0	38.0
Total Split (s)	22.0	82.0	82.0	32.0	92.0	92.0	28.0	43.0	43.0	23.0	38.0	38.0
Total Split (%)	12.2%	45.6%	45.6%	17.8%	51.1%	51.1%	15.6%	23.9%	23.9%	12.8%	21.1%	21.1%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.9	2.7	2.7	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.1	7.1	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max
Act Effct Green (s)	14.3	75.1	75.1	24.5	85.3	85.3	20.3	35.9	35.9	15.9	31.5	31.5
Actuated g/C Ratio	0.08	0.42	0.42	0.14	0.47	0.47	0.11	0.20	0.20	0.09	0.18	0.18
v/c Ratio	0.83	0.41	0.29	0.94	0.64	0.43	0.78	0.90	0.68	1.10	1.01	0.32
Control Delay (s/veh)	105.8	37.8	4.4	105.4	37.4	8.9	92.3	87.2	29.7	152.2	111.4	5.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	105.8	37.8	4.4	105.4	37.4	8.9	92.3	87.2	29.7	152.2	111.4	5.7
LOS	F	D	A	F	D	A	F	F	C	F	F	A
Approach Delay (s/veh)	44.0			45.6			73.5			111.8		
Approach LOS	D			D			E			F		
Queue Length 50th (ft)	140	258	0	275	500	64	184	401	129	~233	~423	0
Queue Length 95th (ft)	#209	300	56	#384	551	151	242	#509	254	#344	#557	35
Internal Link Dist (ft)	420			439			722			1097		
Turn Bay Length (ft)	300		290	500		300	485		530	365		230
Base Capacity (vph)	283	2022	783	480	2386	892	402	719	494	309	625	400
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.42	0.29	0.94	0.64	0.44	0.76	0.91	0.69	1.10	1.02	0.32

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 120

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.10

Intersection Signal Delay (s/veh): 63.2

Intersection LOS: E

Intersection Capacity Utilization 98.0%

ICU Level of Service F

Analysis Period (min) 15

## Timings

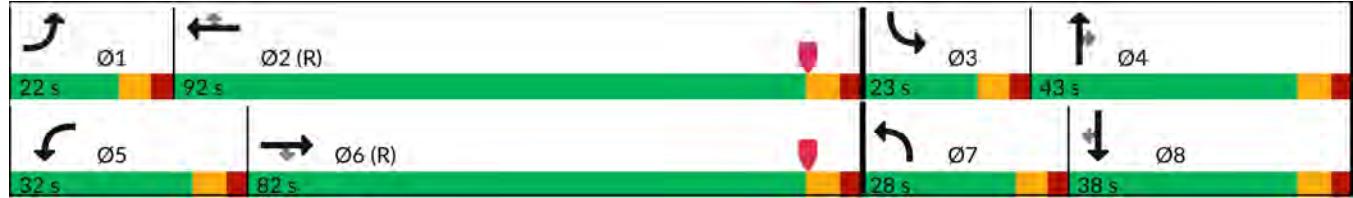
### 10: NW 107th Avenue & NW 74th Street

Existing PM

03/22/2024

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

Splits and Phases: 10: NW 107th Avenue & NW 74th Street



# **Future without Project Conditions**

## Intersection

Intersection Delay, s/veh 26.7

Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	18	29	187	25	26	31	570	107	3	489	14
Future Vol, veh/h	4	18	29	187	25	26	31	570	107	3	489	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	0	0	22	0	0	4	6	1	1	0	2	17
Mvmt Flow	4	19	31	199	27	28	33	606	114	3	520	15
Number of Lanes	0	1	0	0	1	1	1	2	0	0	2	0
Approach												
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			1			2			3		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			3			1			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	3			2			2			1		
HCM Control Delay	13.7			22.5			32.4			22.1		
HCM LOS	B			C			D			C		

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	8%	88%	0%	1%	0%
Vol Thru, %	0%	100%	64%	35%	12%	0%	99%	95%
Vol Right, %	0%	0%	36%	57%	0%	100%	0%	5%
Sign Control	Stop							
Traffic Vol by Lane	31	380	297	51	212	26	248	259
LT Vol	31	0	0	4	187	0	3	0
Through Vol	0	380	190	18	25	0	245	245
RT Vol	0	0	107	29	0	26	0	14
Lane Flow Rate	33	404	316	54	226	28	263	275
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.075	0.857	0.647	0.142	0.577	0.062	0.585	0.61
Departure Headway (Hd)	8.227	7.628	7.37	9.442	9.213	8.043	7.999	7.988
Convergence, Y/N	Yes							
Cap	434	473	490	382	390	443	450	451
Service Time	6.004	5.405	5.146	7.142	7	5.83	5.78	5.77
HCM Lane V/C Ratio	0.076	0.854	0.645	0.141	0.579	0.063	0.584	0.61
HCM Control Delay	11.7	41.5	22.8	13.7	23.9	11.4	21.5	22.6
HCM Lane LOS	B	E	C	B	C	B	C	C
HCM 95th-tile Q	0.2	8.8	4.5	0.5	3.5	0.2	3.7	4

Intersection

Intersection Delay, s/veh 22.7

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↑	↑	↑↑			↔	↔
Traffic Vol, veh/h	3	22	25	75	21	19	46	604	125	3	529	11
Future Vol, veh/h	3	22	25	75	21	19	46	604	125	3	529	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	0	0	42	0	0	0	0	2	1	33	1	0
Mvmt Flow	3	23	26	78	22	20	48	629	130	3	551	11
Number of Lanes	0	1	0	0	1	1	1	2	0	0	2	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	2				1			2			3	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	2				3			1			2	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	3				2			2			1	
HCM Control Delay	12.7				14.3			26.1			20.5	
HCM LOS	B				B			D			C	

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	6%	78%	0%	1%	0%
Vol Thru, %	0%	100%	62%	44%	22%	0%	99%	96%
Vol Right, %	0%	0%	38%	50%	0%	100%	0%	4%
Sign Control	Stop							
Traffic Vol by Lane	46	403	326	50	96	19	268	276
LT Vol	46	0	0	3	75	0	3	0
Through Vol	0	403	201	22	21	0	265	265
RT Vol	0	0	125	25	0	19	0	11
Lane Flow Rate	48	419	340	52	100	20	279	287
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.099	0.808	0.627	0.125	0.253	0.044	0.604	0.575
Departure Headway (Hd)	7.405	6.932	6.642	8.673	9.096	7.979	7.802	7.216
Convergence, Y/N	Yes							
Cap	484	524	544	413	395	448	463	499
Service Time	5.141	4.668	4.378	6.433	6.848	5.731	5.543	4.956
HCM Lane V/C Ratio	0.099	0.8	0.625	0.126	0.253	0.045	0.603	0.575
HCM Control Delay	11	32.8	19.9	12.7	14.9	11.1	21.8	19.3
HCM Lane LOS	B	D	C	B	B	C	C	C
HCM 95th-tile Q	0.3	7.8	4.3	0.4	1	0.1	3.9	3.6

Intersection

Intersection Delay, s/veh 34.3

Intersection LOS D

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	189	195	683	692	13
Future Vol, veh/h	23	189	195	683	692	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	1	1	1	2	0
Mvmt Flow	25	205	212	742	752	14
Number of Lanes	1	0	1	2	2	0
Approach	EB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		2		3	
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	2		1		0	
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	3		0		1	
HCM Control Delay	17.7		17.5		60.3	
HCM LOS	C		C		F	

Lane	NBLn1	NBLn2	NBLn3	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	11%	0%	0%
Vol Thru, %	0%	100%	100%	0%	100%	95%
Vol Right, %	0%	0%	0%	89%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	195	342	342	212	461	244
LT Vol	195	0	0	23	0	0
Through Vol	0	342	342	0	461	231
RT Vol	0	0	0	189	0	13
Lane Flow Rate	212	371	371	230	501	265
Geometry Grp	7	7	7	7	8	8
Degree of Util (X)	0.423	0.689	0.508	0.488	1.05	0.549
Departure Headway (Hd)	7.325	6.814	5.06	7.78	7.537	7.464
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	494	535	716	465	486	487
Service Time	5.025	4.514	2.76	5.48	5.237	5.164
HCM Lane V/C Ratio	0.429	0.693	0.518	0.495	1.031	0.544
HCM Control Delay	15.3	23.3	12.9	17.7	82.2	18.9
HCM Lane LOS	C	C	B	C	F	C
HCM 95th-tile Q	2.1	5.3	2.9	2.6	15.3	3.3

Intersection

Intersection Delay, s/veh 20.8

Intersection LOS C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	140	222	741	602	27
Future Vol, veh/h	30	140	222	741	602	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	147	234	780	634	28
Number of Lanes	1	0	1	2	2	0
Approach	EB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		2		3	
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	2		1		0	
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	3		0		1	
HCM Control Delay	14.6		16		29.8	
HCM LOS	B		C		D	

Lane	NBLn1	NBLn2	NBLn3	EBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	18%	0%	0%
Vol Thru, %	0%	100%	100%	0%	100%	88%
Vol Right, %	0%	0%	0%	82%	0%	12%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	222	371	371	170	401	228
LT Vol	222	0	0	30	0	0
Through Vol	0	371	371	0	401	201
RT Vol	0	0	0	140	0	27
Lane Flow Rate	234	390	390	179	422	240
Geometry Grp	7	7	7	7	8	8
Degree of Util (X)	0.439	0.678	0.487	0.37	0.84	0.471
Departure Headway (Hd)	6.763	6.255	4.493	7.452	7.16	7.075
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	530	573	792	480	503	506
Service Time	4.545	4.036	2.273	5.251	4.952	4.868
HCM Lane V/C Ratio	0.442	0.681	0.492	0.373	0.839	0.474
HCM Control Delay	14.8	21.3	11.5	14.6	37.5	16.1
HCM Lane LOS	B	C	B	B	E	C
HCM 95th-tile Q	2.2	5.2	2.7	1.7	8.5	2.5

HCM Signalized Intersection Capacity Analysis  
3: NW 107th Avenue & NW 82nd Street

Future without Project AM

11/17/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations	↑	↑		↑	↑			↑	↑			↑
Traffic Volume (vph)	9	11	227	41	13	94	37	115	859	114	28	83
Future Volume (vph)	9	11	227	41	13	94	37	115	859	114	28	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1			7.1	7.1			7.1
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95			1.00
Frbp, ped/bikes	1.00	0.99		1.00	0.97			1.00	0.99			1.00
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00	1.00			1.00
Fr <sub>t</sub>	1.00	0.86		1.00	0.87			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1787	1590		1805	1607			1796	3482			1796
Flt Permitted	0.67	1.00		0.14	1.00			0.09	1.00			0.18
Satd. Flow (perm)	1265	1590		270	1607			174	3482			346
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	11	14	280	51	16	116	46	142	1060	141	35	102
RTOR Reduction (vph)	0	148	0	0	98	0	0	0	4	0	0	0
Lane Group Flow (vph)	11	146	0	51	34	0	0	188	1197	0	0	137
Confl. Peds. (#/hr)	6		1	1		6		9		6		6
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	2%	0%	1%	3%	2%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	pm+pt
Protected Phases	7	4		3	8		1	1	6		5	5
Permitted Phases				8			6	6			2	2
Actuated Green, G (s)	25.7	22.8		36.5	28.2			127.6	108.9			110.8
Effective Green, g (s)	25.7	22.8		36.5	28.2			127.6	108.9			110.8
Actuated g/C Ratio	0.14	0.13		0.20	0.16			0.71	0.61			0.62
Clearance Time (s)	7.1	7.1		7.1	7.1			7.1	7.1			7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0			3.0
Lane Grp Cap (vph)	189	201		125	251			315	2106			306
v/s Ratio Prot	0.00	c0.09		c0.02	0.02			c0.07	c0.34			0.03
v/s Ratio Perm	0.01			0.06				0.35				0.25
v/c Ratio	0.06	0.72		0.41	0.14			0.60	0.57			0.45
Uniform Delay, d1	66.5	75.6		60.5	65.4			28.6	21.4			16.3
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Incremental Delay, d2	0.1	12.2		2.2	0.2			3.0	1.1			1.0
Delay (s)	66.7	87.7		62.7	65.7			31.6	22.5			17.3
Level of Service	E	F		E	E			C	C			B
Approach Delay (s)		87.0			64.8				23.8			
Approach LOS		F			E				C			
<b>Intersection Summary</b>												
HCM 2000 Control Delay		34.8										C
HCM 2000 Volume to Capacity ratio		0.69										
Actuated Cycle Length (s)		180.0										28.4
Intersection Capacity Utilization		84.0%										E
Analysis Period (min)				15								
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis  
3: NW 107th Avenue & NW 82nd Street

Future without Project AM  
11/17/2023



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	1094	35
Future Volume (vph)	1094	35
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Fr <sub>t</sub>	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	3540	
Flt Permitted	1.00	
Satd. Flow (perm)	3540	
Peak-hour factor, PHF	0.81	0.81
Adj. Flow (vph)	1351	43
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	1393	0
Confl. Peds. (#/hr)	9	
Confl. Bikes (#/hr)	1	
Heavy Vehicles (%)	1%	11%
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	99.2	
Effective Green, g (s)	99.2	
Actuated g/C Ratio	0.55	
Clearance Time (s)	7.1	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1950	
v/s Ratio Prot	c0.39	
v/s Ratio Perm		
v/c Ratio	0.71	
Uniform Delay, d1	29.9	
Progression Factor	1.00	
Incremental Delay, d2	2.3	
Delay (s)	32.2	
Level of Service	C	
Approach Delay (s)	30.9	
Approach LOS	C	
Intersection Summary		

Timings  
3: NW 107th Avenue & NW 82nd Street

Future without Project AM

11/17/2023



Lane Group	EBL	EBT	WBL	WBT	NBU	NBL	NBT	SBU	SBL	SBT
Lane Configurations	↑	↑	↑	↑						
Traffic Volume (vph)	9	11	41	13	37	115	859	28	83	1094
Future Volume (vph)	9	11	41	13	37	115	859	28	83	1094
Lane Group Flow (vph)	11	294	51	132	0	188	1201	0	137	1394
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	pm+pt	NA	pm+pt	pm+pt	NA
Protected Phases	7	4	3	8	1	1	6	5	5	2
Permitted Phases	4		8		6	6		2	2	
Detector Phase	7	4	3	8	1	1	6	5	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.1	25.1	14.1	25.1	14.1	14.1	25.1	14.1	14.1	25.1
Total Split (s)	20.0	53.0	20.0	53.0	24.0	24.0	83.0	24.0	24.0	83.0
Total Split (%)	11.1%	29.4%	11.1%	29.4%	13.3%	13.3%	46.1%	13.3%	13.3%	46.1%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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)	7.1	7.1	7.1	7.1		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes									
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max
v/c Ratio	0.05	0.90	0.39	0.38		0.59	0.55		0.44	0.69
Control Delay	51.7	61.5	63.5	16.2		27.1	23.2		15.0	32.8
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	51.7	61.5	63.5	16.2		27.1	23.2		15.0	32.8
Queue Length 50th (ft)	11	154	50	15		77	413		46	621
Queue Length 95th (ft)	24	204	75	59		154	555		84	755
Internal Link Dist (ft)	495		443			574			1263	
Turn Bay Length (ft)	160		300			165			130	
Base Capacity (vph)	259	532	161	495		324	2191		370	2034
Starvation Cap Reductn	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.04	0.55	0.32	0.27		0.58	0.55		0.37	0.69

Intersection Summary

Cycle Length: 180

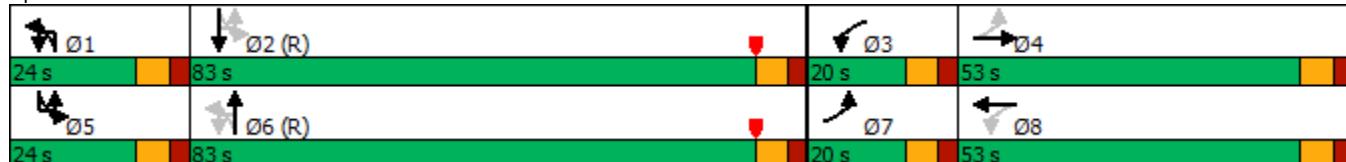
Actuated Cycle Length: 180

Offset: 15.4 (9%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 3: NW 107th Avenue & NW 82nd Street



HCM Signalized Intersection Capacity Analysis  
3: NW 107th Avenue & NW 82nd Street

Future without Project PM  
11/17/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations	↑	↑		↑	↑			↑	↑			↑
Traffic Volume (vph)	21	20	157	34	21	59	48	291	1184	98	38	56
Future Volume (vph)	21	20	157	34	21	59	48	291	1184	98	38	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1			7.1	7.1			7.1
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95			1.00
Frbp, ped/bikes	1.00	0.98		1.00	0.99			1.00	1.00			1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00			1.00	1.00			1.00
Fr <sub>t</sub>	1.00	0.87		1.00	0.89			1.00	0.99			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1805	1616		1803	1646			1790	3520			1759
Flt Permitted	0.70	1.00		0.28	1.00			0.24	1.00			0.18
Satd. Flow (perm)	1333	1616		535	1646			459	3520			334
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	22	21	167	36	22	63	51	310	1260	104	40	60
RTOR Reduction (vph)	0	156	0	0	58	0	0	0	2	0	0	0
Lane Group Flow (vph)	22	32	0	36	27	0	0	361	1362	0	0	100
Confl. Peds. (#/hr)			3	3			2	10		4		4
Confl. Bikes (#/hr)						1				2		
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	1%	1%	2%	2%	3%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	pm+pt	NA		custom	pm+pt
Protected Phases	7	4		3	8		1	1	6			5
Permitted Phases	4			8			6	6			5	2
Actuated Green, G (s)	16.7	11.7		21.7	14.2		139.5	121.9				110.2
Effective Green, g (s)	16.7	11.7		21.7	14.2		139.5	121.9				110.2
Actuated g/C Ratio	0.09	0.06		0.12	0.08		0.78	0.68				0.61
Clearance Time (s)	7.1	7.1		7.1	7.1		7.1	7.1				7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				3.0
Lane Grp Cap (vph)	136	105		117	129		597	2383				287
v/s Ratio Prot	0.00	0.02		c0.01	0.02		c0.11	0.39				0.02
v/s Ratio Perm	0.01			c0.02			c0.36					0.19
v/c Ratio	0.16	0.30		0.31	0.21		0.60	0.57				0.35
Uniform Delay, d1	75.0	80.3		71.3	77.6		10.7	15.3				14.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				1.00
Incremental Delay, d2	0.6	1.6		1.5	0.8		1.7	1.0				0.7
Delay (s)	75.5	81.9		72.8	78.5		12.4	16.3				15.4
Level of Service	E	F		E	E		B	B				B
Approach Delay (s)		81.2			76.8			15.5				
Approach LOS		F			E			B				
<b>Intersection Summary</b>												
HCM 2000 Control Delay			25.1				HCM 2000 Level of Service		C			
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)		28.4			
Intersection Capacity Utilization			82.6%				ICU Level of Service		E			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	SBT	SBR
Lane Configurations	↑↓	
Traffic Volume (vph)	777	37
Future Volume (vph)	777	37
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Fr <sub>t</sub>	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	3525	
Flt Permitted	1.00	
Satd. Flow (perm)	3525	
Peak-hour factor, PHF	0.94	0.94
Adj. Flow (vph)	827	39
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	865	0
Confl. Peds. (#/hr)	10	
Confl. Bikes (#/hr)	3	
Heavy Vehicles (%)	1%	10%
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	99.7	
Effective Green, g (s)	99.7	
Actuated g/C Ratio	0.55	
Clearance Time (s)	7.1	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1952	
v/s Ratio Prot	0.25	
v/s Ratio Perm		
v/c Ratio	0.44	
Uniform Delay, d <sub>1</sub>	23.7	
Progression Factor	1.00	
Incremental Delay, d <sub>2</sub>	0.7	
Delay (s)	24.5	
Level of Service	C	
Approach Delay (s)	23.5	
Approach LOS	C	
Intersection Summary		

Timings  
3: NW 107th Avenue & NW 82nd Street

Future without Project PM

11/17/2023



Lane Group	EBL	EBT	WBL	WBT	NBU	NBL	NBT	SBU	SBL	SBT
Lane Configurations	↑	↑	↑	↑						
Traffic Volume (vph)	21	20	34	21	48	291	1184	38	56	777
Future Volume (vph)	21	20	34	21	48	291	1184	38	56	777
Lane Group Flow (vph)	22	188	36	85	0	361	1364	0	100	866
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	pm+pt	NA	custom	pm+pt	NA
Protected Phases	7	4	3	8	1	1	6		5	2
Permitted Phases	4		8		6	6		5	2	
Detector Phase	7	4	3	8	1	1	6	5	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.1	25.1	14.1	25.1	14.1	14.1	25.1	14.1	14.1	25.1
Total Split (s)	20.0	53.0	20.0	53.0	24.0	24.0	83.0	24.0	24.0	83.0
Total Split (%)	11.1%	29.4%	11.1%	29.4%	13.3%	13.3%	46.1%	13.3%	13.3%	46.1%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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)	7.1	7.1	7.1	7.1		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max
v/c Ratio	0.15	0.75	0.30	0.45		0.60	0.56		0.34	0.43
Control Delay	65.9	33.5	70.9	33.4		10.6	16.7		11.7	24.0
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay	65.9	33.5	70.9	33.4		10.6	16.7		11.7	24.0
Queue Length 50th (ft)	23	25	38	26		100	395		24	292
Queue Length 95th (ft)	50	112	72	85		187	624		53	415
Internal Link Dist (ft)	495		443			574			1263	
Turn Bay Length (ft)	160		300			165			130	
Base Capacity (vph)	195	536	159	467		605	2440		355	2007
Starvation Cap Reductn	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.11	0.35	0.23	0.18		0.60	0.56		0.28	0.43

Intersection Summary

Cycle Length: 180

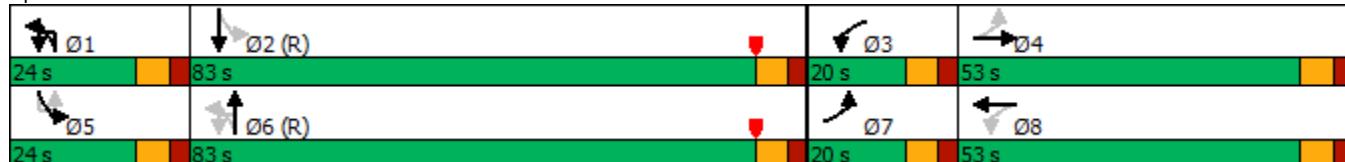
Actuated Cycle Length: 180

Offset: 15.4 (9%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Splits and Phases: 3: NW 107th Avenue & NW 82nd Street



**Intersection**

Intersection Delay, s/veh 98.1

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↔		↑	↑	↑		↔	
Traffic Vol, veh/h	50	63	145	25	129	152	167	424	11	31	250	24
Future Vol, veh/h	50	63	145	25	129	152	167	424	11	31	250	24
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	4	0	2	4	0	0	1	1	10	0	2	0
Mvmt Flow	60	76	175	30	155	183	201	511	13	37	301	29
Number of Lanes	1	1	0	0	1	0	1	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				2			1			3	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				3			2			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	3				1			1			2	
HCM Control Delay	31.9				83.9			137.2			91.3	
HCM LOS	D				F			F			F	

Lane	NBLn1	NBLn2	NBLn3	E BLn1	E BLn2	W BLn1	S BLn1
Vol Left, %	100%	0%	0%	100%	0%	8%	10%
Vol Thru, %	0%	100%	0%	0%	30%	42%	82%
Vol Right, %	0%	0%	100%	0%	70%	50%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	424	11	50	208	306	305
LT Vol	167	0	0	50	0	25	31
Through Vol	0	424	0	0	63	129	250
RT Vol	0	0	11	0	145	152	24
Lane Flow Rate	201	511	13	60	251	369	367
Geometry Grp	7	7	7	8	8	8	8
Degree of Util (X)	0.546	1.312	0.032	0.186	0.698	1.005	1.028
Departure Headway (Hd)	10.003	9.48	8.908	12.041	10.923	10.663	10.933
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	362	388	404	300	333	343	334
Service Time	7.703	7.18	6.608	9.741	8.623	8.363	8.633
HCM Lane V/C Ratio	0.555	1.317	0.032	0.2	0.754	1.076	1.099
HCM Control Delay	24.1	185	11.9	17.5	35.4	83.9	91.3
HCM Lane LOS	C	F	B	C	E	F	F
HCM 95th-tile Q	3.1	23	0.1	0.7	5	11.4	11.9

Intersection

Intersection Delay, s/veh 86.2

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↔		↑	↑	↑		↔	
Traffic Vol, veh/h	28	72	81	16	80	59	101	453	19	86	427	15
Future Vol, veh/h	28	72	81	16	80	59	101	453	19	86	427	15
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	8	2	1	0	1	11	0	2	0	1	1	8
Mvmt Flow	30	77	87	17	86	63	109	487	20	92	459	16
Number of Lanes	1	1	0	0	1	0	1	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				2			1			3	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				3			2			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	3				1			1			2	
HCM Control Delay	17.5				18.9			51.4			167.4	
HCM LOS	C				C			F			F	

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	100%	0%	10%	16%
Vol Thru, %	0%	100%	0%	0%	47%	52%	81%
Vol Right, %	0%	0%	100%	0%	53%	38%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	453	19	28	153	155	528
LT Vol	101	0	0	28	0	16	86
Through Vol	0	453	0	0	72	80	427
RT Vol	0	0	19	0	81	59	15
Lane Flow Rate	109	487	20	30	165	167	568
Geometry Grp	7	7	7	8	8	8	8
Degree of Util (X)	0.23	0.97	0.037	0.081	0.396	0.41	1.281
Departure Headway (Hd)	8.116	7.635	6.877	10.429	9.41	9.643	8.123
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	445	477	524	346	385	375	449
Service Time	5.816	5.335	4.577	8.129	7.11	7.343	5.87
HCM Lane V/C Ratio	0.245	1.021	0.038	0.087	0.429	0.445	1.265
HCM Control Delay	13.2	61.7	9.8	14	18.1	18.9	167.4
HCM Lane LOS	B	F	A	B	C	C	F
HCM 95th-tile Q	0.9	12.2	0.1	0.3	1.8	1.9	24.2

HCM 7th Signalized Intersection Summary  
10: NW 107th Avenue & NW 74th Street

Future without Project AM  
03/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	173	1425	247	267	519	366	187	595	345	642	774	192
Future Volume (veh/h)	173	1425	247	267	519	366	187	595	345	642	774	192
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1870	1811	1870	1856	1618	1885	1870	1885	1870	1885	1885	1885
Adj Flow Rate, veh/h	186	1532	266	287	558	394	201	640	0	690	832	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	6	2	3	19	1	2	1	2	1	1	1
Cap, veh/h	223	1893	598	299	1791	638	249	675		637	1071	
Arrive On Green	0.06	0.38	0.38	0.09	0.41	0.41	0.07	0.19	0.00	0.18	0.30	0.00
Sat Flow, veh/h	3456	4944	1562	3428	4418	1574	3456	3582	1585	3483	3582	1598
Grp Volume(v), veh/h	186	1532	266	287	558	394	201	640	0	690	832	0
Grp Sat Flow(s), veh/h/ln	1728	1648	1562	1714	1473	1574	1728	1791	1585	1742	1791	1598
Q Serve(g_s), s	9.6	49.9	22.8	15.0	15.5	35.8	10.3	31.8	0.0	32.9	38.2	0.0
Cycle Q Clear(g_c), s	9.6	49.9	22.8	15.0	15.5	35.8	10.3	31.8	0.0	32.9	38.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	1893	598	299	1791	638	249	675		637	1071	
V/C Ratio(X)	0.83	0.81	0.44	0.96	0.31	0.62	0.81	0.95		1.08	0.78	
Avail Cap(c_a), veh/h	244	1893	598	299	1791	638	363	675		637	1071	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	83.2	49.7	41.3	81.8	36.4	42.4	82.3	72.2	0.0	73.6	57.6	0.0
Incr Delay (d2), s/veh	19.3	3.9	2.4	41.0	0.5	4.4	13.5	24.1	0.0	60.5	5.5	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.9	21.0	9.2	8.3	5.7	14.7	5.1	16.8	0.0	20.0	18.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	102.5	53.5	43.7	122.8	36.9	46.9	95.8	96.3	0.0	134.1	63.2	0.0
LnGrp LOS	F	D	D	F	D	D	F	F		F	E	
Approach Vol, veh/h		1984			1239			841			1522	
Approach Delay, s/veh		56.8			60.0			96.2			95.3	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.9	80.1	40.0	41.0	23.0	76.0	20.1	60.9				
Change Period (Y+Rc), s	7.3	* 7.1	* 7.1	* 7.1	7.3	* 7.1	* 7.1	* 7.1				
Max Green Setting (Gmax), s	12.7	* 72	* 33	* 34	15.7	* 69	* 19	* 48				
Max Q Clear Time (g_c+l1), s	11.6	37.8	34.9	33.8	17.0	51.9	12.3	40.2				
Green Ext Time (p_c), s	0.1	1.5	0.0	0.1	0.0	4.3	0.7	3.6				

Intersection Summary

HCM 7th Control Delay, s/veh 73.9

HCM 7th LOS E

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: NW 107th Avenue & NW 74th Street

Future without Project AM

03/22/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑↑	↑	↑↑	↑↑↑↑	↑	↑↑	↑↑↑↑	↑	↑↑	↑↑↑↑	↑
Traffic Volume (vph)	173	1425	247	267	519	366	187	595	345	642	774	192
Future Volume (vph)	173	1425	247	267	519	366	187	595	345	642	774	192
Lane Group Flow (vph)	186	1532	266	287	558	394	201	640	371	690	832	206
Turn Type	Prot	NA	Perm									
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases				6		2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.3	34.1	34.1	14.3	34.1	34.1	14.1	41.0	41.0	14.1	43.1	43.1
Total Split (s)	20.0	76.0	76.0	23.0	79.0	79.0	26.0	41.0	41.0	40.0	55.0	55.0
Total Split (%)	11.1%	42.2%	42.2%	12.8%	43.9%	43.9%	14.4%	22.8%	22.8%	22.2%	30.6%	30.6%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.9	2.7	2.7	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.1	7.1	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max
Act Effct Green (s)	12.3	68.9	68.9	15.7	72.3	72.3	17.0	33.9	33.9	32.9	49.8	49.8
Actuated g/C Ratio	0.07	0.38	0.38	0.09	0.40	0.40	0.09	0.19	0.19	0.18	0.28	0.28
v/c Ratio	0.79	0.81	0.37	0.96	0.31	0.45	0.62	0.95	0.88	1.09	0.84	0.38
Control Delay (s/veh)	105.5	54.3	12.2	124.7	37.6	4.6	86.8	95.7	63.6	128.4	70.4	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	105.5	54.3	12.2	124.7	37.6	4.6	86.8	95.7	63.6	128.4	70.4	21.4
LOS	F	D	B	F	D	A	F	F	E	F	E	C
Approach Delay (s/veh)		53.5			47.3			84.5			87.8	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	113	596	55	177	166	0	119	398	267	~470	495	68
Queue Length 95th (ft)	#171	658	133	#280	201	71	165	#523	#461	#602	587	153
Internal Link Dist (ft)		441			364			695			615	
Turn Bay Length (ft)	300		290	500		300	485		530	365		230
Base Capacity (vph)	242	1872	716	296	1750	866	360	673	419	633	988	536
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.82	0.37	0.97	0.32	0.45	0.56	0.95	0.89	1.09	0.84	0.38

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.09

Intersection Signal Delay (s/veh): 68.0

Intersection LOS: E

Intersection Capacity Utilization 93.7%

ICU Level of Service F

Analysis Period (min) 15

## Timings

### 10: NW 107th Avenue & NW 74th Street

Future without Project AM

03/22/2024

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

Splits and Phases: 10: NW 107th Avenue & NW 74th Street



HCM 7th Signalized Intersection Summary  
10: NW 107th Avenue & NW 74th Street

Future without Project PM  
03/22/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	292	867	233	460	1569	531	313	724	346	374	696	173
Future Volume (veh/h)	292	867	233	460	1569	531	313	724	346	374	696	173
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1885	1796	1885	1900	1856	1900	1885	1900	1900	1900	1885	1870
Adj Flow Rate, veh/h	298	885	238	469	1601	542	319	739	0	382	710	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	7	1	0	3	0	1	0	0	0	1	2
Cap, veh/h	284	2041	653	482	2389	742	364	720		310	656	
Arrive On Green	0.08	0.42	0.42	0.14	0.47	0.47	0.10	0.20	0.00	0.09	0.18	0.00
Sat Flow, veh/h	3483	4904	1570	3510	5066	1573	3483	3610	1610	3510	3582	1585
Grp Volume(v), veh/h	298	885	238	469	1601	542	319	739	0	382	710	0
Grp Sat Flow(s), veh/h/ln	1742	1635	1570	1755	1689	1573	1742	1805	1610	1755	1791	1585
Q Serve(g_s), s	14.7	23.1	18.8	23.9	43.9	50.0	16.3	35.9	0.0	15.9	33.0	0.0
Cycle Q Clear(g_c), s	14.7	23.1	18.8	23.9	43.9	50.0	16.3	35.9	0.0	15.9	33.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	284	2041	653	482	2389	742	364	720		310	656	
V/C Ratio(X)	1.05	0.43	0.36	0.97	0.67	0.73	0.88	1.03		1.23	1.08	
Avail Cap(c_a), veh/h	284	2041	653	482	2389	742	404	720		310	656	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	82.7	37.4	36.2	77.3	36.7	38.3	79.4	72.1	0.0	82.1	73.5	0.0
Incr Delay (d2), s/veh	66.4	0.7	1.6	34.1	1.5	6.2	19.9	40.4	0.0	129.2	59.2	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	9.2	9.4	7.5	13.0	18.3	20.4	8.3	20.5	0.0	12.7	20.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	149.0	38.1	37.7	111.4	38.2	44.6	99.4	112.5	0.0	211.3	132.8	0.0
LnGrp LOS	F	D	D	F	D	D	F	F		F	F	
Approach Vol, veh/h		1421			2612			1058			1092	
Approach Delay, s/veh		61.3			52.7			108.5			160.2	
Approach LOS		E			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	92.0	23.0	43.0	32.0	82.0	25.9	40.1				
Change Period (Y+Rc), s	7.3	* 7.1	* 7.1	* 7.1	7.3	* 7.1	* 7.1	* 7.1				
Max Green Setting (Gmax), s	14.7	* 85	* 16	* 36	24.7	* 75	* 21	* 31				
Max Q Clear Time (g_c+l1), s	16.7	52.0	17.9	37.9	25.9	25.1	18.3	35.0				
Green Ext Time (p_c), s	0.0	5.3	0.0	0.0	0.0	2.4	0.6	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh

83.2

HCM 7th LOS

F

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: NW 107th Avenue & NW 74th Street

Future without Project PM

03/22/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	292	867	233	460	1569	531	313	724	346	374	696	173
Future Volume (vph)	292	867	233	460	1569	531	313	724	346	374	696	173
Lane Group Flow (vph)	298	885	238	469	1601	542	319	739	353	382	710	177
Turn Type	Prot	NA	Perm									
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases				6		2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.3	34.1	34.1	14.3	34.1	34.1	14.1	43.0	43.0	14.1	38.0	38.0
Total Split (s)	22.0	82.0	82.0	32.0	92.0	92.0	28.0	43.0	43.0	23.0	38.0	38.0
Total Split (%)	12.2%	45.6%	45.6%	17.8%	51.1%	51.1%	15.6%	23.9%	23.9%	12.8%	21.1%	21.1%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.9	2.7	2.7	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.1	7.1	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max
Act Effct Green (s)	14.7	74.9	74.9	24.7	84.9	84.9	20.5	35.9	35.9	15.9	31.3	31.3
Actuated g/C Ratio	0.08	0.42	0.42	0.14	0.47	0.47	0.11	0.20	0.20	0.09	0.17	0.17
v/c Ratio	1.05	0.43	0.30	0.97	0.67	0.61	0.80	1.02	0.72	1.23	1.14	0.44
Control Delay (s/veh)	143.5	38.3	4.3	111.4	38.6	18.5	94.1	109.3	34.2	193.5	144.8	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	143.5	38.3	4.3	111.4	38.6	18.5	94.1	109.3	34.2	193.5	144.8	16.0
LOS	F	D	A	F	D	B	F	F	C	F	F	B
Approach Delay (s/veh)		54.7			47.5			87.1			141.5	
Approach LOS		D			D			F			F	
Queue Length 50th (ft)	~197	272	0	289	532	224	192	~487	155	~286	~518	21
Queue Length 95th (ft)	#304	315	57	#409	584	353	#253	#624	286	#401	#654	101
Internal Link Dist (ft)		420			439			722			1097	
Turn Bay Length (ft)	300		290	500		300	485		530	365		230
Base Capacity (vph)	283	2017	787	480	2375	886	402	719	489	309	622	398
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.05	0.44	0.30	0.98	0.67	0.61	0.79	1.03	0.72	1.24	1.14	0.44

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 130

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.24

Intersection Signal Delay (s/veh): 75.1

Intersection LOS: E

Intersection Capacity Utilization 102.3%

ICU Level of Service G

Analysis Period (min) 15

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

Splits and Phases: 10: NW 107th Avenue & NW 74th Street



# **Future with Project Conditions**

**Intersection**

Intersection Delay, s/veh 38.8

Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↔			↑	↑	↑	↑↓				↑↓
Traffic Vol, veh/h	4	18	29	245	25	26	31	607	107	5	8	491
Future Vol, veh/h	4	18	29	245	25	26	31	607	107	5	8	491
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94	0.94
Heavy Vehicles, %	0	0	22	0	0	4	6	1	1	2	0	2
Mvmt Flow	4	19	31	261	27	28	33	646	114	5	9	522
Number of Lanes	0	1	0	0	1	1	1	2	0	0	0	2
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	2				1			2			3	
Conflicting Approach Left	SB			NB				EB			WB	
Conflicting Lanes Left	2			3				1			2	
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	3			2			2			1		
HCM Control Delay, s/veh	14.8			36.2			49.7			27		
HCM LOS	B			E			E			D		

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	8%	91%	0%	3%	0%
Vol Thru, %	0%	100%	65%	35%	9%	0%	97%	95%
Vol Right, %	0%	0%	35%	57%	0%	100%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	405	309	51	270	26	259	260
LT Vol	31	0	0	4	245	0	8	0
Through Vol	0	405	202	18	25	0	251	246
RT Vol	0	0	107	29	0	26	0	14
Lane Flow Rate	33	430	329	54	287	28	275	276
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.081	0.984	0.729	0.153	0.771	0.065	0.666	0.661
Departure Headway (Hd)	8.832	8.229	7.98	10.163	9.662	8.476	8.715	8.624
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	406	443	454	353	376	423	415	420
Service Time	6.573	5.97	5.72	7.923	7.406	6.22	6.459	6.368
HCM Lane V/C Ratio	0.081	0.971	0.725	0.153	0.763	0.066	0.663	0.657
HCM Control Delay, s/veh	12.4	68	29.4	14.8	38.5	11.8	27.3	26.7
HCM Lane LOS	B	F	D	B	E	B	D	D
HCM 95th-tile Q	0.3	12.2	5.8	0.5	6.3	0.2	4.7	4.6

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Intersection

Intersection Delay, s/veh

Intersection LOS

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Movement SBR

Lane Configurations

Traffic Vol, veh/h 14

Future Vol, veh/h 14

Peak Hour Factor 0.94

Heavy Vehicles, % 17

Mvmt Flow 15

Number of Lanes 0

---

Approach

Opposing Approach

Opposing Lanes

Conflicting Approach Left

Conflicting Lanes Left

Conflicting Approach Right

Conflicting Lanes Right

HCM Control Delay, s/veh

HCM LOS

**Intersection**

Intersection Delay, s/veh 32.1

Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations		↔			↑	↑	↑	↑↑				↑↑
Traffic Vol, veh/h	3	22	25	124	21	19	46	661	125	11	14	535
Future Vol, veh/h	3	22	25	124	21	19	46	661	125	11	14	535
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.92	0.96	0.96
Heavy Vehicles, %	0	0	42	0	0	0	0	2	1	2	33	1
Mvmt Flow	3	23	26	129	22	20	48	689	130	12	15	557
Number of Lanes	0	1	0	0	1	1	1	2	0	0	0	2
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	2				1			2			3	
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			3			1			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	3			2			2			1		
HCM Control Delay, s/veh	13.6			17.8			40.5			25.5		
HCM LOS	B			C			E			D		

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	6%	86%	0%	5%	0%
Vol Thru, %	0%	100%	64%	44%	14%	0%	95%	96%
Vol Right, %	0%	0%	36%	50%	0%	100%	0%	4%
Sign Control	Stop							
Traffic Vol by Lane	46	441	345	50	145	19	293	279
LT Vol	46	0	0	3	124	0	15	0
Through Vol	0	441	220	22	21	0	278	268
RT Vol	0	0	125	25	0	19	0	11
Lane Flow Rate	48	459	360	52	151	20	305	290
Geometry Grp	6	6	6	6	6	6	6	6
Degree of Util (X)	0.105	0.944	0.712	0.135	0.4	0.046	0.663	0.669
Departure Headway (Hd)	7.88	7.405	7.129	9.363	9.544	8.386	7.819	8.303
Convergence, Y/N	Yes							
Cap	454	491	507	382	376	426	461	435
Service Time	5.635	5.16	4.884	7.153	7.321	6.163	5.577	6.062
HCM Lane V/C Ratio	0.106	0.935	0.71	0.136	0.402	0.047	0.662	0.667
HCM Control Delay, s/veh	11.6	55.2	25.7	13.6	18.6	11.6	24.7	26.4
HCM Lane LOS	B	F	D	B	C	B	C	D
HCM 95th-tile Q	0.3	11.5	5.6	0.5	1.9	0.1	4.7	4.8

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Intersection

Intersection Delay, s/veh

Intersection LOS

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Movement SBR

Lane Configurations

Traffic Vol, veh/h 11

Future Vol, veh/h 11

Peak Hour Factor 0.96

Heavy Vehicles, % 0

Mvmt Flow 11

Number of Lanes 0

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Approach

Opposing Approach

Opposing Lanes

Conflicting Approach Left

Conflicting Lanes Left

Conflicting Approach Right

Conflicting Lanes Right

HCM Control Delay, s/veh

HCM LOS

Intersection

Intersection Delay, s/veh 88.6

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↑	↑	↑	↑↑		↑	↑↑	
Traffic Vol, veh/h	23	0	189	46	0	6	195	734	7	2	750	13
Future Vol, veh/h	23	0	189	46	0	6	195	734	7	2	750	13
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	5	2	1	2	2	2	1	1	2	2	2	0
Mvmt Flow	25	0	205	50	0	7	212	798	8	2	815	14
Number of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			1			3			3		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	3			3			1			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	3			3			2			1		
HCM Control Delay, s/veh	27.6			16.8			81.9			118.6		
HCM LOS	D			C			F			F		

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	11%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	97%	0%	0%	0%	0%	100%	95%
Vol Right, %	0%	0%	3%	89%	0%	100%	0%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	195	489	252	212	46	6	2	500	263
LT Vol	195	0	0	23	46	0	2	0	0
Through Vol	0	489	245	0	0	0	0	500	250
RT Vol	0	0	7	189	0	6	0	0	13
Lane Flow Rate	212	532	274	230	50	7	2	543	286
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.506	1.196	0.615	0.609	0.157	0.018	0.005	1.274	0.665
Departure Headway (Hd)	9.044	8.528	8.525	10.224	12.255	11.002	9.291	8.775	8.704
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	401	431	427	355	295	327	388	418	417
Service Time	6.744	6.228	6.225	7.924	9.955	8.702	6.991	6.475	6.404
HCM Lane V/C Ratio	0.529	1.234	0.642	0.648	0.169	0.021	0.005	1.299	0.686
HCM Control Delay, s/veh	20.7	136.2	23.9	27.6	17.2	13.9	12	167.1	27.1
HCM Lane LOS	C	F	C	D	C	B	B	F	D
HCM 95th-tile Q	2.8	19.9	4	3.8	0.5	0.1	0	22.7	4.7

Intersection

Intersection Delay, s/veh 74.9

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↑	↑	↑	↑↑		↑	↑↑	
Traffic Vol, veh/h	30	0	140	32	0	4	222	860	16	5	651	27
Future Vol, veh/h	30	0	140	32	0	4	222	860	16	5	651	27
Peak Hour Factor	0.95	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	32	0	147	34	0	4	234	905	17	5	685	28
Number of Lanes	0	1	0	0	1	1	1	2	0	1	2	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	2				1			3			3	
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	3			3			1			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	3			3			2			1		
HCM Control Delay, s/veh	21			15.4			95.6			58.2		
HCM LOS	C			C			F			F		

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	18%	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	95%	0%	0%	0%	0%	100%	89%
Vol Right, %	0%	0%	5%	82%	0%	100%	0%	0%	11%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	222	573	303	170	32	4	5	434	244
LT Vol	222	0	0	30	32	0	5	0	0
Through Vol	0	573	287	0	0	0	0	434	217
RT Vol	0	0	16	140	0	4	0	0	27
Lane Flow Rate	234	604	319	179	34	4	5	457	257
Geometry Grp	6	6	6	6	6	6	6	6	6
Degree of Util (X)	0.526	1.272	0.669	0.47	0.104	0.012	0.013	1.025	0.571
Departure Headway (Hd)	8.306	7.794	7.756	9.849	11.671	10.427	8.955	8.443	8.364
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	437	471	469	369	309	345	402	434	434
Service Time	6.006	5.494	5.456	7.549	9.371	8.127	6.655	6.143	6.064
HCM Lane V/C Ratio	0.535	1.282	0.68	0.485	0.11	0.012	0.012	1.053	0.592
HCM Control Delay, s/veh	19.9	162.3	24.8	21	15.7	13.3	11.8	79.4	21.6
HCM Lane LOS	C	F	C	C	C	B	B	F	C
HCM 95th-tile Q	3	24.6	4.8	2.4	0.3	0	0	13.5	3.5

## HCM Signalized Intersection Capacity Analysis

3: NW 107th Avenue &amp; NW 82nd Street

Future with Project AM

03/28/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations	↑	↑		↑	↑			↑	↑			↑
Traffic Volume (vph)	9	11	227	41	13	94	37	115	917	114	28	83
Future Volume (vph)	9	11	227	41	13	94	37	115	917	114	28	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1			7.1	7.1			7.1
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.97			1.00	0.99			1.00
Flpb, ped/bikes	0.99	1.00		1.00	1.00			1.00	1.00			1.00
Frt	1.00	0.85		1.00	0.86			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1787	1590		1805	1607			1796	3487			1796
Flt Permitted	0.67	1.00		0.13	1.00			0.06	1.00			0.15
Satd. Flow (perm)	1265	1590		266	1607			124	3487			296
Peak-hour factor, PHF	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Adj. Flow (vph)	11	14	280	51	16	116	46	142	1132	141	35	102
RTOR Reduction (vph)	0	142	0	0	98	0	0	0	4	0	0	0
Lane Group Flow (vph)	11	152	0	51	34	0	0	188	1269	0	0	137
Confl. Peds. (#/hr)	6		1	1		6		9		6		6
Confl. Bikes (#/hr)												5
Heavy Vehicles (%)	0%	0%	1%	0%	0%	0%	2%	0%	1%	3%	2%	0%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	pm+pt	NA		pm+pt	pm+pt
Protected Phases	7	4		3	8		1	1	6		5	5
Permitted Phases		4			8		6	6			2	2
Actuated Green, G (s)	26.1	23.2		36.9	28.6		127.2	107.1				111.8
Effective Green, g (s)	26.1	23.2		36.9	28.6		127.2	107.1				111.8
Actuated g/C Ratio	0.15	0.13		0.21	0.16		0.71	0.60				0.62
Clearance Time (s)	7.1	7.1		7.1	7.1		7.1	7.1				7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				3.0
Lane Grp Cap (vph)	191	204		125	255		285	2074				292
v/s Ratio Prot	0.00	c0.10		c0.02	0.02		c0.08	c0.36				0.03
v/s Ratio Perm	0.01			0.06			0.39					0.26
v/c Ratio	0.05	0.74		0.40	0.13		0.65	0.61				0.46
Uniform Delay, d1	66.1	75.5		60.2	65.0		44.1	23.2				17.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				1.00
Incremental Delay, d2	0.1	13.7		2.1	0.2		5.4	1.3				1.1
Delay (s)	66.3	89.2		62.4	65.3		49.5	24.5				18.4
Level of Service	E	F		E	E		D	C				B
Approach Delay (s/veh)		88.4			64.5			27.7				
Approach LOS		F			E			C				
<b>Intersection Summary</b>												
HCM 2000 Control Delay (s/veh)		37.6										D
HCM 2000 Volume to Capacity ratio		0.75										
Actuated Cycle Length (s)		180.0										28.4
Intersection Capacity Utilization		86.9%										E
Analysis Period (min)				15								
c Critical Lane Group												



Movement	SBT	SBR
Lane Configurations	↑↑	
Traffic Volume (vph)	1197	35
Future Volume (vph)	1197	35
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	
Lane Util. Factor	0.95	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	1.00	
Fr <sub>t</sub>	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	3543	
Flt Permitted	1.00	
Satd. Flow (perm)	3543	
Peak-hour factor, PHF	0.81	0.81
Adj. Flow (vph)	1478	43
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	1520	0
Confl. Peds. (#/hr)	9	
Confl. Bikes (#/hr)	1	
Heavy Vehicles (%)	1%	11%
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	98.8	
Effective Green, g (s)	98.8	
Actuated g/C Ratio	0.55	
Clearance Time (s)	7.1	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1944	
v/s Ratio Prot	c0.43	
v/s Ratio Perm		
v/c Ratio	0.78	
Uniform Delay, d1	32.0	
Progression Factor	1.00	
Incremental Delay, d2	3.2	
Delay (s)	35.3	
Level of Service	D	
Approach Delay (s/veh)	33.9	
Approach LOS	C	
Intersection Summary		

## Timings

3: NW 107th Avenue &amp; NW 82nd Street

Future with Project AM

03/28/2024



Lane Group	EBL	EBT	WBL	WBT	NBU	NBL	NBT	SBU	SBL	SBT
Lane Configurations	↑	↑	↑	↑			↑↑		↑	↑↑
Traffic Volume (vph)	9	11	41	13	37	115	917	28	83	1197
Future Volume (vph)	9	11	41	13	37	115	917	28	83	1197
Lane Group Flow (vph)	11	294	51	132	0	188	1273	0	137	1521
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	pm+pt	NA	pm+pt	pm+pt	NA
Protected Phases	7	4	3	8	1	1	6	5	5	2
Permitted Phases	4				6	6		2	2	
Detector Phase	7	4	3	8	1	1	6	5	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.1	25.1	14.1	25.1	14.1	14.1	25.1	14.1	14.1	25.1
Total Split (s)	20.0	53.0	20.0	53.0	24.0	24.0	83.0	24.0	24.0	83.0
Total Split (%)	11.1%	29.4%	11.1%	29.4%	13.3%	13.3%	46.1%	13.3%	13.3%	46.1%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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)	7.1	7.1	7.1	7.1		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes									
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max
v/c Ratio	0.05	0.90	0.38	0.37		0.65	0.58		0.45	0.74
Control Delay (s/veh)	51.4	65.1	63.2	16.0		43.4	25.3		15.6	34.9
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay (s/veh)	51.4	65.1	63.2	16.0		43.4	25.3		15.6	34.9
Queue Length 50th (ft)	11	163	50	15		120	472		47	722
Queue Length 95th (ft)	24	212	74	59		190	617		85	864
Internal Link Dist (ft)		495		443			574			1263
Turn Bay Length (ft)	160		300			165			130	
Base Capacity (vph)	260	526	161	495		292	2160		345	2030
Starvation Cap Reductn	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.04	0.56	0.32	0.27		0.64	0.59		0.40	0.75

## Intersection Summary

Cycle Length: 180

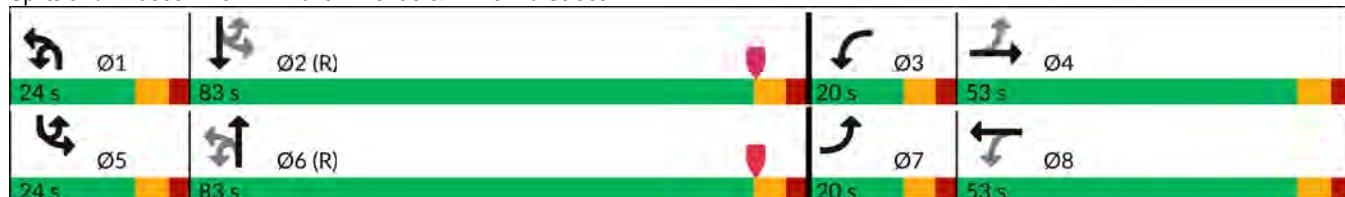
Actuated Cycle Length: 180

Offset: 15.4 (9%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 110

Control Type: Actuated-Coordinated

Splits and Phases: 3: NW 107th Avenue &amp; NW 82nd Street



## HCM Signalized Intersection Capacity Analysis

3: NW 107th Avenue &amp; NW 82nd Street

Future with Project PM

03/28/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations	↑	↑		↑	↑			↑	↑			↑
Traffic Volume (vph)	21	20	157	34	21	59	48	291	1320	98	38	56
Future Volume (vph)	21	20	157	34	21	59	48	291	1320	98	38	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.1	7.1		7.1	7.1			7.1	7.1			7.1
Lane Util. Factor	1.00	1.00		1.00	1.00			1.00	0.95			1.00
Frpb, ped/bikes	1.00	0.98		1.00	0.98			1.00	0.99			1.00
Flpb, ped/bikes	1.00	1.00		0.99	1.00			1.00	1.00			0.99
Frt	1.00	0.86		1.00	0.88			1.00	0.98			1.00
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00			0.95
Satd. Flow (prot)	1805	1616		1803	1646			1790	3525			1759
Flt Permitted	0.70	1.00		0.28	1.00			0.20	1.00			0.15
Satd. Flow (perm)	1333	1616		535	1646			385	3525			278
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	22	21	167	36	22	63	51	310	1404	104	40	60
RTOR Reduction (vph)	0	156	0	0	58	0	0	0	2	0	0	0
Lane Group Flow (vph)	22	32	0	36	27	0	0	361	1506	0	0	100
Confl. Peds. (#/hr)			3	3			2	10		4		4
Confl. Bikes (#/hr)						1			2			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	1%	1%	2%	2%	3%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	pm+pt	NA		custom	pm+pt
Protected Phases	7	4		3	8		1	1	6			5
Permitted Phases	4			8			6	6			5	2
Actuated Green, G (s)	16.7	11.7		21.7	14.2		139.5	121.8				105.5
Effective Green, g (s)	16.7	11.7		21.7	14.2		139.5	121.8				105.5
Actuated g/C Ratio	0.09	0.07		0.12	0.08		0.78	0.68				0.59
Clearance Time (s)	7.1	7.1		7.1	7.1		7.1	7.1				7.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				3.0
Lane Grp Cap (vph)	136	105		117	129		591	2385				250
v/s Ratio Prot	0.00	0.02		c0.01	0.02		c0.13	c0.43				0.02
v/s Ratio Perm	0.01			c0.02			0.35					0.21
v/c Ratio	0.16	0.30		0.30	0.20		0.61	0.63				0.40
Uniform Delay, d1	74.9	80.2		71.3	77.6		13.9	16.4				16.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				1.00
Incremental Delay, d2	0.5	1.6		1.4	0.8		1.8	1.2				1.0
Delay (s)	75.5	81.8		72.8	78.4		15.7	17.7				17.9
Level of Service	E	F		E	E		B	B				B
Approach Delay (s/veh)		81.2			76.7			17.3				
Approach LOS		F			E			B				
<b>Intersection Summary</b>												
HCM 2000 Control Delay (s/veh)		27.0			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.61										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			28.4				
Intersection Capacity Utilization		86.4%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis  
3: NW 107th Avenue & NW 82nd Street

Future with Project PM  
03/28/2024



Movement	SBT	SBR
Lane Configurations	↑↑	
Traffic Volume (vph)	857	37
Future Volume (vph)	857	37
Ideal Flow (vphpl)	1900	1900
Total Lost time (s)	7.1	
Lane Util. Factor	0.95	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	1.00	
Fr <sub>t</sub>	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	3529	
Flt Permitted	1.00	
Satd. Flow (perm)	3529	
Peak-hour factor, PHF	0.94	0.94
Adj. Flow (vph)	912	39
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	950	0
Confl. Peds. (#/hr)	10	
Confl. Bikes (#/hr)	3	
Heavy Vehicles (%)	1%	10%
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	94.9	
Effective Green, g (s)	94.9	
Actuated g/C Ratio	0.53	
Clearance Time (s)	7.1	
Vehicle Extension (s)	3.0	
Lane Grp Cap (vph)	1860	
v/s Ratio Prot	0.27	
v/s Ratio Perm		
v/c Ratio	0.51	
Uniform Delay, d1	27.5	
Progression Factor	1.00	
Incremental Delay, d2	1.0	
Delay (s)	28.5	
Level of Service	C	
Approach Delay (s/veh)	27.5	
Approach LOS	C	
Intersection Summary		

## Timings

3: NW 107th Avenue &amp; NW 82nd Street

Future with Project PM

03/28/2024

Lane Group	EBL	EBT	WBL	WBT	NBU	NBL	NBT	SBU	SBL	SBT
Lane Configurations	↑	↑	↑	↑			↑↑		↑	↑↑
Traffic Volume (vph)	21	20	34	21	48	291	1320	38	56	857
Future Volume (vph)	21	20	34	21	48	291	1320	38	56	857
Lane Group Flow (vph)	22	188	36	85	0	361	1508	0	100	951
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	pm+pt	NA	custom	pm+pt	NA
Protected Phases	7	4	3	8	1	1	6		5	2
Permitted Phases	4		8		6	6		5	2	
Detector Phase	7	4	3	8	1	1	6	5	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.1	25.1	14.1	25.1	14.1	14.1	25.1	14.1	14.1	25.1
Total Split (s)	20.0	53.0	20.0	53.0	24.0	24.0	83.0	24.0	24.0	83.0
Total Split (%)	11.1%	29.4%	11.1%	29.4%	13.3%	13.3%	46.1%	13.3%	13.3%	46.1%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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)	7.1	7.1	7.1	7.1		7.1	7.1		7.1	7.1
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None	None	C-Max	None	None	C-Max
v/c Ratio	0.15	0.75	0.29	0.45		0.60	0.61		0.39	0.49
Control Delay (s/veh)	65.9	33.4	70.8	33.3		14.1	18.2		14.4	27.5
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0
Total Delay (s/veh)	65.9	33.4	70.8	33.3		14.1	18.2		14.4	27.5
Queue Length 50th (ft)	23	25	38	26		100	470		24	348
Queue Length 95th (ft)	50	112	72	85		245	737		53	478
Internal Link Dist (ft)	495		443			574			1263	
Turn Bay Length (ft)	160		300			165			130	
Base Capacity (vph)	195	536	159	467		596	2441		315	1916
Starvation Cap Reductn	0	0	0	0		0	0		0	0
Spillback Cap Reductn	0	0	0	0		0	0		0	0
Storage Cap Reductn	0	0	0	0		0	0		0	0
Reduced v/c Ratio	0.11	0.35	0.23	0.18		0.61	0.62		0.32	0.50

## Intersection Summary

Cycle Length: 180

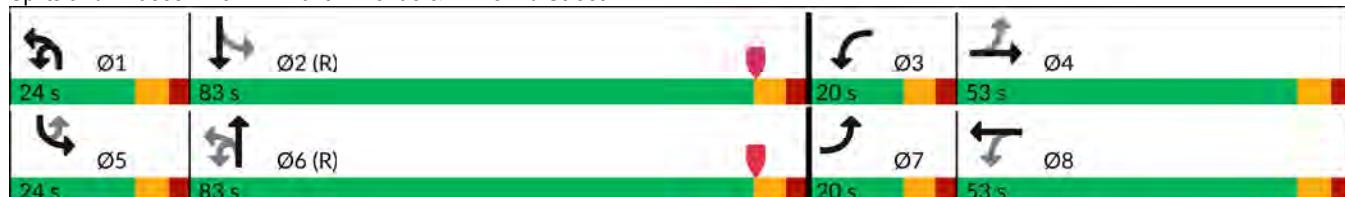
Actuated Cycle Length: 180

Offset: 15.4 (9%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 100

Control Type: Actuated-Coordinated

Splits and Phases: 3: NW 107th Avenue &amp; NW 82nd Street



**Intersection**

Intersection Delay, s/veh 111

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓			↔		↑	↑	↑		↔	
Traffic Vol, veh/h	50	63	145	25	129	152	167	451	11	31	262	24
Future Vol, veh/h	50	63	145	25	129	152	167	451	11	31	262	24
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	4	0	2	4	0	0	1	1	10	0	2	0
Mvmt Flow	60	76	175	30	155	183	201	543	13	37	316	29
Number of Lanes	1	1	0	0	1	0	1	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				2			1			3	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				3			2			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	3				1			1			2	
HCM Control Delay, s/veh	32.5				85.5			158.4			105.3	
HCM LOS	D				F			F			F	

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	100%	0%	8%	10%
Vol Thru, %	0%	100%	0%	0%	30%	42%	83%
Vol Right, %	0%	0%	100%	0%	70%	50%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	451	11	50	208	306	317
LT Vol	167	0	0	50	0	25	31
Through Vol	0	451	0	0	63	129	262
RT Vol	0	0	11	0	145	152	24
Lane Flow Rate	201	543	13	60	251	369	382
Geometry Grp	5	5	5	6	6	6	6
Degree of Util (X)	0.538	1.377	0.032	0.186	0.7	1.008	1.074
Departure Headway (Hd)	10.104	9.581	9.008	12.25	11.131	10.852	11.031
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	360	386	400	295	328	335	332
Service Time	7.804	7.281	6.708	9.95	8.831	8.552	8.731
HCM Lane V/C Ratio	0.558	1.407	0.033	0.203	0.765	1.101	1.151
HCM Control Delay, s/veh	24	211.7	12	17.7	36.1	85.5	105.3
HCM Lane LOS	C	F	B	C	E	F	F
HCM 95th-tile Q	3	25.4	0.1	0.7	5	11.4	13.1

Intersection

Intersection Delay, s/veh 98.6

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↓		81	16	80	59	101	474	19	86	454
Traffic Vol, veh/h	28	72	81	16	80	59	101	474	19	86	454	15
Future Vol, veh/h	28	72	81	16	80	59	101	474	19	86	454	15
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	8	2	1	0	1	11	0	2	0	1	1	8
Mvmt Flow	30	77	87	17	86	63	109	510	20	92	488	16
Number of Lanes	1	1	0	0	1	0	1	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB				EB			SB			NB	
Opposing Lanes	1				2			1			3	
Conflicting Approach Left	SB				NB			EB			WB	
Conflicting Lanes Left	1				3			2			1	
Conflicting Approach Right	NB				SB			WB			EB	
Conflicting Lanes Right	3				1			1			2	
HCM Control Delay, s/veh	17.8				19.3			61.6			186.6	
HCM LOS	C				C			F			F	

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	100%	0%	0%	100%	0%	10%	15%
Vol Thru, %	0%	100%	0%	0%	47%	52%	82%
Vol Right, %	0%	0%	100%	0%	53%	38%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	474	19	28	153	155	555
LT Vol	101	0	0	28	0	16	86
Through Vol	0	474	0	0	72	80	454
RT Vol	0	0	19	0	81	59	15
Lane Flow Rate	109	510	20	30	165	167	597
Geometry Grp	5	5	5	6	6	6	6
Degree of Util (X)	0.231	1.018	0.037	0.081	0.399	0.414	1.328
Departure Headway (Hd)	8.191	7.71	6.951	10.599	9.578	9.81	8.25
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	441	474	518	340	378	370	448
Service Time	5.891	5.41	4.651	8.299	7.278	7.51	5.95
HCM Lane V/C Ratio	0.247	1.076	0.039	0.088	0.437	0.451	1.333
HCM Control Delay, s/veh	13.3	74	9.9	14.2	18.5	19.3	186.6
HCM Lane LOS	B	F	A	B	C	C	F
HCM 95th-tile Q	0.9	13.9	0.1	0.3	1.9	2	26.2

HCM Unsignalized Intersection Capacity Analysis  
5: NW 86th Street & Project Driveway

Future with Project AM  
03/28/2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	0	0	0	0	51
Future Volume (Veh/h)	9	0	0	0	0	51
Sign Control	Free			Stop	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	0	0	0	0	55
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0		75	20	20	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		75	20	20	0
tC, single (s)	4.1		7.1	6.5	6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2		3.5	4.0	4.0	3.3
p0 queue free %	99		100	100	100	95
cM capacity (veh/h)	1623		865	868	868	1085
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	10	0	55			
Volume Left	10	0	0			
Volume Right	0	0	55			
cSH	1623	1700	1085			
Volume to Capacity	0.01	0.00	0.05			
Queue Length 95th (ft)	0	0	4			
Control Delay (s/veh)	7.2	0.0	8.5			
Lane LOS	A	A	A			
Approach Delay (s/veh)	7.2	0.0	8.5			
Approach LOS		A	A			
Intersection Summary						
Average Delay		8.3				
Intersection Capacity Utilization		13.3%		ICU Level of Service		A
Analysis Period (min)		15				

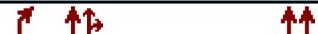
HCM Unsignalized Intersection Capacity Analysis  
5: NW 86th Street & Project Driveway

Future with Project PM  
03/28/2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	22	0	0	0	0	36
Future Volume (Veh/h)	22	0	0	0	0	36
Sign Control	Free			Stop	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	0	0	0	0	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	0		87	48	48	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	0		87	48	48	0
tC, single (s)	4.1		7.1	6.5	6.5	6.2
tC, 2 stage (s)						
tF (s)	2.2		3.5	4.0	4.0	3.3
p0 queue free %	99		100	100	100	96
cM capacity (veh/h)	1623		857	831	831	1085
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	24	0	39			
Volume Left	24	0	0			
Volume Right	0	0	39			
cSH	1623	1700	1085			
Volume to Capacity	0.01	0.00	0.04			
Queue Length 95th (ft)	1	0	3			
Control Delay (s/veh)	7.3	0.0	8.4			
Lane LOS	A	A	A			
Approach Delay (s/veh)	7.3	0.0	8.4			
Approach LOS		A	A			
Intersection Summary						
Average Delay		8.0				
Intersection Capacity Utilization		13.3%		ICU Level of Service		A
Analysis Period (min)		15				

**Intersection**

Int Delay, s/veh 0.1

**Movement** WBL WBR NBT NBR SBL SBTLane Configurations 

Traffic Vol, veh/h 0 11 726 32 0 762

Future Vol, veh/h 0 11 726 32 0 762

Conflicting Peds, #/hr 0 0 0 0 0 0

Sign Control Stop Stop Free Free Free Free

RT Channelized - None - None - None

Storage Length - 0 - - - -

Veh in Median Storage, # 0 - 0 - - 0

Grade, % 0 - 0 - - 0

Peak Hour Factor 92 92 92 92 92 92

Heavy Vehicles, % 2 2 2 2 2 2

Mvmt Flow 0 12 789 35 0 828

**Major/Minor** Minor1 Major1 Major2

Conflicting Flow All - 412 0 0 - -

Stage 1 - - - - - -

Stage 2 - - - - - -

Critical Hdwy - 6.94 - - - -

Critical Hdwy Stg 1 - - - - - -

Critical Hdwy Stg 2 - - - - - -

Follow-up Hdwy - 3.32 - - - -

Pot Cap-1 Maneuver 0 589 - - 0 -

Stage 1 0 - - - 0 -

Stage 2 0 - - - 0 -

Platoon blocked, % - - - - - -

Mov Cap-1 Maneuver - 589 - - - -

Mov Cap-2 Maneuver - - - - - -

Stage 1 - - - - - -

Stage 2 - - - - - -

**Approach** WB NB SB

HCM Control Delay, s/v 11.24 0 0

HCM LOS B

**Minor Lane/Major Mvmt** NBT NBR WBLn1 SBT

Capacity (veh/h) - - 589 -

HCM Lane V/C Ratio - - 0.02 -

HCM Control Delay (s/veh) - - 11.2 -

HCM Lane LOS - - B -

HCM 95th %tile Q(veh) - - 0.1 -

**Intersection**

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
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Lane Configurations						
Traffic Vol, veh/h	0	8	817	76	0	678
Future Vol, veh/h	0	8	817	76	0	678
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	9	888	83	0	737

Major/Minor	Minor1	Major1	Major2
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Conflicting Flow All	-	485	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	-	-	-	-
Pot Cap-1 Maneuver	0	528	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	528	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
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HCM Control Delay, s/v	11.94	0	0
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HCM LOS	B
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Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
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Capacity (veh/h)	-	-	528	-
HCM Lane V/C Ratio	-	-	0.016	-
HCM Control Delay (s/veh)	-	-	11.9	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.1	-

## Intersection

Int Delay, s/veh 2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	128	5	0	239	8	0	0	51	0	0	58
Future Vol, veh/h	0	128	5	0	239	8	0	0	51	0	0	58
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	139	5	0	260	9	0	0	55	0	0	63

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	-	0	0	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	0	-
Stage 1	0	-	0	-
Stage 2	0	-	0	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	906
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	0	9.23	10.06
HCM LOS			A	B
<hr/>				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT WBR SBLn1
Capacity (veh/h)	906	-	-	- 775
HCM Lane V/C Ratio	0.061	-	-	- 0.081
HCM Control Delay (s/veh)	9.2	-	-	- 10.1
HCM Lane LOS	A	-	-	- B
HCM 95th %tile Q(veh)	0.2	-	-	- 0.3

## Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
<b>Lane Configurations</b>												
Traffic Vol, veh/h	0	151	11	0	115	19	0	0	36	0	0	49
Future Vol, veh/h	0	151	11	0	115	19	0	0	36	0	0	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	164	12	0	125	21	0	0	39	0	0	53

Major/Minor	Major1	Major2			Minor1	Minor2		
Conflicting Flow All	-	0	0	-	-	0	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	-	6.22	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	-	3.318	-
Pot Cap-1 Maneuver	0	-	-	0	-	0	0	874
Stage 1	0	-	-	0	-	0	0	0
Stage 2	0	-	-	0	-	0	0	0
Platoon blocked, %	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	-	874	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-

Approach	EB	WB			NB	SB
HCM Control Delay, s/v	0	0			9.31	9.18
HCM LOS					A	A
<hr/>						
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT	WBR	SBLn1
Capacity (veh/h)	874	-	-	-	-	913
HCM Lane V/C Ratio	0.045	-	-	-	-	0.058
HCM Control Delay (s/veh)	9.3	-	-	-	-	9.2
HCM Lane LOS	A	-	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-	0.2

## Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	10	0	619	24	0	470	0
Future Vol, veh/h	0	0	0	0	0	10	0	619	24	0	470	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	130	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	11	0	673	26	0	511	0

Major/Minor	Minor2	Minor1		Major1		Major2		
Conflicting Flow All	847	1210	255	-	-	349	511	0
Stage 1	511	511	-	-	-	-	-	-
Stage 2	336	699	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-
Pot Cap-1 Maneuver	255	181	744	0	0	647	1051	-
Stage 1	514	535	-	0	0	-	-	0
Stage 2	651	440	-	0	0	-	-	0
Platoon blocked, %						-	-	-
Mov Cap-1 Maneuver	251	181	744	-	-	647	1051	-
Mov Cap-2 Maneuver	251	181	-	-	-	-	-	-
Stage 1	514	535	-	-	-	-	-	-
Stage 2	640	440	-	-	-	-	-	-

Approach	EB	WB		NB		SB	
HCM Control Delay, s/v	0	10.66		0		0	
HCM LOS	A	B					
<hr/>							
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	1051	-	-	-	647	-	-
HCM Lane V/C Ratio	-	-	-	-	0.017	-	-
HCM Control Delay (s/veh)	0	-	-	0	10.7	-	-
HCM Lane LOS	A	-	-	A	B	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	-	-

## Intersection

Int Delay, s/veh 0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	9	0	611	56	0	550	0
Future Vol, veh/h	0	0	0	0	0	9	0	611	56	0	550	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	130	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	10	0	664	61	0	598	0

Major/Minor	Minor2	Minor1		Major1		Major2		
Conflicting Flow All	930	1323	299	-	-	362	598	0
Stage 1	598	598	-	-	-	-	-	-
Stage 2	332	725	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-
Pot Cap-1 Maneuver	222	155	697	0	0	634	975	-
Stage 1	456	489	-	0	0	-	-	0
Stage 2	655	428	-	0	0	-	-	0
Platoon blocked, %						-	-	-
Mov Cap-1 Maneuver	219	155	697	-	-	634	975	-
Mov Cap-2 Maneuver	219	155	-	-	-	-	-	-
Stage 1	456	489	-	-	-	-	-	-
Stage 2	645	428	-	-	-	-	-	-

Approach	EB	WB		NB		SB	
HCM Control Delay, s/v	0	10.77		0		0	
HCM LOS	A	B					
<hr/>							
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	975	-	-	-	634	-	-
HCM Lane V/C Ratio	-	-	-	-	0.015	-	-
HCM Control Delay (s/veh)	0	-	-	0	10.8	-	-
HCM Lane LOS	A	-	-	A	B	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	-	-

HCM 7th Signalized Intersection Summary  
10: NW 107th Avenue & NW 74th Street

Future with Project AM  
03/28/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	190	1425	247	267	519	399	187	603	345	687	792	232
Future Volume (veh/h)	190	1425	247	267	519	399	187	603	345	687	792	232
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1870	1811	1870	1856	1618	1885	1870	1885	1870	1885	1885	1885
Adj Flow Rate, veh/h	204	1532	266	287	558	429	201	648	0	739	852	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	6	2	3	19	1	2	1	2	1	1	1
Cap, veh/h	240	1893	598	299	1769	630	249	675		637	1071	
Arrive On Green	0.07	0.38	0.38	0.09	0.40	0.40	0.07	0.19	0.00	0.18	0.30	0.00
Sat Flow, veh/h	3456	4944	1562	3428	4418	1573	3456	3582	1585	3483	3582	1598
Grp Volume(v), veh/h	204	1532	266	287	558	429	201	648	0	739	852	0
Grp Sat Flow(s), veh/h/ln	1728	1648	1562	1714	1473	1573	1728	1791	1585	1742	1791	1598
Q Serve(g_s), s	10.5	49.9	22.8	15.0	15.6	40.5	10.3	32.3	0.0	32.9	39.4	0.0
Cycle Q Clear(g_c), s	10.5	49.9	22.8	15.0	15.6	40.5	10.3	32.3	0.0	32.9	39.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	240	1893	598	299	1769	630	249	675		637	1071	
V/C Ratio(X)	0.85	0.81	0.44	0.96	0.32	0.68	0.81	0.96		1.16	0.80	
Avail Cap(c_a), veh/h	244	1893	598	299	1769	630	363	675		637	1071	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	82.8	49.7	41.3	81.8	37.0	44.5	82.3	72.4	0.0	73.6	58.0	0.0
Incr Delay (d2), s/veh	22.9	3.9	2.4	41.0	0.5	5.9	13.5	26.2	0.0	89.0	6.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5.4	21.0	9.2	8.3	5.7	16.7	5.1	17.2	0.0	22.5	18.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	105.7	53.5	43.7	122.8	37.5	50.3	95.8	98.6	0.0	162.5	64.2	0.0
LnGrp LOS	F	D	D	F	D	D	F	F		F	E	
Approach Vol, veh/h		2002			1274			849			1591	
Approach Delay, s/veh		57.6			61.0			98.0			109.8	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.8	79.2	40.0	41.0	23.0	76.0	20.1	60.9				
Change Period (Y+Rc), s	7.3	* 7.1	* 7.1	* 7.1	7.3	* 7.1	* 7.1	* 7.1				
Max Green Setting (Gmax), s	12.7	* 72	* 33	* 34	15.7	* 69	* 19	* 48				
Max Q Clear Time (g_c+l1), s	12.5	42.5	34.9	34.3	17.0	51.9	12.3	41.4				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	4.3	0.7	3.2				

Intersection Summary

HCM 7th Control Delay, s/veh

78.9

HCM 7th LOS

E

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: NW 107th Avenue & NW 74th Street

Future with Project AM

03/28/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑↑	↑	↑↑	↑↑↑↑	↑	↑↑	↑↑↑↑	↑	↑↑	↑↑↑↑	↑
Traffic Volume (vph)	190	1425	247	267	519	399	187	603	345	687	792	232
Future Volume (vph)	190	1425	247	267	519	399	187	603	345	687	792	232
Lane Group Flow (vph)	204	1532	266	287	558	429	201	648	371	739	852	249
Turn Type	Prot	NA	Perm									
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases				6		2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.3	34.1	34.1	14.3	34.1	34.1	14.1	41.0	41.0	14.1	43.1	43.1
Total Split (s)	20.0	76.0	76.0	23.0	79.0	79.0	26.0	41.0	41.0	40.0	55.0	55.0
Total Split (%)	11.1%	42.2%	42.2%	12.8%	43.9%	43.9%	14.4%	22.8%	22.8%	22.2%	30.6%	30.6%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.9	2.7	2.7	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.1	7.1	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max
v/c Ratio	0.85	0.81	0.37	0.96	0.31	0.49	0.62	0.96	0.88	1.16	0.86	0.45
Control Delay (s/veh)	111.7	54.3	12.2	124.7	37.7	6.4	86.8	97.9	63.6	152.6	71.9	22.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	111.7	54.3	12.2	124.7	37.7	6.4	86.8	97.9	63.6	152.6	71.9	22.8
Queue Length 50th (ft)	125	596	55	177	166	23	119	405	267	~531	510	90
Queue Length 95th (ft)	#197	658	133	#280	201	109	165	#534	#461	#665	#612	185
Internal Link Dist (ft)					364			695				615
Turn Bay Length (ft)	300		290	500		300	485		530	365		230
Base Capacity (vph)	242	1872	716	296	1744	866	360	673	419	633	988	553
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.82	0.37	0.97	0.32	0.50	0.56	0.96	0.89	1.17	0.86	0.45

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

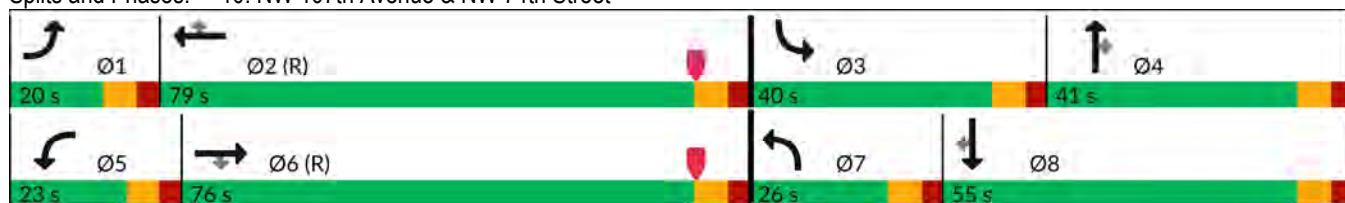
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: NW 107th Avenue & NW 74th Street



HCM 7th Signalized Intersection Summary  
10: NW 107th Avenue & NW 74th Street

Future with Project PM  
03/28/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	331	867	233	460	1569	609	313	742	346	411	710	204
Future Volume (veh/h)	331	867	233	460	1569	609	313	742	346	411	710	204
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1870	1811	1870	1856	1618	1885	1870	1885	1870	1885	1885	1885
Adj Flow Rate, veh/h	338	885	238	469	1601	621	319	757	0	419	724	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	6	2	3	19	1	2	1	2	1	1	1
Cap, veh/h	282	2057	648	470	2084	736	363	714		308	654	
Arrive On Green	0.08	0.42	0.42	0.14	0.47	0.47	0.11	0.20	0.00	0.09	0.18	0.00
Sat Flow, veh/h	3456	4944	1558	3428	4418	1561	3456	3582	1585	3483	3582	1598
Grp Volume(v), veh/h	338	885	238	469	1601	621	319	757	0	419	724	0
Grp Sat Flow(s), veh/h/ln	1728	1648	1558	1714	1473	1561	1728	1791	1585	1742	1791	1598
Q Serve(g_s), s	14.7	22.9	19.0	24.6	54.0	62.8	16.4	35.9	0.0	15.9	32.9	0.0
Cycle Q Clear(g_c), s	14.7	22.9	19.0	24.6	54.0	62.8	16.4	35.9	0.0	15.9	32.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	282	2057	648	470	2084	736	363	714		308	654	
V/C Ratio(X)	1.20	0.43	0.37	1.00	0.77	0.84	0.88	1.06		1.36	1.11	
Avail Cap(c_a), veh/h	282	2057	648	470	2084	736	401	714		308	654	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	82.6	37.4	36.2	77.6	39.4	41.7	79.4	72.1	0.0	82.1	73.6	0.0
Incr Delay (d2), s/veh	118.1	0.7	1.6	40.6	2.8	11.3	20.3	50.6	0.0	182.5	68.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	11.2	9.4	7.5	13.5	19.8	26.1	8.3	21.4	0.0	14.9	21.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	200.7	38.0	37.8	118.3	42.2	53.1	99.7	122.6	0.0	264.5	141.6	0.0
LnGrp LOS	F	D	D	F	D	D	F	F		F	F	
Approach Vol, veh/h						2691			1076			1143
Approach Delay, s/veh						58.0			115.9			186.7
Approach LOS		E				E			F			F
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	92.0	23.0	43.0	32.0	82.0	26.0	40.0				
Change Period (Y+Rc), s	7.3	* 7.1	* 7.1	* 7.1	7.3	* 7.1	* 7.1	* 7.1				
Max Green Setting (Gmax), s	14.7	* 85	* 16	* 36	24.7	* 75	* 21	* 31				
Max Q Clear Time (g_c+l1), s	16.7	64.8	17.9	37.9	26.6	24.9	18.4	34.9				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.0	2.4	0.5	0.0				

Intersection Summary

HCM 7th Control Delay, s/veh

94.9

HCM 7th LOS

F

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
10: NW 107th Avenue & NW 74th Street

Future with Project PM

03/28/2024

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	331	867	233	460	1569	609	313	742	346	411	710	204
Future Volume (vph)	331	867	233	460	1569	609	313	742	346	411	710	204
Lane Group Flow (vph)	338	885	238	469	1601	621	319	757	353	419	724	208
Turn Type	Prot	NA	Perm									
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases				6		2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.3	34.1	34.1	14.3	34.1	34.1	14.1	41.0	41.0	14.1	38.0	38.0
Total Split (s)	22.0	82.0	82.0	32.0	92.0	92.0	28.0	43.0	43.0	23.0	38.0	38.0
Total Split (%)	12.2%	45.6%	45.6%	17.8%	51.1%	51.1%	15.6%	23.9%	23.9%	12.8%	21.1%	21.1%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.9	2.7	2.7	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.1	7.1	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max
v/c Ratio	1.20	0.43	0.30	1.00	0.77	0.70	0.81	1.06	0.73	1.36	1.16	0.51
Control Delay (s/veh)	186.4	38.3	4.3	118.3	43.0	24.0	94.8	117.9	34.8	241.2	152.4	23.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	186.4	38.3	4.3	118.3	43.0	24.0	94.8	117.9	34.8	241.2	152.4	23.3
Queue Length 50th (ft)	~249	272	0	~292	573	328	192	~515	156	~335	~536	54
Queue Length 95th (ft)	#360	314	57	#418	635	489	#259	#652	288	#453	#673	146
Internal Link Dist (ft)				441		364		695				615
Turn Bay Length (ft)	300		290	500		300	485		530	365		230
Base Capacity (vph)	280	2036	781	466	2055	877	398	712	483	306	621	401
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.21	0.43	0.30	1.01	0.78	0.71	0.80	1.06	0.73	1.37	1.17	0.52

Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

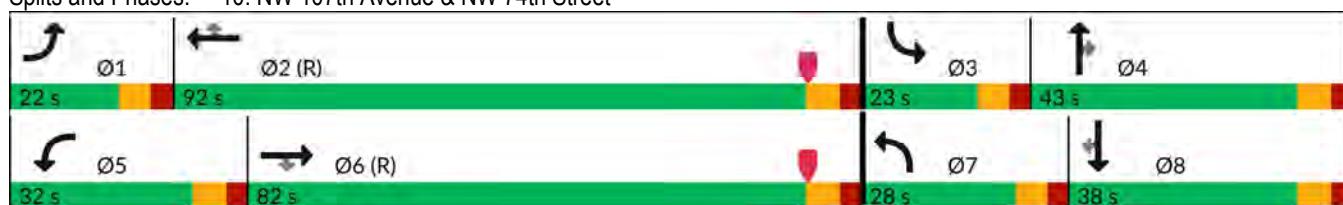
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: NW 107th Avenue & NW 74th Street



# **Future with Project with Improvement Conditions**

HCM 7th Signalized Intersection Summary  
1: NW 107th Avenue & NW 88th Street

Future with Project with IMP AM  
03/29/2024

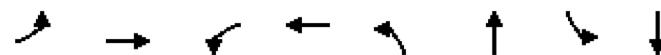
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	18	29	245	25	26	31	607	107	13	491	14
Future Volume (veh/h)	4	18	29	245	25	26	31	607	107	13	491	14
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	0.97			0.96	0.98		0.98	1.00		0.98	1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		No
Adj Sat Flow, veh/h/ln	1900	1900	1574	1900	1900	1841	1811	1885	1885	1900	1870	1648
Adj Flow Rate, veh/h	4	19	31	261	27	28	33	646	114	14	522	15
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	22	0	0	4	6	1	1	0	2	17
Cap, veh/h	54	72	104	416	229	237	433	1350	238	331	1468	42
Arrive On Green	0.11	0.11	0.11	0.07	0.27	0.27	0.05	0.45	0.45	0.02	0.42	0.42
Sat Flow, veh/h	48	659	953	1810	843	874	1725	3031	534	1810	3525	101
Grp Volume(v), veh/h	54	0	0	261	0	55	33	381	379	14	263	274
Grp Sat Flow(s), veh/h/ln	1660	0	0	1810	0	1717	1725	1791	1774	1810	1777	1849
Q Serve(g_s), s	0.0	0.0	0.0	5.9	0.0	1.9	0.8	12.0	12.0	0.4	8.1	8.1
Cycle Q Clear(g_c), s	2.4	0.0	0.0	5.9	0.0	1.9	0.8	12.0	12.0	0.4	8.1	8.1
Prop In Lane	0.07			0.57	1.00		0.51	1.00		0.30	1.00	0.05
Lane Grp Cap(c), veh/h	230	0	0	416	0	466	433	798	790	331	740	770
V/C Ratio(X)	0.24	0.00	0.00	0.63	0.00	0.12	0.08	0.48	0.48	0.04	0.36	0.36
Avail Cap(c_a), veh/h	419	0	0	416	0	665	506	798	790	414	740	770
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	0.0	29.5	0.0	21.9	12.2	15.6	15.6	13.6	16.0	16.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	3.0	0.0	0.1	0.1	2.0	2.1	0.1	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.0	0.0	0.0	4.9	0.0	0.8	0.3	4.8	4.8	0.1	3.2	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.3	0.0	0.0	32.5	0.0	22.0	12.3	17.7	17.7	13.6	17.3	17.3
LnGrp LOS	C			C		C	B	B	B	B	B	B
Approach Vol, veh/h				54		316		793			551	
Approach Delay, s/veh				33.3		30.7		17.5			17.2	
Approach LOS				C		C		B			B	
Timer - Assigned Phs	1	2	3	4	5	6				8		
Phs Duration (G+Y+Rc), s	10.7	40.4	13.0	15.8	8.4	42.7				28.8		
Change Period (Y+Rc), s	* 7.1	* 7.1	* 7.1	* 7.1	* 7.1	* 7.1				* 7.1		
Max Green Setting (Gmax), s	* 7	* 21	* 5.9	* 18	* 5	* 23				* 31		
Max Q Clear Time (g_c+l1), s	2.8	10.1	7.9	4.4	2.4	14.0				3.9		
Green Ext Time (p_c), s	0.0	2.2	0.0	0.2	0.0	2.9				0.2		
Intersection Summary												
HCM 7th Control Delay, s/veh				20.3								
HCM 7th LOS				C								
Notes												
* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.												

## Timings

1: NW 107th Avenue &amp; NW 88th Street

Future with Project with IMP AM

03/29/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	4	18	245	25	31	607	13	491
Future Volume (vph)	4	18	245	25	31	607	13	491
Lane Group Flow (vph)	0	54	261	55	33	760	14	537
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases		4	3	8	1	6	5	2
Permitted Phases	4		8		6		2	
Detector Phase	4	4	3	8	1	6	5	2
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	5.0	7.0	7.0	5.0	7.0
Minimum Split (s)	25.1	25.1	12.1	25.1	14.1	25.1	12.1	25.1
Total Split (s)	25.1	25.1	13.0	38.1	14.1	29.8	12.1	27.8
Total Split (%)	31.4%	31.4%	16.3%	47.6%	17.6%	37.3%	15.1%	34.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
v/c Ratio	0.31	1.09	0.15	0.05	0.36	0.03	0.27	
Control Delay (s/veh)	23.3	116.7	14.3	8.3	11.1	8.6	12.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay (s/veh)	23.3	116.7	14.3	8.3	11.1	8.6	12.8	
Queue Length 50th (ft)	11	114	10	7	96	3	64	
Queue Length 95th (ft)	43	#222	36	20	209	11	148	
Internal Link Dist (ft)	531		310		245		252	
Turn Bay Length (ft)		140		140		50		
Base Capacity (vph)	358	238	675	552	2095	462	1972	
Starvation Cap Reductn	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.15	1.10	0.08	0.06	0.36	0.03	0.27	

## Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow

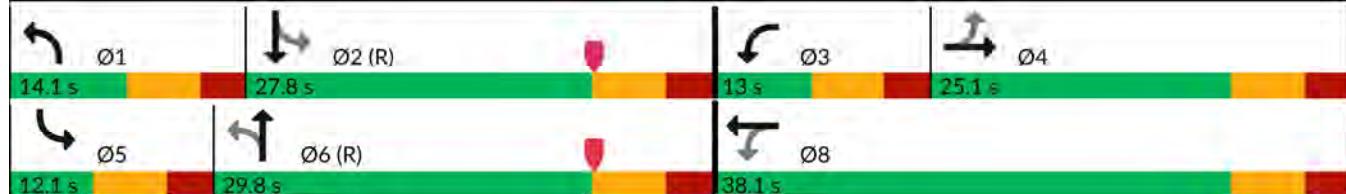
Natural Cycle: 80

Control Type: Actuated-Coordinated

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: NW 107th Avenue &amp; NW 88th Street



## HCM Signalized Intersection Capacity Analysis

1: NW 107th Avenue &amp; NW 88th Street

Future with Project with IMP PM

03/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	3	22	25	124	21	19	46	661	125	11	14	535
Future Volume (vph)	3	22	25	124	21	19	46	661	125	11	14	535
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor	1.00			1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	0.99			1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99			0.99	1.00		0.99	1.00		0.99	1.00	
Fr <sub>t</sub>	0.93			1.00	0.92		1.00	0.97		1.00	0.99	
Flt Protected	0.99			0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1447			1802	1749		1801	3447		1514	3562	
Flt Permitted	0.97			0.47	1.00		0.40	1.00		0.29	1.00	
Satd. Flow (perm)	1416			904	1749		769	3447		478	3562	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.92	0.96	0.96
Adj. Flow (vph)	3	23	26	129	22	20	48	689	130	12	15	557
RTOR Reduction (vph)	0	24	0	0	16	0	0	15	0	0	0	1
Lane Group Flow (vph)	0	28	0	129	26	0	48	804	0	0	27	567
Confl. Peds. (#/hr)	5			4			5	7		2		2
Confl. Bikes (#/hr)												
Heavy Vehicles (%)	0%	0%	42%	0%	0%	0%	0%	2%	1%	2%	33%	1%
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		custom	pm+pt	NA
Protected Phases		4		3	8		1	6			5	2
Permitted Phases		4		8			6			5	2	
Actuated Green, G (s)	5.0		16.2	16.2		38.9	34.7				36.1	33.3
Effective Green, g (s)	5.0		16.2	16.2		38.9	34.7				36.1	33.3
Actuated g/C Ratio	0.07		0.22	0.22		0.52	0.46				0.48	0.44
Clearance Time (s)	7.1		7.1	7.1		7.1	7.1				7.1	7.1
Vehicle Extension (s)	3.0		3.0	3.0		3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	94		244	377		456	1594				268	1581
v/s Ratio Prot			c0.03	0.02		c0.01	c0.23				0.00	0.16
v/s Ratio Perm		0.02		c0.09			0.05				0.04	
v/c Ratio	0.29		0.52	0.06		0.10	0.50				0.10	0.35
Uniform Delay, d1	33.3		25.7	23.4		8.9	14.1				10.3	13.7
Progression Factor	1.00		1.00	1.00		1.00	1.00				1.00	1.00
Incremental Delay, d2	1.7		2.0	0.0		0.1	1.1				0.1	0.6
Delay (s)	35.0		27.8	23.4		9.0	15.2				10.5	14.4
Level of Service	D		C	C		A	B				B	B
Approach Delay (s/veh)	35.0			26.7			14.9					14.2
Approach LOS	D			C			B					B
<b>Intersection Summary</b>												
HCM 2000 Control Delay (s/veh)	16.5											
HCM 2000 Volume to Capacity ratio	0.54											
Actuated Cycle Length (s)	75.0											
Intersection Capacity Utilization	58.0%											
Analysis Period (min)	15											
c Critical Lane Group												

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	11
Future Volume (vph)	11
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Fr <sub>t</sub>	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.96
Adj. Flow (vph)	11
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	7
Confl. Bikes (#/hr)	3
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d <sub>1</sub>	
Progression Factor	
Incremental Delay, d <sub>2</sub>	
Delay (s)	
Level of Service	
Approach Delay (s/veh)	
Approach LOS	
Intersection Summary	

## Timings

1: NW 107th Avenue &amp; NW 88th Street

Future with Project with IMP PM

03/29/2024



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBU	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	3	22	124	21	46	661	11	14	535
Future Volume (vph)	3	22	124	21	46	661	11	14	535
Lane Group Flow (vph)	0	52	129	42	48	819	0	27	568
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	custom	pm+pt	NA
Protected Phases		4	3	8	1	6		5	2
Permitted Phases	4		8		6		5	2	
Detector Phase	4	4	3	8	1	6	5	5	2
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	25.1	25.1	12.1	25.1	12.1	25.1	12.1	12.1	25.1
Total Split (s)	25.1	25.1	12.1	37.2	12.1	25.7	12.1	12.1	25.7
Total Split (%)	33.5%	33.5%	16.1%	49.6%	16.1%	34.3%	16.1%	16.1%	34.3%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.1	7.1	7.1	7.1	7.1		7.1	7.1	
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	None	C-Max
v/c Ratio	0.32	0.55	0.11	0.08	0.39		0.07	0.28	
Control Delay (s/veh)	24.3	33.2	13.8	8.6	13.8		9.0	14.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay (s/veh)	24.3	33.2	13.8	8.6	13.8		9.0	14.8	
Queue Length 50th (ft)	11	48	8	9	102		5	100	
Queue Length 95th (ft)	42	87	29	26	233		17	158	
Internal Link Dist (ft)	531		244		250			262	
Turn Bay Length (ft)				140			50		
Base Capacity (vph)	359	234	714	562	2064		368	1986	
Starvation Cap Reductn	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.14	0.55	0.06	0.09	0.40		0.07	0.29	

## Intersection Summary

Cycle Length: 75

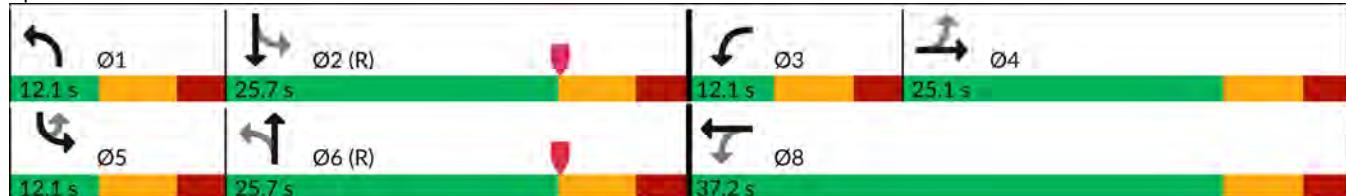
Actuated Cycle Length: 75

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Splits and Phases: 1: NW 107th Avenue &amp; NW 88th Street



HCM 7th Signalized Intersection Summary  
2: NW 107th Avenue & NW 86th Street

Future with Project with IMP AM  
06/26/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	0	189	46	0	6	195	734	7	2	750	13
Future Volume (veh/h)	23	0	189	46	0	6	195	734	7	2	750	13
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		No
Adj Sat Flow, veh/h/ln	1826	1870	1885	1870	1870	1870	1885	1885	1870	1870	1870	1900
Adj Flow Rate, veh/h	25	0	205	50	0	7	212	798	8	2	815	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	2	1	2	2	2	1	1	2	2	2	0
Cap, veh/h	67	13	248	227	0	280	475	2582	26	484	2081	36
Arrive On Green	0.18	0.00	0.18	0.18	0.00	0.18	0.07	0.71	0.71	0.19	0.19	0.19
Sat Flow, veh/h	100	71	1403	775	0	1585	1795	3633	36	676	3573	61
Grp Volume(v), veh/h	230	0	0	50	0	7	212	393	413	2	405	424
Grp Sat Flow(s), veh/h/ln	1574	0	0	775	0	1585	1795	1791	1879	676	1777	1858
Q Serve(g_s), s	5.4	0.0	0.0	0.0	0.0	0.3	3.4	6.5	6.5	0.2	15.9	15.9
Cycle Q Clear(g_c), s	11.2	0.0	0.0	5.3	0.0	0.3	3.4	6.5	6.5	0.2	15.9	15.9
Prop In Lane	0.11		0.89	1.00		1.00	1.00		0.02	1.00		0.03
Lane Grp Cap(c), veh/h	328	0	0	227	0	280	475	1273	1335	484	1035	1082
V/C Ratio(X)	0.70	0.00	0.00	0.22	0.00	0.02	0.45	0.31	0.31	0.00	0.39	0.39
Avail Cap(c_a), veh/h	452	0	0	320	0	406	671	1273	1335	484	1035	1082
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	0.0	29.3	0.0	27.2	7.6	4.3	4.3	13.6	19.9	19.9
Incr Delay (d2), s/veh	2.9	0.0	0.0	0.5	0.0	0.0	0.5	0.5	0.5	0.0	1.1	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	4.4	0.0	0.0	0.9	0.0	0.1	1.0	1.7	1.8	0.0	7.7	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	34.6	0.0	0.0	29.8	0.0	27.3	8.1	4.8	4.8	13.6	21.0	21.0
LnGrp LOS	C			C		C	A	A	A	B	C	C
Approach Vol, veh/h	230			57			1018			831		
Approach Delay, s/veh	34.6			29.5			5.5			21.0		
Approach LOS	C			C			A			C		
Timer - Assigned Phs	1	2	4	6	8							
Phs Duration (G+Y+Rc), s	10.3	51.1	18.6	61.4	18.6							
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5							
Max Green Setting (Gmax), s	14.5	31.5	20.5	50.5	20.5							
Max Q Clear Time (g_c+l1), s	5.4	17.9	13.2	8.5	7.3							
Green Ext Time (p_c), s	0.4	4.1	0.8	5.3	0.2							
Intersection Summary												
HCM 7th Control Delay, s/veh			15.3									
HCM 7th LOS			B									

## Timings

2: NW 107th Avenue &amp; NW 86th Street

Future with Project with IMP AM

06/26/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	23	0	46	0	6	195	734	2	750
Future Volume (vph)	23	0	46	0	6	195	734	2	750
Lane Group Flow (vph)	0	230	0	50	7	212	806	2	829
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		4		8		1	6		2
Permitted Phases	4		8		8	6		2	
Detector Phase	4	4	8	8	8	1	6	2	2
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	25.0	25.0	25.0	25.0	25.0	19.0	55.0	36.0	36.0
Total Split (%)	31.3%	31.3%	31.3%	31.3%	31.3%	23.8%	68.8%	45.0%	45.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag						Lead		Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio	0.62		0.54	0.03	0.40	0.30	0.01	0.39	
Control Delay (s/veh)	14.3		52.7	0.2	5.4	3.6	6.5	9.4	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	14.3		52.7	0.2	5.4	3.6	6.5	9.4	
Queue Length 50th (ft)	11		24	0	21	48	0	123	
Queue Length 95th (ft)	70		56	0	52	91	m1	m188	
Internal Link Dist (ft)	675		238			1263		239	
Turn Bay Length (ft)				110	150		150		
Base Capacity (vph)	550		192	466	623	2727	390	2132	
Starvation Cap Reductn	0		0	0	0	0	0	0	
Spillback Cap Reductn	0		0	0	0	0	0	0	
Storage Cap Reductn	0		0	0	0	0	0	0	
Reduced v/c Ratio	0.42		0.26	0.02	0.34	0.30	0.01	0.39	

## Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 31.5 (39%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NW 107th Avenue &amp; NW 86th Street



HCM 7th Signalized Intersection Summary  
2: NW 107th Avenue & NW 86th Street

Future with Project with IMP PM  
06/26/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	0	140	32	0	4	222	860	16	5	651	27
Future Volume (veh/h)	30	0	140	32	0	4	222	860	16	5	651	27
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No											
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	0	147	34	0	4	234	905	17	5	685	28
Peak Hour Factor	0.95	0.92	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	14	188	242	0	231	673	2619	49	457	2073	85
Arrive On Green	0.15	0.00	0.15	0.15	0.00	0.15	0.08	0.73	0.73	1.00	1.00	1.00
Sat Flow, veh/h	185	96	1289	1001	0	1585	1781	3568	67	605	3475	142
Grp Volume(v), veh/h	179	0	0	34	0	4	234	451	471	5	350	363
Grp Sat Flow(s), veh/h/ln	1569	0	0	1001	0	1585	1781	1777	1858	605	1777	1840
Q Serve(g_s), s	4.6	0.0	0.0	0.0	0.0	0.2	3.4	6.8	6.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.2	0.0	0.0	2.5	0.0	0.2	3.4	6.8	6.8	0.0	0.0	0.0
Prop In Lane	0.18		0.82	1.00		1.00	1.00		0.04	1.00		0.08
Lane Grp Cap(c), veh/h	286	0	0	242	0	231	673	1304	1364	457	1060	1098
V/C Ratio(X)	0.63	0.00	0.00	0.14	0.00	0.02	0.35	0.35	0.35	0.01	0.33	0.33
Avail Cap(c_a), veh/h	462	0	0	383	0	412	903	1304	1364	457	1060	1098
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	1.00	0.76	0.76	0.76	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	0.0	28.4	0.0	27.4	3.9	3.6	3.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.3	0.0	0.0	0.3	0.0	0.0	0.2	0.6	0.5	0.0	0.8	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.2	0.0	0.0	0.5	0.0	0.1	0.8	1.5	1.6	0.0	0.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.1	0.0	0.0	28.7	0.0	27.4	4.1	4.1	4.1	0.0	0.8	0.8
LnGrp LOS	C			C		C	A	A	A	A	A	A
Approach Vol, veh/h	179			38			1156			718		
Approach Delay, s/veh	33.1			28.5			4.1			0.8		
Approach LOS	C			C			A			A		
Timer - Assigned Phs	1	2	4	6	8							
Phs Duration (G+Y+Rc), s	10.3	49.2	15.4	59.6	15.4							
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5							
Max Green Setting (Gmax), s	15.5	26.5	19.5	46.5	19.5							
Max Q Clear Time (g_c+l1), s	5.4	2.0	10.2	8.8	4.5							
Green Ext Time (p_c), s	0.5	4.3	0.6	6.4	0.1							
<b>Intersection Summary</b>												
HCM 7th Control Delay, s/veh			5.9									
HCM 7th LOS			A									

## Timings

2: NW 107th Avenue &amp; NW 86th Street

Future with Project with IMP PM

06/26/2024



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	30	0	32	0	4	222	860	5	651
Future Volume (vph)	30	0	32	0	4	222	860	5	651
Lane Group Flow (vph)	0	179	0	34	4	234	922	5	713
Turn Type	Perm	NA	Perm	NA	Perm	pm+pt	NA	Perm	NA
Protected Phases		4			8		1	6	2
Permitted Phases	4				8		6		2
Detector Phase	4	4	8	8	8	1	6	2	2
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	22.5
Total Split (s)	24.0	24.0	24.0	24.0	24.0	20.0	51.0	31.0	31.0
Total Split (%)	32.0%	32.0%	32.0%	32.0%	32.0%	26.7%	68.0%	41.3%	41.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)					0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)				4.5		4.5	4.5	4.5	4.5
Lead/Lag						Lead		Lag	Lag
Lead-Lag Optimize?						Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max	C-Max	C-Max
v/c Ratio		0.59		0.34	0.02	0.40	0.34	0.01	0.34
Control Delay (s/veh)	16.9		39.0	0.0	4.8	3.4	7.6	7.0	
Queue Delay	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	16.9		39.0	0.0	4.8	3.4	7.6	7.0	
Queue Length 50th (ft)	14		15	0	20	48	1	54	
Queue Length 95th (ft)	65		39	0	52	99	m3	97	
Internal Link Dist (ft)	675		247			1263		234	
Turn Bay Length (ft)				110	150		150		
Base Capacity (vph)	508		228	475	697	2708	343	2094	
Starvation Cap Reductn	0		0	0	0	0	0	0	0
Spillback Cap Reductn	0		0	0	0	0	0	0	0
Storage Cap Reductn	0		0	0	0	0	0	0	0
Reduced v/c Ratio	0.35		0.15	0.01	0.34	0.34	0.01	0.34	

## Intersection Summary

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBT, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: NW 107th Avenue &amp; NW 86th Street



HCM 7th Signalized Intersection Summary  
10: NW 107th Avenue & NW 74th Street

Future with Project with Signal Timing IMP AM  
03/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑↑	↑	↑↑	↑↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑↑↑	↑
Traffic Volume (veh/h)	190	1425	247	267	519	399	187	603	345	687	792	232
Future Volume (veh/h)	190	1425	247	267	519	399	187	603	345	687	792	232
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1870	1811	1870	1856	1618	1885	1870	1885	1870	1885	1885	1885
Adj Flow Rate, veh/h	204	1532	266	287	558	429	201	648	0	739	852	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	6	2	3	19	1	2	1	2	1	1	1
Cap, veh/h	244	1675	529	318	1595	568	246	675		771	1212	
Arrive On Green	0.07	0.34	0.34	0.09	0.36	0.36	0.07	0.19	0.00	0.22	0.34	0.00
Sat Flow, veh/h	3456	4944	1562	3428	4418	1573	3456	3582	1585	3483	3582	1598
Grp Volume(v), veh/h	204	1532	266	287	558	429	201	648	0	739	852	0
Grp Sat Flow(s), veh/h/ln	1728	1648	1562	1714	1473	1573	1728	1791	1585	1742	1791	1598
Q Serve(g_s), s	10.5	53.4	24.4	14.9	16.6	43.1	10.3	32.3	0.0	37.7	37.2	0.0
Cycle Q Clear(g_c), s	10.5	53.4	24.4	14.9	16.6	43.1	10.3	32.3	0.0	37.7	37.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	1675	529	318	1595	568	246	675		771	1212	
V/C Ratio(X)	0.84	0.91	0.50	0.90	0.35	0.76	0.82	0.96		0.96	0.70	
Avail Cap(c_a), veh/h	326	1675	529	318	1595	568	324	675		772	1212	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	82.6	57.0	47.4	80.8	42.1	50.5	82.4	72.4	0.0	69.3	51.7	0.0
Incr Delay (d2), s/veh	12.1	9.3	3.4	27.0	0.6	9.1	16.1	26.2	0.0	23.1	3.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5.1	23.4	10.0	7.8	6.2	18.3	5.1	17.2	0.0	19.2	17.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	94.7	66.3	50.8	107.9	42.7	59.6	98.5	98.6	0.0	92.3	55.1	0.0
LnGrp LOS	F	E	D	F	D	E	F	F		F	E	
Approach Vol, veh/h		2002				1274			849		1591	
Approach Delay, s/veh		67.2				63.1			98.6		72.4	
Approach LOS		E				E			F		E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	72.1	46.9	41.0	24.0	68.1	19.9	68.0				
Change Period (Y+Rc), s	7.3	* 7.1	* 7.1	* 7.1	7.3	* 7.1	* 7.1	* 7.1				
Max Green Setting (Gmax), s	17.0	* 61	* 40	* 34	16.7	* 61	* 17	* 57				
Max Q Clear Time (g_c+l1), s	12.5	45.1	39.7	34.3	16.9	55.4	12.3	39.2				
Green Ext Time (p_c), s	0.2	1.5	0.1	0.0	0.0	2.5	0.5	6.2				

Intersection Summary

HCM 7th Control Delay, s/veh

72.4

HCM 7th LOS

E

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

## Timings

10: NW 107th Avenue &amp; NW 74th Street

Future with Project with Signal Timing IMP AM

03/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	190	1425	247	267	519	399	187	603	345	687	792	232
Future Volume (vph)	190	1425	247	267	519	399	187	603	345	687	792	232
Lane Group Flow (vph)	204	1532	266	287	558	429	201	648	371	739	852	249
Turn Type	Prot	NA	Perm									
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases				6		2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.3	34.1	34.1	14.3	34.1	34.1	14.1	41.0	41.0	14.1	43.1	43.1
Total Split (s)	24.3	68.0	68.0	24.0	67.7	67.7	24.0	41.0	41.0	47.0	64.0	64.0
Total Split (%)	13.5%	37.8%	37.8%	13.3%	37.6%	37.6%	13.3%	22.8%	22.8%	26.1%	35.6%	35.6%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.9	2.7	2.7	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.1	7.1	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max
v/c Ratio	0.71	0.92	0.41	0.91	0.36	0.51	0.65	0.96	0.86	0.96	0.74	0.39
Control Delay (s/veh)	94.8	67.4	16.1	112.8	45.0	5.7	89.9	97.9	57.3	92.7	59.4	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	94.8	67.4	16.1	112.8	45.0	5.7	89.9	97.9	57.3	92.7	59.4	17.5
Queue Length 50th (ft)	123	641	72	176	182	0	120	405	247	451	478	72
Queue Length 95th (ft)	170	708	158	#269	223	84	168	#534	#430	#580	562	158
Internal Link Dist (ft)					364			695			615	
Turn Bay Length (ft)	300		290	500		300	485		530	365		230
Base Capacity (vph)	324	1657	647	315	1518	826	322	673	431	768	1146	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.92	0.41	0.91	0.37	0.52	0.62	0.96	0.86	0.96	0.74	0.40

## Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 30 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 150

Control Type: Actuated-Coordinated

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: NW 107th Avenue &amp; NW 74th Street



Future with Project with Signal Timing Imp Midtown Doral Phases IV, V, &amp; VI 11:30 am 03/29/2024 Future with Project with Signal Timing Imp AM

HCM 7th Signalized Intersection Summary  
10: NW 107th Avenue & NW 74th Street

Future with Project with Signal Timing IMP PM  
03/29/2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	331	867	233	460	1569	609	313	742	346	411	710	204
Future Volume (veh/h)	331	867	233	460	1569	609	313	742	346	411	710	204
Initial Q (Q <sub>b</sub> ), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No		No		No		No	
Adj Sat Flow, veh/h/ln	1870	1811	1870	1856	1618	1885	1870	1885	1870	1885	1885	1885
Adj Flow Rate, veh/h	338	885	238	469	1601	621	319	757	0	419	724	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	6	2	3	19	1	2	1	2	1	1	1
Cap, veh/h	359	1717	540	516	1740	614	360	774		443	856	
Arrive On Green	0.10	0.35	0.35	0.15	0.39	0.39	0.10	0.22	0.00	0.13	0.24	0.00
Sat Flow, veh/h	3456	4944	1556	3428	4418	1558	3456	3582	1585	3483	3582	1598
Grp Volume(v), veh/h	338	885	238	469	1601	621	319	757	0	419	724	0
Grp Sat Flow(s), veh/h/ln	1728	1648	1556	1714	1473	1558	1728	1791	1585	1742	1791	1598
Q Serve(g_s), s	17.5	25.6	21.2	24.2	62.0	70.9	16.4	37.8	0.0	21.5	34.7	0.0
Cycle Q Clear(g_c), s	17.5	25.6	21.2	24.2	62.0	70.9	16.4	37.8	0.0	21.5	34.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	359	1717	540	516	1740	614	360	774		443	856	
V/C Ratio(X)	0.94	0.52	0.44	0.91	0.92	1.01	0.89	0.98		0.95	0.85	
Avail Cap(c_a), veh/h	359	1717	540	648	1740	614	386	774		443	856	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	80.1	46.7	45.3	75.3	51.9	54.5	79.6	70.1	0.0	77.9	65.3	0.0
Incr Delay (d2), s/veh	32.5	1.1	2.6	14.0	9.4	39.4	22.0	27.4	0.0	29.9	10.1	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	9.4	10.7	8.6	11.6	24.1	34.0	8.4	20.1	0.0	11.4	16.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	112.6	47.8	47.9	89.2	61.3	93.9	101.5	97.5	0.0	107.8	75.4	0.0
LnGrp LOS	F	D	D	F	E	F	F	F		F	E	
Approach Vol, veh/h		1461			2691			1076			1143	
Approach Delay, s/veh		62.8			73.7			98.7			87.3	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	78.0	30.0	46.0	34.4	69.6	25.9	50.1				
Change Period (Y+Rc), s	7.3	* 7.1	* 7.1	* 7.1	7.3	* 7.1	* 7.1	* 7.1				
Max Green Setting (Gmax), s	18.7	* 71	* 23	* 39	34.0	* 56	* 20	* 42				
Max Q Clear Time (g_c+l1), s	19.5	72.9	23.5	39.8	26.2	27.6	18.4	36.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.8	2.3	0.4	2.3				

Intersection Summary

HCM 7th Control Delay, s/veh 77.9

HCM 7th LOS E

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [NBR, SBR] is excluded from calculations of the approach delay and intersection delay.

## Timings

10: NW 107th Avenue &amp; NW 74th Street

Future with Project with Signal Timing IMP PM

03/29/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑	↑↑↑	↑	↑↑	↑↑↑	↑	↑↑	↑↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	331	867	233	460	1569	609	313	742	346	411	710	204
Future Volume (vph)	331	867	233	460	1569	609	313	742	346	411	710	204
Lane Group Flow (vph)	338	885	238	469	1601	621	319	757	353	419	724	208
Turn Type	Prot	NA	Perm									
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases				6		2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	14.3	34.1	34.1	14.3	34.1	34.1	14.1	41.0	41.0	14.1	38.0	38.0
Total Split (s)	26.0	62.7	62.7	41.3	78.0	78.0	27.2	46.0	46.0	30.0	48.8	48.8
Total Split (%)	14.4%	34.8%	34.8%	22.9%	43.3%	43.3%	15.1%	25.6%	25.6%	16.7%	27.1%	27.1%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	2.9	2.7	2.7	2.9	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.3	7.1	7.1	7.3	7.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
Lead/Lag	Lead	Lag	Lag									
Lead-Lag Optimize?	Yes											
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	Max	Max	None	Max	Max
v/c Ratio	0.94	0.53	0.35	0.85	0.93	0.79	0.84	0.98	0.62	0.95	0.87	0.42
Control Delay (s/veh)	114.9	50.5	6.1	88.2	62.9	33.3	97.9	96.9	16.4	108.5	78.5	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay (s/veh)	114.9	50.5	6.1	88.2	62.9	33.3	97.9	96.9	16.4	108.5	78.5	18.7
Queue Length 50th (ft)	208	313	0	280	664	379	193	474	54	257	438	49
Queue Length 95th (ft)	#312	375	68	339	734	565	#269	#613	172	#368	#524	134
Internal Link Dist (ft)				441		364			695			615
Turn Bay Length (ft)	300		290	500		300	485		530	365		230
Base Capacity (vph)	356	1643	676	642	1716	781	383	772	568	441	831	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	0.54	0.35	0.73	0.93	0.80	0.83	0.98	0.62	0.95	0.87	0.43

## Intersection Summary

Cycle Length: 180

Actuated Cycle Length: 180

Offset: 0 (0%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

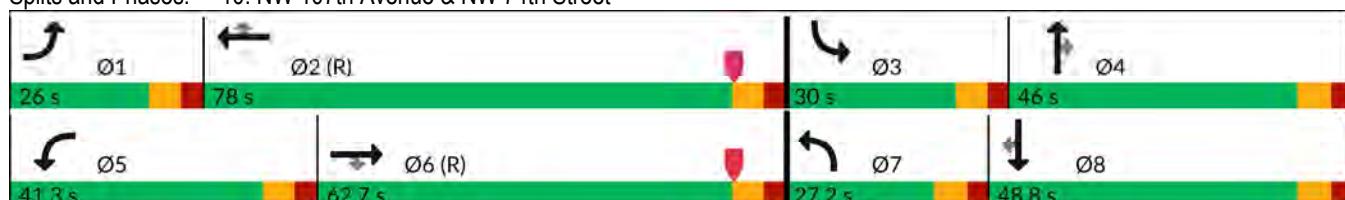
Natural Cycle: 145

Control Type: Actuated-Coordinated

# 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 10: NW 107th Avenue &amp; NW 74th Street



Future with Project with Signal Timing Imp Midtown Doral Phases IV, V, &amp; VI 11:54 am 03/29/2024 Future with Project with Signal Timing Imp PM

# **Appendix E**

## **Committed Development and Roadway Improvement Information**

# Century Town Center

at Midtown Doral

NW 82<sup>nd</sup> Street and NW 107<sup>th</sup> Avenue  
Doral, Florida

## TRAFFIC IMPACT STUDY

prepared for:  
Century Homebuilders Group

**KBP CONSULTING, INC.**

July 2021  
**Updated May 2022**

# **Century Town Center**

## **At Midtown Doral**

**NW 82<sup>nd</sup> Street and NW 107<sup>th</sup> Avenue**

**Doral, Florida**

## **Traffic Impact Study**

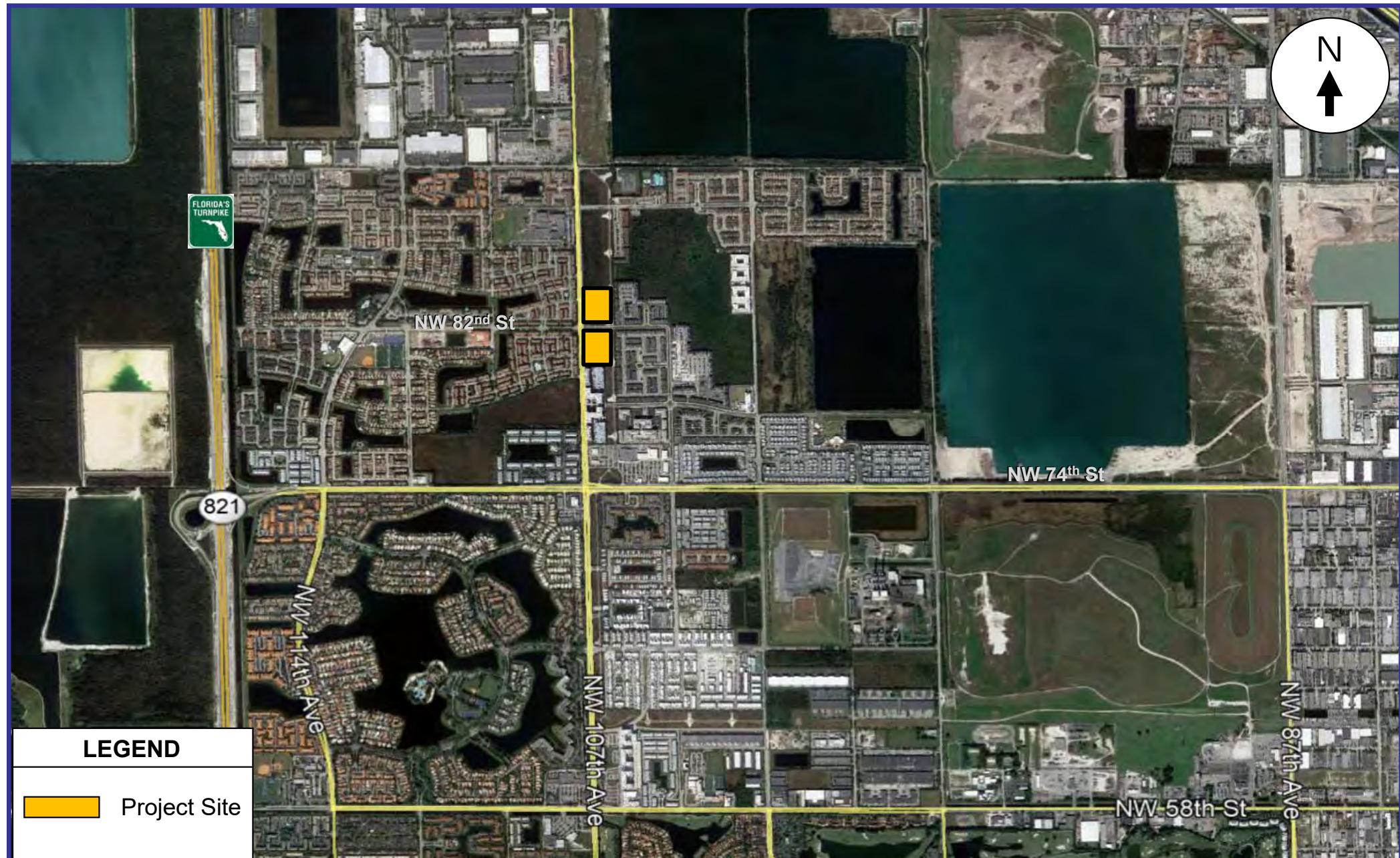
**July 2021**  
*Updated May 2022*

*Prepared for:*  
Century Homebuilders Group

*Prepared by:*  
KBP Consulting, Inc.  
8400 N. University Drive, Suite 309  
Tamarac, Florida 33321  
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Karl B. Peterson, P.E.  
Florida Registration Number 49897  
KBP Consulting, Inc.  
8400 N. University Drive, Suite 309  
Tamarac, Florida 33321  
Registry 29939



**KBP**

CONSULTING, INC.

## Project Location Map

**FIGURE 1**

Century Town Center  
Doral, Florida

## TRIP GENERATION

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A trip generation analysis has been conducted for the approved and proposed development on the subject site. This analysis was performed using the trip generation rates and equations published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (10<sup>th</sup> Edition)*. The trip generation analysis was undertaken for daily, AM peak hour, and PM peak hour conditions. According to the referenced ITE manual, the most appropriate "land use" categories and corresponding rates and equations are as follows:

### **ITE Land Use #221 – Multifamily Housing (Mid-Rise)**

- Weekday:  $T = 5.45 (X) - 1.75$   
*where T = number of trips and X = number of dwelling units*
- AM Peak:  $\ln(T) = 0.98 \ln(X) - 0.98$  (26% in / 74% out)
- PM Peak:  $\ln(T) = 0.96 \ln(X) - 0.63$  (61% in / 39% out)

### **ITE Land Use #820 – Shopping Center (Retail)**

- Weekday:  $\ln(T) = 0.68 \ln(X) + 5.57$   
*where T = number of trips and X = 1,000 square feet of gross leasable area*
- AM Peak:  $T = 0.50 (X) + 151.78$  (62% in / 38% out)
- PM Peak:  $\ln(T) = 0.74 \ln(X) + 2.89$  (48% in / 52% out)
- Pass-by: PM = 34%<sup>1</sup>

Internalization procedures outlined in the ITE *Trip Generation Handbook (3<sup>rd</sup> Edition)* were evaluated to document the trips that will be internalized as a result of this specific mixed-use development program.

Utilizing the above-listed trip generation rates and equations from the referenced ITE manual and the internalization procedures outlined in the ITE handbook, a trip generation analysis was undertaken for the approved mixed-use development and the currently proposed mixed-use development. The results of this effort are documented in Table 1 on the following page. Excerpts from the referenced ITE manual are presented in Appendix H and the internalization analysis for these development programs are presented in Appendix I.

---

<sup>1</sup> The ITE *Trip Generation Handbook (3<sup>rd</sup> Edition)* does not specifically document a pass-by rate for the daily or AM peak hour time frames. It is understood that a significant portion of the trips generated during these time periods are pass-by trips; however, based upon input from Miami-Dade County, no pass-by trip reductions have been applied.

**Table 1**  
**Trip Generation Summary**  
**Century Town Center at Midtown Doral - Doral, Florida**

Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
<b>Approved Uses</b>								
Retail / Shopping Center	89,750 SF	5,586	122	75	197	241	261	502
Multifamily Housing (Mid-Rise)	505 DU	2,751	43	124	167	128	82	210
<b>Subtotal</b>		<b>8,337</b>	<b>165</b>	<b>199</b>	<b>364</b>	<b>369</b>	<b>343</b>	<b>712</b>
- Internalization (12% 2% 23%)		(1,000)	(4)	(4)	(8)	(83)	(83)	(166)
<b>Driveway Volumes</b>		<b>7,337</b>	<b>161</b>	<b>195</b>	<b>356</b>	<b>286</b>	<b>260</b>	<b>546</b>
- Pass-by Trips (Retail - 34%)		0	0	0	0	(74)	(69)	(143)
<b>Total Trips (Approved Uses)</b>		<b>7,337</b>	<b>161</b>	<b>195</b>	<b>356</b>	<b>212</b>	<b>191</b>	<b>403</b>
<b>Proposed Uses</b>								
Retail / Shopping Center	81,538 SF	5,233	120	73	193	224	243	467
Multifamily Housing (Mid-Rise)	675 DU	3,677	58	164	222	169	108	277
<b>Subtotal</b>		<b>8,910</b>	<b>178</b>	<b>237</b>	<b>415</b>	<b>393</b>	<b>351</b>	<b>744</b>
- Internalization (12.5% 2% 23%)		(1,114)	(4)	(4)	(8)	(86)	(86)	(172)
<b>Driveway Volumes</b>		<b>7,796</b>	<b>174</b>	<b>233</b>	<b>407</b>	<b>307</b>	<b>265</b>	<b>572</b>
- Pass-by Trips (Retail - 34%)		0	0	0	0	(69)	(61)	(130)
<b>Total Trips (Proposed Uses)</b>		<b>7,796</b>	<b>174</b>	<b>233</b>	<b>407</b>	<b>238</b>	<b>204</b>	<b>442</b>
<b>Difference (Proposed Uses - Approved Uses)</b>		<b>459</b>	<b>13</b>	<b>38</b>	<b>51</b>	<b>26</b>	<b>13</b>	<b>39</b>

Compiled by: KBP Consulting, Inc. (May 2022).

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition) and Trip Generation Handbook (3rd Edition).

Note: Pass-by reduction is associated with external trips only (i.e. gross trips minus internal trips) for the retail use.

As indicated in Table 1, the proposed mixed-use development is anticipated to generate approximately 7,796 daily vehicle trips, approximately 407 AM peak hour vehicle trips (174 inbound and 233 outbound) and approximately 442 vehicle trips (238 inbound and 204 outbound) during the typical afternoon peak hour. When compared with the approved development for this site this represents an increase of 459 daily vehicle trips, an increase of 51 AM peak hour vehicle trips and an increase of 39 PM peak hour vehicle trips.

## TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

---

The trip distribution for this project was based upon the *Miami-Dade County 2045 Long Range Transportation Plan – Directional Distribution Report* (excerpts are presented in Appendix J). Table 2 below summarizes the County's 2015 and 2045 cardinal distribution data for Traffic Analysis Zone (TAZ) 687, which is applicable to the project location. This table also presents the interpolated distribution for the buildout year of 2024.

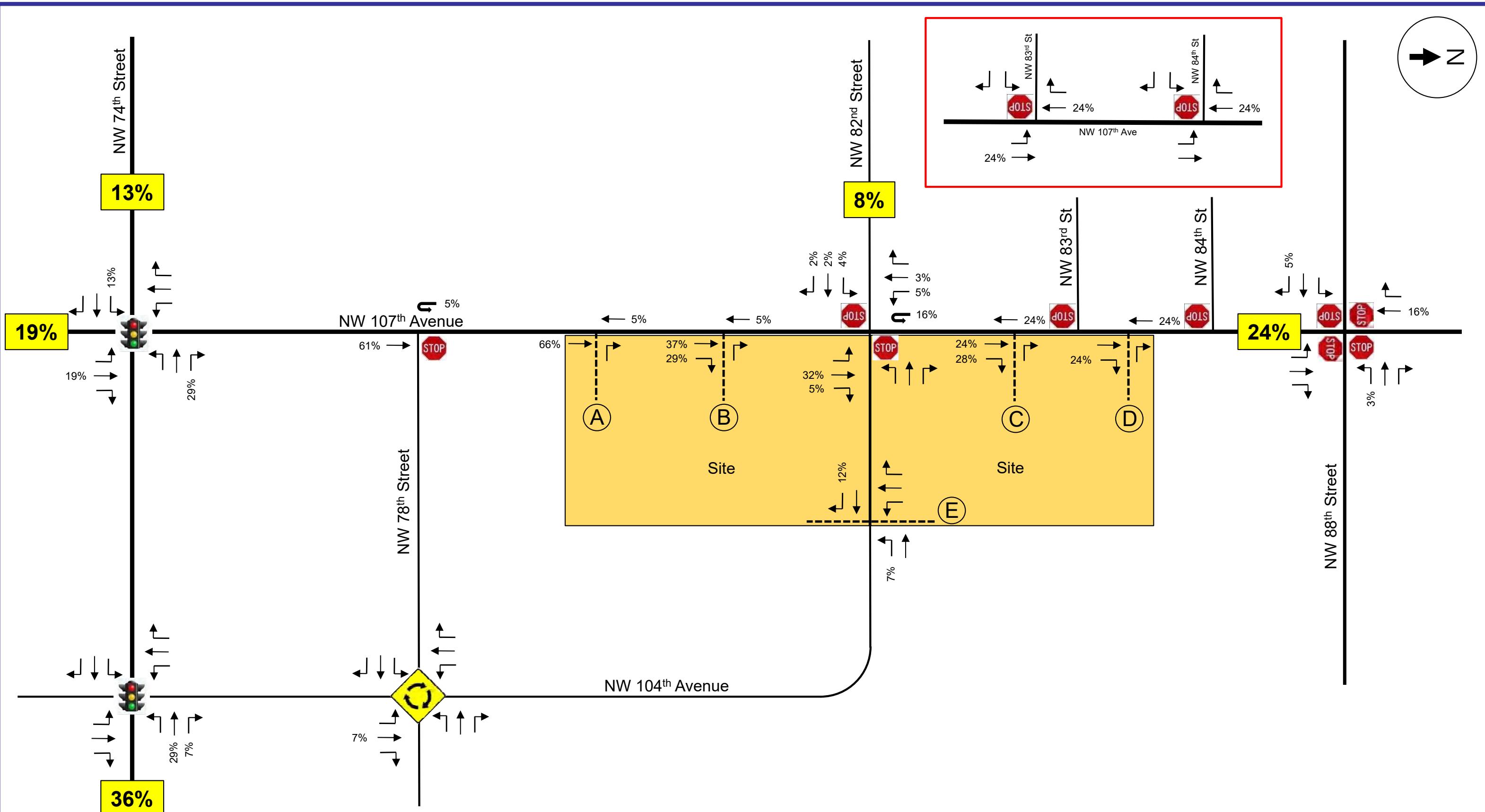
Table 2 Project Trip Distribution Century Town Center at Midtown Doral - Doral, Florida			
Direction	TAZ 687		
	Percent Distribution		
	2015	2024	2045
<b>North</b>			
Northwest	3.00%	3.93%	6.10%
Northeast	12.20%	12.98%	14.80%
<b>South</b>			
Southwest	12.50%	13.49%	15.80%
Southeast	20.50%	20.65%	21.00%
<b>East</b>			
Northeast	17.20%	16.36%	14.40%
Southeast	27.10%	25.63%	22.20%
<b>West</b>			
Northwest	2.10%	2.10%	2.10%
Southwest	5.40%	4.86%	3.60%
<b>Total</b>	100.00%	100.00%	100.00%

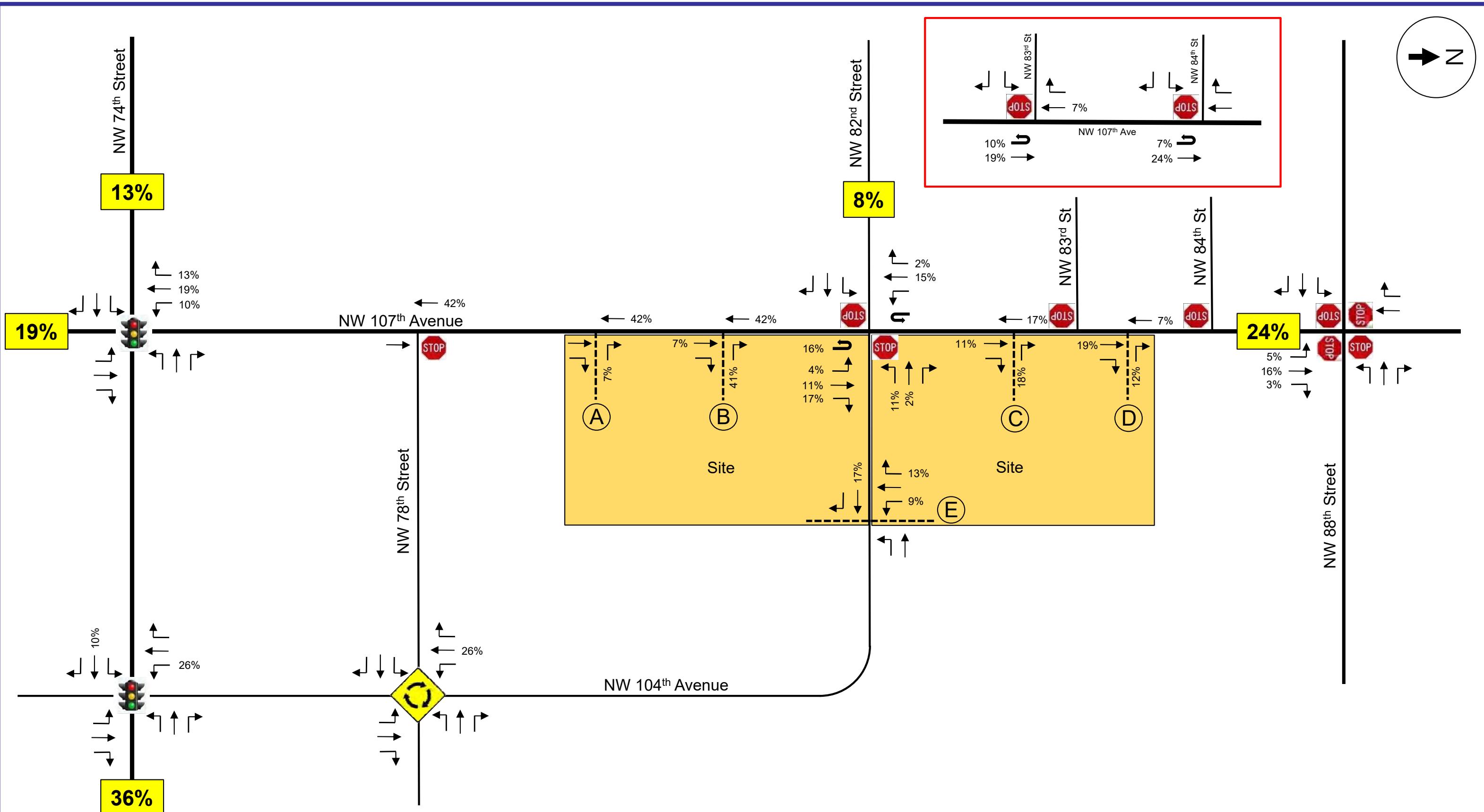
Source: *Miami-Dade County MPO, 2045 LRTP*

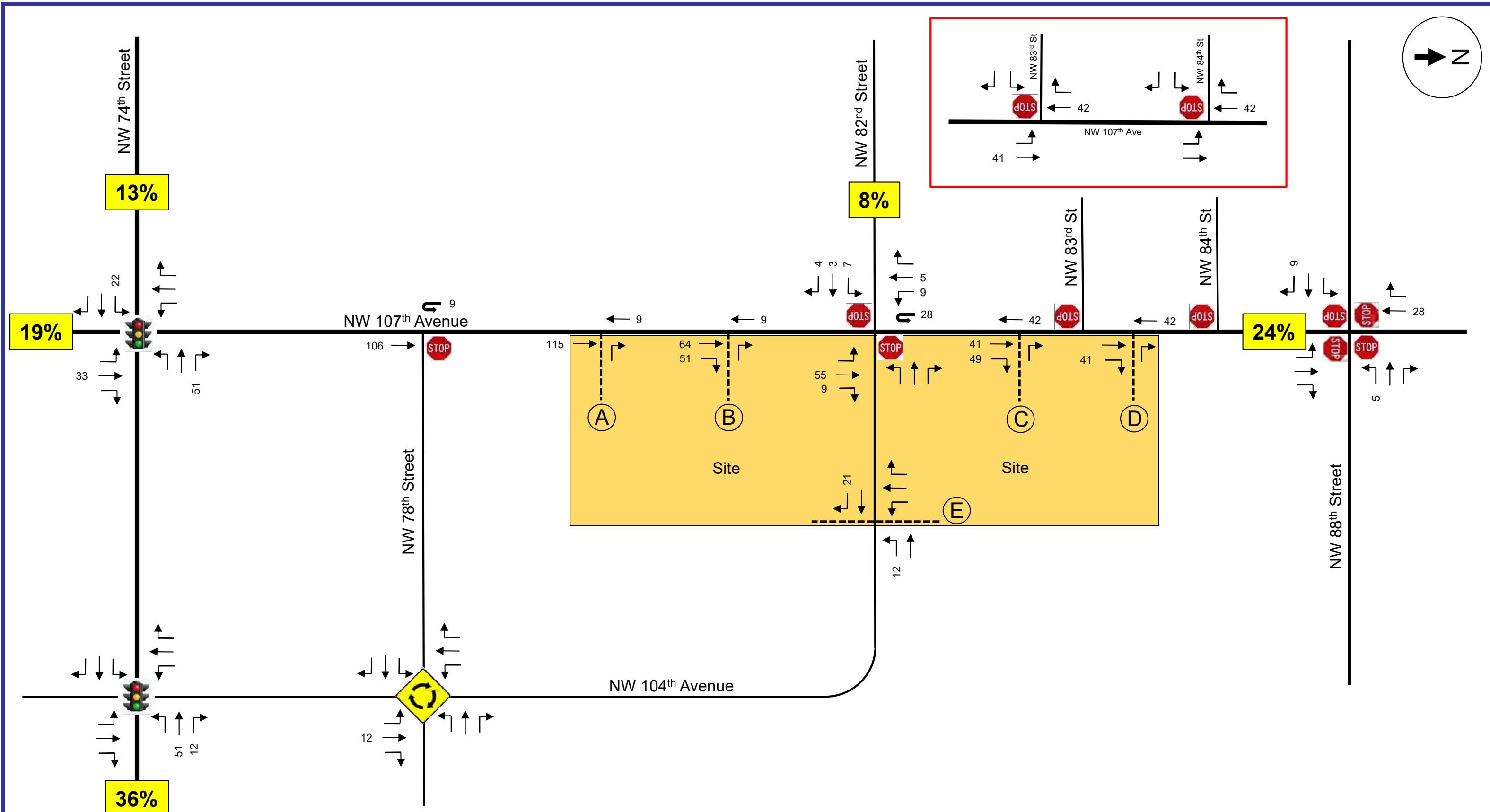
Using the trip distribution documented in Table 2 above, the following general traffic assignment was developed for the proposed Century Town Center project:

- 36% to and from the east via NW 74<sup>th</sup> Street
- 24% to and from the north via NW 107<sup>th</sup> Avenue
- 19% to and from the south via NW 107<sup>th</sup> Avenue
- 13% to and from the west via NW 74<sup>th</sup> Street
- 8% to and from the west via NW 82<sup>nd</sup> Street

The detailed inbound and outbound trip distribution patterns for the primary project trips at the study intersections are depicted graphically in Figures 5 and 6. The primary peak hour trips generated by the project have been assigned to the nearby transportation network and external intersections using these trip distribution patterns. The resulting inbound and outbound AM and PM peak hour project traffic assignments are summarized in Figures 7 through 10.





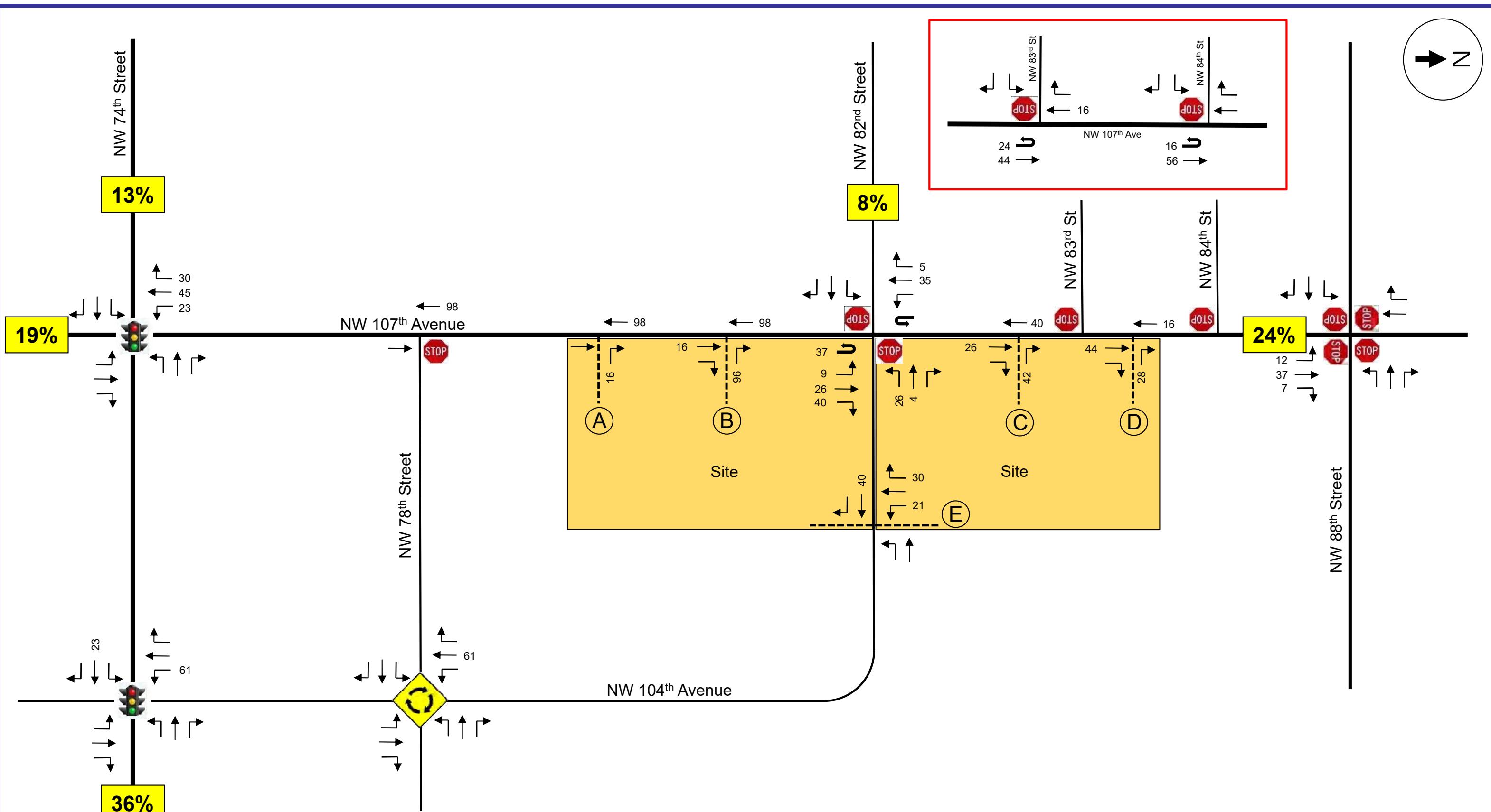


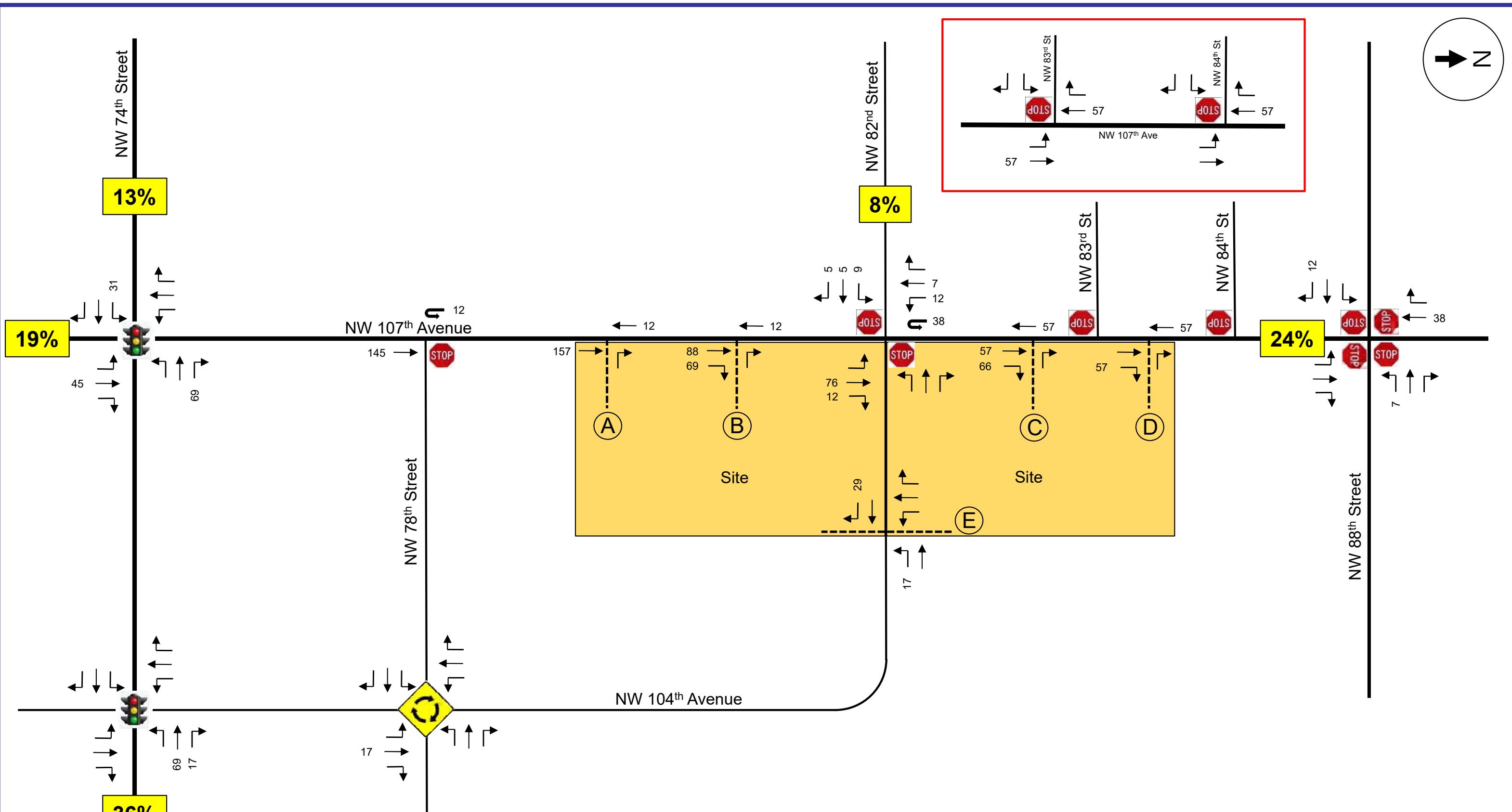
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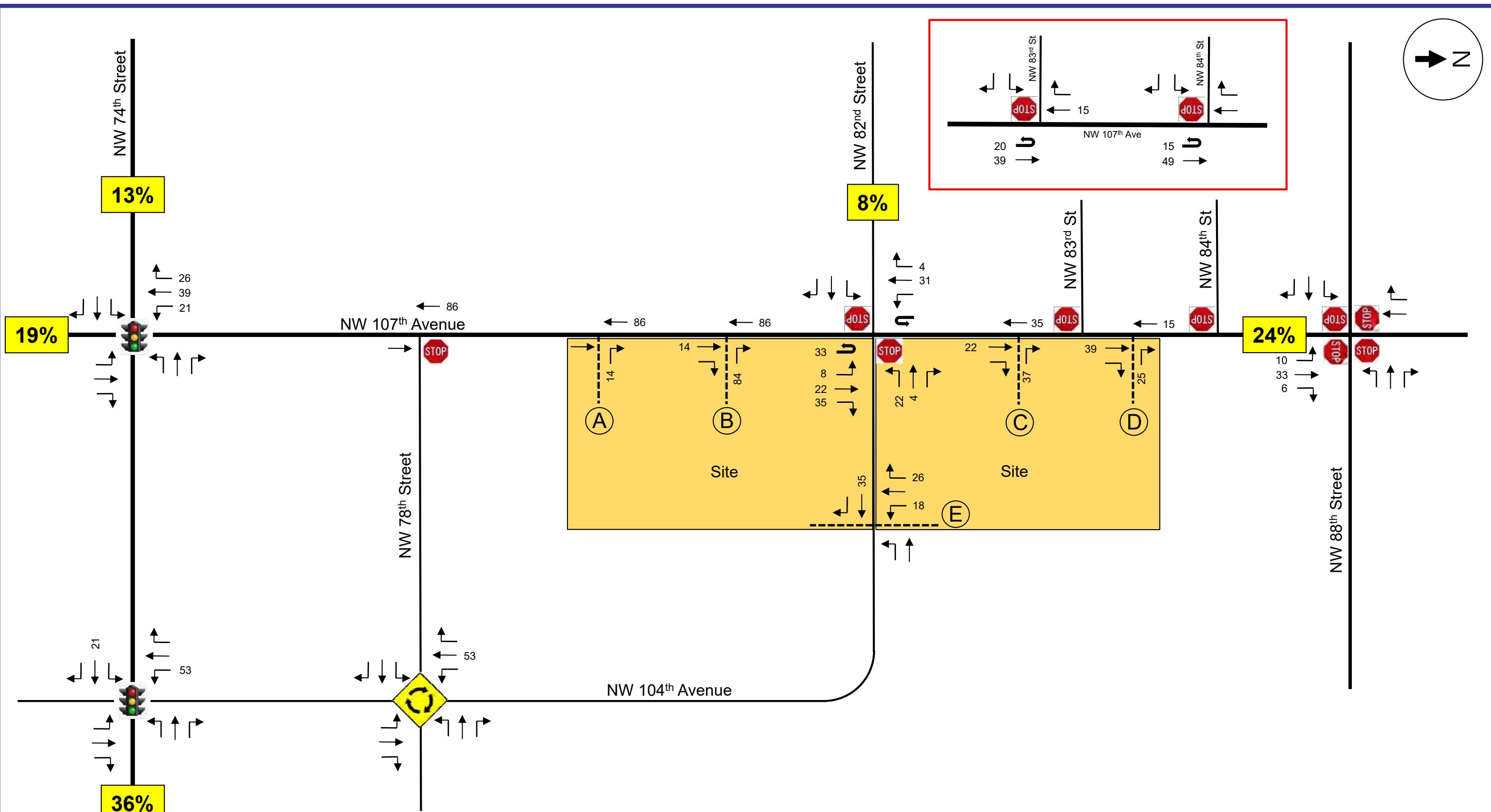
# **Primary Project Traffic Assignment**

## **AM Peak Hour – Inbound Traffic**

**FIGURE 7**  
Century Town Center  
Doral, Florida







# KBP CONSULTING, INC.

## MEMORANDUM

**To:** Edna Sibila  
**From:** Karl Peterson  
**Date:** March 25, 2023  
**Subject:** Midtown Doral – Phase III  
Traffic Impact Study Methodology

---

**Project Location:** East side of NW 107<sup>th</sup> Avenue generally between NW 83<sup>rd</sup> Street and NW 86<sup>th</sup> Street (Folio Number 35-3008-000-0031)

**Existing Land Use:** Vacant

**Approved Land Uses:** Commercial / Retail Space (44,875 square feet)  
Mid-Rise Multifamily Housing (253 dwelling units)

**Proposed Land Uses:** Mid-Rise Multifamily Housing (492 dwelling units)  
*A preliminary site plan is presented in Attachment A*

**Trip Generation:** In accordance with the ITE *Trip Generation Manual (11<sup>th</sup> Edition)*.

**Internalization of Traffic:** In accordance with the ITE *Trip Generation Handbook (3<sup>rd</sup> Edition)*.

**Pass-By Traffic Analysis:** To be prepared in accordance with the latest ITE pass-by rates tables.

**Preliminary Trip Generation Analysis:** See Table 1 on the following page. Internalization analyses are presented in Attachment B.

**Required Study:** City of Doral – Level 1: Between 1 and 250 net new peak hour vehicle trips.

**Note:** The trip generation characteristics of the approved land uses are provided purely for informational and comparison purposes. Since the property is currently vacant, there will be no credit taken for the approved land uses and the corresponding trips. The traffic impact analyses will be conducted by assessing the full impacts of the traffic to be generated by the proposed development program.

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**Table 1**  
**Midtown Doral - Phase III**  
**Trip Generation Summary**  
**Doral, Florida**

Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
<b>Approved Uses</b>								
Shopping Plaza (40-150k/No Supermkt)	44,875 SF	3,030	48	30	78	114	119	233
Multifamily Housing (Mid-Rise)	253 DU	1,160	23	77	100	60	39	99
<b>Subtotal</b>		<b>4,190</b>	<b>71</b>	<b>107</b>	<b>178</b>	<b>174</b>	<b>158</b>	<b>332</b>
- Internalization (12.43800% 1.38202% 23.49398%)		(521)	(1)	(1)	(2)	(39)	(39)	(78)
<b>Driveway Volumes</b>		<b>3,669</b>	<b>70</b>	<b>106</b>	<b>176</b>	<b>135</b>	<b>119</b>	<b>254</b>
- Pass-by Trips (Retail - 40%)		0	0	0	0	(41)	(36)	(77)
<b>Total Trips (Approved Uses)</b>		<b>3,669</b>	<b>70</b>	<b>106</b>	<b>176</b>	<b>94</b>	<b>83</b>	<b>177</b>
<b>Proposed Use</b>								
Multifamily Housing (Mid-Rise)	492 DU	2,300	47	158	205	117	75	192
<b>Subtotal</b>		<b>2,300</b>	<b>47</b>	<b>158</b>	<b>205</b>	<b>117</b>	<b>75</b>	<b>192</b>
- Internalization (N/A)		0	0	0	0	0	0	0
<b>Driveway Volumes</b>		<b>2,300</b>	<b>47</b>	<b>158</b>	<b>205</b>	<b>117</b>	<b>75</b>	<b>192</b>
- Pass-by Trips (N/A)		0	0	0	0	0	0	0
<b>Total Trips (Proposed Uses)</b>		<b>2,300</b>	<b>47</b>	<b>158</b>	<b>205</b>	<b>117</b>	<b>75</b>	<b>192</b>
<b>Difference (Proposed Uses - Approved Uses)</b>		<b>(1,369)</b>	<b>(23)</b>	<b>52</b>	<b>29</b>	<b>23</b>	<b>(8)</b>	<b>15</b>

Compiled by: KBP Consulting, Inc. (March 2023).

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition) and Trip Generation Handbook (3rd Edition).

Note: Pass-by reduction is associated with external trips only (i.e. gross trips minus internal trips) for the retail use.

## Proposed Traffic Impact Study Methodology

- Trip Generation – to be performed in accordance with the ITE *Trip Generation Manual (11<sup>th</sup> Edition)* and *Trip Generation Handbook (3<sup>rd</sup> Edition)* report.
- Trip Distribution & Assignment – to be based upon the latest applicable TAZ data contained within the Long Range Transportation Plan (LRTP) published by the Miami-Dade MPO.
- Traffic Counts (to include trucks and pedestrians) – See Attachment C
  - AM (7-9) & PM (4-6) peak period turning movement counts
    - NW 107<sup>th</sup> Avenue and NW 74<sup>th</sup> Street
    - NW 107<sup>th</sup> Avenue and NW 82<sup>nd</sup> Street
    - NW 107<sup>th</sup> Avenue and NW 84<sup>th</sup> Street
    - NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street
    - NW 107<sup>th</sup> Avenue and NW 88<sup>th</sup> Street

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- 72-Hour Roadway Link Counts
  - NW 107<sup>th</sup> Avenue
    - Between NW 82<sup>nd</sup> Street and NW 84<sup>th</sup> Street
    - Between NW 84<sup>th</sup> Street and NW 88<sup>th</sup> Street
  - NW 82<sup>nd</sup> Street
    - Between NW 104<sup>th</sup> Avenue and NW 107<sup>th</sup> Avenue
  - NW 88<sup>th</sup> Street
    - Between NW 107<sup>th</sup> Avenue and NW 102<sup>nd</sup> Avenue
- These counts will be reviewed with respect to the City of Doral's biannual traffic count data for applicable roadways.
- Traffic counts will be adjusted to peak season conditions.
- Signal Timing – timing plans for the study intersections will be obtained from Miami-Dade County. (Approved signal timing recommendations related to Century Town will be incorporated.)
- Committed Development – traffic data associated with committed development within the project study area will be obtained from the City of Doral.
- Background Growth – traffic data collected and maintained by the City of Doral and/or the FDOT will be reviewed and analyzed for the purposes of establishing the appropriate background growth rates for the project study area.
- Future Transportation Projects – roadway improvements that will add capacity within the project study area will be identified and reviewed with City staff for possible inclusion in the traffic analysis.
- Build Out Year – it is anticipated that the build out year for this project will be 2026. This will be confirmed with the owner / client.
- Level of Service Analyses / Concurrency Determination
  - Periods to be Analyzed
    - Base Year (2023)
    - Project Build Out Year (2026) without Project Traffic
    - Project Build Out Year (2026) with Project Traffic
  - Intersection Analyses (including project driveways)
    - Signalized intersection analysis procedures
    - To be performed in accordance with 2010 HCM procedures
    - Utilize SYNCHRO traffic analysis software
  - Roadway Link Analyses
    - Analysis to be based upon latest FDOT published level of service criteria and information contained with the City's Transportation Master Plan

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- Left-turn land and right-turn lane analyses will be conducted in accordance with City Code at the following locations:
  - NW 107<sup>th</sup> Avenue and NW 84<sup>th</sup> Street
    - Southbound Left-Turn
    - Northbound Right-Turn
  - NW 107<sup>th</sup> Avenue and Project Driveway (north of NW 84<sup>th</sup> Street)
  - NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street
    - Southbound Left-Turn
    - Northbound Right-Turn
    - Westbound Left-Turn
- NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street – This intersection will be evaluated with respect to signal warrant criteria and/or removing the all-way stop condition.
- Traffic Report – This analysis will be presented in a Traffic Impact Study (TIS) and accompanied by supporting data. The TIS will address the requirements of the City of Doral's Land Development Code, Chapter 77 pertaining to turning lanes, intersection improvements, access drives, and other applicable sections.
  - A section of the report will be dedicated to pedestrian and transit amenities within the project study area.
  - If access to the parking garage will be gated, a vehicle queuing analysis will be performed.

## **Attachment A**

### **Midtown Doral – Phase III**

#### **Preliminary Site Plan**

# MIDTOWN DORAL PHASE III

PASCUAL  
PEREZ  
KILIDDJIAN  
STARR  
ARCHITECTS + PLANNERS

FPL EASEMENT

FPL EASEMENT

PHASE IV

PHASE II



SITE PLAN

N.W. 86th STREET

N.W. 86th STREET

RIGHT © 22 PASCUAL, PEREZ, KILIJDIAN, STARR ARCHITECTS - PLANNERS  
architectural design and detail drawings for this building and/or overall project the legal property of and all rights are reserved by the Architect. Their use for reproduction, construction or distribution is prohibited unless authorized in writing by Architect.

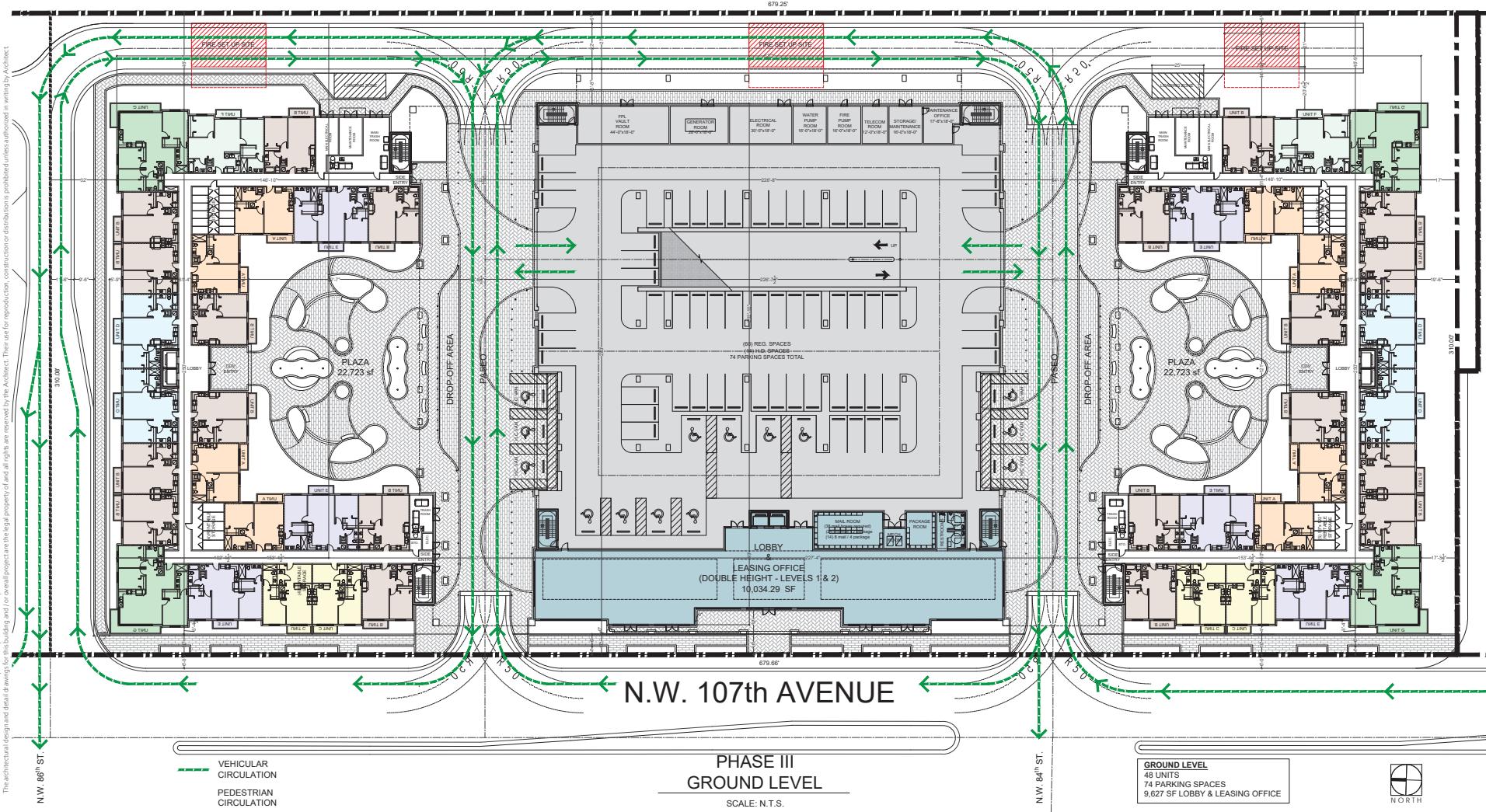
EFFICIENCY TABLE	
TOTAL RENTABLE SF	447,792 SF
TOTAL BUILDING AREA	532,650 SF
TOTAL BLDG. %	94.67%

FAR TABLE		
	REQUIRED	PROVIDED
1 LEVEL	0.5 (105,333.30 SF)	63,530 SF
2 LEVEL	0.25 (52,666.65 SF)	61,733 SF
3 LEVEL	0.25 (52,666.65 SF)	66,426 SF
4 LEVEL	0.25 (52,666.65 SF)	66,426 SF
5 LEVEL	0.25 (52,666.65 SF)	66,426 SF
6 LEVEL	0.25 (52,666.65 SF)	66,426 SF
7 LEVEL	0.25 (52,666.65 SF)	66,426 SF
8 LEVEL	0.25 (52,666.65 SF)	63,530 SF
TOTAL	474,900 SF	420,923 SF

Phase III Parking Garage Breakdown			
	UNIT COUNT	SPACES REQ'D PER UNIT	REQUIRED DRAWS
STUDIO	12	2	24
1 BEDROOM	70	2	140
1 BEDROOM + DEN	70	2	140
2 BEDROOM	22	2	44
3 BEDROOM	32	3	96
TOTAL	492		1,139
<b>TOTAL PARKING PROVIDED</b>			<b>1,145</b>
REQUERED / PROVIDED DRAWN			
HANDICAP SPACES			23
E.V.S.E. SPACES		0.05 SPACES	23
BICYCLE RESIDENTIAL		0.10 UNIT	

OVERALL UNIT & AREA BREAKDOWN												
UNIT TYPE	BED / BATH	UNIT AREA SQ FT (including setbacks)	PER FLOOR COUNT								TOTAL NO. UNITS	(% )
			1ST FLR	2ND FLR	3RD FLR	4TH FLR	5TH FLR	6TH FLR	7TH FLR	8TH FLR		
STUDIO	0 / 1	533 SF	581 SF	0	2	2	2	2	2	2	12	12.4%
UNI	1 / 1	622 SF	720 SF	18	14	14	14	14	14	14	60	19.4%
UNIT B	1 / 1	622 SF	720 SF	20	18	14	14	14	14	14	194	39.43%
UNIT C	1 + Den / 1.5	622 SF	772 SF	10	10	10	10	10	10	10	70	14.23%
UNIT D	2 / 2	888 SF	948 SF	4	8	12	12	12	12	12	84	16.2%
UNIT E	2 / 2	888 SF	948 SF	4	8	12	12	12	12	12	84	16.2%
UNIT F	2 + Den / 1.5	1,018 SF	1,068 SF	4	8	12	12	12	12	12	78	15.23%
UNIT G	2 + 1.5 / 2	1,242 SF	1,373 SF	4	4	4	4	4	4	4	32	6.50%
TOTAL UNITS QTY.			48	50	62	62	62	62	62	62	492	100.00%
RENTABLE STORAGE, SQ. FT.			34	34	34	34	34	34	34	34	320	
PER FLOOR COUNT												
TOTAL UNITS GROSS SF / PER FLOOR			41,240 SF	43,568 SF	44,410 SF	44,541 SF	44,541 SF	44,410 SF	44,410 SF	44,410 SF	140,840 SF	431,342 SF
RENTABLE STORAGE, SF / PER FLOOR			1,736 SF	1,736 SF	1,736 SF	1,736 SF	1,736 SF	1,736 SF	1,736 SF	1,736 SF	1,736 SF	14,046 SF
PER FLOOR COUNT												
CIRCULATION & LITERS, SF / PER FLOOR			10,528 SF	9,286 SF	10,286 SF	10,286 SF	10,286 SF	10,286 SF	10,286 SF	10,286 SF	94,557 SF	44,657 SF
LOBBY & COMMON AREA, SF			1,024 SF	1,024 SF	1,024 SF	1,024 SF	1,024 SF	1,024 SF	1,024 SF	1,024 SF	8,192 SF	18,192 SF
CLUBHOUSE											14,761 SF	14,760 SF
POOL / DECK / AMENITY AREA											33,598 SF	33,598 SF
FRONT COLONNADE			1,193 SF	1,193 SF	1,193 SF	1,193 SF	1,193 SF	1,193 SF	1,193 SF	1,193 SF	1,193 SF	1,193 SF
PARKING GARAGE, CARS / PER FLOOR			44,548 SF	45,367 SF	71,829 SF	71,620 SF	446,204 SF	446,204 SF				
PER FLOOR COUNT												
TOTAL BUILDING GROSS SF / PER FLOOR			196,570 SF	105,100 SF	138,055 SF	141,789 SF	1,046,732 SF					

PHASE III SITE DATA TABLE	
CAN USE	CMU
DUNING	PUD
CROSS AREA	237,855.31 SF
ACREAGE	5.6 ACRES
NO. OF UNITS	452*
DENSITY (based on gross area)	90.01 (DU)
ARIA SUBDIVISIONS	
BUILDING LINE	REQUIRED
MINIMUM LOT AREAS	20,352.72 SF
SIDEWALKS & STREETS	93.71%
DRIVE SPACES (LANDSCAPE)	10,150.48 SF
DRIVE SPACES (NON-LANDSCAPE)	10,150.48 SF
GT AREA	100%
OPEN SPACE	REQUIRED PROVIDED
SETBACKS	15.00' 12.00'
WEST (1ST FLOOR) EASEMENT	16'0"
WEST (2ND FLOOR) EASEMENT	27'0"
WEST (3RD FLOOR) EASEMENT	30'0"
SOUTH (PHASE II)	11'0"
LANDSCAPE BUFFER	REQUIRED PROVIDED
BUILDING HEIGHT	8' STORIES
BUILDING LENGTH	75'-0"



## MIDTOWN DORAL - PHASE III DORAL, FLORIDA

A-1

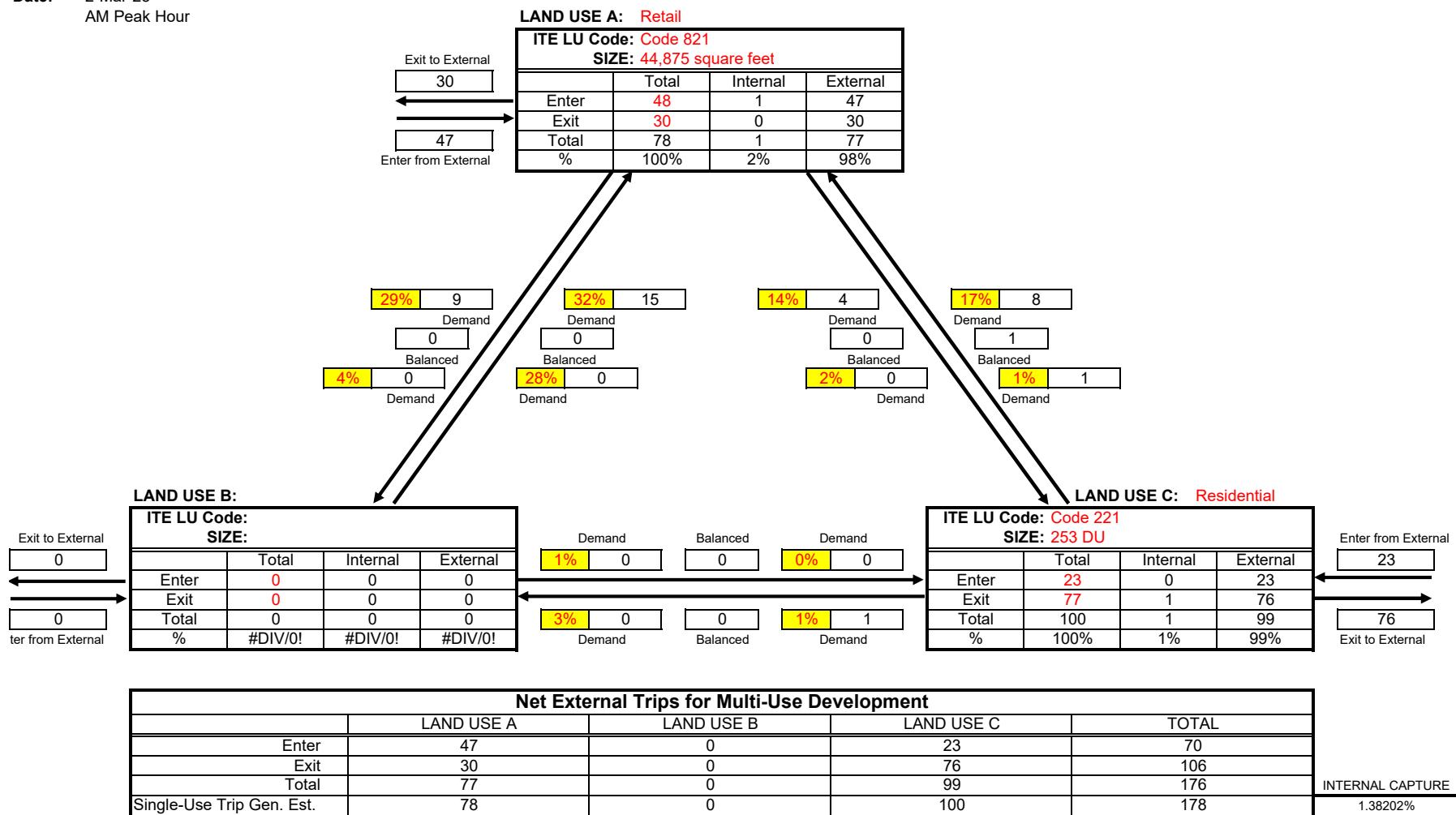
**Attachment B**

**Midtown Doral – Phase III**

**Internalization Analyses**

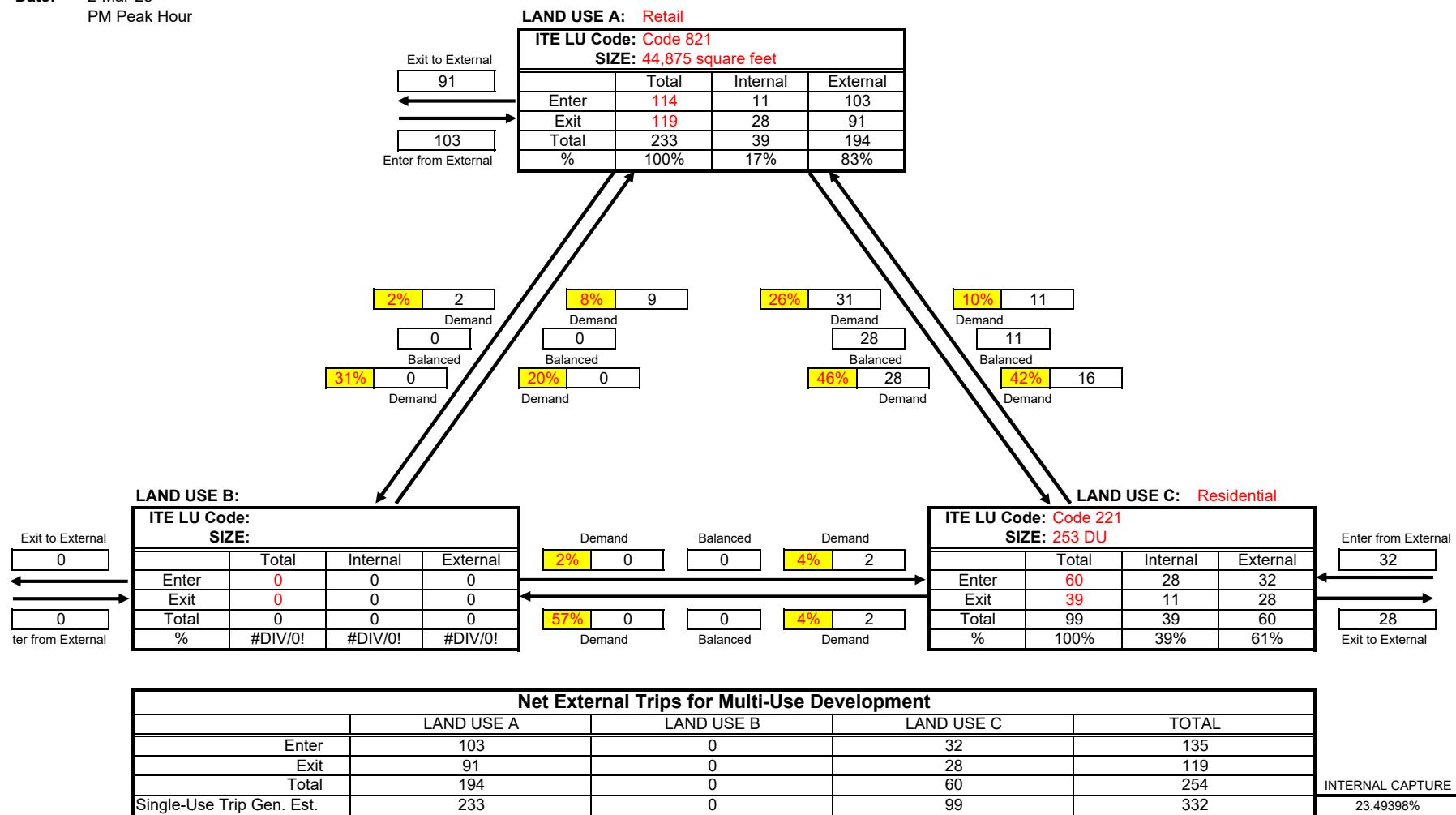
Analyst: Peterson  
Date: 2-Mar-23  
AM Peak Hour

**APPROVED LAND USES**  
**Trip Generation**  
**and Internal Capture Summary**



Analyst: Peterson  
 Date: 2-Mar-23  
 PM Peak Hour

**APPROVED LAND USES**  
**Trip Generation**  
**and Internal Capture Summary**



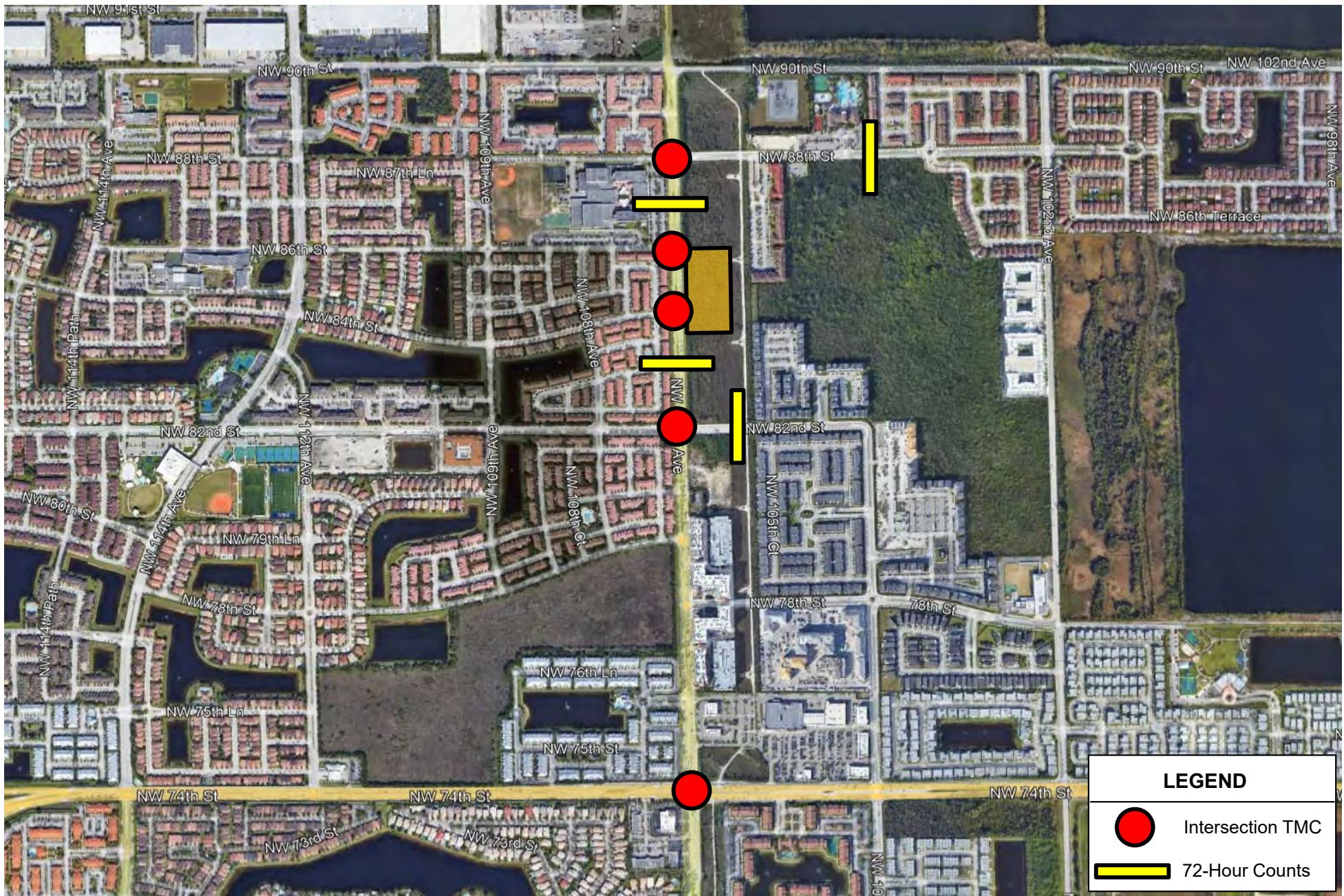
**Attachment C**

**Midtown Doral – Phase III**

**Traffic Count Locations**

## Attachment C

### Midtown Doral – Phase III – Data Collection Sites

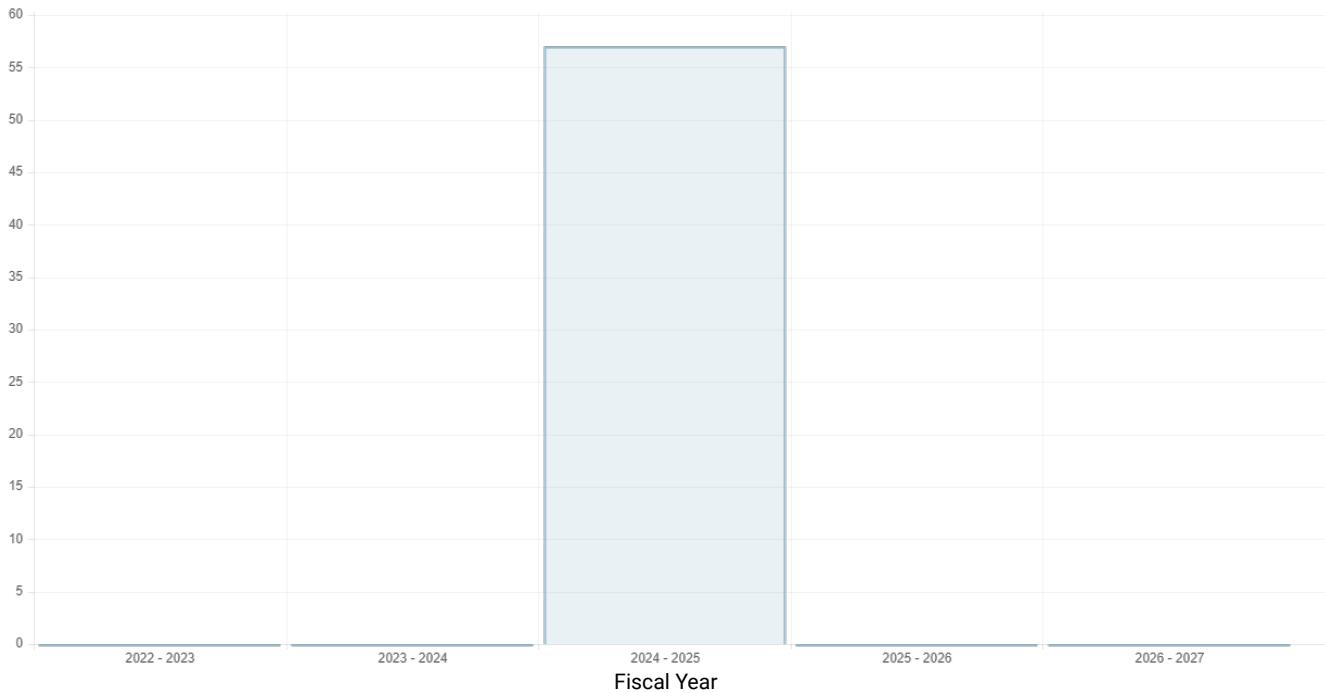


**Project Type:** Pedestrian/Bicycle  
**MPO Project No.:** DT4460711  
**Type of Work:** BIKE LANE/SIDEWALK  
**TIP Year:** 2023  
**Construction Year:**  
**From:**  
**To:**  
**Agency:** FL Dept. of Transportation  
**Management Agency:** MIAMI-DADE COUNTY FLORIDA  
**Agency Project No:** 4460711  
**Status:**  
**Contact Person:**  
**Contact Email:**  
**Contact Phone:**  
**Description:**

### Funding Information \$(thousands)

Project Phase	Funding	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026	2026 - 2027
PRELIMINARY ENGINEERING	SU	\$0	\$0	\$5	\$0	\$0
PRELIMINARY ENGINEERING	TALU	\$0	\$0	\$52	\$0	\$0

Funding Chart \$(thousands)



**Project Type:** Arterial/Collector Road  
**MPO Project No.:** PW0001192  
**Type of Work:** Resurfacing  
**TIP Year:** 2023  
**Construction Year:**  
**From:** NW 74 Street  
**To:** NW 90 Street  
**Agency:** Miami-Dade Dept. of Transportation and Public Works  
**Management Agency:** Miami-Dade Dept. of Transportation and Public Works  
**Agency Project No:** 0001192  
**Status:** Construction completed  
**Contact Person:**  
**Contact Email:**  
**Contact Phone:**  
**Description:**  
Resurfacing. Prior Years' Funding as follows: \$593,000 for CST.

No Funding Information



# City of Doral TRANSPORTATION MASTER PLAN



**Project Name:** Widen NW 90<sup>th</sup> Street between NW 107<sup>th</sup> Avenue and NW 97<sup>th</sup> Avenue

**Purpose:** Widen NW 90<sup>th</sup> Street between NW 107<sup>th</sup> Avenue and NW 97<sup>th</sup> Avenue to 4 lanes.

**Need:** Currently, the roadways services residential properties in the north of Doral. South of these properties are land which are expected to be developed into new mixed-use developments, which will result in a need for additional capacity of NW 90<sup>th</sup> Street.

**Description:** Widen the existing NW 90<sup>th</sup> Street from 2 to 4 lanes between NW 107<sup>th</sup> Avenue and NW 97<sup>th</sup> Avenue. This project will require coordination with the City of Medley in order to procure room for the expansion, and may, depending on the project's needs, merge with Medley's NW 102<sup>nd</sup> Avenue.



**Cost:**

*Planning:* \$95,000

*Design:* \$470,000

*Construction:* \$4,700,000

**Project Name:** Construct new roadways for "White Course" development

**Purpose:** Future redevelopment of the golf course located between NW 41st Street, NW 48<sup>th</sup> Street, NW 87<sup>th</sup> Avenue and NW 79<sup>th</sup> Avenue will necessitate new roadways for internal circulation.

**Need:** To accommodate future growth and development within the City.

**Description:** Construction of six new local roadways for internal circulations within the new development, "White Course". New roadways will include the following, however the actual layout of the roadways will depend on the final plat.



# City of Doral

## TRANSPORTATION MASTER PLAN



NW 54 <sup>th</sup> St. (79 <sup>th</sup> ave-87 <sup>th</sup> ave)	\$850,000	\$0	\$0	\$0	\$0	\$850,000	GF
NW 92 <sup>nd</sup> Ave (NW 28 <sup>th</sup> - 33 <sup>rd</sup> st)	\$250,000	\$0	\$0	\$0	\$0	\$250,000	SW
NW 82 <sup>nd</sup> Av. (NW 27 <sup>th</sup> - 33 <sup>rd</sup> St)	\$0	\$2,000,000	\$0	\$0	\$0	\$2,000,000	TF
NW 99 <sup>th</sup> ave (NW 64 <sup>th</sup> -66 <sup>th</sup> st)	\$0	\$0	\$800,000	\$0	\$0	\$800,000	TF
NW 41 st (NW 79 <sup>th</sup> - 87 <sup>th</sup> ave)	\$2,650,000	\$0	\$0	\$0	\$0	\$2,650,000	TF, SWF
NW 102th ave & 62 <sup>nd</sup> st	\$0	\$0	\$700,000	\$0	\$0	\$700,000	TF
NW 112 Av. & 114 Av. (41 St. - 58 St.)	\$0	\$0	\$2,000,000	\$0	\$0	\$2,000,000	TF

PROJECT / LOCATION	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	TOTAL COST FY 2017-21	FUNDING SOURCE
NW 114 Av. (34 St - 39 St)	\$0	\$0	\$0	\$2,000,000	\$0	\$2,000,000	TF
NW 34 St. (117 Av - 112 Av)	\$0	\$0	\$0	\$0	\$2,000,000	\$2,000,000	TF
NW 112 Av. (25 St - 34 St)	\$0	\$2,000,000	\$0	\$0	\$0	\$2,000,000	TF
NW 117 Av. ( NW 58 St - North)	\$0	\$0	\$0	\$800,000	\$0	\$800,000	TF
NW 114 <sup>th</sup> ave & 58 <sup>th</sup> St.	\$0	\$0	\$120,000	\$0	\$0	\$120,000	TF
Citywide – Roads	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$1,200,000	\$6,000,000	TF, PTP
Traffic Monitoring	\$50,000	\$50,000	\$50,000	\$0	\$0	\$150,000	TF
Traffic Calming	\$175,000	\$250,000	\$250,000	\$250,000	\$250,000	\$1,175,000	TF, GF
<b>5 Year Transportation Cost Sub Total</b>	<b>\$15,320,000</b>	<b>\$12,440,000</b>	<b>\$8,070,000</b>	<b>\$7,150,000</b>	<b>\$6,400,000</b>	<b>\$49,305,000</b>	

Source: City of Doral Public Works Dept., 2016

### 10.2.2 New Project Analysis

The projects identified and described in Chapter 7 were cross referenced with current cost estimates and prioritized using seven evaluation factors. The seven factors include 1) Ease of Implementation; 2) Efficiency; 3) Effectiveness; 4) Promotes Safety; 5) Promotes Flow; 6) Maintains/Enhances City Character; and 7) Reduces Traffic Intrusion. The following Table presents the prioritized projects and categorizes each project into one of four Tiers. The purpose of ranking by Tiers is to establish a schedule, **Tier I projects**



# City of Doral

## TRANSPORTATION MASTER PLAN



are phased in the short-term (3 to 5 years); Tier II projects are further out, but still in the near future (5 to 10 years); Tier III looks to the mid-term timeframe (10 to 15 years); and Tier IV projects are the long-term (15 to 20 years). The project priorities are subject to change if additional funding come available. This could be in the form of grants, private funding or impact fees. If additional funds are to become available, the City should consider re-prioritizing projects.

No.	Project	Location	From	To	Description
<b>Tier I</b>					
1	Repair Sidewalks	Various	Various	Various	Repair or replace damaged, uneven or cracked sidewalks
2	One Stop Personal Mobility Information Center	N/A	N/A	N/A	Develop a mobile app to offer access to public transit information, ride-sharing and carpooling, and bicycling and pedestrian routes.
3	Infill Sidewalks	Various	Various	Various	Prioritization of these sidewalk improvements should be based on proximity to residential areas, schools, parks, and bus or trolley stops, and then to existing businesses. Primarily, the purpose is to create a cohesive, connected walking network; thus, in some cases, the need for sidewalks can be bundled with a bicycle path to develop a shared use off-road path.
4	Compleste Streets Design Guidelines	N/A	N/A	N/A	Develop new City regulations for implementing complete streets concepts that will foster design and redevelopment of all streets to improve mobility for all users.
5	Multiple Intersection Safety Studies	Various	Various	Various	Safety Studies are necessary at intersections with high crash rates to determine changes that may be needed
6	Doral Boulevard Corridor Safety Study	Doral Boulevard	NW 97th Avenue	NW 87th Avenue	The purpose of this project is to evaluate safety on the NW 36 <sup>th</sup> /NW 41 <sup>st</sup> Streets corridor between NW 87 <sup>th</sup> Avenue and NW 97 <sup>th</sup> Avenue for both vehicles and pedestrians crossing the road.
7	Complete Bicycling Network	Various	Various	Various	Work to implement the remaining facilities, through ROW acquisition, design and construction.
8	Update City of Doral Bicycle Master Plan	N/A	N/A	N/A	Revise the City's Bicycle Master Plan in light of the plan's age and need to account for new bicycle network needs.
9	Transit Development Plan	N/A	N/A	N/A	Ensure the efficiency and effectiveness of the Doral Trolley by establishing new routes in response to future growth of the City.
10	Pedestrian Safety Improvements at Intersections	Various	Various	Various	44 locations have been noted with need for improvement. Each intersection should undergo an individual pedestrian safety evaluation to explore the number of crashes, operational characteristics, signal timing, geometry, etc. .
11	Pedestrian Bridge at NW 41st Street	NW 41st Street	NW 117th Avenue	N/A	Construct a pedestrian bridge over NW 41st Street to connect the multi-use path where it is currently bi-sected by the roadway
12	Bicycling Safety and Education Programs	N/A	N/A	N/A	Develop a bicycle/driver educational pamphlet, work to educate the public on bicycle and driver safety.
13	NW 74th Street Bike Lane Conversion	NW 74th Street	NW 97th Avenue	NW 107th Avenue	Convert the current bike lane to a multi-use path.
14	Doral Boulevard Safety Study	Doral Boulevard	NW 97th Avenue	NW 987th Avenue	A safety study should be conducted on this corridor to determine the cause of crashes and possible remediating actions which can be undertaken
15	Flyover Ramp to HEFT	HEFT	NW 41st Street	NW 25th Street	To connect the existing NW 25th Street viaduct to NW 41st Street



# City of Doral TRANSPORTATION MASTER PLAN



Tier IV					
1	New roadways for "White Course" development	NW 41st Street	NW 87th Avenue	NW 79th Avenue	Future redevelopment of the golf course located between NW 41st Street, NW 48 <sup>th</sup> Street, NW 87 <sup>th</sup> Avenue and NW 79 <sup>th</sup> Avenue will necessitate new roadways for internal circulation.
2	Complete the grid for Sections 17 & 8	Section 17 & 8	N/A	N/A	Future development in the north of the City will necessitate new roadways to complete the grid.
3	Signal Priority for Buses/Trolleys	Various	Various	Various	Conduct a study to evaluate on-time performance, ridership, and rider in-transit time. Improvement options include installing technology at traffic signals and transponders on the buses/trolleys.
4	Traffic Monitoring Control Center	TBD	TBD	TBD	Construct a traffic monitoring control center to monitor city roads
5	Off-road Bicycle Path Maintenance and Rest Area Development	Various	Various	Various	Rest areas should be developed along existing shared-use, off-road paths at approximately every 0.5 miles.
6	Citywide On-Street Parking Study	N/A	N/A	N/A	Conduct assessment of available on-street parking and associated policies in the City of Doral.
7	Doral Trolley Passport Program	N/A	N/A	N/A	Incentivize fare reductions, either in parking costs or through lower boarding fares
8	Roadway widening improvements	Various	Various	Various	An analysis of various roadways and future growth within the City indicated unacceptable levels of service for specific segments.
9	Widen NW 90th Street	NW 90th Street	NW 107th Avenue	NW 97th Avenue	Widen an existing roadway to support future growth and development along this roadway
10	Intersection Improvements	NW 12th Street	NW 97th Avenue	Off Ramp	Add westbound and northbound right turn lanes and also provide access to southbound 97th Avenue from 12th Street.
11	Intersection Improvements	NW 12th Street	NW 97th Avenue	On Ramp	Add westbound and northbound right turn lanes and also provide access to southbound 97th Avenue from 12th Street.
12	Intersection Improvements	NW 7th Street	NW 97th Avenue	N/A	Signalize intersection.

## 10.3 Funding Sources

Funding for transportation projects comes from three primary sources: Local, State and Federal. Each year funding is more difficult to come by. Cities and counties, face the dilemma of rising costs of transportation projects, increasing traffic volumes and limitations on the ability to generate revenue. The cost of construction and materials increased by 44 percent between 2000 and 2013, more than the 35 percent rise in the overall rate of inflation. Fast changing economic environments put pressure on local governments to keep up with growth and congestion. At the same time, most states limit counties' ability to raise revenue.

Faced with rapidly increasing construction costs and traffic volumes local governments are finding new funding and financing solutions for transportation. Often, these solutions involve partnerships with other jurisdictions, the private sector and, most of all, county residents. Unfortunately, Florida is a donor state, giving more into the federal system than it gets back. Most monies for large projects are collected locally, provided to the Federal Government, and then reallocated to the states to be administered to agencies, like FDOT. The next pages contain a description of relevant funding opportunities at all levels.

### 10.3.1 Local Funding

Local funding is generated from within a city or county, generally relying on property taxes or other funds. Many communities have concurrency fees or impact fees, which can be applied to local infrastructure projects. In high-growth communities, like Doral, it is advised that they consider these

# **Appendix F**

## **Project Trip Generation**

**Scenario - 2**

Scenario Name: Phases IV and V

User Group:

**VEHICLE TRIPS BEFORE REDUCTION**

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit
					Rate/Equation	Split%	Split%
221 - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	349	Weekday	Best Fit (LIN) $T = 4.77(X) - 46.46$	809 50%	809 50%
221(1) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	349	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN) $T = 0.44(X) - 11.61$	33 23%	109 77%
221(2) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	349	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN) $T = 0.39(X) + 0.34$	83 61%	53 39%
822 - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday	Best Fit (LIN) $T = 42.20(X) + 229.68$	355 50%	355 50%
822(1) - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 2.36	16 60%	11 40%
822(2) - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) $\ln(T) = 0.71\ln(X) + 2.72$	43 50%	43 50%

**Scenario - 3**

Scenario Name: Phase VI

User Group:

**VEHICLE TRIPS BEFORE REDUCTION**

Land Use & Data Source	Location	IV	Size	Time Period	Method	Entry	Exit
					Rate/Equation	Split%	Split%
221 - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	203	Weekday	Best Fit (LIN) $T = 4.77(X) - 46.46$	461 50%	461 50%
221(1) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	203	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Best Fit (LIN) $T = 0.44(X) - 11.61$	18 23%	60 77%
221(2) - Multifamily Housing (Mid-Rise) - Not Close to Rail Transit Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	Dwelling Units	203	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LIN) $T = 0.39(X) + 0.34$	49 61%	31 39%
822 - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday	Best Fit (LIN) $T = 42.20(X) + 229.68$	355 50%	355 50%
822(1) - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m.	Average 2.36	16 60%	11 40%
822(2) - Strip Retail Plaza (<40k) Data Source: Trip Generation Manual, 11th Ed	General Urban/Suburban	1000 Sq. Ft. GLA	11.37	Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m.	Best Fit (LOG) $\ln(T) = 0.71\ln(X) + 2.72$	43 50%	43 50%

## AM Peak Hour Trip Generation and Internalization

*Midtown Doral Phases IV and V*

Multifamily (Mid-Rise)		Strip Retail Plaza		
Land Use 221		Land Use 822		
349 DU		11,370 SF		
In		In		
Out		Out		
33		16		169 ITE Trips
-1				-5 -4.1% other modes of transportaion
32		16		164 Non Transit Vehicle Trips
<b>UNBALANCED INTERNALIZATION</b>				
1%		17%		
1		3		
2%		14%		
1		2		
Multifamily (Mid-Rise)		Strip Retail Plaza		
In		In		
Out		Out		
32		16		164 Vehicle Trips
<b>BALANCED INTERNALIZATION</b>				
-1		-1		
-1		-1		
-1		-1		-4 Internal
31		15		160 External Trips
1.5%		7.4%		2.4% % Internal
<b>31</b>		<b>15</b>		<b>160 Net New External Trips</b>
<b>104</b>		<b>10</b>		

## PM Peak Hour Trip Generation and Internalization

*Midtown Doral Phases IV and V*

Multifamily (Mid-Rise)		Strip Retail Plaza		
Land Use 221		Land Use 822		
349 DU		11,370 SF		
In	Out	In	Out	
83	53	43	43	222 ITE Trips
-3	-2			-5 -4.1% other modes of transportaion
80	51	43	43	217 Non Transit Vehicle Trips
<b>UNBALANCED INTERNALIZATION</b>				
42% 21	4	10% 4		
46% 37	11		26% 11	
Multifamily (Mid-Rise)		Strip Retail Plaza		
In	Out	In	Out	
80	51	43	43	217 Vehicle Trips
<b>BALANCED INTERNALIZATION</b>				
-4		-4		
-11			-11	
-11	-4	-4	-11	-30 Internal
69	47	39	32	187 External Trips
11.5%			17.4%	13.8% % Internal
		0	0	0 0% Passby
<b>69</b>	<b>47</b>	<b>39</b>	<b>32</b>	<b>187 Net New External Trips</b>

## AM Peak Hour Trip Generation and Internalization

*Midtown Doral Phase VI*

Multifamily (Mid-Rise)		Strip Retail Plaza			
Land Use 221		Land Use 822			
203 DU		11,370 SF			
In	Out	In	Out		
18	60	16	11	105 ITE Trips	
-1	-2			-3 -4.1% other modes of transportation	
17	58	16	11	102 Non Transit Vehicle Trips	
<b>UNBALANCED INTERNALIZATION</b>					
1%		17%			
1	1	3			
2%			14%		
0	0		2		
Multifamily (Mid-Rise)		Strip Retail Plaza			
In	Out	In	Out		
17	58	16	11	102 Vehicle Trips	
<b>BALANCED INTERNALIZATION</b>					
-1		-1			
0			0		
0	-1	-1	0	-2 Internal	
17	57	15	11	100 External Trips	
1.3%		3.7%		2.0% % Internal	
<b>17</b>	<b>57</b>	<b>15</b>	<b>11</b>	<b>100 Net New External Trips</b>	

## PM Peak Hour Trip Generation and Internalization

*Midtown Doral Phase VI*

Multifamily (Mid-Rise)		Strip Retail Plaza		
Land Use 221		Land Use 822		
203 DU		11,370 SF		
In	Out	In	Out	
48	31	43	43	165 ITE Trips
-2	-1			-3 -4.1% other modes of transportaion
46	30	43	43	162 Non Transit Vehicle Trips
<b>UNBALANCED INTERNALIZATION</b>				
42% 13	4	10% 4		
46% 21	11		26% 11	
Multifamily (Mid-Rise)		Strip Retail Plaza		
In	Out	In	Out	
46	30	43	43	162 Vehicle Trips
<b>BALANCED INTERNALIZATION</b>				
-4		-4		
-11			-11	
-11	-4	-4	-11	-30 Internal
35	26	39	32	132 External Trips
19.7%			17.4%	18.5% % Internal
		0	0	0 0% Passby
35	26	39	32	<b>132 Net New External Trips</b>

# COMMUTING CHARACTERISTICS BY SEX



Note: This is a modified view of the original table produced by the U.S. Census Bureau. This download or printed version may have missing information from the original table.

Census Tract 90.40, Miami-Dade County, Florida		
Total	Estimate	Margin of Error
<b>Label</b>		
Workers 16 years and over	2,922	±402
MEANS OF TRANSPORTATION TO WORK		
Car, truck, or van	82.6%	±5.3
Drove alone	74.6%	±6.1
Carpooled	8.0%	±3.0
In 2-person carpool	7.2%	±3.0
In 3-person carpool	0.4%	±0.5
In 4-or-more person carpool	0.4%	±0.4
Workers per car, truck, or van	1.05	±0.02
Public transportation (excluding taxicab)	3.7%	±4.3
Walked	0.4%	±0.6
Bicycle	0.0%	±1.6
Taxicab, motorcycle, or other means	0.3%	±0.4
Worked from home	12.9%	±4.0
PLACE OF WORK		
Workers 16 years and over who did not work from home	2,545	±392
VEHICLES AVAILABLE		
PERCENT ALLOCATED		

## Table Notes

### COMMUTING CHARACTERISTICS BY SEX

**Survey/Program:** American Community Survey

**Year:** 2021

**Estimates:** 5-Year

**Table ID:** S0801

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode

## Table Notes

### COMMUTING CHARACTERISTICS BY SEX

**Survey/Program:** American Community Survey.

**Year:** 2021

**Estimates:** 5-Year

**Table ID:** S0801

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities, and towns and estimates of housing units for states and counties.

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Technical Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Source: U.S. Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see ACS Technical Documentation). The effect of nonsampling error is not represented in these tables.

The 12 selected states are Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and Wisconsin.

Workers include members of the Armed Forces and civilians who were at work last week.

When information is missing or inconsistent, the Census Bureau logically assigns an acceptable value using the response to a related question or questions. If a logical assignment is not possible, data are filled using a statistical process called allocation, which uses a similar individual or household to provide a donor value. The "Allocated" section is the number of respondents who received an allocated value for a particular subject.

Several means of transportation to work categories were updated in 2019. For more information, see: Change to Means of Transportation.

The 2017-2021 American Community Survey (ACS) data generally reflect the March 2020 Office of Management and Budget (OMB) delineations of metropolitan and micropolitan statistical areas. In certain instances, the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB delineation lists due to differences in the effective dates of the geographic entities.

Estimates of urban and rural populations, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

#### Explanation of Symbols:

- The estimate could not be computed because there were an insufficient number of sample observations. For a ratio of medians estimate, one or both of the median estimates falls in the lowest interval or highest interval of an open-ended distribution. For a 5-year median estimate, the margin of error associated with a median was larger than the median itself.

N

The estimate or margin of error cannot be displayed because there were an insufficient number of sample cases in the selected geographic area.  
(X)

The estimate or margin of error is not applicable or not available.

median-

The median falls in the lowest interval of an open-ended distribution (for example "2,500-")

median+

The median falls in the highest interval of an open-ended distribution (for example "250,000+").

\*\*

The margin of error could not be computed because there were an insufficient number of sample observations.

\*\*\*

The margin of error could not be computed because the median falls in the lowest interval or highest interval of an open-ended distribution.

\*\*\*\*

A margin of error is not appropriate because the corresponding estimate is controlled to an independent population or housing estimate. Effectively, the corresponding estimate has no sampling error and the margin of error may be treated as zero.

## Daily Trip Generation and Internalization

*Midtown Doral Phases IV and V*

Multifamily (Mid-Rise)		Strip Retail Plaza		
Land Use 221		Land Use 822		
349 DU		11,370 SF		
In	Out	In	Out	
809	809	355	355	2,328 ITE Trips
-33	-33			-66 -4.1% other modes of transportaion
776	776	355	355	2,262 Non Transit Vehicle Trips
<b>UNBALANCED INTERNALIZATION</b>				
38% 295	<b>32</b>	9% 32		
33% 256	<b>39</b>		11% 39	
Multifamily (Mid-Rise)		Strip Retail Plaza		
In	Out	In	Out	
776	776	355	355	2,262 Vehicle Trips
<b>BALANCED INTERNALIZATION</b>				
-32		-32		
-39			-39	
-39	-32	-32	-39	-142 Internal
737	744	323	316	2,120 External Trips
4.6%			10.0%	6.3% % Internal
		0	0	0 0% Passby
<b>737</b>	<b>744</b>	<b>323</b>	<b>316</b>	<b>2,120 Net New External Trips</b>

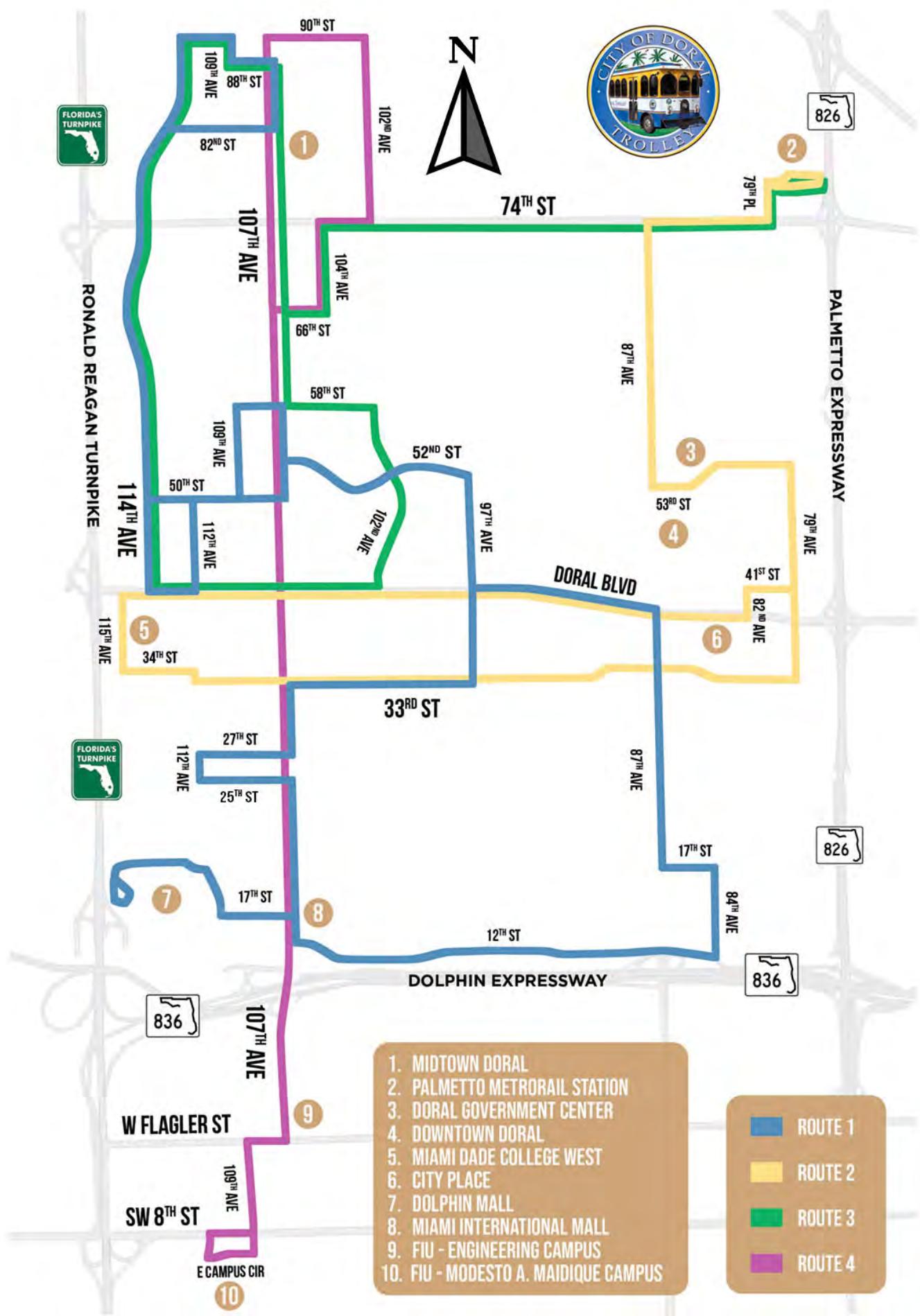
## Daily Trip Generation and Internalization

*Midtown Doral Phase VI*

Multifamily (Mid-Rise)		Strip Retail Plaza		
Land Use 221		Land Use 822		
203 DU		11,370 SF		
In	Out	In	Out	
461	461	355	355	1,632 ITE Trips
-19	-19			-38 -4.1% other modes of transportaion
442	442	355	355	1,594 Non Transit Vehicle Trips
<b>UNBALANCED INTERNALIZATION</b>				
38% 168	<b>32</b>	9% 32		
33% 146	<b>39</b>		11% 39	
Multifamily (Mid-Rise)		Strip Retail Plaza		
In	Out	In	Out	
442	442	355	355	1,594 Vehicle Trips
<b>BALANCED INTERNALIZATION</b>				
-32		-32		
-39			-39	
-39	-32	-32	-39	-142 Internal
403	410	323	316	1,452 External Trips
8.0%			10.0%	8.9% % Internal
		0	0	0 0% Passby
<b>403</b>	<b>410</b>	<b>323</b>	<b>316</b>	<b>1,452 Net New External Trips</b>

# **Appendix G**

## **Transit Information**



Weekday Route 1 NORTHBOUND																																					
Stop #	Road	Location	Nearby Landmark	B-1	B-2	B-3	B-4	B-I	B-2	B-3	B-4	B-I	B-2	B-3	B-4	B-I	Peak 1	B-2	B-3	B-4	Peak 2	B-1	Peak 1	B-2	B-3	B-4	Peak 2	B-1	B-2	B-3	B-4	B-I	B-2				
1005	NW 12 St	West of NW 10500 Blk	Miami Int'l Mall (TD Bank)	6:00 AM	6:31 AM	6:59 AM	7:30 AM	7:59 AM	8:30 AM	9:03 AM	9:35 AM	10:08 AM	10:40 AM	11:12 AM	11:44 AM	12:07 PM	12:40 PM	1:12 PM	1:44 PM	2:13 PM	2:42 PM	3:44 PM	3:59 PM	4:13 PM	4:40 PM	5:13 PM	5:37 PM	6:01 PM	6:28 PM	6:56 PM	7:20 PM	7:52 PM	8:17 PM	8:46 PM	9:08 PM	9:32 PM	9:59 PM
1006	NW 107 Ave	North of NW 12 St	Miami Int'l Mall (Mattress Firm)	6:00 AM	6:31 AM	6:59 AM	7:30 AM	8:00 AM	8:31 AM	9:04 AM	9:36 AM	10:09 AM	10:41 AM	11:13 AM	11:45 AM	12:08 PM	12:41 PM	1:13 PM	1:45 PM	2:16 PM	2:45 PM	3:45 PM	4:00 PM	4:13 PM	4:40 PM	5:13 PM	5:37 PM	6:02 PM	6:29 PM	6:57 PM	7:22 PM	7:54 PM	8:18 PM	8:47 PM	9:09 PM	9:33 PM	10:01 PM
1079	Dolphin Mall Arrival			6:07 AM	6:38 AM	7:06 AM	7:37 AM	8:06 AM	8:37 AM	9:10 AM	9:42 AM	10:16 AM	10:48 AM	11:20 AM	11:52 AM	12:15 PM	12:48 PM	1:20 PM	1:52 PM	2:23 PM	2:52 PM	3:50 PM	4:06 PM	4:20 PM	4:48 PM	5:21 PM	5:45 PM	6:10 PM	6:36 PM	7:01 PM	7:27 PM	8:01 PM	8:25 PM	8:53 PM	9:15 PM	9:39 PM	10:07 PM
1079	Dolphin Mall Departure			6:07 AM	6:38 AM	7:11 AM	7:43 AM	8:16 AM	8:48 AM	9:20 AM	9:52 AM	10:25 AM	10:58 AM	11:30 AM	11:52 PM	12:02 PM	12:31 PM	1:00 PM	1:30 PM	2:02 PM	2:33 PM	3:07 PM	4:00 PM	4:16 PM	4:30 PM	4:58 PM	5:31 PM	5:55 PM	6:20 PM	6:46 PM	7:11 PM	7:37 PM	8:06 PM	8:33 PM	8:58 PM	9:20 PM	
1007	4004 NW 107 Ave	North of NW 14	Miami Int'l Mall (BJ's)	6:13 AM	6:44 AM	7:17 AM	7:49 AM	8:22 AM	8:54 AM	9:26 AM	9:58 AM	10:32 AM	11:05 AM	11:37 AM	12:09 PM	12:38 PM	1:07 PM	1:36 PM	2:07 PM	2:37 PM	3:11 PM	4:04 PM	4:20 PM	4:35 PM	5:05 PM	5:37 PM	6:00 PM	6:24 PM	6:51 PM	7:18 PM	7:43 PM	8:11 PM	8:39 PM	9:03 PM	9:26 PM		
1078	4005 NW 107 Ave	North of NW 16 St	Toy's r Us	6:13 AM	6:44 AM	7:17 AM	7:49 AM	8:22 AM	8:54 AM	9:26 AM	9:58 AM	10:32 AM	11:05 AM	11:37 AM	12:09 PM	12:38 PM	1:07 PM	1:36 PM	2:07 PM	2:37 PM	3:11 PM	4:05 PM	4:21 PM	4:36 PM	5:06 PM	5:38 PM	6:01 PM	6:25 PM	6:51 PM	7:19 PM	7:44 PM	8:12 PM	8:40 PM	9:04 PM	9:27 PM		
1008	4006 NW 107 Ave	North of NW 17 St	Bed Bath & Beyond Plaza	6:14 AM	6:45 AM	7:18 AM	7:50 AM	8:23 AM	8:55 AM	9:27 AM	9:59 AM	10:33 AM	11:06 AM	11:38 AM	12:10 PM	12:39 PM	1:08 PM	1:37 PM	2:08 PM	2:38 PM	3:12 PM	4:06 PM	4:22 PM	4:37 PM	5:06 PM	5:38 PM	6:01 PM	6:25 PM	6:52 PM	7:19 PM	7:44 PM	8:12 PM	8:40 PM	9:04 PM	9:27 PM		
1009	4007 NW 107 Ave	North of NW 19 St	International Corporate Park	6:15 AM	6:46 AM	7:19 AM	7:51 AM	8:24 AM	8:56 AM	9:28 AM	10:00 AM	10:33 AM	11:06 AM	11:38 AM	12:10 PM	12:39 PM	1:08 PM	1:37 PM	2:08 PM	2:38 PM	3:13 PM	4:08 PM	4:26 PM	4:42 PM	5:12 PM	5:40 PM	6:03 PM	6:26 PM	6:53 PM	7:20 PM	7:45 PM	8:13 PM	8:41 PM	9:05 PM	9:28 PM		
1010	NW 112 Ave	North of NW 25 St	Doral Academy Middle School	6:20 AM	6:51 AM	7:24 AM	7:56 AM	8:29 AM	9:01 AM	9:33 AM	10:05 AM	10:36 AM	11:09 AM	11:41 AM	12:13 PM	12:42 PM	1:11 PM	1:42 PM	2:15 PM	2:47 PM	3:21 PM	3:40 PM	4:14 PM	4:46 PM	5:16 PM	5:44 PM	6:06 PM	6:28 PM	6:56 PM	7:25 PM	7:48 PM	8:15 PM	8:43 PM	9:07 PM	9:31 PM		
1011	NW 27 St	East of NW 112 Ave	Doral Academy High School	6:21 AM	6:52 AM	7:26 AM	7:58 AM	8:31 AM	9:03 AM	9:35 AM	10:07 AM	10:37 AM	11:10 AM	11:42 AM	12:14 PM	12:43 PM	1:12 PM	1:43 PM	2:20 PM	2:54 PM	3:27 PM	3:53 PM	4:20 PM	4:36 PM	5:20 PM	5:47 PM	6:08 PM	6:36 PM	7:03 PM	7:29 PM	8:16 PM	8:44 PM	9:08 PM	9:33 PM			
1012	NW 107 Ave	North of NW 27 St	UCASA	6:25 AM	6:56 AM	7:29 AM	8:01 AM	8:34 AM	9:06 AM	9:38 AM	10:10 AM	10:39 AM	11:12 AM	11:44 AM	12:16 PM	12:45 PM	1:14 PM	1:45 PM	2:22 PM	2:56 PM	3:29 PM	3:55 PM	4:21 PM	4:37 PM	5:21 PM	5:47 PM	6:09 PM	6:31 PM	6:58 PM	7:31 PM	7:52 PM	8:19 PM	8:45 PM	9:09 PM	9:35 PM		
1013	NW 107 Ave	North of 30 Ter	Mercantil Bank (Aloft)	6:25 AM	6:56 AM	7:29 AM	8:01 AM	8:35 AM	9:07 AM	9:39 AM	10:11 AM	10:39 AM	11:12 AM	11:44 AM	12:16 PM	12:45 PM	1:14 PM	1:47 PM	2:23 PM	2:57 PM	3:30 PM	3:56 PM	4:23 PM	4:39 PM	5:45 PM	5:49 PM	6:11 PM	6:33 PM	7:00 PM	7:34 PM	7:54 PM	8:21 PM	8:48 PM	9:12 PM	9:38 PM		
1014	NW 33 St	West of NW 101 Ave	Veterans' Park	6:28 AM	6:59 AM	7:32 AM	8:04 AM	8:38 AM	9:10 AM	9:42 AM	10:14 AM	11:46 AM	12:18 PM	12:47 PM	1:16 PM	1:49 PM	2:24 PM	2:58 PM	3:31 PM	3:57 PM	4:24 PM	4:40 PM	5:45 PM	5:49 PM	6:11 PM	6:33 PM	7:00 PM	7:34 PM	7:54 PM	8:21 PM	8:48 PM	9:12 PM	9:38 PM				
1015	NW 33 St	East of NW 98 Pl	Costa Verde	6:29 AM	7:00 AM	7:33 AM	8:05 AM	8:38 AM	9:10 AM	9:42 AM	10:14 AM	10:42 AM	11:15 AM	11:47 AM	12:19 PM	12:48 PM	1:17 PM	1:50 PM	2:26 PM	3:00 PM	3:33 PM	3:59 PM	4:25 PM	4:42 PM	5:47 PM	5:53 PM	6:14 PM	6:36 PM	7:03 PM	7:36 PM	7:57 PM	8:22 PM	8:49 PM	9:13 PM	9:39 PM		
1016	NW 97 Ave	North of NW 33 St	Costa del Sol	6:30 AM	7:01 AM	7:34 AM	8:06 AM	8:40 AM	9:12 AM	9:44 AM	10:16 AM	10:43 AM	11:16 AM	11:48 AM	12:20 PM	12:49 PM	1:18 PM	1:52 PM	2:27 PM	3:01 PM	3:34 PM	4:00 PM	4:26 PM	4:43 PM	5:30 PM	5:54 PM	6:15 PM	6:36 PM	7:04 PM	7:37 PM	8:24 PM	8:51 PM	9:15 PM	9:41 PM			
1017	NW 97 Ave	North of NW 40 St/Rd	Millennia Atlantic University	6:31 AM	7:02 AM	7:35 AM	8:07 AM	8:41 AM	9:13 AM	9:45 AM	10:17 AM	10:44 AM	11:19 AM	11:49 AM	12:21 PM	12:50 PM	1:19 PM	1:52 PM	2:29 PM	3:05 PM	3:36 PM	4:01 PM	4:27 PM	4:45 PM	5:01 PM	5:33 PM	5:56 PM	6:17 PM	6:37 PM	7:05 PM	7:38 PM	7:58 PM	8:25 PM	8:52 PM	9:16 PM	9:42 PM	
1018	NW 97 Ave	North of NW 41 St	Doral Center (Walgreens)	6:33 AM	7:04 AM	7:37 AM	8:09 AM	8:43 AM	9:15 AM	9:47 AM	10:19 AM	10:46 AM	11:19 AM	11:51 AM	12:23 PM	12:52 PM	1:21 PM	1:53 PM	2:31 PM	3:06 PM	3:37 PM	4:02 PM	4:28 PM	4:46 PM	5:02 PM	5:34 PM	5:57 PM	6:17 PM	6:38 PM	7:05 PM	7:38 PM	7:58 PM	8:25 PM	8:52 PM	9:16 PM	9:42 PM	
1019	NW 97 Ave	North of NW 46 Ln	Gold Vue Estates	6:34 AM	7:05 AM	7:38 AM	8:10 AM	8:44 AM	9:16 AM	9:48 AM	10:20 AM	10:47 AM	11:20 AM	11:52 AM	12:24 PM	12:53 PM	1:22 PM	1:54 PM	2:32 PM	3:07 PM	3:39 PM	4:04 PM	4:30 PM	4:48 PM	5:05 PM	5:38 PM	6:00 PM	6:20 PM	6:40 PM	7:07 PM	7:40 PM	8:00					

**Weekday Route 1**  
**SOUTHBOUND**

Stop #	Road	Location	Nearby Landmark	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4	B-1	Peak 1	B-2	B-3	B-4	Peak 2	B-1	B-2	B-3	B-4	B-1	B-2	B-3	B-4											
1039	3032	NW 109 Ave	South of NW 90 St	Ibis Villas		6:59 AM	7:30 AM	8:03 AM	8:35 AM	9:08 AM	9:40 AM	10:12 AM	10:44 AM	11:06 AM	11:39 AM	12:11 PM	12:43 PM	1:12 PM	1:41 PM	2:23 PM	3:00 PM	3:36 PM	4:03 PM	4:26 PM	4:50 PM	5:08 PM	5:25 PM	5:59 PM	6:19 PM	6:38 PM	6:57 PM	7:25 PM	7:59 PM	8:19 PM	8:44 PM	9:09 PM	9:31 PM	10:03 PM		
1040	3033	NW 88 St	East of NW 109 Ave	Ronald Reagan High School	6:00 AM	6:31 AM	7:00 AM	7:31 AM	8:04 AM	8:36 AM	9:09 AM	9:41 AM	10:13 AM	10:45 AM	11:07 AM	11:40 AM	12:12 PM	12:44 PM	1:13 PM	1:42 PM	2:27 PM	2:45 PM	3:02 PM	3:37 PM	4:04 PM	4:27 PM	4:51 PM	5:09 PM	5:26 PM	6:00 PM	6:20 PM	6:38 PM	6:57 PM	7:25 PM	8:00 PM	8:19 PM	8:44 PM	9:10 PM	9:32 PM	10:04 PM
1041	3034	NW 88 St	West of NW 107 Ave	Ronald Reagan High School	6:00 AM	6:31 AM	7:01 AM	7:32 AM	8:05 AM	8:37 AM	9:10 AM	9:42 AM	10:14 AM	10:46 AM	11:08 AM	11:41 AM	12:13 PM	12:45 PM	1:14 PM	1:43 PM	2:31 PM	2:47 PM	3:04 PM	3:37 PM	4:05 PM	4:28 PM	4:52 PM		5:27 PM	6:00 PM	6:21 PM		6:58 PM	7:27 PM	8:01 PM	8:21 PM	8:45 PM	9:11 PM		
1042	3035	NW 107 Ave	South of NW 86 St	Islands of Doral	6:02 AM	6:33 AM	7:02 AM	7:33 AM	8:06 AM	8:38 AM	9:11 AM	9:43 AM	10:15 AM	10:47 AM	11:09 AM	11:42 AM	12:14 PM	12:46 PM	1:15 PM	1:44 PM	2:37 PM	2:53 PM	3:09 PM	3:41 PM	4:07 PM	4:30 PM	4:53 PM		5:28 PM	6:01 PM	6:23 PM		7:00 PM	7:28 PM	8:02 PM	8:22 PM	8:47 PM	9:12 PM		
1043	3036	NW 107 Ave	South of NW 83 St	Leeward	6:02 AM	6:33 AM	7:03 AM	7:34 AM	8:07 AM	8:39 AM	9:12 AM	9:44 AM	10:16 AM	10:48 AM	11:09 AM	11:42 AM	12:14 PM	12:46 PM	1:15 PM	1:44 PM	2:38 PM	2:54 PM	3:10 PM	3:42 PM	4:09 PM	4:32 PM	4:55 PM		5:29 PM	6:02 PM	6:24 PM		7:01 PM	7:29 PM	8:02 PM	8:23 PM	8:48 PM	9:13 PM		
1045	NW 82 St	West of NW 109 Ave	The Promenade		6:05 AM	6:36 AM	7:05 AM	7:36 AM	8:09 AM	8:41 AM	9:14 AM	9:46 AM	10:18 AM	10:50 AM	11:10 AM	11:43 AM	12:15 PM	12:47 PM	1:16 PM	1:45 PM	2:40 PM	2:55 PM	3:12 PM	3:43 PM	4:10 PM	4:33 PM	4:56 PM		5:30 PM	6:03 PM	6:26 PM		7:03 PM	7:31 PM	8:04 PM	8:24 PM	8:49 PM	9:15 PM		
1046	NW 82 St	East of NW 112 Ave	The Promenade		6:05 AM	6:36 AM	7:06 AM	7:37 AM	8:10 AM	8:42 AM	9:15 AM	9:47 AM	10:19 AM	10:51 AM	11:11 AM	11:44 AM	12:16 PM	12:48 PM	1:17 PM	1:46 PM	2:43 PM	2:58 PM	3:13 PM	3:43 PM	4:10 PM	4:33 PM	4:57 PM		5:31 PM	6:04 PM	6:26 PM		7:03 PM	7:31 PM	8:05 PM	8:25 PM	8:50 PM	9:15 PM		
1047	NW 114 Ave	South of NW 82 St	Doral Legacy Park		6:07 AM	6:38 AM	7:07 AM	7:38 AM	8:11 AM	8:43 AM	9:17 AM	9:49 AM	10:21 AM	10:53 AM	11:12 AM	11:45 AM	12:17 PM	12:49 PM	1:18 PM	1:47 PM	2:45 PM	3:00 PM	3:15 PM	3:45 PM	4:12 PM	4:35 PM	4:58 PM		5:32 PM	6:05 PM	6:27 PM		7:05 PM	7:32 PM	8:05 PM	8:26 PM	8:51 PM	9:16 PM		
1048	NW 114 Ave	South of NW 77 Ln	Windward at Doral		6:08 AM	6:39 AM	7:09 AM	7:40 AM	8:13 AM	8:45 AM	9:18 AM	9:50 AM	10:22 AM	10:54 AM	11:13 AM	11:46 AM	12:18 PM	12:50 PM	1:19 PM	1:48 PM	2:46 PM	3:01 PM	3:16 PM	3:45 PM	4:12 PM	4:35 PM	4:59 PM		5:33 PM	6:06 PM	6:28 PM		7:05 PM	7:33 PM	8:06 PM	8:27 PM	8:52 PM	9:17 PM		
1049	NW 114 Ave	Nort of NW 72 St	Barbados		6:10 AM	6:41 AM	7:10 AM	7:41 AM	8:14 AM	8:46 AM	9:20 AM	9:52 AM	10:24 AM	10:56 AM	11:15 AM	11:48 AM	12:20 PM	12:52 PM	1:21 PM	1:50 PM	2:49 PM	3:03 PM	3:19 PM	3:47 PM	4:16 PM	4:39 PM	5:03 PM		5:36 PM	6:08 PM	6:30 PM		7:06 PM	7:34 PM	8:08 PM	8:29 PM	8:54 PM	9:19 PM		
1050	NW 114 Ave	North of NW 68 St	St. Lucia		6:10 AM	6:41 AM	7:11 AM	7:42 AM	8:15 AM	8:47 AM	9:20 AM	9:52 AM	10:24 AM	10:56 AM	11:15 AM	11:48 AM	12:20 PM	12:52 PM	1:21 PM	1:50 PM	2:51 PM	3:05 PM	3:19 PM	3:47 PM	4:16 PM	4:40 PM	5:04 PM		5:37 PM	6:09 PM	6:30 PM		7:06 PM	7:34 PM	8:08 PM	8:29 PM	8:54 PM	9:19 PM		
1051	NW 114 Ave	North of NW 62 Ter	The Courts		6:11 AM	6:42 AM	7:11 AM	7:42 AM	8:15 AM	8:47 AM	9:21 AM	9:53 AM	10:25 AM	10:57 AM	11:16 AM	11:49 AM	12:21 PM	12:53 PM	1:22 PM	1:51 PM	2:52 PM	3:06 PM	3:20 PM	3:48 PM	4:17 PM	4:41 PM	5:05 PM		5:38 PM	6:09 PM	6:31 PM		7:07 PM	7:35 PM	8:09 PM	8:30 PM	8:55 PM	9:20 PM		
1052	NW 114 Ave	North of NW 58 St	E. B. Thomas K-8 Center		6:12 AM	6:43 AM	7:12 AM	7:43 AM	8:16 AM	8:48 AM	9:22 AM	9:54 AM	10:26 AM	10:58 AM	11:16 AM	11:49 AM	12:21 PM	12:53 PM	1:22 PM	1:51 PM	2:53 PM	3:07 PM	3:22 PM	3:50 PM	4:18 PM	4:42 PM	5:06 PM		5:39 PM	6:11 PM	6:32 PM		7:08 PM	7:36 PM	8:09 PM	8:30 PM	8:56 PM	9:20 PM		
1053	NW 114 Ave	South of NW 57 St	Brisas of Doral		6:13 AM	6:44 AM	7:13 AM	7:44 AM	8:17 AM	8:49 AM	9:23 AM	9:55 AM	10:27 AM	10:59 AM	11:18 AM	11:51 AM	12:23 PM	12:55 PM	1:24 PM	1:53 PM	2:55 PM	3:09 PM	3:24 PM	3:52 PM	4:20 PM	4:43 PM	5:06 PM		5:40 PM	6:12 PM	6:33 PM		7:08 PM	7:36 PM	8:10 PM	8:31 PM	8:57 PM	9:21 PM		
1054	NW 114 Ave	South of NW 51 Ter	Doral Landings		6:14 AM	6:45 AM	7:15 AM	7:46 AM	8:19 AM	8:51 AM	9:24 AM	9:56 AM	10:28 AM	11:00 AM	11:19 AM	11:52 AM	12:24 PM	12:56 PM	1:25 PM	1:54 PM	2:57 PM	3:11 PM	3:25 PM	3:52 PM	4:20 PM	4:43 PM	5:07 PM		5:41 PM	6:14 PM	6:35 PM		7:10 PM	7:38 PM	8:11 PM	8:32 PM	8:58 PM	9:23 PM		
1080	NW 114 Ave	South of NW 50 St	Trails and Tails Park		6:15 AM	6:46 AM	7:16 AM	7:47 AM	8:19 AM	8:51 AM	9:25 AM	9:57 AM	10:29 AM	11:01 AM	11:20 AM	11:53 AM	12:25 PM	12:57 PM	1:26 AM	1:55 PM	2:57 PM	3:11 PM	3:26 PM	3:53 PM	4:22 PM	4:45 PM	5:08 PM		5:42 PM	6:14 PM	6:35 PM		7:10 PM	7:38 PM	8:11 PM	8:32 PM	8:58 PM	9:23 PM		
1081	NW 114 Ave	North of NW 44 St	Camden Doral Villas		6:15 AM	6:46 AM	7:16 AM	7:47 AM	8:20 AM	8:52 AM	9:25 AM	9:57 AM	10:29 AM	11:01 AM	11:20 AM	11:53 AM	12:25 PM	12:57 PM	1:26 PM	1:55 PM	2:58 PM	3:12 PM	3:26 PM	3:53 PM	4:22 PM	4:45 PM	5:09 PM		5:43 PM	6:15 PM	6:36 PM		7:11 PM	7:39 PM	8:12 PM	8:33 PM	8:59 PM	9:24 PM		
1082	2029	NW 41 St	East of NW 114 Ave	The Imagination Factory Preschool	6:18 AM	6:49 AM	7:19 AM	7:50 AM	8:23 AM	8:55 AM	9:28 AM	10:00 AM	10:32 AM	11:04 AM	11:23 AM	11:56 AM	12:28 PM	1:00 PM	1:29 PM	1:58 PM	2:01 PM	3:15 PM	3:30 PM	3:57 PM	4:26 PM	4:50 PM	5:14 PM		5:47 PM	6:18 PM	6:39 PM		7:13 PM	7:41 PM	8:14 PM	8:35 PM	9:01 PM	9:26 PM		
1083	NW 112 Ave	South of NW 42 Terr			6:21 AM	6:52 AM	7:21 AM																																	

Weekday Route 3 Southbound																													
Stop #	Road	Location	Nearby Landmark	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2
3000	NW 77 St	NW 79 Pl	Palmetto Metrorail Station	550	630	7:10	7:50	8:31	9:11	9:51	10:31	11:05	11:39	12:13	12:47	13:21	13:55	14:31	15:08	15:44	16:21	16:57	17:34	18:10	18:47	19:23	19:55	20:27	
3001	NW 74 St	West of NW 97 Ave		557	637	7:17	7:57	8:38	9:18	9:58	10:38	11:12	11:46	12:20	12:54	13:28	14:03	14:39	15:16	15:52	16:29	17:05	17:42	18:18	18:54	19:30	20:02	20:34	
3002	NW 74 St	East of NW 102 Ave		557	637	7:18	7:58	8:38	9:18	9:59	10:39	11:13	11:47	12:21	12:55	13:29	14:03	14:39	15:16	15:52	16:29	17:05	17:42	18:18	18:55	19:31	20:03	20:35	
3003	4033	NW 74 St	West of NW 102 Ave	559	639	7:19	7:59	8:40	9:20	9:59	10:39	11:13	11:47	12:21	12:55	13:29	14:04	14:40	15:17	15:53	16:30	17:06	17:43	18:19	18:55	19:31	20:03	20:35	
3042	4034	NW 104 Ave	South of NW 74 St	The Atlantic Doral	559	639	7:20	8:00	8:40	9:20	10:01	10:41	11:15	11:49	12:23	12:57	13:31	14:05	14:44	15:18	15:54	16:31	17:07	17:44	18:20	18:57	19:33	20:05	20:37
3043	4035	NW 104 Ave	North of NW 70 Terr		600	640	7:21	8:01	8:41	9:21	10:02	10:42	11:16	11:50	12:24	12:58	13:32	14:06	14:42	15:19	15:55	16:32	17:08	17:45	18:21	18:58	19:34	20:06	20:38
3044	4036	NW 104 Ave	North of NW 66 St	Doral International Academy of Math Science	600	640	7:21	8:01	8:41	9:21	10:02	10:42	11:16	11:50	12:24	12:58	13:32	14:06	14:42	15:19	15:55	16:32	17:08	17:45	18:21	18:58	19:34	20:06	20:38
3005	4037	NW 107 Ave	South of NW 66 St	Doral Isles	603	643	7:24	8:04	8:44	9:24	10:04	10:44	11:18	11:52	12:26	13:00	13:34	14:09	14:45	15:22	15:58	16:35	17:11	17:48	18:24	19:00	19:36	20:08	20:40
3006	4038	NW 107 Ave	North of NW 58 St	Doral Isles Plaza (Publix)	604	644	7:25	8:05	8:45	9:25	10:05	10:45	11:19	11:53	12:27	13:01	13:35	14:10	14:44	15:23	15:59	16:36	17:12	17:49	18:25	19:01	19:37	20:09	20:41
3007	NW 58 St	East of NW 107 Ave			608	648	7:29	8:09	8:49	9:29	10:07	10:47	11:21	11:55	12:29	13:03	13:37	14:12	14:48	15:25	16:01	16:38	17:14	17:51	18:27	19:03	19:39	20:11	20:43
3008	NW 102 Ave	South of NW 58 St	Doral Palms		609	649	7:30	8:10	8:50	9:30	10:09	10:49	11:23	11:57	12:31	13:05	13:39	14:13	14:49	15:26	16:02	16:39	17:15	17:52	18:28	19:05	19:41	20:13	20:45
3009	NW 102 Ave	North of NW 52 St	Morgan Levy Park		610	650	7:30	8:10	8:51	9:31	10:09	10:49	11:23	11:57	12:31	13:05	13:39	14:14	14:50	15:27	16:05	16:40	17:16	17:53	18:29	19:05	19:41	20:13	20:45
3010	NW 102 Ave	South of NW 52 St	Doral Cove		612	652	7:32	8:12	8:53	9:33	10:10	10:50	11:24	11:58	12:32	13:06	13:40	14:15	14:51	15:28	16:04	16:41	17:17	17:54	18:30	19:06	19:42	20:14	20:46
3011	NW 102 Ave	South of NW 48 St	Doral Place		613	653	7:33	8:13	8:54	9:34	10:11	10:51	11:25	11:59	12:33	13:07	13:41	14:16	14:52	15:29	16:05	16:42	17:18	17:55	18:31	19:07	19:43	20:15	20:47
3012	NW 102 Ave	North of NW 43 Ter	Doral Dunes		613	653	7:34	8:14	8:54	9:34	10:11	10:51	11:25	11:59	12:33	13:07	13:41	14:16	14:52	15:29	16:05	16:42	17:18	17:55	18:31	19:07	19:43	20:15	20:47
3013	NW 41 St	West of NW 102 Ave	Aleman Building (Doral Park)		616	656	7:36	8:16	8:57	9:37	10:14	10:54	11:28	12:02	12:36	13:10	13:44	14:17	14:53	15:30	16:06	16:43	17:19	17:56	18:32	19:10	19:46	20:18	20:50
3014	NW 41 St	East of NW 104 Ave	San Ignacio College		616	656	7:37	8:17	8:57	9:37	10:14	10:54	11:28	12:02	12:36	13:10	13:44	14:18	14:54	15:31	16:07	16:44	17:20	17:57	18:33	19:10	19:46	20:18	20:50
3015	NW 41 St	East of NW 107 Ave	Wells Fargo Bank		617	657	7:38	8:18	8:58	9:38	10:15	10:55	11:29	12:03	12:37	13:11	13:45	14:21	14:57	15:34	16:10	16:47	17:23	18:03	18:36	19:11	19:47	20:19	20:51
3016	NW 41 St	West of NW 107 Ave	Palm Springs Mile Shopping Ctr		619	659	7:39	8:19	9:00	9:40	10:16	10:56	11:30	12:04	12:38	13:12	13:46	14:21	14:57	15:34	16:10	16:47	17:23	18:00	18:36	19:12	19:48	20:20	20:52

Weekday Route 3 Northbound																												
Stop #	Road	Location	Nearby Landmark	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	B - 1	B - 2	
3017	NW 114 Ave	North of NW 41 St	Mercantil Bank	6:21	7:01	7:41	8:21	9:02	9:42	10:18	10:58	11:32	12:06	12:40	13:14	13:48	14:24	15:00	15:37	16:13	16:50	17:26	18:03	18:39	19:14	19:50	20:22	20:54
3018	NW 114 Ave	North of NW 44 St	Balmoral Estates	6:21	7:01	7:42	8:22	9:02	9:42	10:18	10:58	11:32	12:06	12:40	13:14	13:48	14:25	15:01	15:38	16:14	16:51	17:27	18:04	18:40	19:14	19:50	20:22	20:54
3019	NW 114 Ave	North of NW 47 St	Biarritz	6:22	7:02	7:42	8:22	9:03	9:43	10:19	10:59	11:33	12:07	12:41	13:15	13:49	14:25	15:01	15:38	16:14	16:51	17:27	18:04	18:40	19:15	19:51	20:23	20:55
3020	NW 114 Ave	North of NW 51 Ter	Trails & Tails Pk (Doral Landings)	6:22	7:02	7:43	8:23	9:03	9:43	10:19	10:59	11:33	12:07	12:41	13:15	13:49	14:27	15:03	15:40	16:16	16:53	17:29	18:06	18:42	19:15	19:51	20:23	20:55
3021	NW 114 Ave	North of NW 55 St	Las Cascadas	6:23	7:03	7:44	8:24	9:04	9:44	10:20	11:00	11:34	12:08	12:42	13:16	13:50	14:28	15:04	15:41	16:17	16:54	17:30	18:07	18:43	19:16	19:52	20:24	20:56
3022	NW 114 Ave	North of NW 58 St	EB Thomas K-8 Center	6:26	7:06	7:46	8:26	9:07	9:47	10:21	11:01	11:35	12:09	12:43	13:17	13:51	14:29	15:05	15:42	16:18	16:55	17:31	18:08	18:44	19:17	19:53	20:25	20:57
3023	NW 114 Ave	North of NW 60 St	Doral Isles	6:26	7:06	7:47	8:27	9:07	9:47	10:21	11:01	11:35	12:09	12:43	13:17	13:51	14:29	15:05	15:42	16:18	16:55	17:31	18:08	18:44	19:17	19:53	20:25	20:57
3024	NW 114 Ave	North of NW 64 Ter	The Courts	6:27	7:07	7:47	8:27	9:08	9:48	10:22	11:02	11:35	12:10	12:44	13:18	13:52	14:30	15:05	15:43	16:19	16:56	17:32	18:09	18:45	19:18	19:54	20:26	20:58
3025	NW 114 Ave	North of NW 68 St	St Lucia	6:27	7:07	7:48	8:28	9:08	9:48	10:22	11:02	11:36	12:10	12:44	13:18	13:52	14:30	15:06	15:43	16:19	16:56	17:32	18:09	18:45	19:18	19:54	20:26	20:58
3026	NW 114 Ave	North of NW 72 St	Doral Isles	6:28	7:08	7:49	8:29	9:09	9:49	10:23	11:03	11:37	12:11	12:45	13:19	13:53	14:31	15:07	15:44	16:20	16:57	17:33	18:10	18:46	19:19	19:55	20:27	20:59
3027	NW 114 Ave	North of NW 75 Ln	Polyesian	6:31	7:11	7:52	8:32	9:12	9:52	10:25	11:05	11:39	12:13	12:47	13:21	13:55	14:32	15:08	15:45	16:21	16:58	17:34	18:11	18:47	19:21	19:57	20:29	21:01
3028	NW 114 Ave	South of NW 82 St	Doral Legacy Park	6:32	7:12	7:52	8:32	9:13	9:53	10:26	11:06	11:40	12:14	12:48	13:22	13:56	14:32	15:08	15:45	16:21	16:58	17:34	18:11	18:47	19:22	19:58	20:30	21:02
3029	NW 112 Ave	South of NW 84 St	Islands at Doral Club House	6:33	7:13	7:53	8:33	9:14	9:54	10:27	11:07	11:41	12:15	12:49	13:23	13:57	14:34	15:10	15:47	16:23	17:00	17:36	18:13	18:49	19:23	19:59	20:31	21:03
3030	NW 112 Ave	North of NW 86 St	Dr. Rolando Espinosa K-8 Center	6:34	7:14	7:54	8:34	9:15	9:55	10:27	11:07	11:41	12:15	12:49	13:23	13:57	14:35	15:11	15:48	16:24	17:01	17:37	18:14	18:50	19:23	19:59	20:31	21:03
3031	NW 112 Ave	South of NW 90 St	Ibis Villas	6:34	7:14	7:55	8:35	9:15	9:55	10:28	11:08	11:42	12:16	12:50	13:24	13:58	14:35	15:11	15:48	16:24	17:01	17:37	18:14	18:50	19:24	20:00	20:32	21:04
3032	NW 109 Ave	South of NW 90 St	Ibis Villas	6:36	7:16	7:56	8:36	9:17	9:57	10:30	11:10	11:44	12:18	12:52	13:26	14:00	14:36	15:12	15:49	16:25	17:02	17:38	18:15	18:51	19:26	20:02	20:34	21:06
3033	NW 88 St	East of NW 109 Ave	Ronald Reagan High School	6:36	7:16	7:57	8:37	9:17	9:57	10:31	11:11	11:45	12:19	12:53	13:27	14:01	14:37	15:13	15:50	16:26	17:03	17:39	18:16	18:52	19:27	20:03	20:35	21:07
3034	NW 88 St	West of NW 107 Ave	Ronald Reagan High School	6:37	7:17	7:57	8:37	9:18	9:58	10:32	11:12	11:46	12:20	12:54	13:28	14:02	14:37	15:13	15:50	16:26	17:03	17:39	18:16	18:52	19:28	20:04	20:36	21:08
3035	NW 107 Ave	South of NW 86 St	Islands at Doral	6:38	7:18	7:59	8:39	9:19	9:59	10:32	11:12	11:46	12:20	12:54	13:28	14:02	14:38	15:14	15:51	16:27	17:04	17:40	18:17	18:53	19:28	20:04	20:36	21:08
3036	NW 107 Ave	South of NW 83 St	Leeward	6:39	7:19	7:59	8:39	9:20	9:59	10:33	11:13	11:47	12:21	12:55	13:29	14:03	14:39	15:15	15:52	16:28	17:05	17:41	18:18	18:54	19:29	20:05	20:37	21:09
3037	NW 107 Ave	North of NW 80 Ln	Antilles	6:39	7:19	7:59	8:40	9:20	9:59	10:33	11:13	11:47	12:21	12:55	13:29	14:03	14:39	15:15	15:52	16:28	17:05	17:41	18:18	18:54	19:29	20:05	20:37	21:09
3038	NW 107 Ave	North of NW 75 Ln		6:43	7:23	8:04	8:44	9:24	10:04	10:34	11:14	11:48	12:22	12:56	13:30	14:04	14:40	15:16	15:53	16:29	17:06	17:42	18:19	18:55	19:30	20:06	20:38	21:10
3004	NW 107 Ave	South of NW 74 St	Bank of America	6:49	7:29	8:09	8:49	9:30	10:10	10:35	11:15	11:49	12:23	12:57	13:31	14:05	14:42	15:18	15:55	16:31	17:08	17:44	18:21	18:57	19:31	20:07	20:39	21:11
3045	NW 66 St	East of NW 107 Ave		6:50	7:30	8:11	8:51	9:31	10:11	10:39	11:19	11:53	12:27	13:01	13:35	14:09	14:44	15:20	15:57	16:33	17:10	17:46	18:23	18:59	19:35	20:11	20:43	21:15
3046	NW 104 Ave	North of NW 66 St	Doral International Academy of Math of Science	6:52	7:32	8:12	8:52	9:33	10:13	10:41	11:21	11:55	12:29	13:03	13:37	14:11	14:45	15:21	15:58	16:34	17:11	17:47	18:24	19:00	19:37	20:13	20:45	21:17
3047	NW 104 Ave	South of NW 74 St		6:53	7:33	8:13	8:53	9:34	10:14	10:42	11:22	11:56	12:30	13:04	13:38	14:12	14:46	15:22	15:59	16:35	17:12	17:48	18:25	19:01	19:38	20:14	20:46	21:18
3039	NW 74 St	East of NW 104 Ave		6:55	7:35	8:15	8:55	9:36	10:16	10:43	11:23	11:57	12:31	13:05	13:39	14:13	14:47	15:23	16:00	16:36	17:13	17:49	18:26	19:02	19:39	20:15	20:47	21:19
3040	NW 74 St	East of NW 102 Ave		6:55	7:35	8:16	8:56	9:36	10:16	10:43	11:23	11:57	12:31	13:05	13:39	14:13	14:47	15:23	16:00	16:36	17:13	17:49	18:26	19:02	19:39	20:15	20:47	21:19
3041	NW 74 St	West of NW 97 Ave	Emergency Debris Management Site	6:56	7:36	8:16	8:56	9:37	10:17	10:44	11:24	11:58	12:32	13:06	13:40	14:14	14:48	15:24	16:01	16:37	17:14	17:50	18:27	19:03	19:40	20:16	20:48	21:20
3000	NW 77 St	NW 79 Pl	Palmetto Metrorail Station	7:03	7:43	8:24	9:04	9:44	10:24	10:52	11:32	12:06	12:40	13:14	13:48	14:22	15:01	15:37	16:14	16:50	17:27	18:03	18:40	19:16	19:48	20:24	20:56	21:28

**Weekdays FIU Trolley Route 4  
Northbound**

Stop #	Road	Location	Nearby Landmark	BLOCK	B-1	B-2	B-1	B-2	B-1	B-2	B-1	B-2	B-1	B-2	B-1	B-2	B-1	B-2	B-1	B-2	B-1	B-2	B-1	B-2		
4000		FIU- PG 6	FIU Main Campus (Departure)		6:53	7:33	8:14	8:54	9:35	10:15	10:56	11:36	12:12	12:48	13:22	13:58	14:32	15:06	15:42	16:16	16:57	17:44	18:41	19:33	20:25	
4001		NW 109 Ave	North of SW 7 Terr		6:57	7:37	8:18	8:58	9:39	10:19	11:00	11:40	12:17	12:52	13:27	14:02	14:37	15:11	15:47	16:22	17:03	17:50	18:47	19:39	20:29	
4002		NW 107 Ave	North of Flagler St		7:02	7:42	8:23	9:03	9:43	10:23	11:05	11:46	12:23	12:58	13:33	14:08	14:43	15:17	15:53	16:28	17:09	17:57	18:53	19:43	20:32	
4003	1006	NW 107 Ave	North of NW 12 St	Miami Int'l Mall (Mattress Firm)	7:05	7:45	8:26	9:06	9:47	10:27	11:08	11:49	12:25	13:01	13:35	14:11	14:45	15:20	15:55	16:31	17:13	18:01	18:57	19:47	20:35	
4004	1007	NW 107 Ave	North of NW 14	Miami Int'l Mall (BJS)	7:06	7:46	8:27	9:07	9:47	10:27	11:09	11:49	12:26	13:01	13:36	14:11	14:45	15:20	15:56	16:32	17:14	18:02	18:58	19:47	20:35	
4005	1078	NW 107 Ave	North of NW 15 St	Toy's Us	7:06	7:46	8:27	9:07	9:48	10:28	11:09	11:50	12:26	13:02	13:36	14:12	14:44	15:21	15:56	16:32	17:14	18:02	18:58	19:48	20:36	
4006	1008	NW 107 Ave	North of NW 17 St	Bed Bath & Beyond Plaza	7:08	7:48	8:29	9:09	9:49	10:29	11:10	11:50	12:27	13:02	13:37	14:12	14:47	15:21	15:57	16:33	17:15	18:03	18:59	19:45	20:36	
4007	1009	NW 107 Ave	North of NW 19 St	International Corporate Park	7:08	7:48	8:29	9:09	9:50	10:30	11:11	11:51	12:27	13:03	13:37	14:13	14:47	15:22	15:57	16:34	17:16	18:03	19:00	19:49	20:37	
4008		NW 107 Ave	North of NW 21 St	Miami Free Zone	7:09	7:49	8:29	9:09	9:50	10:30	11:11	11:51	12:28	13:03	13:37	14:13	14:47	15:22	15:57	16:34	17:16	18:04	19:00	19:49	20:37	
4009		NW 107 Ave	North of NW 25 St		7:09	7:49	8:29	9:09	9:50	10:30	11:11	11:51	12:28	13:03	13:37	14:14	14:48	15:23	15:58	16:35	17:18	18:06	19:02	19:51	20:38	
4010	1012	NW 107 Ave	North of NW 27 St	Tu Casa	7:10	7:50	8:30	9:10	9:51	10:31	11:12	11:52	12:29	13:04	13:39	14:14	14:49	15:23	15:59	16:36	17:18	18:06	19:02	19:51	20:39	
4011	1013	NW 107 Ave	North of 30 Ter	FLYTEC/Aloft	7:10	7:50	8:31	9:11	9:52	10:32	11:13	11:53	12:29	13:05	13:39	14:15	14:49	15:24	15:59	16:36	17:20	18:07	19:04	19:52	20:46	
4012		NW 107 Ave	South of NW 36 St	INTLCOMER	7:12	7:52	8:33	9:13	9:54	10:34	11:14	11:53	12:30	13:05	13:40	14:15	14:50	15:24	16:00	16:37	17:21	18:08	19:05	19:53	20:41	
4013		NW 107 Ave	South of NW 41 St	TD Bank	7:14	7:54	8:34	9:14	9:55	10:35	11:15	11:54	12:30	13:05	13:40	14:16	14:50	15:25	16:00	16:38	17:23	18:10	19:07	19:55	20:41	
4014		NW 107 Ave	North of NW 41 St	Don Pan	7:17	7:57	8:38	9:18	9:59	10:39	11:18	11:56	12:32	13:08	13:42	14:18	14:52	15:27	16:02	16:42	17:27	18:15	19:11	19:57	20:42	
4015		NW 107 Ave	South of NW 48 Ln		7:17	7:57	8:38	9:18	9:59	10:39	11:18	11:56	12:32	13:08	13:42	14:18	14:52	15:27	16:02	16:42	17:27	18:15	19:11	19:57	20:42	
4016		NW 107 Ave	South of NW 52 St		7:18	7:58	8:39	9:19	9:00	10:40	11:19	11:57	12:33	13:09	13:43	14:19	14:53	15:28	16:03	16:43	17:29	18:16	19:13	19:59	20:43	
4017		NW 107 Ave	South of NW 58 St		7:20	8:00	8:41	9:21	10:02	10:42	11:20	11:57	12:35	13:10	13:44	14:24	14:54	15:29	16:04	16:44	17:30	18:18	19:14	20:00	20:44	
4018		NW 107 Ave	North of NW 60 St		7:21	8:01	8:42	9:22	10:02	10:42	11:21	11:59	12:35	13:11	13:45	14:21	14:55	15:30	16:05	16:45	17:30	18:19	19:14	20:00	20:44	
4019		NW 107 Ave	South of NW 66 St	LANDMARK	6:00	6:41	7:22	8:02	8:42	9:22	10:03	10:43	11:22	12:00	12:36	13:12	13:46	14:21	14:55	15:30	16:06	16:46	17:31	18:19	19:15	20:01
4020		NW 107 Ave	North of NW 68 St	The Mansions	6:01	6:41	7:22	8:02	8:42	9:22	10:03	10:43	11:22	12:00	12:36	13:12	13:46	14:21	14:55	15:30	16:06	16:46	17:31	18:19	19:15	20:01
4021		NW 107 Ave	North of NW 70 St	Vintage Estates	6:02	6:42	7:23	8:03	8:43	9:23	10:04	10:44	11:23	12:00	12:37	13:12	13:47	14:22	14:57	15:31	16:07	16:46	17:31	18:19	19:15	20:01
4022		NW 107 Ave	North of NW 74 St	Mc Donalds	6:03	6:43	7:23	8:03	8:44	9:24	10:05	10:45	11:24	12:02	12:39	13:14	13:49	14:24	14:59	15:33	16:08	16:49	17:34	18:22	19:18	20:04
4023		NW 107 Ave	South of NW 78 St	Midtown at Doral	6:04	6:43	7:24	8:04	8:45	9:25	10:05	10:45	11:25	12:03	12:39	13:15	13:49	14:25	14:59	15:34	16:09	16:49	17:35	18:22	19:19	20:05
4024		NW 107 Ave	South of NW 82 St		6:04	6:44	7:25	8:05	8:45	9:25	10:06	10:46	11:25	12:04	12:40	13:16	13:50	14:25	15:00	15:34	16:10	16:50	17:35	18:23	19:19	20:05
4025		NW 107 Ave	South of NW 86 St		6:05	6:45	7:26	8:06	8:46	9:26	10:07	10:47	11:26	12:05	12:41	13:17	13:51	14:26	15:01	15:35	16:11	16:51	17:36	18:24	19:20	20:06
4026		NW 107 Ave	North of NW 88 St		6:06	6:46	7:27	8:07	8:48	9:28	10:08	10:48	11:27	12:05	12:41	13:17	13:51	14:27	15:01	15:36	16:11	16:51	17:37	18:24	19:21	20:06

## **Weekdays FIU Trolley Route 4 Southbound**

# **Appendix H**

## **Signal Warrant Data**

**NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street Intersection**

**NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street Intersection**

## CHAPTER 4C. TRAFFIC CONTROL SIGNAL NEEDS STUDIES

### Section 4C.01 Studies and Factors for Justifying Traffic Control Signals

#### Standard:

- 01 An engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic control signal is justified at a particular location.
- 02 The investigation of the need for a traffic control signal shall include an analysis of factors related to the existing operation and safety at the study location and the potential to improve these conditions, and the applicable factors contained in the following traffic signal warrants:

**Warrant 1, Eight-Hour Vehicular Volume**  
**Warrant 2, Four-Hour Vehicular Volume**  
**Warrant 3, Peak Hour**  
**Warrant 4, Pedestrian Volume**  
**Warrant 5, School Crossing**  
**Warrant 6, Coordinated Signal System**  
**Warrant 7, Crash Experience**  
**Warrant 8, Roadway Network**  
**Warrant 9, Intersection Near a Grade Crossing**

- 03 The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

#### Support:

- 04 Sections 8C.09 and 8C.10 contain information regarding the use of traffic control signals instead of gates and/or flashing-light signals at highway-rail grade crossings and highway-light rail transit grade crossings, respectively.

#### Guidance:

- 05 A traffic control signal should not be installed unless one or more of the factors described in this Chapter are met.

- 06 A traffic control signal should not be installed unless an engineering study indicates that installing a traffic control signal will improve the overall safety and/or operation of the intersection.

- 07 A traffic control signal should not be installed if it will seriously disrupt progressive traffic flow.

- 08 The study should consider the effects of the right-turn vehicles from the minor-street approaches.

Engineering judgment should be used to determine what, if any, portion of the right-turn traffic is subtracted from the minor-street traffic count when evaluating the count against the signal warrants listed in Paragraph 2.

- 09 Engineering judgment should also be used in applying various traffic signal warrants to cases where approaches consist of one lane plus one left-turn or right-turn lane. The site-specific traffic characteristics should dictate whether an approach is considered as one lane or two lanes. For example, for an approach with one lane for through and right-turning traffic plus a left-turn lane, if engineering judgment indicates that it should be considered a one-lane approach because the traffic using the left-turn lane is minor, the total traffic volume approaching the intersection should be applied against the signal warrants as a one-lane approach. The approach should be considered two lanes if approximately half of the traffic on the approach turns left and the left-turn lane is of sufficient length to accommodate all left-turn vehicles.

- 10 Similar engineering judgment and rationale should be applied to a street approach with one through/left-turn lane plus a right-turn lane. In this case, the degree of conflict of minor-street right-turn traffic with traffic on the major street should be considered. Thus, right-turn traffic should not be included in the minor-street volume if the movement enters the major street with minimal conflict. The approach should be evaluated as a one-lane approach with only the traffic volume in the through/left-turn lane considered.

- 11 At a location that is under development or construction and where it is not possible to obtain a traffic count that would represent future traffic conditions, hourly volumes should be estimated as part of an engineering study for comparison with traffic signal warrants. Except for locations where the engineering study uses the satisfaction of Warrant 8 to justify a signal, a traffic control signal installed under projected conditions should have an engineering study done within 1 year of putting the signal into stop-and-go operation to determine if the signal is justified. If not justified, the signal should be taken out of stop-and-go operation or removed.

- 12 For signal warrant analysis, a location with a wide median, even if the median width is greater than 30 feet, should be considered as one intersection.

# Traffic Signal Warrants: Two Agencies' Preferences

THIS RESEARCH  
EXAMINED TWO STATE  
DEPARTMENTS OF  
TRANSPORTATION AND  
THEIR PREFERENCES OF  
TRAFFIC SIGNAL  
WARRANTS. KNOWING  
THE PREFERENCES OF  
TRAFFIC SIGNAL  
WARRANTS CAN AID THE  
ENGINEER WHEN  
EVALUATING THE NEED  
FOR TRAFFIC SIGNALS.

BY DAVID R. MCDONALD JR.

TRANSPORTATION ENGINEERS are often required to determine the need for signal installation at intersections. The 1988 *Manual on Uniform Traffic Control Devices*<sup>1</sup> (MUTCD), published by the Federal Highway Administration (FHWA), is the most common reference material used by transportation engineers in the signal warranting process. The MUTCD lists 11 warrants for the purpose of warranting traffic signals at an intersection. A proposed update to this manual is currently in review by the FHWA. The update, MUTCD "2000,"<sup>2</sup> will reduce the number of traffic signal warrants by combining and eliminating warrants found in the 1988 MUTCD. This research examined two state departments of transportation and their preferences of traffic signal warrants. Knowing the preferences of traffic signal warrants can aid the engineer when evaluating the need for traffic signals. This research can be used in conjunction with both the 1988 MUTCD and the MUTCD "2000" traffic signal warrants.

The traffic signal warrants are found in Tables 1 and 2 with a general relationship between the 1988 and 2000 traffic signal warrants highlighted in Table 2. Unless noted, the warrants refer to those found in the 1988 MUTCD.

## PURPOSE AND SCOPE

A third publication, *Manual of Traffic Signal Design* (MTSD), published by the Institute of Transportation Engineers (ITE), indicates that some of the 11 war-

[REDACTED] rants may be preferred or weighted more heavily than other warrants when determining when to provide signals at an intersection.<sup>3</sup> The purpose of this research was to determine which warrants are preferred in practice by two state departments of transportation. The Illinois Department of Transportation (IDOT) and Tennessee

Department of Transportation (TDOT) were selected. Both states divide their transportation departments into smaller units. IDOT's are called districts and TDOT's are regions. To determine if a prioritization for signal warrants existed in Illinois and Tennessee, each of these sub-units was contacted.

## Publications EXISTING INTERSECTIONS *General*

The MTSD repeats the signal warrants found in the MUTCD with some additional data, but for the most part the warrants are identical. The MUTCD and the MUTCD "2000" state that meeting a signal warrant does not always indicate that a traffic signal should be installed; the MTSD reiterates this position.<sup>1,2</sup> Each publication suggests that an engineering study should be performed and the results compared with the values required by the warrants. The MTSD indicates that providing traffic signals at an unsignalized intersection should improve the safety, operation, or both at the intersection or the signals should not be installed.<sup>3</sup> Other means, such as widening the approaches, removing roadside parking and adding turn lanes may eliminate the need for traffic signals.

### *Right-Turn Reductions*

The MUTCD states in section 4C-2, "The analysis should consider the effects of the right-turn vehicles from the minor street approaches. Engineering judgment should be used to determine what, if any, portion of the right turn traffic is subtracted from the minor street traffic count when evaluating the count against the [11] warrants."<sup>1</sup> The MTSD suggests that all right turns may be excluded in the analysis if the approach has a separate right-turn lane and a large-radius curb return. This exclusion can also apply when the right turns are made from a

**Table 1. 1988 MUTCD Signal Warrants.<sup>1</sup>**

Warrant number	Warrant name
1	Minimum Vehicle Volume
2	Interruption of Continuous Traffic
3	Minimum Pedestrian Volume
4	School Crossings
5	Progressive Movement
6	Accident Experience
7	Systems
8	Combination of Warrants
9	Four Hour Volumes
10	Peak Hour Delay
11	Peak Hour Volume

through lane and only a small-radius curb return is available. The MUTCD "2000" maintains a similar position to right-turn reductions in section 4C.1.<sup>2</sup>

#### *Preferred Warrants*

The MTSD suggests verifying the requirements of the warrants in the following order<sup>3</sup>:

1. Warrants 1, 2, 8, 9 and 11 if the available volume data is available;
2. Warrant 6 after collecting accident data;
3. Warrant 3 after collecting pedestrian data;
4. Warrant 8 (combination warrant);
5. Warrant 4 after collecting specialized school data; and then
6. Warrants 5 and 7 (controlling arterial and system flow).

When numerous locations warrant traffic signals, a prioritization system can be used to rank the individual intersections by applying a point value to each intersection.

#### **PROPOSED INTERSECTIONS**

In the case of new road development with new construction, traffic volumes cannot be counted because the vehicles are not yet present. The MTSD suggests using the ITE publication *Trip Generation: An Informational Report<sup>4</sup>* (*Trip Generation*) to derive trips for the proposed development. These trips are generally represented in terms of average daily traffic (ADT). *Trip Generation* also includes data about morning and afternoon peak-

**Table 2. General relationship between 1988 and "2000" MUTCD Signal Warrants.<sup>1,2,7</sup>**

MUTCD "2000" warrant number	MUTCD "2000" warrant name	General relationship to 1988 MUTCD warrant(s)
1	Eight-Hour Vehicular Volume	Combination of Warrant 1 and Warrant 2 and Provides Warrant 8 Option
2	Four-Hour Vehicular Volume	Warrant 9
3	Peak Hour	Combination of Warrant 10 and Warrant 11
4	Pedestrian Volume	Warrant 3
5	School Crossing	Warrant 4
6	Coordinated Signal System	Warrant 5
7	Accident Experience	Warrant 6
8	Roadway Network	Warrant 7

hour trip generation, but the MTSD suggests using only the average daily traffic. To warrant traffic signals, an assumption must be made about the ADT. The text suggests that the eight highest hours of traffic will each exceed 6.25 percent of the ADT with some variance allowable in the percentage. The MTSD provides three modified MUTCD warrants for use with estimated ADT data. The three are the Minimum Vehicular, Interruption of Continuous Traffic and Combination warrants.<sup>3</sup> The MTSD provides a sample analysis form for these procedures and notes that they are also found in the State of California Traffic Manual.

#### **Illinois EXISTING INTERSECTIONS**

##### *General*

Illinois is divided into nine districts. According to the state central office, any of the warrants found in the MUTCD may be used in determining signal installation at an intersection.<sup>5</sup> Upon further review, many of the districts have a preference on which warrant or warrants must be met before installing signals at an intersection.

#### *Preferred Warrants*

District One includes Chicago and the surrounding counties, and has the most signalized intersections of the nine districts in Illinois. District One has divided the warrant analysis into two groups.<sup>6,7</sup> The first group is applicable if the major roadway is designated as a Strategic Regional Arterial Highway (SRA); the second is applicable if the major roadway is

not a SRA. If the major roadway is a SRA, Warrants 8, 9, 10 and 11 are not allowed to warrant signals. Of the remaining warrants, several adjustments are required when performing the analysis. The two adjustment factors described in the MUTCD, the 70 percent factor for locations with a major roadway of speeds in excess of 40 miles per hour (mph), or in an isolated community having a population of less than 10,000 are not applied to the vehicles per hour. This non-reduction affects Warrants 1 and 2. Additional modification is also made to Warrant 2 by increasing the minimum vehicular volume per hour on the minor approaches from 75 to 100 vehicles per hour and from 100 to 150 vehicles per hour when the major street is a SRA.<sup>7</sup>

The non-SRA intersections in District One also do not honor the reductions to vehicles per hour. However, all warrants are used for non-SRA intersections. New signals are prioritized in the programming department of IDOT to favor the intersections that first meet Warrant 6 and then the eight-hour warrants (Warrants 1 and 2). In most cases, the intersections meeting the peak-hour warrants (Warrants 10 and 11) are not signalized, because intersections satisfying the other warrants are a higher priority.<sup>7</sup>

The other Illinois districts do not have a category of SRAs. Several of the districts prefer specific warrants and some have no preference. All but one of the districts outside of District One apply the reduction factors to the vehicles per hour. The districts consider the following during an analysis<sup>8-12</sup>:

- The more warrants that are met, the stronger the case is to install traffic signals at the intersection;
- Attempt to improve the number of lanes or visibility before installing signals;
- There are too many signals already, use engineering judgment;
- Sometimes four-way stop signs are preferred because they create gaps in the traffic; and
- Sometimes providing traffic signals creates more accidents than before signals. Accidents change from 90-degree collisions to rear-end collisions. The current IDOT Engineer of Project Development added that although accident type may change for a short time after installation, accident rates are generally reduced once the drivers adjust to the new configuration. His experience finds this to be particularly true in cases of thoughtful and appropriate design.<sup>13</sup>

#### *Right-Turn Reductions*

District One has attempted to remove the engineering judgment that was used to determine what, if any, portion of the right-turn traffic should be subtracted from the minor street traffic count when evaluating the count against the [11] warrants.<sup>7</sup> District One uses a process called the “Pagones Theorem” to reduce the number of right turns on the minor approach (Figure 1). This reduction is based on the congestion on the conflicting mainline approach volume. District Two and District Four follow the same procedures as District One in reducing the right-turn volumes.<sup>8,9,14</sup> District Seven leaves the right-turn reduction to the judgment of the engineer performing the analysis.<sup>15</sup> Districts Three, Five, Six, Eight and Nine do not reduce any right turns from the minor approach traffic when performing signal warrant analyses.<sup>10–12,14,16</sup>

#### *Collecting Traffic and Other Necessary Data*

All districts prefer manual counts on existing traffic to determine if the warrants requiring traffic volumes are met. Several districts are more open than others in using ADT information and adjusting the ADT to the eight-hour

**Figure 1. Pagones Theorem\* provided by IDOT District 1—used with a 12-hour manual traffic count.<sup>26</sup>**

First, determine which lane configuration represents the leg that is being studied. Then, based on the movements for each hour, find the percent reduction for each hour with Pagones Theorem.

#### **Pagones Theorem**

Situation	Approach configuration	Condition	Reduction of right turns
1	Shared Left/Through/Right	$R > 0.7A$ $0.7A \geq R > 0.35A$ $R \leq 0.35A$	Reduce $R$ by 60 percent Reduce $R$ by 40 percent Reduce $R$ by 20 percent
2	Exclusive Left, Shared Through/Right	$R > 3T$ $3T \geq R > T/3$ $R \leq T/3$	Reduce $R$ by 60 percent Reduce $R$ by 40 percent Reduce $R$ by 20 percent
3	Any configuration with an exclusive right turn lane (usually $\geq 600$ feet long)		Reduce $R$ by 75 percent in all cases
4	Shared Left/Through and Shared Through/Right	$R > (T + L)$ $L > (T + R)$ $L = T = R (\pm 10 \text{ vehicles})$ $L = T > 3R$ $R = T > 3L$ All other cases	Reduce $R$ by 65 percent Use Situation 2 Reduce $R$ by 40 percent Reduce $R$ by 20 percent Reduce $R$ by 50 percent Reduce $R$ by 30 percent
5	Exclusive Left, Exclusive Through and Shared Through/Right	$R > T$ $T \geq R > T/2$ $T/2 \geq R > T/4$ $R \leq T/4$	Reduce $R$ by 75 percent Reduce $R$ by 50 percent Reduce $R$ by 30 percent Reduce $R$ by 15 percent

Where:  $L$  = number of left turning vehicles in approach;  
 $T$  = number of through vehicles in approach;  
 $R$  = number of right turning vehicles in approach; and  
 $A = (L + T + R)$ .

\*Note that this is just one step of the IDOT District 1 Signal Warrant Analysis. Mainline configuration factors and volume modifications should also be considered per District 1 procedure.

maximum of a typical day. District Two prefers to use this adjustment as a check and would only use this adjustment in a warrant analysis as a last resort.<sup>8</sup> District Eight is the most receptive to adjusting ADTs to eight-hour values,<sup>11</sup> and even has created worksheets for determining the eight-hour maximum volumes for existing intersections. The steps in the formula that District Eight uses are:

1.  $\text{ADT} \div 2 = \text{Entering ADT}$   
(directional)
2.  $\text{Entering ADT (directional)} \times 10$   
percent = Directional Design Hourly Volume (DDHV)

(Note: percentage may range from 8 percent to 12 percent)

3.  $\text{DDHV} \times 55 \text{ percent} = \text{Eight-hour maximum of a typical day}$

District Eight's formula assumes a directional split of 50/50 in step 1. The Chief of the Project Development Unit in IDOT's central office suggests that the split is normally closer to 60/40, but 50/50 is sometimes used.<sup>5</sup> Similar splits were reported from the other districts. The Chief of the Project Development Unit also reports that the percentage in step 2 can vary from 6 percent to 14 percent over the entire state.<sup>5</sup>

## PROPOSED INTERSECTIONS

All districts use *Trip Generation* to derive trips for the proposed development traffic. These trips are then represented in terms of ADT and morning and afternoon peak-hour trips.<sup>4</sup> With the peak-hour volumes available, Warrant 11 may be analyzed. District Six does not allow the use of Warrant 11.<sup>10</sup> Rather, District Six prefers to use Warrants 1, 2 and 8; however, the other districts do analyze Warrant 11. The volumes for these warrants are found by converting the ADTs to eight-hour maximum volumes of a typical day with the same procedures described in the District Eight formula previously mentioned. District Eight uses this formula for analyses being made on signals at proposed intersections for Warrants 1, 2 and 8.<sup>11</sup>

## Tennessee EXISTING INTERSECTIONS

### *General*

Tennessee is divided into four regions. According to the State Traffic Engineer, any of the warrants found in the MUTCD may be used in determining signal installation at intersections.<sup>17,18</sup> He further states that all other options should be analyzed before installing traffic signals. Geometrics, beacons, signage and pavement characteristics are several factors that could be candidates for upgrade to improve the intersection such that signals are no longer warranted.

### *Preferred Warrants*

Regions One, Two, Three and Four use any of the 11 warrants. They also apply the reductions to vehicles per hour when appropriate, consider options other than the installation of signals and use engineering judgment during the process.<sup>18</sup> At one time, Region One preferred the eight-hour warrants (Warrants 1, 2 and 8) and accepted Warrants 6, 9 and 11 while not using the other warrants.<sup>19</sup> This, however, is no longer the policy of TDOT.

### *Right-Turn Reductions*

Much of the reduction is left to engineering judgment. If the approach is one lane or has no right-turn lane, the approach volume is generally not reduced. Reductions are based on traffic volume, storage capacity and geomet-

rics. Engineering judgment is vital when making this determination for the amount of reduction.<sup>18</sup>

In many cases, the assumption is made that the geometry of the approach could be modified to handle an exclusive right-turn lane if the lane would help reduce the need for a signalized intersection.<sup>18</sup>

### *Collecting Traffic and Other Necessary Data*

The regions prefer manual counts on existing traffic to determine if the warrants requiring traffic volumes are met.

## PROPOSED INTERSECTIONS

The Tennessee Regions use *Trip Generation* to derive trips for the proposed development traffic.<sup>4</sup> The trips are then represented in terms of ADT and morning and afternoon peak-hour trips. With the peak-hour volumes available, Warrant 11 may be analyzed. TDOT headquarters keeps a database of conversion factors for locations through the state that can be applied to an ADT to calculate the number of vehicles to be used in the average of the peak eight hours of an average day. The formulae follow<sup>17</sup>:

$ADT \div (1.94 \text{ to } 2.26) = \text{Average of the peak eight hours of an average day (rural)}$

$ADT \div (1.98 \text{ to } 2.24) = \text{Average of the peak eight hours of an average day (urban)}$

The morning factor (2.26 and 2.24) in each case is higher than the afternoon factor (1.94 and 1.98) in Tennessee. When appropriate, Tennessee considers the three traffic signal warrants found in the MTSD created to use estimated ADT.<sup>3,18,20</sup>

## RESULTS

The first result from the research is that if an intersection meets one or more of the warrants in the MUTCD, traffic signals may not necessarily be installed. Engineering judgment is a crucial aspect of warranting traffic signals. Other aspects of the intersection should be studied, such as the intersection and roadway geometrics, before deciding on signal installation.

The second result is that the engineer should be aware of which methods are acceptable for obtaining traffic data and if all warrants are acceptable to the governing agency. The requirements vary not

Table 3. Summary of IDOT and TDOT warrants and reductions.<sup>7-15,17-25</sup>

	Preferred warrants	Non-acceptable warrants	Applies 70 percent factor for speeds and populations	Right turns from the minor approach subtracted
<b>Illinois district number</b>				
One	SRA: 6, 1, 2	8, 9, 10, 11	No (Warrant 2 minimum vehicular volume is increased)	Yes
One	Non-SRA: 6, 1, 2	None	No	Yes
Two	1, 2, 11, 9	None	Yes	Yes
Three	All equal	None	Yes	No
Four	No preference	None	Yes	Yes
Five	1, 2, 8 then 9, 11	None	Yes	No
Six	1, 2, 8	None	Yes	No
Seven	All equal	None	Yes	Yes
Eight	1, 2, 6, 8	3, 5, 7, 9, 10, 11	Yes	No
Nine	6	None	Yes	No
<b>Tennessee region number</b>				
One	No preference	None	Yes	Yes
Two	No preference	None	Yes	Yes
Three	No preference	None	Yes	Yes
Four	No preference	None	Yes	Yes

only between states, but also within each state. Further differences may be encountered at the local agency level of government. Table 3 summarizes the preferred warrants by district and region within IDOT and TDOT.

The third result is that the engineer should be aware that inter-state and intra-state variations also occur in the determination of what portion, if any, of the right turns from the minor approach should be subtracted during the warrant analysis.

The fourth result is that when an existing intersection is being analyzed, manual count data is preferred. The MUTCD "2000" provides guidance for traffic engineering studies. The guidance includes important considerations and data requirements. If the data cannot be collected, then it should be estimated.<sup>2</sup>

The fifth result is that for proposed intersections, *Trip Generation* is the preferred source to determine future traffic volumes. As a reminder, when the MUTCD "2000" becomes effective, the engineer should follow its signal warrant requirements. According to the FHWA, "All traffic control devices must conform to the MUTCD. No exceptions will be made."<sup>2</sup> ■

## References

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3. Institute of Transportation Engineers. *Manual of Traffic Signal Design, Second Edition*. Englewood Cliffs, NJ, USA: Prentice Hall, 1991.
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10. Antonacci, J. IDOT District Six, Geometrics Engineer. Personal interview, Nov. 13, 1997.
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22. Warren, J. TDOT Region 4, Traffic Operations Specialist 3. Personal interview, Nov. 26, 1997.
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24. Kastl, M. IDOT District Seven, Traffic Operations Engineer. Personal interview, Nov. 13, 1997.
25. Addis, M. IDOT District Four, Geometrics Engineer. Personal interview, Nov. 20, 1997.
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27. Federal Highway Administration. *Revision of the Manual on Uniform Traffic Control Devices; General Provisions, Markings, and Signals*. 23 CFR Part 655. *Federal Register*; Vol. 64, No. 250, Dec. 30, 1999.

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**NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street  
Intersection**

## TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01  
TRAFFIC ENGINEERING

### Introduction

- The Signal Warrant Analysis Spreadsheets are a tool for assisting traffic engineers when evaluating the need for a traffic signal installation
  - The filled spreadsheets can be used as part of the supporting documents for the signal warrant evaluation
- Note: These templates are a useful resource, but it remains necessary to apply engineering judgment and to consider specific environmental, traffic, geometric, and operational conditions

### Instructions

*Fill in "Orange" areas only*

*Automated cells based on Input Data in "orange" cells*

#### General Information

Fill in below the general information including:

District, County (drop-down menu)

City, Engineer, Date

Major and Minor Street with corresponding number of lanes and speed limits

#### Enter Eight Hour Volumes

Any 8 hours of an average day. Major-street and minor-street volumes shall be for the same 8 hours; however, the 8 hours satisfied in Condition A shall **not** be required to be the same 8 hours satisfied in Condition B **for 80% columns only**. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

#### Enter Four Hour Volumes

Any 4 hours of an average day. Vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only, not required to be on the same approach during each of the 4 hours)

#### Enter Pedestrian Volumes (4-h Pedestrians per hour crossing the major street (total of all crossings)

#### Enter Peak Hour Volumes

Vehicular: Any four consecutive 15-minute periods of an average day

Pedestrian: Any four consecutive 15-minute periods of an average day representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings)

### Input Data

City:	Doral
County:	87 – Miami Dade
District:	Six

Engineer: PA - Existing Conditions  
Date: June 26, 2024

Major Street: NW 107th Avenue  
Minor Street: NW 86th Street

Major Street # Lanes: 2  
Minor Street # Lanes: 1

Major Approach Speed: 40  
Minor Approach Speed: 30

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7:00 - 8:00 AM	1,206	169	39
8:00 - 9:00 AM	1,255	159	4
12:00 - 1:00 PM	922	84	
2:00 - 3:00 PM	1,066	145	
3:00 - 4:00 PM	1,026	136	
4:00 - 5:00 PM	1,102	101	1
5:00 - 6:00 PM	1,379	132	3
6:00 - 7:00 PM	1,209	125	

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7:00 - 8:00 AM	1,206	169
8:00 - 9:00 AM	1,255	159
12:00 - 1:00 PM	922	84
2:00 - 3:00 PM	1,066	145
3:00 - 4:00 PM	1,026	136
4:00 - 5:00 PM	1,102	101
5:00 - 6:00 PM	1,379	132
6:00 - 7:00 PM	1,209	125

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7:00 - 8:00 AM	1,206	169
8:00 - 9:00 AM	1,255	159
5:00 - 6:00 PM	1,379	132
6:00 - 7:00 PM	1,209	125

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
7:00 - 8:00 AM	1,206	39
8:00 - 9:00 AM	1,255	4
4:00 - 5:00 PM	1,102	1
5:00 - 6:00 PM	1,379	3

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
5:00 - 6:00 PM	1,379	132	1,511

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
5:00 - 6:00 PM	1,206	39

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 86th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No  
 2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME**

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.*  Yes  No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).*  Yes  No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.*  Yes  No

**Condition A - Minimum Vehicular Volume**

Applicable:  Yes  No

100% Satisfied:  Yes  No

80% Satisfied:  Yes  No

70% Satisfied:  Yes  No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

<sup>a</sup> Basic Minimum hourly volume

<sup>b</sup> Used for combination of Conditions A and B after adequate trial of other remedial measures

<sup>c</sup> May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7:00 - 8:00 AM	8:00 - 9:00 AM	12:00 - 1:00 PM	2:00 - 3:00 PM	3:00 - 4:00 PM	4:00 - 5:00 PM	5:00 - 6:00 PM	6:00 - 7:00 PM
Major	1,206	1,255	922	1,066	1,026	1,102	1,379	1,209
Minor	169	159	84	145	136	101	132	125

Existing Volumes

**TRAFFIC SIGNAL WARRANT SUMMARY****Condition B - Interruption of Continuous Traffic**

*Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.*

Applicable:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
100% Satisfied:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
80% Satisfied:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
70% Satisfied:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

<sup>a</sup> Basic Minimum hourly volume<sup>b</sup> Used for combination of Conditions A and B after adequate trial of other remedial measures<sup>c</sup> May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours									
Street	7:00 - 8:00 AM	8:00 - 9:00 AM	12:00 - 1:00 PM	2:00 - 3:00 PM	3:00 - 4:00 PM	4:00 - 5:00 PM	5:00 - 6:00 PM	6:00 - 7:00 PM	
Major	1,206	1,255	922	1,066	1,026	1,102	1,379	1,209	
Minor	169	159	84	145	136	101	132	125	

**Existing Volumes**

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Existing Conditions**  
 Date: **June 26, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 86th Street** Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"

MAY

70%  100%

**WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME**

If all four points lie above the appropriate line, then the warrant is satisfied.

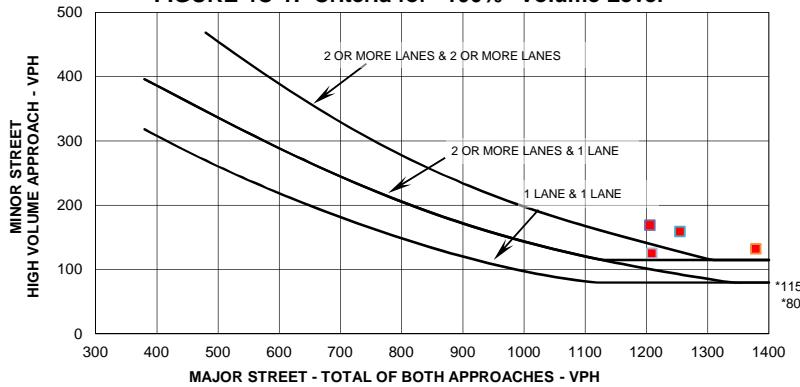
Applicable:  Yes  No

Satisfied:  Yes  No

Plot four volume combinations on the applicable figure below.

**100% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Minor Street
7:00 - 8:00 AM	1206	169
8:00 - 9:00 AM	1255	159
5:00 - 6:00 PM	1379	132
6:00 - 7:00 PM	1209	125

**FIGURE 4C-1: Criteria for "100%" Volume Level**

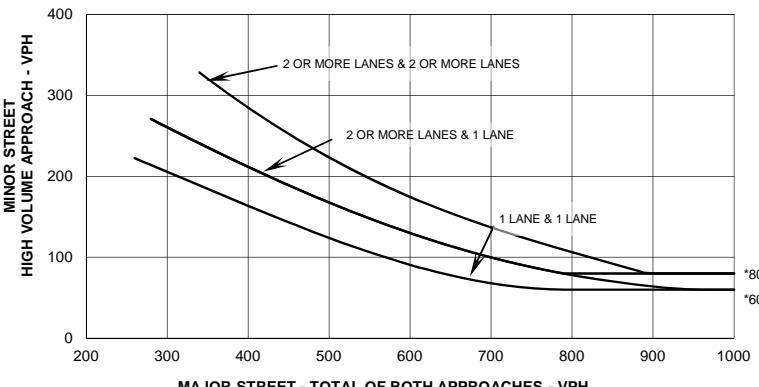
\* Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.

**70% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Minor Street

**FIGURE 4C-2: Criteria for "70%" Volume Level**

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



\* Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 86th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No
  2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No
- "70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**WARRANT 3 - PEAK HOUR**

If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Unusual condition justifying use of warrant:  
Industrial Complex  
 -

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
5:00 - 6:00 PM	1379	132

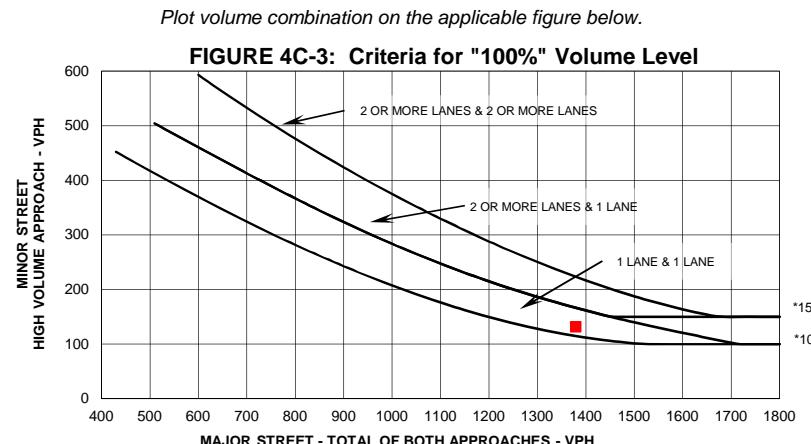
Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.

**Criteria**

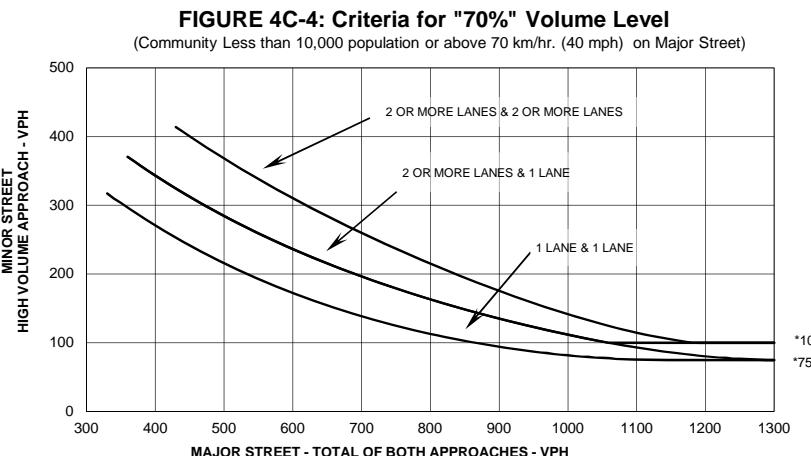
1. Delay on Minor Approach (vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No



\* Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.



\* Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Existing Conditions**  
 Date: **June 26, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 86th Street** Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 35 mph?  Yes  No
  2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No
- "70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**Option**

Pedestrian volume crossing the major street **may** be reduced as much as 50% if the 15th-percentile crossing speed of pedestrians is less than 3.5 ft/sec. A walking speed study was conducted which reported a pedestrian speed less than 3.5 ft/sec for the 15th percentile.

Yes  No

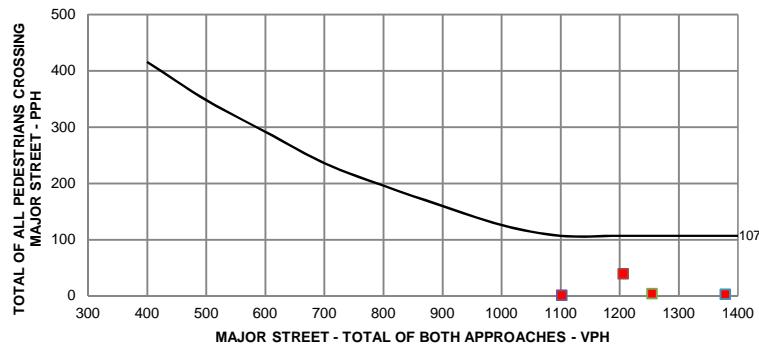
**WARRANT 4 - PEDESTRIAN VOLUME**

For each of any 4 hours of an average day, the plotted points lie above the appropriate line, then the warrant is satisfied.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Plot four volume combinations on the applicable figure below.

**Figure 4C-5. Criteria for "100%" Volume Level**

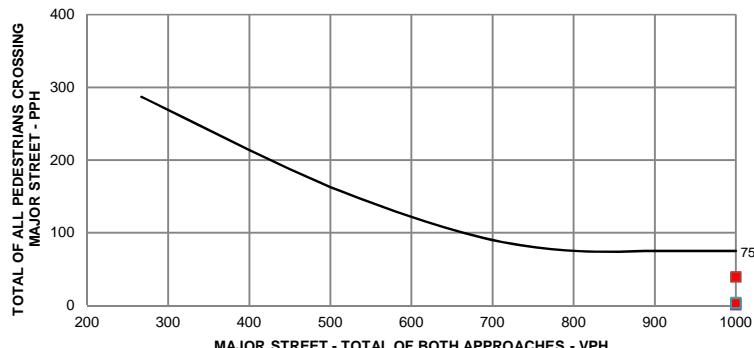


\* Note: 107 pph applies as the lower threshold volume for 100% volume level

**70% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	1206	39
8:00 - 9:00 AM	1255	4
4:00 - 5:00 PM	1102	1
4:00 - 5:00 PM	1379	3

**Figure 4C-6 Criteria for "70%" Volume Level**



\* Note: 75 pph applies as the lower threshold volume for 70% volume level

## WARRANT 4 - PEDESTRIAN VOLUME

For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point falls above the appropriate line, then the warrant is satisfied.

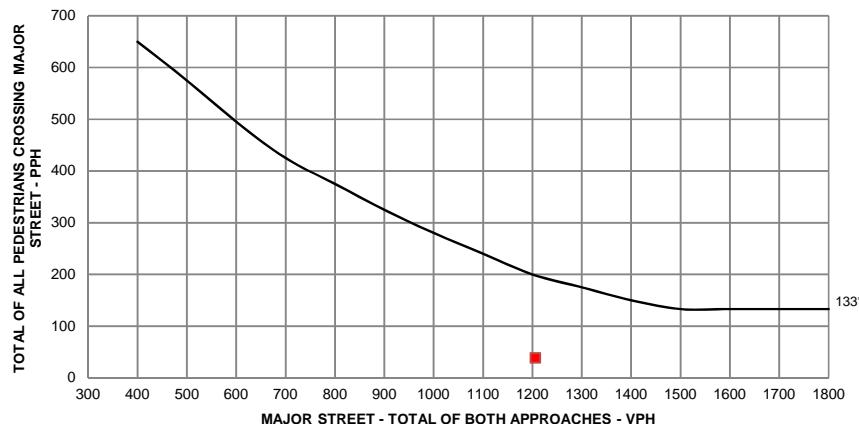
Applicable:  Yes  No  
Satisfied:  Yes  No

Plot one volume combination on the applicable figure below.

**100% Volume Level**

Peak Hour	Volumes	
	Major Street	Pedestrian Total
5:00 - 6:00 PM	1206	39

**Figure 4C-7. Criteria for "100%" Volume Level - Peak Hour**

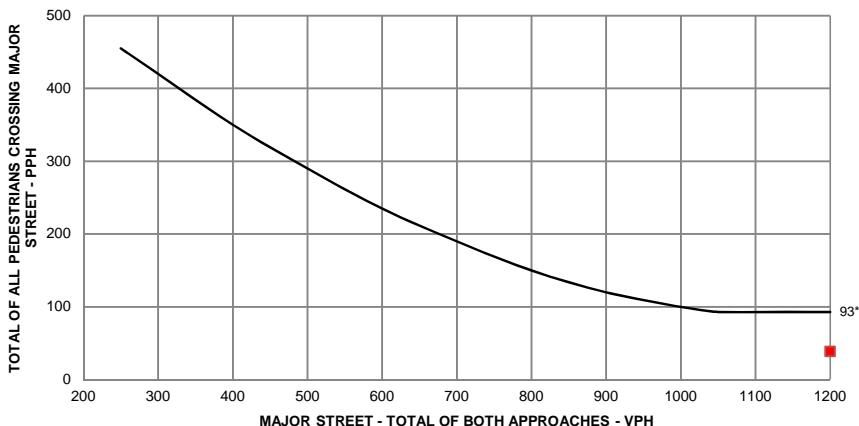


\* Note: 133 pph applies as the lower threshold volume

**70% Volume Level**

Peak Hour	Volumes	
	Major Street	Pedestrian Total
5:00 - 6:00 PM	1206	39

**Figure 4C-8 Criteria for "70%" Volume Level - Peak Hour**



\* Note: 93 pph applies as the lower threshold volume

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Existing Conditions**  
 Date: **June 26, 2024**

Major Street: **NW 107th Avenue**  
 Minor Street: **NW 86th Street**

Lanes: **2**  
 Lanes: **1**

Major Approach Speed: **40**  
 Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 5 - SCHOOL CROSSING**

*Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.*

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria	Fulfilled?	
	Yes	No
1. There are a minimum of 20 students crossing the major street during the highest crossing hour.	Students:	Hour:
2. There are fewer adequate gaps in the major street traffic stream during the period when the children are using the established school crossing than the number of minutes in the same period.	Minutes:	Gaps:
3. The nearest traffic signal along the major street is located more than 300 ft. (90 m) away, or the nearest signal is within 300 ft. (90 m) but the proposed traffic signal will not restrict the progressive movement of traffic.		

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 86th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 6 - COORDINATED SIGNAL SYSTEM**

*Indicate if the criteria are fulfilled in the boxes provided. The warrant is satisfied if either criterion is fulfilled. This warrant should not be applied when the resulting signal spacing would be less than 300 m (1,000 ft.).*

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria	Fulfilled?	
	Yes	No
1. On a one-way street or a street that has traffic predominately in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.		
2. On a two-way street, adjacent signals do not provide the necessary degree of platooning, and the proposed and adjacent signals will collectively provide a progressive operation.		

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Existing Conditions**  
 Date: **June 26, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 86th Street** Lanes: **1** Minor Approach Speed: **30**

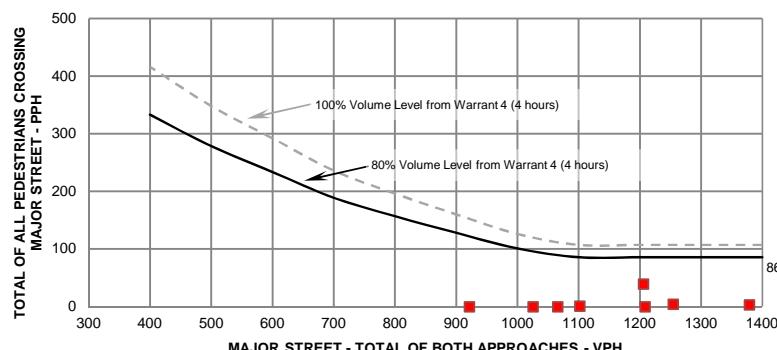
MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 7 - CRASH EXPERIENCE**

Record hours where criteria are fulfilled, the corresponding volume, and other information in the boxes provided. The warrant is satisfied if **all three** of the criteria are fulfilled.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria			Fulfilled?	
			Yes	No
1. Adequate trial of other remedial measure has failed to reduce crash frequency.	Measure tried:			
2. Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12-month period.	Observed Crash Types:		Number of crashes per 12 months:	
3. One of the following volume warrants is met:			Met?	
Warrant 1, Condition A (80% satisfied), or			No	
Warrant 1, Condition B (80% satisfied), or			Yes	
Warrant 4, Pedestrian Volume satisfied at 80% of volume requirements for any 8 hours of an average day.			Yes	

**Figure 4C-5. Criteria for "100%" Volume Level**

\* Note: 86 pph applies as the lower threshold volume for the 80% volume threshold.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue  
 Minor Street: NW 86th Street

Lanes: 2 Major Approach Speed: 40  
 Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 8 - ROADWAY NETWORK**

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the Major Route characteristics listed.

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria				Met?		Fulfilled?	
				Yes	No	Yes	No
Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.				Entering Volume:		
				Warrant:	1	2	3
2. Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)	b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.				Satisfied?:		
						← Hour	
						← Volume	

Characteristics of Major Routes				Met?		Fulfilled?	
				Yes	No	Yes	No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.				Major Street:			
				Minor Street:			
2. Rural or suburban highway outside of, entering, or traversing a city.				Major Street:			
				Minor Street:			
3. Appears as a major route on an official plan.				Major Street:			
				Minor Street:			

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 86th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Approach Lane Criteria**

1. How many approach lanes are there at the track crossing?

1  2 or more

If there is 1 lane, use Figure 4C-9 and if there are 2 or more, use Figure 4C-10.

Fig 4C-9  Fig 4C-10

**WARRANT 9 - INTERSECTION NEAR A GRADE CROSSING**

*This signal warrant should be applied only after adequate consideration has been given to other alternatives or after a trial of an alternative has failed to alleviate the safety concerns associated with the grade crossing.*

Indicate if both criteria are fulfilled in the boxes provided. The warrant is satisfied if both criteria are met.

Applicable:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Satisfied:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

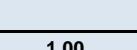
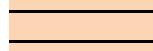
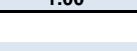
Criteria	Fulfilled?	
	Yes	No
1. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. During the highest traffic volume hour during which the rail uses the crossing, the plotted point falls above the applicable curve for the existing combination of approach lanes over the track and the distance D (clear storage distance).	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Use the following tables (4C-2, 4C-3, and 4C-4 to appropriately adjust the minor-street approach volume).

**Inputs**

Occurrences of Rail traffic per day  
% of High Occupancy Buses on Approach Lane at Track Crossing  
Enter D (feet)  
% of Tractor-Trailer Trucks on Approach Lane at Track Crossing

**Adjustment Factors from Tables**

**Table 4C-2. Adjustment Factor for Daily Frequency of Rail Traffic**

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

**Table 4C-3. Adjustment Factor for Percentage of High-Occupancy Buses**

% of High-Occupancy Buses* on Minor Street Approach	Adjustment Factor
0%	1.00
2%	1.09
4%	1.19
6% or more	1.32

\* A high-occupancy bus is defined as a bus occupied by at least 20 people

**Table 4C-4. Adjustment Factor for Percentage of Tractor-Trailer Trucks**

% of Tractor-Trailer Trucks on Minor Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

*Input the major and minor street volumes before adjustment factors are applied*

1 Approach Lane		
D (ft)	Major Vol.	Minor Vol.

*After adjustment factors are applied*

1 Approach Lane w/Factors		
D (ft)	Major Vol.	Minor Vol.

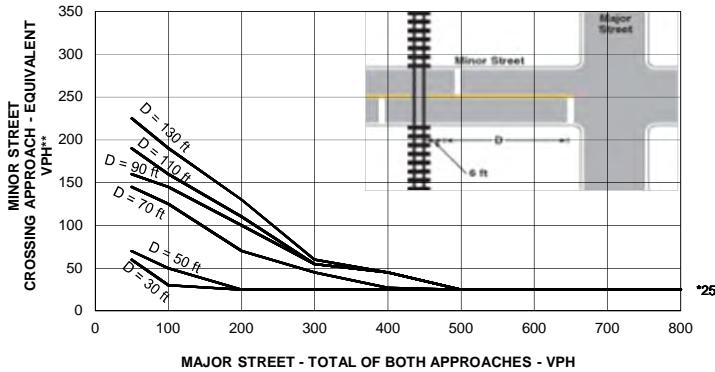
*Input D and the major and minor street volumes before adjustment factors are applied*

2 or more Approach Lanes		
D (ft)	Major Vol.	Minor Vol.

*After adjustment factors are applied*

2+ Approach Lane w/Factors		
D (ft)	Major Vol.	Minor Vol.

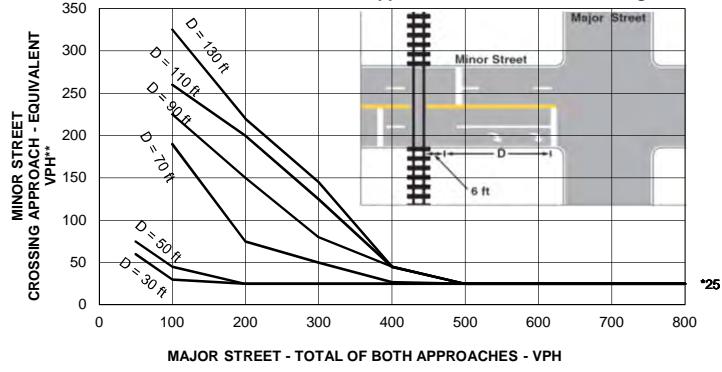
**FIGURE 4C-9: Criteria for 1 Approach Lane at the Track Crossing**



\* Note: 25 vph applies as the lower threshold volume

\* \*Note: VPH after applying the adjustment factors in Tables 4C-2, 4C, and or 4C-4, if appropriate

**FIGURE 4C-10: Criteria for 2+ Approach Lanes at Track Crossing**



\* Note: 25 vph applies as the lower threshold volume

\* \*Note: VPH after applying the adjustment factors in Tables 4C-2, 4C, and or 4C-4, if appropriate

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
County: 87 – Miami Dade  
District: Six

Engineer: DPA - Existing Conditions  
Date: June 26, 2024

Major Street: NW 107th Avenue  
Minor Street: NW 86th Street

Lanes: 2 Major Approach Speed: 40  
Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**CONCLUSIONS**

Remarks:

**WARRANTS SATISFIED:**

Warrant 1	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 2	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 3	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 4	<input type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 5	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 6	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 7	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 8	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 9	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met

## TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01  
TRAFFIC ENGINEERING

### Introduction

- The Signal Warrant Analysis Spreadsheets are a tool for assisting traffic engineers when evaluating the need for a traffic signal installation
  - The filled spreadsheets can be used as part of the supporting documents for the signal warrant evaluation
- Note: These templates are a useful resource, but it remains necessary to apply engineering judgment and to consider specific environmental, traffic, geometric, and operational conditions

### Instructions

*Fill in "Orange" areas only*

*Automated cells based on Input Data in "orange" cells*

#### General Information

Fill in below the general information including:

District, County (drop-down menu)

City, Engineer, Date

Major and Minor Street with corresponding number of lanes and speed limits

#### Enter Eight Hour Volumes

Any 8 hours of an average day. Major-street and minor-street volumes shall be for the same 8 hours; however, the 8 hours satisfied in Condition A shall **not** be required to be the same 8 hours satisfied in Condition B **for 80% columns only**. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

#### Enter Four Hour Volumes

Any 4 hours of an average day. Vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only, not required to be on the same approach during each of the 4 hours)

#### Enter Pedestrian Volumes (4-h Pedestrians per hour crossing the major street (total of all crossings)

#### Enter Peak Hour Volumes

Vehicular: Any four consecutive 15-minute periods of an average day

Pedestrian: Any four consecutive 15-minute periods of an average day representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings)

### Input Data

City:	Doral
County:	87 – Miami Dade
District:	Six

Engineer: IPA - Future Conditions  
Date: June 26, 2024

Major Street: NW 107th Avenue  
Minor Street: NW 86th Street

Major Street # Lanes: 2  
Minor Street # Lanes: 1

Major Approach Speed: 40  
Minor Approach Speed: 30

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7:00 - 8:00 AM	1,458	177	39
8:00 - 9:00 AM	1,546	166	4
12:00 - 1:00 PM	1,281	88	
2:00 - 3:00 PM	1,388	151	
3:00 - 4:00 PM	1,385	142	
4:00 - 5:00 PM	1,595	105	1
5:00 - 6:00 PM	1,877	138	3
6:00 - 7:00 PM	1,676	130	

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7:00 - 8:00 AM	1,458	177
8:00 - 9:00 AM	1,546	166
12:00 - 1:00 PM	1,281	88
2:00 - 3:00 PM	1,388	151
3:00 - 4:00 PM	1,385	142
4:00 - 5:00 PM	1,595	105
5:00 - 6:00 PM	1,877	138
6:00 - 7:00 PM	1,676	130

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
8:00 - 9:00 AM	1,546	166
4:00 - 5:00 PM	1,595	105
5:00 - 6:00 PM	1,877	138
6:00 - 7:00 PM	1,676	130

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
7:00 - 8:00 AM	1,458	39
8:00 - 9:00 AM	1,546	4
4:00 - 5:00 PM	1,595	1
5:00 - 6:00 PM	1,877	3

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
5:00 - 6:00 PM	1,877	138	2,015

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
7:00 - 8:00 AM	1,458	39

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Future Conditions**  
 Date: **June 26, 2024**

Major Street: **NW 107th Avenue**  
 Minor Street: **NW 86th Street**

Lanes: **2**  
 Lanes: **1**

Major Approach Speed: **40**  
 Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"

MAY

70%  100%

**WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME**

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.*

Yes  No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).*

Yes  No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.*

Yes  No

**Condition A - Minimum Vehicular Volume**

Applicable:  Yes  No

100% Satisfied:  Yes  No

80% Satisfied:  Yes  No

70% Satisfied:  Yes  No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

<sup>a</sup> Basic Minimum hourly volume

<sup>b</sup> Used for combination of Conditions A and B after adequate trial of other remedial measures

<sup>c</sup> May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7:00 - 8:00 AM	8:00 - 9:00 AM	12:00 - 1:00 PM	2:00 - 3:00 PM	3:00 - 4:00 PM	4:00 - 5:00 PM	5:00 - 6:00 PM	6:00 - 7:00 PM
Major	1,458	1,546	1,281	1,388	1,385	1,595	1,877	1,676
Minor	177	166	88	151	142	105	138	130

Existing Volumes

State of Florida Department of Transportation  
**TRAFFIC SIGNAL WARRANT SUMMARY**

Form 750-020-01  
 TRAFFIC ENGINEERING  
 October 2020

**Condition B - Interruption of Continuous Traffic**

*Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.*

Applicable:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
100% Satisfied:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
80% Satisfied:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
70% Satisfied:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

<sup>a</sup> Basic Minimum hourly volume

<sup>b</sup> Used for combination of Conditions A and B after adequate trial of other remedial measures

<sup>c</sup> May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours									
Street	7:00 - 8:00 AM	8:00 - 9:00 AM	12:00 - 1:00 PM	2:00 - 3:00 PM	3:00 - 4:00 PM	4:00 - 5:00 PM	5:00 - 6:00 PM	6:00 - 7:00 PM	
Major	1,458	1,546	1,281	1,388	1,385	1,595	1,877	1,676	
Minor	177	166	88	151	142	105	138	130	

**Existing Volumes**

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Future Conditions**  
 Date: **June 26, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 86th Street** Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"

MAY

70%  100%

**WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME**

If all four points lie above the appropriate line, then the warrant is satisfied.

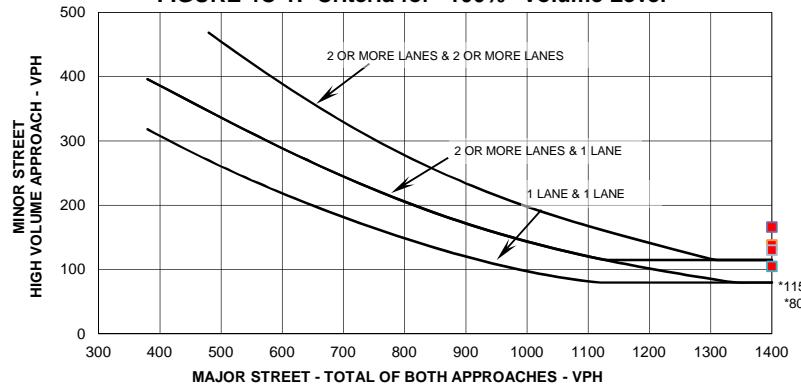
Applicable:  Yes  No

Satisfied:  Yes  No

Plot four volume combinations on the applicable figure below.

**100% Volume Level**

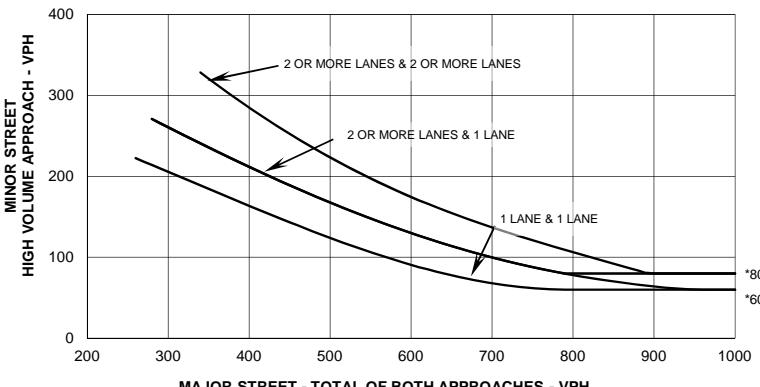
Four Highest Hours	Volumes	
	Major Street	Minor Street
8:00 - 9:00 AM	1546	166
4:00 - 5:00 PM	1595	105
5:00 - 6:00 PM	1877	138
6:00 - 7:00 PM	1676	130

**FIGURE 4C-1: Criteria for "100%" Volume Level****70% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Minor Street

**FIGURE 4C-2: Criteria for "70%" Volume Level**

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



\* Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 86th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No
  2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No
- "70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**WARRANT 3 - PEAK HOUR**

If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Unusual condition justifying use of warrant:  
Industrial Complex  
 -

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
5:00 - 6:00 PM	1877	138

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.

**Criteria****1. Delay on Minor Approach  
(vehicle-hours)**

Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**2. Volume on Minor Approach  
One-Direction \*(vehicles per hour)**

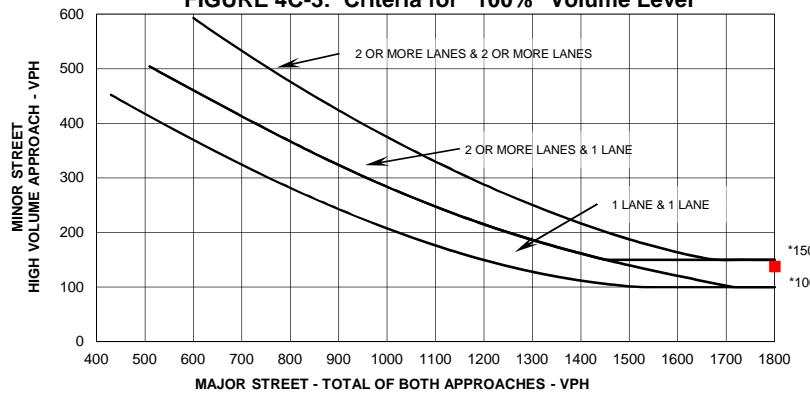
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**3. Total Intersection Entering Volume \*(vehicles per hour)**

No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Plot volume combination on the applicable figure below.

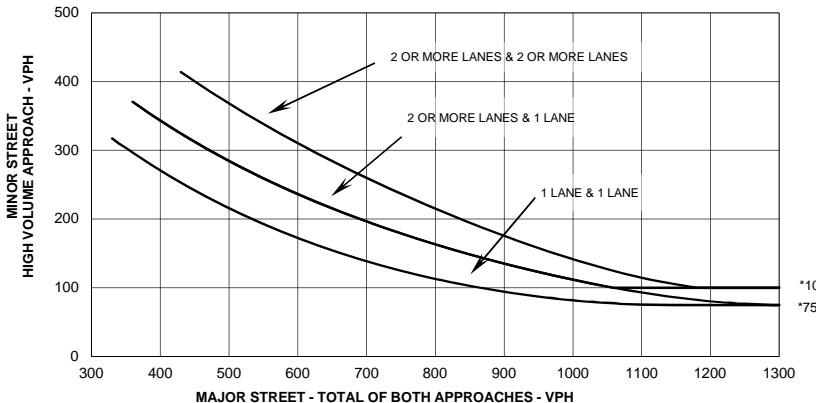
**FIGURE 4C-3: Criteria for "100%" Volume Level**



\* Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

**FIGURE 4C-4: Criteria for "70%" Volume Level**

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



\* Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Future Conditions**  
 Date: **June 26, 2024**

Major Street: **NW 107th Avenue**  
 Minor Street: **NW 86th Street**

Lanes: **2**  
 Major Approach Speed: **40**  
 Lanes: **1**  
 Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 35 mph?  Yes  No
  2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No
- "70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**Option**

Pedestrian volume crossing the major street **may** be reduced as much as 50% if the 15th-percentile crossing speed of pedestrians is less than 3.5 ft/sec. A walking speed study was conducted which reported a pedestrian speed less than 3.5 ft/sec for the 15th percentile.

Yes  No

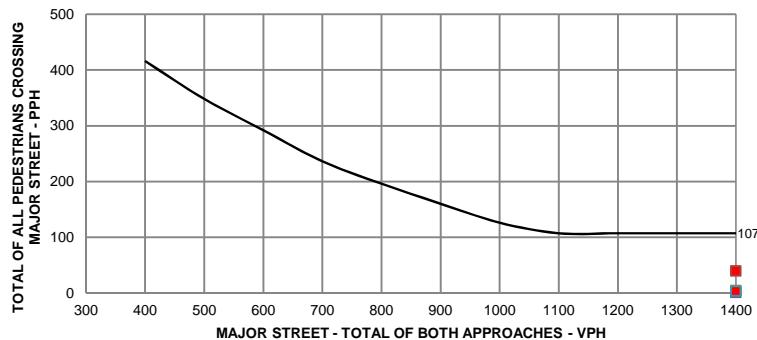
**WARRANT 4 - PEDESTRIAN VOLUME**

For each of any 4 hours of an average day, the plotted points lie above the appropriate line, then the warrant is satisfied.

Applicable:  Yes  No  
 Satisfied:  Yes  No

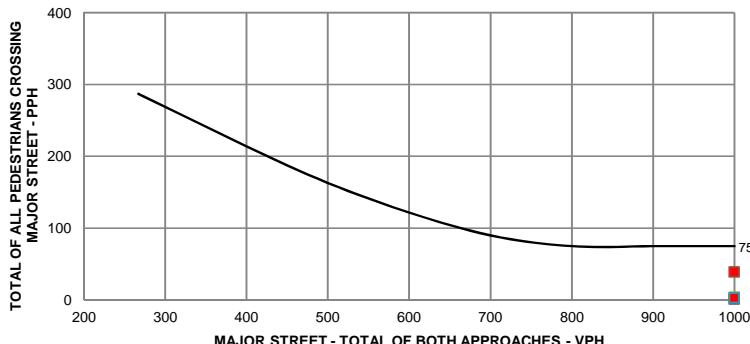
Plot four volume combinations on the applicable figure below.

**Figure 4C-5. Criteria for "100%" Volume Level**



\* Note: 107 pph applies as the lower threshold volume for 100% volume level

**Figure 4C-6 Criteria for "70%" Volume Level**



\* Note: 75 pph applies as the lower threshold volume for 70% volume level

## WARRANT 4 - PEDESTRIAN VOLUME

For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point falls above the appropriate line, then the warrant is satisfied.

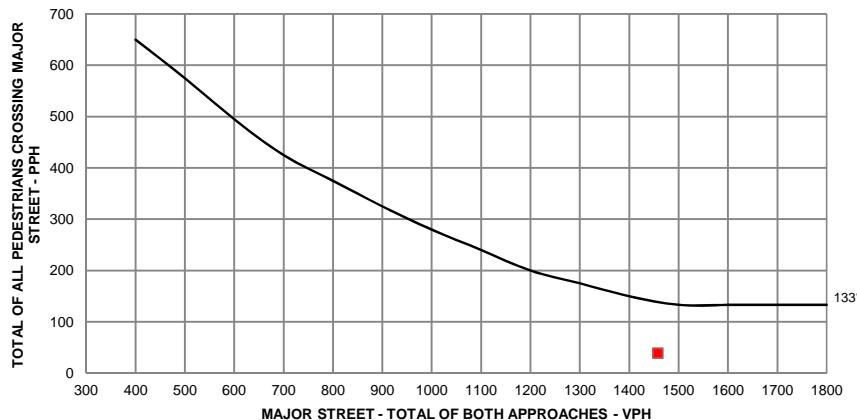
Applicable:  Yes  No  
 Satisfied:  Yes  No

Plot one volume combination on the applicable figure below.

### 100% Volume Level

Peak Hour	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	1458	39

Figure 4C-7. Criteria for "100%" Volume Level - Peak Hour

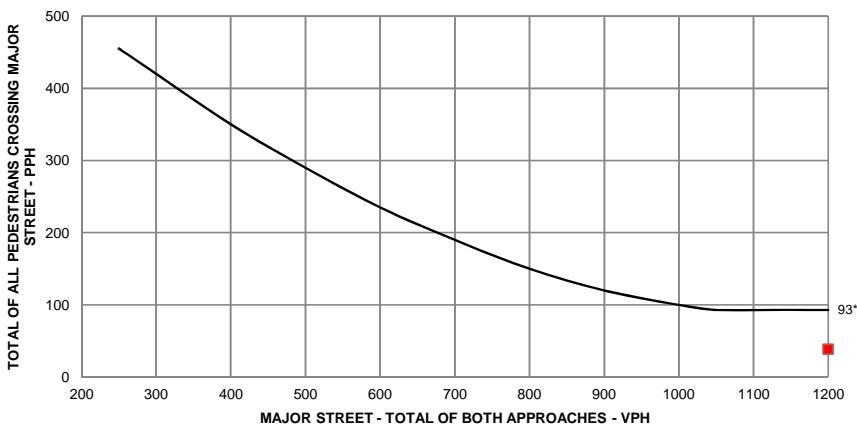


\* Note: 133 pph applies as the lower threshold volume

### 70% Volume Level

Peak Hour	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	1458	39

Figure 4C-8 Criteria for "70%" Volume Level - Peak Hour



\* Note: 93 pph applies as the lower threshold volume

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Future Conditions**  
 Date: **June 26, 2024**

Major Street: **NW 107th Avenue**  
 Minor Street: **NW 86th Street**

Lanes: **2**  
 Major Approach Speed: **40**  
 Lanes: **1**  
 Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 5 - SCHOOL CROSSING**

*Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.*

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria	Fulfilled?	
	Yes	No
1. There are a minimum of 20 students crossing the major street during the highest crossing hour.	Students:	Hour:
2. There are fewer adequate gaps in the major street traffic stream during the period when the children are using the established school crossing than the number of minutes in the same period.	Minutes:	Gaps:
3. The nearest traffic signal along the major street is located more than 300 ft. (90 m) away, or the nearest signal is within 300 ft. (90 m) but the proposed traffic signal will not restrict the progressive movement of traffic.		

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Future Conditions**  
 Date: **June 26, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 86th Street** Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 6 - COORDINATED SIGNAL SYSTEM**

*Indicate if the criteria are fulfilled in the boxes provided. The warrant is satisfied if either criterion is fulfilled. This warrant should not be applied when the resulting signal spacing would be less than 300 m (1,000 ft.).*

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria	Fulfilled?	
	Yes	No
1. On a one-way street or a street that has traffic predominately in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.		
2. On a two-way street, adjacent signals do not provide the necessary degree of platooning, and the proposed and adjacent signals will collectively provide a progressive operation.		

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 86th Street Lanes: 1 Minor Approach Speed: 30

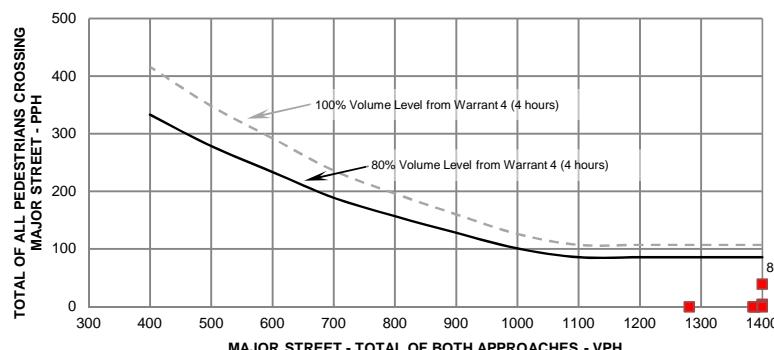
MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 7 - CRASH EXPERIENCE**

Record hours where criteria are fulfilled, the corresponding volume, and other information in the boxes provided. The warrant is satisfied if **all three** of the criteria are fulfilled.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria			Fulfilled?	
			Yes	No
1. Adequate trial of other remedial measure has failed to reduce crash frequency.	Measure tried:			
2. Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12-month period.	Observed Crash Types:		Number of crashes per 12 months:	
3. One of the following volume warrants is met:			Met?	
Warrant 1, Condition A (80% satisfied), or			No	
Warrant 1, Condition B (80% satisfied), or			Yes	
Warrant 4, Pedestrian Volume satisfied at 80% of volume requirements for any 8 hours of an average day.			Yes	

**Figure 4C-5. Criteria for "100%" Volume Level**

\* Note: 86 pph applies as the lower threshold volume for the 80% volume threshold.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue  
 Minor Street: NW 86th Street

Lanes: 2 Major Approach Speed: 40  
 Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 8 - ROADWAY NETWORK**

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the Major Route characteristics listed.

Applicable:  Yes  No

Satisfied:  Yes  No

	Criteria	Met?		Fulfilled?	
		Yes	No	Yes	No
1.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.  b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.	Entering Volume:			
		Warrant:	1	2	3
		Satisfied?:			
2.	Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)	← Hour			
		← Volume			

	Characteristics of Major Routes	Met?		Fulfilled?	
		Yes	No	Yes	No
1.	Part of the street or highway system that serves as the principal roadway network for through traffic flow.	Major Street:			
		Minor Street:			
2.	Rural or suburban highway outside of, entering, or traversing a city.	Major Street:			
		Minor Street:			
3.	Appears as a major route on an official plan.	Major Street:			
		Minor Street:			

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 86th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Approach Lane Criteria**

1. How many approach lanes are there at the track crossing?

1  2 or more

If there is 1 lane, use Figure 4C-9 and if there are 2 or more, use Figure 4C-10.

Fig 4C-9  Fig 4C-10

**WARRANT 9 - INTERSECTION NEAR A GRADE CROSSING**

*This signal warrant should be applied only after adequate consideration has been given to other alternatives or after a trial of an alternative has failed to alleviate the safety concerns associated with the grade crossing.*

Indicate if both criteria are fulfilled in the boxes provided. The warrant is satisfied if both criteria are met.

Applicable:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Satisfied:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

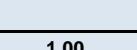
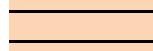
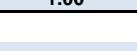
Criteria	Fulfilled?	
	Yes	No
1. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. During the highest traffic volume hour during which the rail uses the crossing, the plotted point falls above the applicable curve for the existing combination of approach lanes over the track and the distance D (clear storage distance).	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Use the following tables (4C-2, 4C-3, and 4C-4 to appropriately adjust the minor-street approach volume).

**Inputs**

Occurrences of Rail traffic per day  
% of High Occupancy Buses on Approach Lane at Track Crossing  
Enter D (feet)  
% of Tractor-Trailer Trucks on Approach Lane at Track Crossing

**Adjustment Factors from Tables**

**Table 4C-2. Adjustment Factor for Daily Frequency of Rail Traffic**

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

**Table 4C-3. Adjustment Factor for Percentage of High-Occupancy Buses**

% of High-Occupancy Buses* on Minor Street Approach	Adjustment Factor
0%	1.00
2%	1.09
4%	1.19
6% or more	1.32

\* A high-occupancy bus is defined as a bus occupied by at least 20 people

**Table 4C-4. Adjustment Factor for Percentage of Tractor-Trailer Trucks**

% of Tractor-Trailer Trucks on Minor Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

*Input the major and minor street volumes before adjustment factors are applied*

1 Approach Lane		
D (ft)	Major Vol.	Minor Vol.

*After adjustment factors are applied*

1 Approach Lane w/Factors		
D (ft)	Major Vol.	Minor Vol.

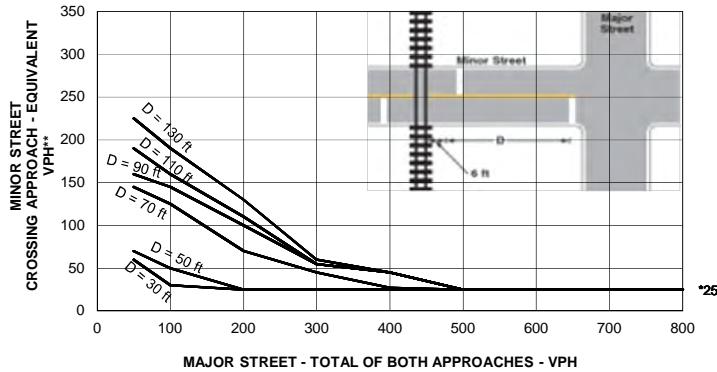
*Input D and the major and minor street volumes before adjustment factors are applied*

2 or more Approach Lanes		
D (ft)	Major Vol.	Minor Vol.

*After adjustment factors are applied*

2+ Approach Lane w/Factors		
D (ft)	Major Vol.	Minor Vol.

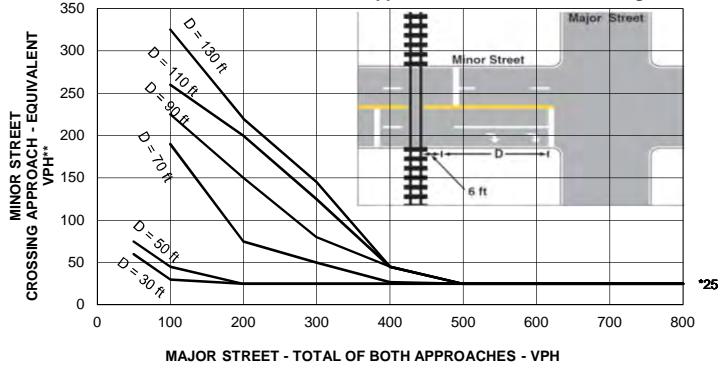
**FIGURE 4C-9: Criteria for 1 Approach Lane at the Track Crossing**



\* Note: 25 vph applies as the lower threshold volume

\* \*Note: VPH after applying the adjustment factors in Tables 4C-2, 4C, and or 4C-4, if appropriate

**FIGURE 4C-10: Criteria for 2+ Approach Lanes at Track Crossing**



\* Note: 25 vph applies as the lower threshold volume

\* \*Note: VPH after applying the adjustment factors in Tables 4C-2, 4C, and or 4C-4, if appropriate

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: June 26, 2024

Major Street: NW 107th Avenue  
 Minor Street: NW 86th Street

Lanes: 2 Major Approach Speed: 40  
 Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**CONCLUSIONS**

Remarks:

**WARRANTS SATISFIED:**

Warrant 1	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 2	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 3	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 4	<input type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 5	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 6	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 7	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 8	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 9	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input type="checkbox"/> Not Met

**VOLUME****NW 107th Ave Bet. NW 86th St & NW 88th St**

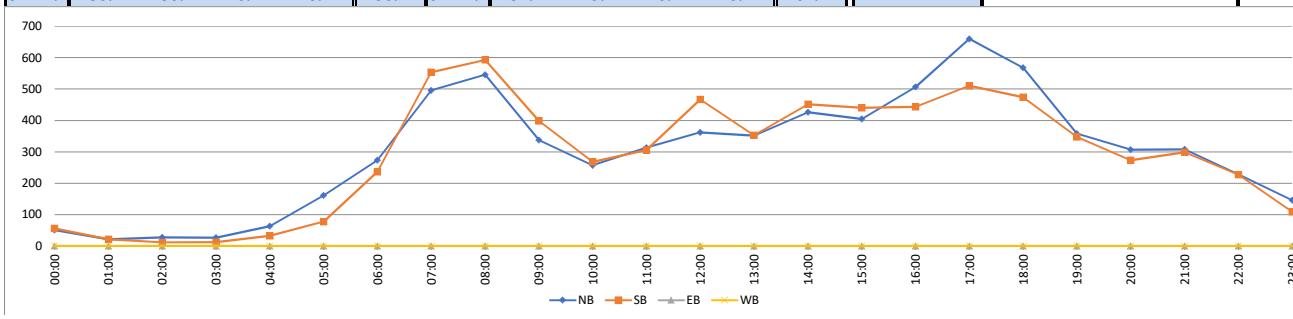
Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_004

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					7,195	6,958	0	0	14,153								
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	12	23			35	12:00	76	124			200	00:00	01:00	51	56		107
00:15	12	9			21	12:15	81	117			198	01:00	02:00	21	21		42
00:30	13	10			23	12:30	105	125			230	02:00	03:00	27	11		38
00:45	14	14			28	12:45	100	101			201	03:00	04:00	26	12		38
01:00	11	5			16	13:00	72	95			167	04:00	05:00	63	32		95
01:15	6	6			12	13:15	98	85			183	05:00	06:00	161	77		238
01:30	2	4			6	13:30	84	101			185	06:00	07:00	273	236		509
01:45	2	6			8	13:45	98	72			170	07:00	08:00	495	554		1049
02:00	2	5			7	14:00	117	88			205	08:00	09:00	545	593		1138
02:15	8	4			12	14:15	88	106			194	09:00	10:00	337	398		735
02:30	6	0			6	14:30	127	150			277	10:00	11:00	257	268		525
02:45	11	2			13	14:45	94	108			202	11:00	12:00	313	306		619
03:00	4	2			6	15:00	96	114			210	12:00	13:00	362	467		829
03:15	7	2			9	15:15	92	114			206	13:00	14:00	352	353		705
03:30	6	5			11	15:30	105	123			228	14:00	15:00	426	452		878
03:45	9	3			12	15:45	112	89			201	15:00	16:00	405	440		845
04:00	7	5			12	16:00	102	107			209	16:00	17:00	507	443		950
04:15	15	4			19	16:15	126	91			217	17:00	18:00	660	511		1171
04:30	18	12			30	16:30	133	136			269	18:00	19:00	568	474		1042
04:45	23	11			34	16:45	146	109			255	19:00	20:00	358	347		705
05:00	31	12			43	17:00	150	143			293	20:00	21:00	307	273		580
05:15	20	18			38	17:15	170	128			298	21:00	22:00	308	298		606
05:30	55	18			73	17:30	181	122			303	22:00	23:00	228	227		455
05:45	55	29			84	17:45	159	118			277	23:00	00:00	145	109		254
06:00	47	26			73	18:00	167	135			302	STATISTICS					
06:15	55	49			104	18:15	146	123			269	Peak Period	00:00	to	12:00		
06:30	83	63			146	18:30	132	111			243	Volume	2569	2564		5133	
06:45	88	98			186	18:45	123	105			228	Peak Hour	7:45	7:45		7:45	
07:00	119	132			251	19:00	115	105			220	Peak Volume	575	594		1169	
07:15	120	177			297	19:15	84	104			188	Peak Hour Factor	0.910	0.874		0.958	
07:30	117	122			239	19:30	79	77			156	Peak Period					
07:45	139	123			262	19:45	80	61			141	Volume	12:00	to	00:00		
08:00	133	170			303	20:00	67	72			139	Peak Hour	17:15	16:30		17:15	
08:15	145	154			299	20:15	77	66			143	Peak Volume	677	516		1180	
08:30	158	147			305	20:30	81	72			153	Peak Hour Factor	0.935	0.902		0.974	
08:45	109	122			231	20:45	82	63			145	Peak Period					
09:00	93	113			206	21:00	76	88			164	Volume	07:00	to	09:00		
09:15	75	117			192	21:15	75	72			147	Peak Hour	7:45	7:45		7:45	
09:30	84	93			177	21:30	73	74			147	Peak Volume	575	594		1169	
09:45	85	75			160	21:45	84	64			148	Peak Hour Factor	0.910	0.874		0.958	
10:00	69	83			152	22:00	69	70			139	Peak Period					
10:15	65	67			132	22:15	57	76			133	Volume	16:00	to	18:00		
10:30	54	59			113	22:30	47	48			95	Peak Hour	17:00	16:30		17:00	
10:45	69	59			128	22:45	55	33			88	Peak Volume	660	516		1171	
11:00	78	83			161	23:00	40	41			81	Peak Hour Factor	0.912	0.902		0.966	
11:15	70	65			135	23:15	40	25			65						
11:30	95	69			164	23:30	32	24			56						
11:45	70	89			159	23:45	33	19			52						
<b>TOTALS</b>	<b>2569</b>	<b>2564</b>	<b>0</b>	<b>0</b>	<b>5133</b>	<b>TOTALS</b>	<b>4626</b>	<b>4394</b>	<b>0</b>	<b>0</b>	<b>9020</b>						
SPLIT %	50%	50%	0%	0%	36%	SPLIT %	51%	49%	0%	0%	64%						



**VOLUME****NW 107th Ave Bet. NW 86th St & NW 88th St**

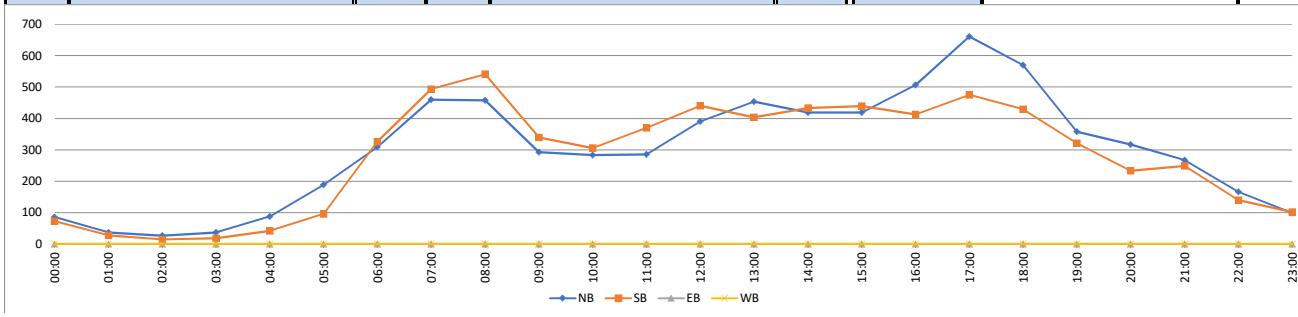
Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_004

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					7,172	6,720	0	0	13,892								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	30	26			56	12:00	100	107			207	00:00	85	72			157
00:15	23	13			36	12:15	109	120			229	01:00	36	27			63
00:30	11	17			28	12:30	84	113			197	02:00	26	14			40
00:45	21	16			37	12:45	97	100			197	03:00	36	18			54
01:00	9	7			16	13:00	117	90			207	04:00	87	41			128
01:15	12	11			23	13:15	99	92			191	05:00	188	96			284
01:30	10	5			15	13:30	124	95			219	06:00	309	326			635
01:45	5	4			9	13:45	114	127			241	07:00	460	493			953
02:00	5	5			10	14:00	103	115			218	08:00	458	541			999
02:15	7	8			15	14:15	121	120			241	09:00	292	339			631
02:30	7	0			7	14:30	94	96			190	10:00	283	306			589
02:45	7	1			8	14:45	101	102			203	11:00	285	370			655
03:00	7	8			15	15:00	94	101			195	12:00	390	440			830
03:15	7	2			9	15:15	92	136			228	13:00	454	404			858
03:30	12	2			14	15:30	121	121			242	14:00	419	433			852
03:45	10	6			16	15:45	112	81			193	15:00	419	439			858
04:00	14	10			24	16:00	102	101			203	16:00	507	413			920
04:15	18	10			28	16:15	126	83			209	17:00	661	475			1136
04:30	36	6			42	16:30	133	130			263	18:00	570	429			999
04:45	19	15			34	16:45	146	99			245	19:00	358	321			679
05:00	39	14			53	17:00	150	132			282	20:00	317	233			550
05:15	56	25			81	17:15	170	122			292	21:00	267	249			516
05:30	43	22			65	17:30	182	114			296	22:00	166	139			305
05:45	50	35			85	17:45	159	107			266	23:00	99	102			201
06:00	62	48			110	18:00	167	117			284	STATISTICS					
06:15	58	65			123	18:15	146	109			255	Peak Period	00:00	to	12:00		
06:30	91	95			186	18:30	133	107			240	Volume	2545	2643			5188
06:45	98	118			216	18:45	124	96			220	Peak Hour	7:15	7:45			7:30
07:00	118	109			227	19:00	115	95			210	Peak Volume	506	592			1082
07:15	122	125			247	19:15	84	95			179	Peak Hour Factor	0.771	0.851			0.843
07:30	123	101			224	19:30	79	74			153	Peak Period					
07:45	97	158			255	19:45	80	57			137	Volume	4627	4077			8704
08:00	164	157			321	20:00	77	67			144	Peak Hour	17:15	16:30			17:15
08:15	108	174			282	20:15	97	62			159	Peak Volume	678	483			1138
08:30	106	103			209	20:30	80	50			130	Peak Hour Factor	0.931	0.915			0.961
08:45	80	107			187	20:45	63	54			117	Peak Period					
09:00	75	95			170	21:00	73	71			144	Volume	918	1034			1952
09:15	68	86			154	21:15	79	70			149	Peak Hour	7:15	7:45			7:30
09:30	70	76			146	21:30	59	61			120	Peak Volume	506	592			1082
09:45	79	82			161	21:45	56	47			103	Peak Hour Factor	0.771	0.851			0.843
10:00	61	88			149	22:00	47	43			90	Peak Period					
10:15	80	78			158	22:15	50	33			83	Volume	1168	888			2056
10:30	72	84			156	22:30	34	33			67	Peak Hour	17:00	16:30			17:00
10:45	70	56			126	22:45	35	30			65	Peak Volume	661	483			1136
11:00	57	89			146	23:00	22	34			56	Peak Hour Factor	0.908	0.915			0.959
11:15	71	87			158	23:15	33	27			60	Peak Period					
11:30	64	76			140	23:30	24	23			47	Volume	1168	888			2056
11:45	93	118			211	23:45	20	18			38	Peak Hour	17:00	16:30			17:00
<b>TOTALS</b>	<b>2545</b>	<b>2643</b>	<b>0</b>	<b>0</b>	<b>5188</b>	<b>TOTALS</b>	<b>4627</b>	<b>4077</b>	<b>0</b>	<b>0</b>	<b>8704</b>	<b>Peak Volume</b>	<b>661</b>	<b>483</b>	<b></b>	<b></b>	<b>1136</b>
<b>SPLIT %</b>	<b>49%</b>	<b>51%</b>	<b>0%</b>	<b>0%</b>	<b>37%</b>	<b>SPLIT %</b>	<b>53%</b>	<b>47%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>	<b>Peak Hour Factor</b>	<b>0.908</b>	<b>0.915</b>	<b></b>	<b></b>	<b>0.959</b>



**VOLUME****NW 107th Ave Bet. NW 86th St & NW 88th St**

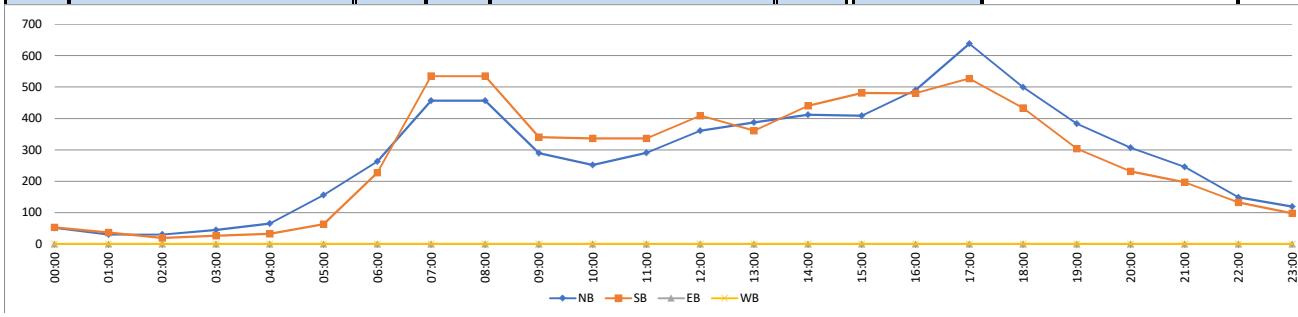
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_004

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					6,784	6,631	0	0	13,415								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	13	14			27	12:00	76	114			190	00:00	01:00	52	53		105
00:15	19	13			32	12:15	91	96			187	01:00	02:00	30	36		66
00:30	14	9			23	12:30	95	90			185	02:00	03:00	30	19		49
00:45	6	17			23	12:45	99	109			208	03:00	04:00	44	26		70
01:00	13	11			24	13:00	107	103			210	04:00	05:00	65	32		97
01:15	5	17			22	13:15	94	79			173	05:00	06:00	156	63		219
01:30	5	4			9	13:30	82	98			180	06:00	07:00	263	227		490
01:45	7	4			11	13:45	104	81			185	07:00	08:00	457	535		992
02:00	10	6			16	14:00	97	93			190	08:00	09:00	457	535		992
02:15	4	5			9	14:15	116	108			224	09:00	10:00	289	340		629
02:30	6	3			9	14:30	90	126			216	10:00	11:00	252	336		588
02:45	10	5			15	14:45	109	113			222	11:00	12:00	290	336		626
03:00	12	5			17	15:00	122	117			239	12:00	13:00	361	409		770
03:15	12	6			18	15:15	77	137			214	13:00	14:00	387	361		748
03:30	8	12			20	15:30	104	115			219	14:00	15:00	412	440		852
03:45	12	3			15	15:45	106	112			218	15:00	16:00	409	481		890
04:00	7	8			15	16:00	111	101			212	16:00	17:00	490	480		970
04:15	12	6			18	16:15	126	115			241	17:00	18:00	638	527		1165
04:30	19	7			26	16:30	113	125			238	18:00	19:00	499	433		932
04:45	27	11			38	16:45	140	139			279	19:00	20:00	383	304		687
05:00	25	11			36	17:00	155	122			277	20:00	21:00	307	231		538
05:15	30	12			42	17:15	174	124			298	21:00	22:00	245	197		442
05:30	43	13			56	17:30	143	150			293	22:00	23:00	149	132		281
05:45	58	27			85	17:45	166	131			297	23:00	00:00	119	98		217
06:00	41	25			66	18:00	148	123			271	STATISTICS					
06:15	57	41			98	18:15	139	130			269	NB	SB	EB	WB	TOTAL	
06:30	72	50			122	18:30	115	97			212	Peak Period	00:00	to	12:00		
06:45	93	111			204	18:45	97	83			180	Volume	2385	2538			4923
07:00	117	153			270	19:00	87	85			172	Peak Hour	7:15	7:30			7:30
07:15	120	127			247	19:15	120	70			190	Peak Volume	507	584			1076
07:30	122	100			222	19:30	97	57			154	Peak Hour Factor	0.759	0.854			0.828
07:45	98	155			253	19:45	79	92			171	Peak Period	12:00	to	00:00		
08:00	167	158			325	20:00	73	66			139	Volume	4399	4093			8492
08:15	105	171			276	20:15	93	61			154	Peak Hour	17:00	16:45			17:00
08:30	108	100			208	20:30	79	56			135	Peak Volume	638	535			1165
08:45	77	106			183	20:45	62	48			110	Peak Hour Factor	0.917	0.892			0.977
09:00	78	92			170	21:00	66	55			121	Peak Period	07:00	to	09:00		
09:15	67	88			155	21:15	67	44			111	Volume	914	1070			1984
09:30	68	79			147	21:30	60	48			108	Peak Hour	7:15	7:30			7:30
09:45	76	81			157	21:45	52	50			102	Peak Volume	507	584			1076
10:00	69	90			159	22:00	45	34			79	Peak Hour Factor	0.759	0.854			0.828
10:15	61	85			146	22:15	34	51			85	Peak Period	16:00	to	18:00		
10:30	61	77			138	22:30	39	16			55	Volume	1128	1007			2135
10:45	61	84			145	22:45	31	31			62	Peak Hour	17:00	16:45			17:00
11:00	55	70			125	23:00	37	26			63	Peak Volume	638	535			1165
11:15	73	81			154	23:15	39	31			70	Peak Hour Factor	0.917	0.892			0.977
11:30	83	93			176	23:30	20	22			42						
11:45	79	92			171	23:45	23	19			42						
<b>TOTALS</b>	<b>2385</b>	<b>2538</b>	<b>0</b>	<b>0</b>	<b>4923</b>	<b>TOTALS</b>	<b>4399</b>	<b>4093</b>	<b>0</b>	<b>0</b>	<b>8492</b>						
<b>SPLIT %</b>	<b>48%</b>	<b>52%</b>	<b>0%</b>	<b>0%</b>	<b>37%</b>	<b>SPLIT %</b>	<b>52%</b>	<b>48%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>						



**VOLUME**

NW 86th St W/O NW 107th Ave

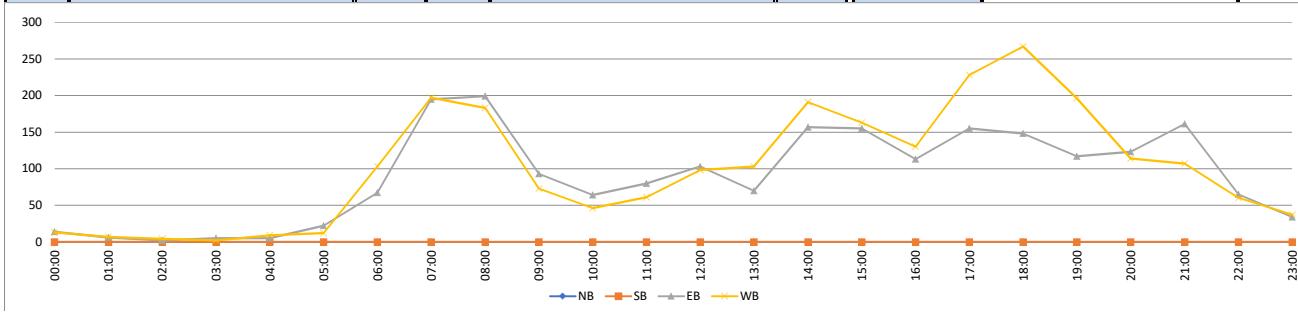
Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_005

DAILY TOTALS					NB 0	SB 0	EB 2,153	WB 2,404	Total 4,557	DAILY TOTALS							
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			4	3	7	12:00			29	23	52	00:00	01:00		14	13	27
00:15			0	3	3	12:15			16	32	48	01:00	02:00		6	7	13
00:30			2	3	5	12:30			35	29	64	02:00	03:00		2	4	6
00:45			8	4	12	12:45			23	14	37	03:00	04:00		5	2	7
01:00			1	4	5	13:00			11	19	30	04:00	05:00		5	9	14
01:15			1	1	2	13:15			16	21	37	05:00	06:00		22	12	34
01:30			3	2	5	13:30			17	33	50	06:00	07:00		67	103	170
01:45			1	0	1	13:45			26	30	56	07:00	08:00		195	197	392
02:00			1	3	4	14:00			21	46	67	08:00	09:00		199	183	382
02:15			1	0	1	14:15			33	45	78	09:00	10:00		93	73	166
02:30			0	0	0	14:30			75	55	130	10:00	11:00		64	46	110
02:45			0	1	1	14:45			28	45	73	11:00	12:00		80	61	141
03:00			0	1	1	15:00			39	63	102	12:00	13:00		103	98	201
03:15			0	1	1	15:15			57	35	92	13:00	14:00		70	103	173
03:30			3	0	3	15:30			32	29	61	14:00	15:00		157	191	348
03:45			2	0	2	15:45			27	36	63	15:00	16:00		155	163	318
04:00			0	1	1	16:00			23	29	52	16:00	17:00		113	130	243
04:15			0	1	1	16:15			25	30	55	17:00	18:00		155	228	383
04:30			2	2	4	16:30			32	36	68	18:00	19:00		148	267	415
04:45			3	5	8	16:45			33	35	68	19:00	20:00		117	196	313
05:00			5	2	7	17:00			29	42	71	20:00	21:00		123	114	237
05:15			3	4	7	17:15			32	54	86	21:00	22:00		161	107	268
05:30			8	2	10	17:30			36	59	95	22:00	23:00		65	60	125
05:45			6	4	10	17:45			58	73	131	23:00	00:00		34	37	71
06:00			6	10	16	18:00			36	69	105	STATISTICS					
06:15			8	16	24	18:15			35	76	111	NB	SB	EB	WB	TOTAL	
06:30			19	17	36	18:30			50	61	111	Peak Period	00:00	to	12:00		
06:45			34	60	94	18:45			27	61	88	Volume			752	710	1462
07:00			62	94	156	19:00			32	57	89	Peak Hour			8:00	6:45	6:45
07:15			55	54	109	19:15			30	55	85	Peak Volume			199	227	424
07:30			46	19	65	19:30			28	38	66	Peak Hour Factor			0.843	0.604	0.679
07:45			32	30	62	19:45			27	46	73	Peak Period	12:00	to	00:00		
08:00			55	69	124	20:00			26	30	56	Volume			1401	1694	3095
08:15			59	55	114	20:15			31	20	51	Peak Hour			14:30	17:45	17:45
08:30			47	31	78	20:30			31	31	62	Peak Volume			199	279	458
08:45			38	28	66	20:45			35	33	68	Peak Hour Factor			0.663	0.918	0.874
09:00			33	19	52	21:00			44	34	78	Peak Period	07:00	to	09:00		
09:15			24	19	43	21:15			67	17	84	Volume			394	380	774
09:30			26	22	48	21:30			28	23	51	Peak Hour			8:00	7:00	7:00
09:45			10	13	23	21:45			22	33	55	Peak Volume			199	197	392
10:00			22	12	34	22:00			19	18	37	Peak Hour Factor			0.843	0.524	0.628
10:15			12	7	19	22:15			17	15	32	Peak Period	16:00	to	18:00		
10:30			17	11	28	22:30			16	15	31	Volume			268	358	626
10:45			13	16	29	22:45			13	12	25	Peak Hour			17:00	17:00	17:00
11:00			26	12	38	23:00			12	6	18	Peak Volume			155	228	383
11:15			13	16	29	23:15			7	6	13	Peak Hour Factor			0.668	0.781	0.731
11:30			21	18	39	23:30			4	16	20						
11:45			20	15	35	23:45			11	9	20						
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>752</b>	<b>710</b>	<b>1462</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1401</b>	<b>1694</b>	<b>3095</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>51%</b>	<b>49%</b>	<b>32%</b>
<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>51%</b>	<b>49%</b>	<b>32%</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>45%</b>	<b>55%</b>	<b>68%</b>						



**VOLUME**

NW 86th St W/O NW 107th Ave

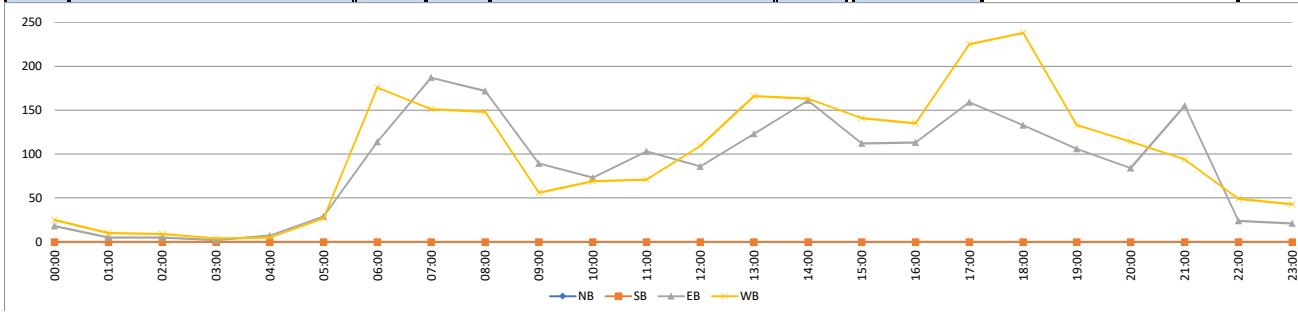
Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_005

DAILY TOTALS					NB 0	SB 0	EB 2,081	WB 2,361	Total 4,442	DAILY TOTALS							
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			6	6	12	12:00			19	28	47	00:00	01:00		18	25	43
00:15			1	8	9	12:15			20	22	42	01:00	02:00		5	10	15
00:30			5	5	10	12:30			26	32	58	02:00	03:00		5	9	14
00:45			6	6	12	12:45			21	27	48	03:00	04:00		2	4	6
01:00			1	2	3	13:00			23	30	53	04:00	05:00		7	5	12
01:15			1	3	4	13:15			20	37	57	05:00	06:00		29	27	56
01:30			0	4	4	13:30			27	49	76	06:00	07:00		114	176	290
01:45			3	1	4	13:45			53	50	103	07:00	08:00		187	151	338
02:00			1	3	4	14:00			48	55	103	08:00	09:00		172	148	320
02:15			1	4	5	14:15			56	57	113	09:00	10:00		89	56	145
02:30			1	1	2	14:30			28	18	46	10:00	11:00		73	69	142
02:45			2	1	3	14:45			29	33	62	11:00	12:00		103	71	174
03:00			1	1	2	15:00			34	43	77	12:00	13:00		86	109	195
03:15			1	0	1	15:15			28	43	71	13:00	14:00		123	166	289
03:30			0	2	2	15:30			23	30	53	14:00	15:00		161	163	324
03:45			0	1	1	15:45			27	25	52	15:00	16:00		112	141	253
04:00			0	0	0	16:00			31	38	69	16:00	17:00		113	135	248
04:15			1	2	3	16:15			25	35	60	17:00	18:00		159	225	384
04:30			1	1	2	16:30			35	35	70	18:00	19:00		133	238	371
04:45			5	2	7	16:45			22	27	49	19:00	20:00		106	133	239
05:00			10	11	21	17:00			26	39	65	20:00	21:00		84	114	198
05:15			8	7	15	17:15			39	49	88	21:00	22:00		155	94	249
05:30			5	4	9	17:30			42	58	100	22:00	23:00		24	49	73
05:45			6	5	11	17:45			52	79	131	23:00	00:00		21	43	64
06:00			8	18	26	18:00			34	73	107	STATISTICS					
06:15			13	14	27	18:15			34	70	104	NB	SB	EB	WB	TOTAL	
06:30			31	52	83	18:30			34	46	80	Peak Period	00:00 to 12:00				
06:45			62	92	154	18:45			31	49	80	Volume			804	751	1555
07:00			57	51	108	19:00			23	42	65	Peak Hour			7:30	6:30	6:30
07:15			35	23	58	19:15			34	33	67	Peak Volume			215	218	403
07:30			35	20	55	19:30			27	34	61	Peak Hour Factor			0.814	0.592	0.654
07:45			60	57	117	19:45			22	24	46	Peak Period	12:00 to 00:00				
08:00			54	62	116	20:00			23	33	56	Volume			1277	1610	2887
08:15			66	42	108	20:15			19	28	47	Peak Hour			13:45	17:30	17:30
08:30			29	18	47	20:30			22	25	47	Peak Volume			185	280	442
08:45			23	26	49	20:45			20	28	48	Peak Hour Factor			0.826	0.886	0.844
09:00			37	17	54	21:00			42	34	76	Peak Period	07:00 to 09:00				
09:15			20	12	32	21:15			81	19	100	Volume			359	299	658
09:30			14	10	24	21:30			15	25	40	Peak Hour			7:30	7:30	7:30
09:45			18	17	35	21:45			17	16	33	Peak Volume			215	181	396
10:00			13	14	27	22:00			3	16	19	Peak Hour Factor			0.814	0.730	0.846
10:15			20	15	35	22:15			7	14	21	Peak Period	16:00 to 18:00				
10:30			18	17	35	22:30			10	12	22	Volume			272	360	632
10:45			22	23	45	22:45			4	7	11	Peak Hour			17:00	17:00	17:00
11:00			18	15	33	23:00			6	15	21	Peak Volume			159	225	384
11:15			29	19	48	23:15			5	9	14	Peak Hour Factor			0.764	0.712	0.733
11:30			23	19	42	23:30			6	11	17						
11:45			33	18	51	23:45			4	8	12						
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>804</b>	<b>751</b>	<b>1555</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1277</b>	<b>1610</b>	<b>2887</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>52%</b>	<b>48%</b>	<b>35%</b>
<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>52%</b>	<b>48%</b>	<b>35%</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>44%</b>	<b>56%</b>	<b>65%</b>						



**VOLUME**

NW 86th St W/O NW 107th Ave

Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_005

DAILY TOTALS					NB 0	SB 0	EB 2,108	WB 2,341	Total 4,449	DAILY TOTALS							
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			4	10	14	12:00			27	24	51	00:00	01:00		9	20	29
00:15			4	1	5	12:15			27	19	46	01:00	02:00		4	8	12
00:30			0	4	4	12:30			25	24	49	02:00	03:00		3	5	8
00:45			1	5	6	12:45			24	32	56	03:00	04:00		3	9	12
01:00			1	3	4	13:00			25	22	47	04:00	05:00		5	6	11
01:15			3	2	5	13:15			14	32	46	05:00	06:00		17	11	28
01:30			0	1	1	13:30			16	37	53	06:00	07:00		57	87	144
01:45			0	2	2	13:45			19	35	54	07:00	08:00		202	215	417
02:00			0	2	2	14:00			25	39	64	08:00	09:00		176	150	326
02:15			2	2	4	14:15			51	53	104	09:00	10:00		92	56	148
02:30			1	1	2	14:30			52	48	100	10:00	11:00		71	54	125
02:45			0	0	0	14:45			53	52	105	11:00	12:00		114	106	220
03:00			0	5	5	15:00			77	58	135	12:00	13:00		103	99	202
03:15			0	1	1	15:15			63	32	95	13:00	14:00		74	126	200
03:30			0	2	2	15:30			32	38	70	14:00	15:00		181	192	373
03:45			3	1	4	15:45			28	35	63	15:00	16:00		200	163	363
04:00			1	2	3	16:00			31	36	67	16:00	17:00		122	149	271
04:15			0	2	2	16:15			38	37	75	17:00	18:00		143	210	353
04:30			3	1	4	16:30			21	39	60	18:00	19:00		150	225	375
04:45			1	1	2	16:45			32	37	69	19:00	20:00		92	122	214
05:00			5	1	6	17:00			31	27	58	20:00	21:00		87	127	214
05:15			2	2	4	17:15			22	53	75	21:00	22:00		152	101	253
05:30			4	3	7	17:30			37	68	105	22:00	23:00		34	60	94
05:45			6	5	11	17:45			53	62	115	23:00	00:00		17	40	57
06:00			6	5	11	18:00			28	64	92	STATISTICS					
06:15			7	13	20	18:15			45	70	115	NB SB EB WB TOTAL					
06:30			15	14	29	18:30			37	49	86	Peak Period	00:00 to 12:00		753	727	1480
06:45			29	55	84	18:45			40	42	82	Volume			7:30	7:00	7:00
07:00			68	98	166	19:00			21	40	61	Peak Hour			220	215	417
07:15			37	39	76	19:15			26	33	59	Peak Volume			0.809	0.548	0.628
07:30			34	19	53	19:30			21	33	54	Peak Hour Factor					
07:45			63	59	122	19:45			24	16	40	Peak Period	12:00 to 00:00		1355	1614	2969
08:00			55	64	119	20:00			16	33	49	Volume			14:30	17:30	14:15
08:15			68	41	109	20:15			22	39	61	Peak Hour			245	264	444
08:30			32	16	48	20:30			17	25	42	Peak Volume			0.795	0.943	0.822
08:45			21	29	50	20:45			32	30	62	Peak Hour Factor	07:00 to 09:00		378	365	743
09:00			38	15	53	21:00			38	35	73	Volume			7:30	7:00	7:00
09:15			23	13	36	21:15			83	34	117	Peak Hour			220	215	417
09:30			16	11	27	21:30			21	19	40	Peak Volume			0.809	0.548	0.628
09:45			15	17	32	21:45			10	13	23	Peak Hour Factor	16:00 to 18:00		265	359	624
10:00			18	12	30	22:00			8	16	24	Volume			17:00	17:00	17:00
10:15			17	16	33	22:15			8	21	29	Peak Hour			143	210	353
10:30			16	13	29	22:30			9	14	23	Peak Volume			0.675	0.772	0.767
10:45			20	13	33	22:45			9	9	18	Peak Hour Factor					
11:00			18	15	33	23:00			10	8	18						
11:15			23	27	50	23:15			3	14	17						
11:30			20	31	51	23:30			1	12	13						
11:45			53	33	86	23:45			3	6	9						
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>753</b>	<b>727</b>	<b>1480</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1355</b>	<b>1614</b>	<b>2969</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>51%</b>	<b>49%</b>	<b>33%</b>
<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>51%</b>	<b>49%</b>	<b>33%</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>46%</b>	<b>54%</b>	<b>67%</b>						



**VOLUME**

NW 107th Ave S/O NW 86th St

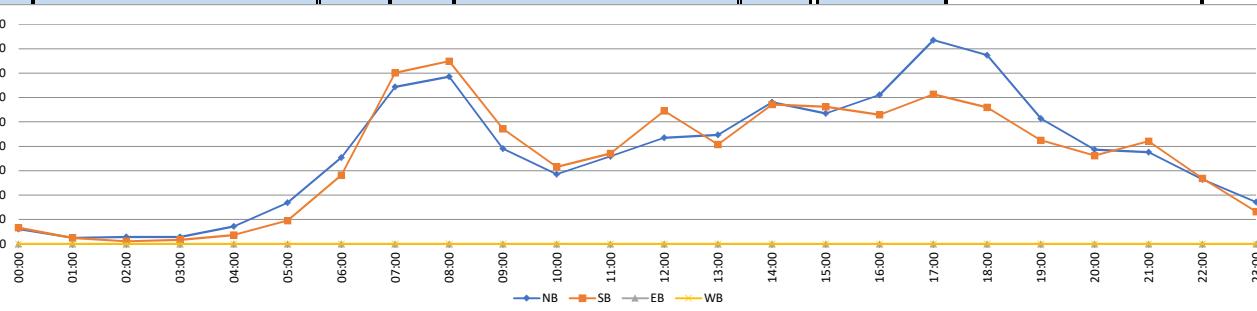
Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_006

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					9,030	8,534	0	0	17,564								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	14	26			40	12:00	94	148			242	00:00	61	67			128
00:15	15	9			24	12:15	104	124			228	01:00	25	24			49
00:30	15	11			26	12:30	127	153			280	02:00	29	11			40
00:45	17	21			38	12:45	110	120			230	03:00	28	17			45
01:00	14	5			19	13:00	96	103			199	04:00	71	36			107
01:15	6	6			12	13:15	115	97			212	05:00	169	95			264
01:30	4	7			11	13:30	113	114			227	06:00	354	281			635
01:45	1	6			7	13:45	123	93			216	07:00	644	701			1345
02:00	4	5			9	14:00	159	105			264	08:00	685	749			1434
02:15	7	4			11	14:15	129	135			264	09:00	391	472			863
02:30	6	0			6	14:30	165	208			373	10:00	286	315			601
02:45	12	2			14	14:45	127	124			251	11:00	359	371			730
03:00	5	2			7	15:00	153	147			300	12:00	435	545			980
03:15	8	2			10	15:15	117	161			278	13:00	447	407			854
03:30	6	8			14	15:30	121	142			263	14:00	580	572			1152
03:45	9	5			14	15:45	144	112			256	15:00	535	562			1097
04:00	8	5			13	16:00	123	122			245	16:00	611	530			1141
04:15	16	4			20	16:15	154	114			268	17:00	835	613			1448
04:30	20	14			34	16:30	162	161			323	18:00	773	560			1333
04:45	27	13			40	16:45	172	133			305	19:00	514	424			938
05:00	33	17			50	17:00	179	159			338	20:00	386	361			747
05:15	23	20			43	17:15	215	151			366	21:00	376	420			796
05:30	56	25			81	17:30	226	144			370	22:00	265	269			534
05:45	57	33			90	17:45	215	159			374	23:00	171	132			303
06:00	56	31			87	18:00	214	149			363	STATISTICS					
06:15	65	51			116	18:15	207	143			350	Peak Period	00:00 to 12:00				
06:30	92	74			166	18:30	182	150			332	Volume	3102	3139			6241
06:45	141	125			266	18:45	170	118			288	Peak Hour	7:45	7:45			7:45
07:00	194	175			369	19:00	157	122			279	Peak Volume	726	753			1479
07:15	155	213			368	19:15	126	121			247	Peak Hour Factor	0.945	0.884			0.917
07:30	129	161			290	19:30	109	97			206	12:00 to 00:00					
07:45	166	152			318	19:45	122	84			206	Peak Period	12:00 to 00:00				
08:00	190	213			403	20:00	90	91			181	Volume	5928	5395			11323
08:15	192	205			397	20:15	86	86			172	Peak Hour	17:15	14:30			17:15
08:30	178	183			361	20:30	105	96			201	Peak Volume	870	640			1473
08:45	125	148			273	20:45	105	88			193	Peak Hour Factor	0.962	0.769			0.985
09:00	109	143			252	21:00	98	120			218	07:00 to 09:00					
09:15	86	133			219	21:15	81	128			209	Peak Period	07:00 to 09:00				
09:30	101	114			215	21:30	90	96			186	Volume	1329	1450			2779
09:45	95	82			177	21:45	107	76			183	Peak Hour	7:45	7:45			7:45
10:00	76	100			176	22:00	79	81			160	Peak Volume	726	753			1479
10:15	68	75			143	22:15	63	84			147	Peak Hour Factor	0.945	0.884			0.917
10:30	62	73			135	22:30	61	63			124	16:00 to 18:00					
10:45	80	67			147	22:45	62	41			103	Peak Period	16:00 to 18:00				
11:00	87	106			193	23:00	41	48			89	Volume	1446	1143			2589
11:15	85	77			162	23:15	43	29			72	Peak Hour	17:00	17:00			17:00
11:30	107	84			191	23:30	45	25			70	Peak Volume	835	613			1448
11:45	80	104			184	23:45	42	30			72	Peak Hour Factor	0.924	0.964			0.968
<b>TOTALS</b>	<b>3102</b>	<b>3139</b>	<b>0</b>	<b>0</b>	<b>6241</b>	<b>TOTALS</b>	<b>5928</b>	<b>5395</b>	<b>0</b>	<b>0</b>	<b>11323</b>	<b>SPLIT %</b>	<b>50%</b>	<b>50%</b>	<b>0%</b>	<b>0%</b>	<b>64%</b>
<b>SPLIT %</b>	<b>50%</b>	<b>50%</b>	<b>0%</b>	<b>0%</b>	<b>36%</b>	<b>SPLIT %</b>	<b>52%</b>	<b>48%</b>	<b>0%</b>	<b>0%</b>	<b>64%</b>						



**VOLUME**

NW 107th Ave S/O NW 86th St

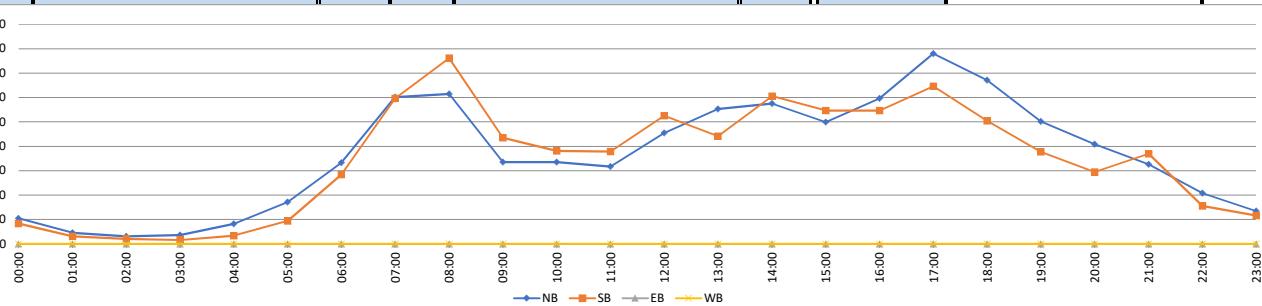
Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_006

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					8,713	8,243	0	0	16,956								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	35	31			66	12:00	105	145			250	00:00	104	84			188
00:15	29	12			41	12:15	120	118			238	01:00	45	31			76
00:30	15	21			36	12:30	128	137			265	02:00	31	21			52
00:45	25	20			45	12:45	102	125			227	03:00	36	16			52
01:00	12	9			21	13:00	115	112			227	04:00	82	34			116
01:15	5	7			12	13:15	143	109			252	05:00	171	94			265
01:30	15	11			26	13:30	130	106			236	06:00	333	284			617
01:45	13	4			17	13:45	165	114			279	07:00	601	596			1197
02:00	6	7			13	14:00	153	169			322	08:00	614	761			1375
02:15	8	6			14	14:15	145	150			295	09:00	335	435			770
02:30	9	7			16	14:30	170	168			338	10:00	335	381			716
02:45	8	1			9	14:45	107	119			226	11:00	317	379			696
03:00	8	3			11	15:00	128	125			253	12:00	455	525			980
03:15	7	8			15	15:15	125	124			249	13:00	553	441			994
03:30	7	3			10	15:30	112	157			269	14:00	575	606			1181
03:45	14	2			16	15:45	134	140			274	15:00	499	546			1045
04:00	11	6			17	16:00	129	136			265	16:00	596	547			1143
04:15	14	10			24	16:15	160	123			283	17:00	780	646			1426
04:30	20	11			31	16:30	158	159			317	18:00	671	504			1175
04:45	37	7			44	16:45	149	129			278	19:00	502	377			879
05:00	21	20			41	17:00	168	157			325	20:00	409	294			703
05:15	47	21			68	17:15	196	186			382	21:00	326	369			695
05:30	58	28			86	17:30	199	142			341	22:00	208	156			364
05:45	45	25			70	17:45	217	161			378	23:00	135	116			251
06:00	54	40			94	18:00	187	147			334	STATISTICS					
06:15	74	50			124	18:15	183	124			307	Peak Period	00:00	to	12:00		
06:30	71	77			148	18:30	150	115			265	Volume	3004	3116			6120
06:45	134	117			251	18:45	151	118			269	Peak Hour	7:30	7:45			7:45
07:00	168	158			326	19:00	127	98			225	Peak Volume	645	767			1402
07:15	151	148			299	19:15	146	97			243	Peak Hour Factor	0.743	0.864			0.837
07:30	142	157			299	19:30	112	93			205	Peak Period					
07:45	140	133			273	19:45	117	89			206	Volume	5709	5127			10836
08:00	146	210			356	20:00	102	83			185	Peak Hour	17:15	17:00			17:15
08:15	217	202			419	20:15	122	76			198	Peak Volume	799	646			1435
08:30	132	222			354	20:30	102	69			171	Peak Hour Factor	0.921	0.868			0.939
08:45	119	127			246	20:45	83	66			149	Peak Period					
09:00	94	118			212	21:00	93	99			192	Volume	1215	1357			2572
09:15	87	127			214	21:15	83	136			219	Peak Hour	7:30	7:45			7:45
09:30	76	102			178	21:30	80	72			152	Peak Volume	645	767			1402
09:45	78	88			166	21:45	70	62			132	Peak Hour Factor	0.743	0.864			0.837
10:00	90	94			184	22:00	61	44			105	Peak Period					
10:15	73	99			172	22:15	62	38			100	Volume	1376	1193			2569
10:30	91	94			185	22:30	43	40			83	Peak Hour	17:00	17:00			17:00
10:45	81	94			175	22:45	42	34			76	Peak Volume	780	646			1426
11:00	89	74			163	23:00	36	39			75	Peak Hour Factor	0.899	0.868			0.933
11:15	64	99			163	23:15	39	29			68	Peak Period					
11:30	82	108			190	23:30	33	27			60	Volume	1215	1357			2572
11:45	82	98			180	23:45	27	21			48	Peak Hour	7:30	7:45			7:45
<b>TOTALS</b>	<b>3004</b>	<b>3116</b>	<b>0</b>	<b>0</b>	<b>6120</b>	<b>TOTALS</b>	<b>5709</b>	<b>5127</b>	<b>0</b>	<b>0</b>	<b>10836</b>	<b>Peak Volume</b>	<b>645</b>	<b>767</b>	<b></b>	<b></b>	<b>1402</b>
SPLIT %	49%	51%	0%	0%	36%	SPLIT %	53%	47%	0%	0%	64%	Peak Hour Factor	0.743	0.864			0.837



**VOLUME**

NW 107th Ave S/O NW 86th St

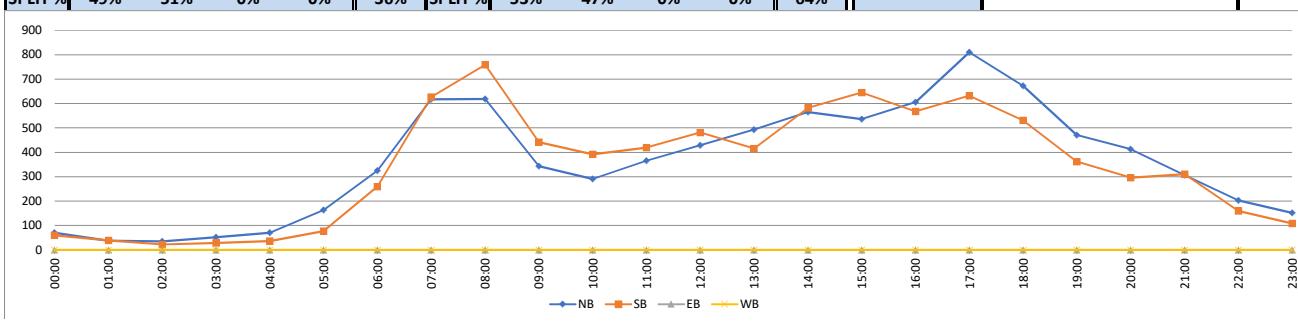
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_006

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					8,642	8,249	0	0	16,891								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	22	17			39	12:00	92	133			225	00:00	70	60			130
00:15	20	17			37	12:15	100	113			213	01:00	37	39			76
00:30	18	9			27	12:30	113	109			222	02:00	35	22			57
00:45	10	17			27	12:45	124	126			250	03:00	52	28			80
01:00	16	12			28	13:00	126	125			251	04:00	70	36			106
01:15	6	19			25	13:15	119	86			205	05:00	164	77			241
01:30	6	4			10	13:30	115	110			225	06:00	325	259			584
01:45	9	4			13	13:45	133	94			227	07:00	617	627			1244
02:00	12	6			18	14:00	133	115			248	08:00	618	759			1377
02:15	6	7			13	14:15	157	147			304	09:00	343	441			784
02:30	7	4			11	14:30	129	169			298	10:00	291	392			683
02:45	10	5			15	14:45	146	151			297	11:00	365	419			784
03:00	17	5			22	15:00	166	180			346	12:00	429	481			910
03:15	13	6			19	15:15	104	195			299	13:00	493	415			908
03:30	9	11			20	15:30	133	138			271	14:00	565	582			1147
03:45	13	6			19	15:45	133	132			265	15:00	536	645			1181
04:00	9	9			18	16:00	132	117			249	16:00	605	568			1173
04:15	14	6			20	16:15	157	147			304	17:00	810	632			1442
04:30	19	9			28	16:30	148	142			290	18:00	672	531			1203
04:45	28	12			40	16:45	168	162			330	19:00	471	362			833
05:00	26	16			42	17:00	177	148			325	20:00	412	296			708
05:15	31	13			44	17:15	223	142			365	21:00	307	310			617
05:30	44	15			59	17:30	199	175			374	22:00	203	160			363
05:45	63	33			96	17:45	211	167			378	23:00	152	108			260
06:00	44	29			73	18:00	201	140			341	STATISTICS					
06:15	65	43			108	18:15	193	159			352	Peak Period	00:00	to	12:00		
06:30	81	60			141	18:30	150	120			270	Volume	2987	3159			6146
06:45	135	127			262	18:45	128	112			240	Peak Hour	7:30	7:45			7:45
07:00	186	192			378	19:00	119	98			217	Peak Volume	641	765			1399
07:15	153	147			300	19:15	140	83			223	Peak Hour Factor	0.732	0.873			0.837
07:30	140	154			294	19:30	119	67			186	12:00 to 00:00					
07:45	138	134			272	19:45	93	114			207	Peak Period	12:00	to	00:00		
08:00	144	213			357	20:00	103	79			182	Volume	5655	5090			10745
08:15	219	199			418	20:15	126	77			203	Peak Hour	17:15	14:30			17:15
08:30	133	219			352	20:30	96	65			161	Peak Volume	834	695			1458
08:45	122	128			250	20:45	87	75			162	Peak Hour Factor	0.935	0.891			0.964
09:00	96	119			215	21:00	87	79			166	07:00 to 09:00					
09:15	89	128			217	21:15	88	114			202	Peak Period	1235	1386			2621
09:30	78	105			183	21:30	71	61			132	Volume	7:30	7:45			7:45
09:45	80	89			169	21:45	61	56			117	Peak Hour	641	765			1399
10:00	76	103			179	22:00	59	40			99	Peak Volume	0.732	0.873			0.837
10:15	75	100			175	22:15	54	58			112	16:00 to 18:00					
10:30	69	88			157	22:30	52	24			76	Peak Period	1415	1200			2615
10:45	71	101			172	22:45	38	38			76	Volume	17:00	17:00			17:00
11:00	68	86			154	23:00	43	34			77	Peak Hour	810	632			1442
11:15	95	99			194	23:15	51	32			83	Peak Volume	0.908	0.903			0.954
11:30	105	104			209	23:30	30	21			51						
11:45	97	130			227	23:45	28	21			49						
<b>TOTALS</b>	<b>2987</b>	<b>3159</b>	<b>0</b>	<b>0</b>	<b>6146</b>	<b>TOTALS</b>	<b>5655</b>	<b>5090</b>	<b>0</b>	<b>0</b>	<b>10745</b>						
<b>SPLIT %</b>	<b>49%</b>	<b>51%</b>	<b>0%</b>	<b>0%</b>	<b>36%</b>	<b>SPLIT %</b>	<b>53%</b>	<b>47%</b>	<b>0%</b>	<b>0%</b>	<b>64%</b>						



**Century Town Phase II Committed Development**  
**Hourly Distribution by Land Use**

Time Period		Mid-Rise Multifamily Housing- (Land Use 221) - 675 units						Retail (Land Use 820) - 81,538 SF						Century Town Phase II				
		Hourly Distribution <sup>2</sup>		ITE LU 221	Entering <sup>1</sup>		Exiting <sup>1</sup>		Hourly Distribution <sup>2</sup>		ITE LU 820	Entering <sup>1</sup>		Exiting <sup>1</sup>		Entering	Exiting	Total
		% IN	% OUT		%	Trips	%	Trips	% IN	% OUT		%	Trips	%	Trips	4,455	4,455	8,910
12:00 AM	01:00 AM	1.17%	0.38%	0.8%	0.58%	21	0.19%	7	0.05%	0.13%	0.1%	0.02%	1	0.06%	3	23	10	33
01:00 AM	02:00 AM	0.56%	0.33%	0.4%	0.28%	10	0.17%	6	0.03%	0.04%	0.0%	0.01%	1	0.02%	1	11	7	18
02:00 AM	03:00 AM	0.29%	0.11%	0.2%	0.14%	5	0.06%	2	0.03%	0.03%	0.0%	0.02%	1	0.02%	1	6	3	9
03:00 AM	04:00 AM	0.25%	0.23%	0.2%	0.11%	4	0.11%	4	0.03%	0.09%	0.0%	0.01%	0	0.02%	1	5	5	10
04:00 AM	05:00 AM	0.11%	0.53%	1.2%	0.21%	8	0.96%	35	0.07%	0.09%	0.1%	0.02%	1	0.03%	2	9	37	46
05:00 AM	06:00 AM	0.41%	2.04%	1.2%	0.21%	8	1.02%	38	0.13%	0.06%	0.2%	0.12%	6	0.06%	3	14	41	55
06:00 AM	07:00 AM	0.97%	7.77%	4.5%	0.50%	18	3.97%	146	0.86%	0.41%	0.6%	0.41%	21	0.19%	10	40	156	196
07:00 AM	08:00 AM	2.50%	15.58%	8.9%	1.23%	45	7.67%	282	2.01%	1.08%	1.2%	0.79%	42	0.43%	22	87	304	391
08:00 AM	09:00 AM	3.75%	10.71%	6.0%	1.56%	58	4.47%	164	3.79%	2.31%	3.7%	2.30%	120	1.40%	73	178	238	416
09:00 AM	10:00 AM	2.19%	6.87%	4.5%	1.10%	40	3.44%	127	4.95%	3.16%	4.0%	2.46%	129	1.57%	82	169	209	378
10:00 AM	11:00 AM	2.74%	4.58%	3.8%	1.42%	52	2.36%	87	7.01%	5.27%	6.1%	3.50%	183	2.64%	138	235	225	460
11:00 AM	12:00 PM	3.38%	3.97%	3.7%	1.69%	62	1.99%	73	8.47%	7.29%	7.7%	4.14%	216	3.56%	186	279	259	538
12:00 PM	01:00 PM	4.31%	4.81%	4.6%	2.15%	79	2.41%	88	9.64%	8.71%	9.2%	4.85%	254	4.38%	229	333	318	651
01:00 PM	02:00 PM	4.37%	4.38%	4.3%	2.13%	78	2.13%	78	8.79%	8.85%	8.4%	4.21%	220	4.23%	222	298	300	598
02:00 PM	03:00 PM	4.08%	3.71%	3.9%	2.02%	74	1.83%	67	7.77%	8.54%	8.2%	3.92%	205	4.31%	226	279	293	572
03:00 PM	04:00 PM	5.91%	3.82%	5.3%	3.22%	118	2.08%	76	8.07%	8.46%	8.3%	4.04%	211	4.23%	221	330	298	627
04:00 PM	05:00 PM	8.58%	5.45%	7.5%	4.60%	169	2.93%	108	8.72%	9.48%	8.9%	4.27%	224	4.65%	243	393	351	744
05:00 PM	06:00 PM	12.93%	6.08%	9.6%	6.53%	240	3.07%	113	8.75%	8.88%	8.7%	4.33%	227	4.40%	230	467	343	810
06:00 PM	07:00 PM	12.09%	6.21%	9.0%	5.96%	219	3.06%	113	7.58%	7.69%	7.7%	3.85%	201	3.90%	204	420	317	737
07:00 PM	08:00 PM	9.44%	5.42%	7.4%	4.70%	173	2.70%	99	6.54%	6.95%	6.7%	3.25%	170	3.45%	181	343	280	623
08:00 PM	09:00 PM	7.71%	3.12%	5.4%	3.85%	142	1.56%	57	3.87%	6.21%	5.1%	1.96%	102	3.14%	164	244	222	466
09:00 PM	10:00 PM	6.51%	1.52%	4.0%	3.25%	119	0.76%	28	1.86%	4.32%	3.3%	0.99%	52	2.29%	120	171	148	319
10:00 PM	11:00 PM	3.66%	1.60%	2.4%	1.70%	62	0.74%	27	0.66%	1.25%	1.0%	0.35%	18	0.67%	35	81	62	143
11:00 PM	12:00 AM	2.09%	0.79%	1.2%	0.86%	32	0.33%	12	0.34%	0.69%	0.5%	0.17%	9	0.35%	18	41	30	71
<b>TOTAL</b>		100.00%	100.00%	<b>100.00%</b>	50.00%	1839	50.00%	1839	100.00%	100.00%	<b>100.00%</b>	49.99%	2616	50.01%	2616	4455	4455	8910

<sup>1</sup>ITE Trip Generation Manual, 10<sup>th</sup> Edition

<sup>2</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices

**Century Town Phase III Committed Development**

**Hourly Distribution by Land Use**

Time Period		Mid-Rise Multifamily Housing- (Land Use 221) - 492 units						Century Town Phase III									
		Hourly Distribution <sup>2</sup>		ITE LU 221	Entering <sup>1</sup>		Exiting <sup>1</sup>		Hourly Distribution <sup>2</sup>		ITE LU 820	Entering		Exiting		Total	
		% IN	% OUT		%	Trips	%	Trips	% IN	% OUT		%	Trips	%	Trips	1,150	1,150
12:00 AM	01:00 AM	1.17%	0.38%	0.8%	0.6%	13	0.19%	4	13	4	18						
01:00 AM	02:00 AM	0.56%	0.33%	0.4%	0.3%	6	0.17%	4	6	4	10						
02:00 AM	03:00 AM	0.29%	0.11%	0.2%	0.1%	3	0.06%	1	3	1	5						
03:00 AM	04:00 AM	0.25%	0.23%	0.2%	0.1%	3	0.11%	3	3	3	5						
04:00 AM	05:00 AM	0.11%	0.53%	0.3%	0.1%	1	0.26%	6	1	6	7						
05:00 AM	06:00 AM	0.41%	2.04%	1.2%	0.2%	5	1.02%	24	5	24	28						
06:00 AM	07:00 AM	0.97%	7.77%	4.4%	0.5%	11	3.9%	90	11	90	101						
07:00 AM	08:00 AM	3.73%	12.69%	8.9%	2.02%	47	6.88%	158	47	158	205						
08:00 AM	09:00 AM	3.56%	12.50%	7.5%	1.65%	38	5.80%	133	38	133	171						
09:00 AM	10:00 AM	2.19%	6.87%	4.5%	1.10%	25	3.44%	79	25	79	104						
10:00 AM	11:00 AM	2.74%	4.58%	3.7%	1.37%	32	2.29%	53	32	53	84						
11:00 AM	12:00 PM	3.38%	3.97%	3.7%	1.69%	39	1.99%	46	39	46	85						
12:00 PM	01:00 PM	4.82%	5.23%	4.7%	2.25%	52	2.45%	56	52	56	108						
01:00 PM	02:00 PM	4.37%	4.38%	4.4%	2.19%	50	2.19%	50	50	50	101						
02:00 PM	03:00 PM	4.08%	3.71%	3.9%	2.04%	47	1.86%	43	47	43	90						
03:00 PM	04:00 PM	5.91%	3.82%	4.9%	2.95%	68	1.91%	44	68	44	112						
04:00 PM	05:00 PM	9.23%	5.12%	8.0%	5.16%	119	2.86%	66	119	66	184						
05:00 PM	06:00 PM	9.92%	6.40%	8.3%	5.07%	117	3.27%	75	117	75	192						
06:00 PM	07:00 PM	12.89%	5.97%	9.1%	6.22%	143	2.88%	66	143	66	209						
07:00 PM	08:00 PM	9.44%	5.42%	7.4%	4.72%	108	2.71%	62	108	62	171						
08:00 PM	09:00 PM	7.71%	3.12%	5.4%	3.85%	88	1.56%	36	88	36	124						
09:00 PM	10:00 PM	6.51%	1.52%	4.0%	3.25%	75	0.76%	17	75	17	92						
10:00 PM	11:00 PM	3.66%	2.54%	2.6%	1.55%	36	1.08%	25	36	25	60						
11:00 PM	12:00 AM	2.09%	0.79%	1.4%	1.04%	24	0.39%	9	24	9	33						
<b>TOTAL</b>		100.00%	100.00%	<b>100.00%</b>	50.00%	1150	50.00%	1150	1150	1150	2300						

<sup>1</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition

<sup>2</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices

**Midtown Doral Phases IV and V**  
**Hourly Distribution by Land Use**

Multifamily Mid-Rise (Land Use 221) - 349 units				Strip Retail Plaza (<40k) (Land Use 822) - 11,370 SF				Midtown Doral Phases IV and V										
Time Period	Hourly Distribution Residential <sup>2</sup>		ITE LU 221	Entering <sup>1</sup>		Exiting <sup>1</sup>	Hourly Distribution Retail <sup>3</sup>		ITE LU 814	Entering <sup>1</sup>		Exiting <sup>1</sup>	Entering	Exiting	Total			
	% IN	% OUT		%	Trips	%	Trips	% IN	% OUT		%	Trips	%	Trips	1,164	1,164	2,328	
	12:00 AM	01:00 AM	1.2%	0.4%	0.3%	0.2%	4	0.1%	1	0.0%	0.1%	0.0%	0.0%	0	4	1	5	
01:00 AM	02:00 AM	0.6%	0.3%	0.4%	0.3%	5	0.2%	3	0.0%	0.0%	0.0%	0.0%	0	5	3	8		
02:00 AM	03:00 AM	0.3%	0.1%	0.2%	0.1%	2	0.1%	1	0.0%	0.0%	0.0%	0.0%	0	2	1	3		
03:00 AM	04:00 AM	0.2%	0.2%	0.2%	0.1%	2	0.1%	2	0.0%	0.0%	0.0%	0.0%	0	2	2	4		
04:00 AM	05:00 AM	0.0%	0.3%	0.3%	0.0%	0	0.3%	5	0.1%	0.0%	0.0%	0.0%	0	0	5	5		
05:00 AM	06:00 AM	0.2%	2.0%	1.2%	0.1%	2	1.1%	18	0.1%	0.1%	0.0%	0.0%	0	2	18	20		
06:00 AM	07:00 AM	1.0%	7.8%	4.6%	0.5%	8	4.1%	66	0.9%	0.5%	0.0%	0.0%	0	8	66	74		
07:00 AM	08:00 AM	2.9%	14.2%	8.1%	1.4%	22	6.7%	109	1.9%	1.2%	1.1%	0.7%	5	0.4%	3	27	112	139
08:00 AM	09:00 AM	4.2%	13.9%	8.8%	2.0%	33	6.8%	109	3.6%	2.4%	3.7%	2.2%	16	1.5%	11	49	120	169
09:00 AM	10:00 AM	2.2%	6.9%	4.5%	1.1%	18	3.4%	56	4.9%	3.2%	4.0%	2.5%	17	1.6%	11	35	67	102
10:00 AM	11:00 AM	2.7%	4.6%	3.7%	1.4%	22	2.3%	37	7.0%	5.3%	6.1%	3.5%	25	2.6%	19	47	56	103
11:00 AM	12:00 PM	3.4%	4.0%	3.7%	1.7%	27	2.0%	32	8.5%	7.3%	7.2%	3.9%	25	3.3%	24	54	56	110
12:00 PM	01:00 PM	4.3%	4.8%	4.6%	2.2%	35	2.4%	39	9.4%	8.9%	10.1%	5.2%	37	4.9%	35	72	74	146
01:00 PM	02:00 PM	4.0%	4.0%	4.4%	2.2%	35	2.2%	35	8.7%	9.0%	8.3%	4.1%	29	4.2%	30	64	65	129
02:00 PM	03:00 PM	4.1%	3.7%	3.9%	2.0%	33	1.9%	30	7.8%	8.6%	8.2%	3.9%	28	4.3%	31	61	61	122
03:00 PM	04:00 PM	5.9%	3.8%	4.9%	3.0%	48	1.9%	31	8.1%	8.5%	8.3%	4.0%	29	4.2%	30	77	61	138
04:00 PM	05:00 PM	9.8%	6.3%	8.4%	5.1%	83	3.3%	53	9.3%	9.3%	12.2%	6.1%	43	6.1%	43	126	96	222
05:00 PM	06:00 PM	11.3%	5.1%	8.9%	6.1%	99	2.8%	45	8.1%	7.9%	7.5%	3.8%	27	3.7%	26	126	71	197
06:00 PM	07:00 PM	12.1%	6.0%	9.0%	6.0%	98	3.0%	48	7.7%	7.8%	7.1%	3.5%	25	3.6%	25	123	73	196
07:00 PM	08:00 PM	9.7%	5.4%	7.4%	4.8%	77	2.7%	43	6.5%	7.0%	6.4%	3.1%	22	3.3%	23	99	66	165
08:00 PM	09:00 PM	7.7%	2.5%	4.4%	3.3%	54	1.1%	17	4.3%	6.3%	5.3%	2.1%	15	3.2%	23	69	40	109
09:00 PM	10:00 PM	6.5%	1.5%	4.0%	3.2%	53	0.8%	12	1.9%	4.6%	3.3%	0.9%	7	2.3%	17	60	29	89
10:00 PM	11:00 PM	3.7%	1.6%	2.6%	1.8%	30	0.8%	13	0.8%	1.2%	1.0%	0.4%	3	0.6%	4	33	17	50
11:00 PM	12:00 AM	2.1%	0.5%	1.4%	1.2%	19	0.3%	4	0.3%	0.7%	0.1%	0.0%	0	0.0%	0	19	4	23
<b>TOTAL</b>		100.0%	100.0%	100.0%	49.9%	809	50.1%	809	100.00%	100.00%	100.0%	49.92%	355	49.95%	355	1164	1164	2328

<sup>1</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition

<sup>2</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices

<sup>3</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices for LU 820 due to insufficient hourly distribution for LU 822

**Midtown Doral Phase VI**  
**Hourly Distribution by Land Use**

Multifamily Mid-Rise (Land Use 221) - 203 units				Strip Retail Plaza (<40k) (Land Use 822) - 11,370 SF				Midtown Doral Phase VI										
Time Period	Hourly Distribution Residential <sup>2</sup>		ITE LU 221	Entering <sup>1</sup>		Exiting <sup>1</sup>	Hourly Distribution Retail <sup>3</sup>		ITE LU 814	Entering <sup>1</sup>		Exiting <sup>1</sup>	Entering	Exiting	Total			
	% IN	% OUT		%	Trips	%	Trips	% IN	% OUT		%	Trips	%	Trips	816	816	1,632	
	12:00 AM	01:00 AM	1.2%	0.4%	1.1%	0.8%	7	0.3%	2	0.0%	0.1%	0.0%	0.0%	0	7	2	9	
01:00 AM	02:00 AM	0.6%	0.3%	0.4%	0.3%	3	0.2%	2	0.0%	0.0%	0.0%	0.0%	0	3	2	5		
02:00 AM	03:00 AM	0.3%	0.1%	0.2%	0.1%	1	0.1%	1	0.0%	0.0%	0.0%	0.0%	0	1	1	2		
03:00 AM	04:00 AM	0.2%	0.2%	0.2%	0.1%	1	0.1%	1	0.0%	0.0%	0.0%	0.0%	0	1	1	2		
04:00 AM	05:00 AM	0.1%	0.5%	0.3%	0.1%	1	0.3%	2	0.1%	0.0%	0.0%	0.0%	0	1	2	3		
05:00 AM	06:00 AM	0.4%	2.0%	1.2%	0.2%	2	1.0%	9	0.1%	0.1%	0.0%	0.0%	0	2	9	11		
06:00 AM	07:00 AM	1.0%	7.8%	4.4%	0.5%	4	3.9%	36	0.9%	0.5%	0.0%	0.0%	0	4	36	40		
07:00 AM	08:00 AM	2.5%	14.7%	8.2%	1.2%	11	7.0%	65	1.9%	1.2%	1.1%	0.7%	5	0.4%	3	16	68	84
08:00 AM	09:00 AM	3.6%	12.1%	8.5%	1.9%	18	6.6%	60	3.6%	2.4%	3.7%	2.2%	16	1.5%	11	34	71	105
09:00 AM	10:00 AM	2.2%	6.9%	4.5%	1.1%	10	3.4%	32	4.9%	3.2%	4.0%	2.5%	17	1.6%	11	27	43	70
10:00 AM	11:00 AM	2.7%	4.6%	3.7%	1.4%	13	2.3%	21	7.0%	5.3%	6.1%	3.5%	25	2.6%	19	38	40	78
11:00 AM	12:00 PM	3.4%	4.0%	3.7%	1.7%	16	2.0%	18	8.5%	7.3%	7.2%	3.9%	27	3.3%	24	43	42	85
12:00 PM	01:00 PM	4.3%	4.4%	4.6%	2.3%	21	2.3%	21	9.4%	8.9%	10.1%	5.2%	37	4.9%	35	58	56	114
01:00 PM	02:00 PM	4.4%	4.4%	4.1%	2.0%	19	2.1%	19	8.7%	9.0%	8.3%	4.1%	29	4.2%	30	48	49	97
02:00 PM	03:00 PM	4.1%	3.7%	3.9%	2.0%	19	1.9%	17	7.8%	8.6%	8.2%	3.9%	28	4.3%	31	47	48	95
03:00 PM	04:00 PM	5.9%	3.8%	4.9%	3.0%	27	1.9%	18	8.1%	8.5%	8.3%	4.0%	29	4.2%	30	56	48	104
04:00 PM	05:00 PM	9.4%	6.1%	8.5%	5.2%	48	3.3%	31	9.3%	9.3%	12.2%	6.1%	43	6.1%	43	91	74	165
05:00 PM	06:00 PM	12.4%	5.8%	9.1%	6.2%	57	2.9%	27	8.1%	7.9%	7.5%	3.8%	27	3.7%	26	84	53	137
06:00 PM	07:00 PM	12.0%	6.0%	7.6%	5.1%	47	2.5%	23	7.7%	7.8%	7.1%	3.5%	25	3.6%	25	72	48	120
07:00 PM	08:00 PM	9.4%	5.2%	7.4%	4.8%	44	2.6%	24	6.5%	7.0%	6.4%	3.1%	22	3.3%	23	66	47	113
08:00 PM	09:00 PM	7.7%	3.1%	5.4%	3.8%	35	1.6%	14	4.3%	6.3%	5.3%	2.1%	15	3.2%	23	50	37	87
09:00 PM	10:00 PM	6.5%	1.5%	4.0%	3.2%	30	0.8%	7	1.9%	4.6%	3.3%	0.9%	7	2.3%	17	37	24	61
10:00 PM	11:00 PM	3.7%	1.6%	2.6%	1.8%	17	0.8%	7	0.8%	1.2%	1.0%	0.4%	3	0.6%	4	20	11	31
11:00 PM	12:00 AM	2.1%	0.8%	1.4%	1.0%	10	0.4%	4	0.3%	0.7%	0.1%	0.0%	0	0.0%	0	10	4	14
<b>TOTAL</b>		100.0%	100.0%	100.0%	49.9%	461	50.1%	461	100.00%	100.00%	100.0%	49.9%	355	49.9%	355	816	816	1632

<sup>1</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition

<sup>2</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices

<sup>3</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices for LU 820 due to insufficient hourly distribution for LU 822

**NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street  
Intersection**

## TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01  
TRAFFIC ENGINEERING

### Introduction

- The Signal Warrant Analysis Spreadsheets are a tool for assisting traffic engineers when evaluating the need for a traffic signal installation
  - The filled spreadsheets can be used as part of the supporting documents for the signal warrant evaluation
- Note: These templates are a useful resource, but it remains necessary to apply engineering judgment and to consider specific environmental, traffic, geometric, and operational conditions

### Instructions

*Fill in "Orange" areas only*

*Automated cells based on Input Data in "orange" cells*

#### General Information

Fill in below the general information including:

District, County (drop-down menu)

City, Engineer, Date

Major and Minor Street with corresponding number of lanes and speed limits

#### Enter Eight Hour Volumes

Any 8 hours of an average day. Major-street and minor-street volumes shall be for the same 8 hours; however, the 8 hours satisfied in Condition A shall **not** be required to be the same 8 hours satisfied in Condition B **for 80% columns only**. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

#### Enter Four Hour Volumes

Any 4 hours of an average day. Vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only, not required to be on the same approach during each of the 4 hours)

#### Enter Pedestrian Volumes (4-h Pedestrians per hour crossing the major street (total of all crossings)

#### Enter Peak Hour Volumes

Vehicular: Any four consecutive 15-minute periods of an average day

Pedestrian: Any four consecutive 15-minute periods of an average day representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings)

### Input Data

City:	Doral
County:	87 – Miami Dade
District:	Six

Engineer: PA - Existing Conditions  
Date: March 29, 2024

Major Street: NW 107th Avenue  
Minor Street: NW 88th Street

Major Street # Lanes: 2  
Minor Street # Lanes: 1

Major Approach Speed: 40  
Minor Approach Speed: 30

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7:00 - 8:00 AM	847	200	47
8:00 - 9:00 AM	975	192	10
12:00 - 1:00 PM	797	67	
2:00 - 3:00 PM	800	120	
3:00 - 4:00 PM	833	106	
4:00 - 5:00 PM	928	99	5
5:00 - 6:00 PM	1,158	114	9
6:00 - 7:00 PM	940	130	

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7:00 - 8:00 AM	847	200
8:00 - 9:00 AM	975	192
12:00 - 1:00 PM	797	67
2:00 - 3:00 PM	800	120
3:00 - 4:00 PM	833	106
4:00 - 5:00 PM	928	99
5:00 - 6:00 PM	1,158	114
6:00 - 7:00 PM	940	130

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7:00 - 8:00 AM	847	200
8:00 - 9:00 AM	975	192
5:00 - 6:00 PM	1,158	114
6:00 - 7:00 PM	940	130

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
7:00 - 8:00 AM	847	47
8:00 - 9:00 AM	975	10
4:00 - 5:00 PM	928	5
5:00 - 6:00 PM	1,158	9

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
5:00 - 6:00 PM	1,158	114	1,272

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
7:00 - 8:00 AM	847	47

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Existing Conditions**  
 Date: **March 29, 2024**

Major Street: **NW 107th Avenue**  
 Minor Street: **NW 88th Street**

Lanes: **2**  
 Lanes: **1**

Major Approach Speed: **40**  
 Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No  
 2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"

MAY

70%  100%

**WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME**

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.*

Yes  No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).*

Yes  No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.*

Yes  No

**Condition A - Minimum Vehicular Volume**

Applicable:  Yes  No

100% Satisfied:  Yes  No

80% Satisfied:  Yes  No

70% Satisfied:  Yes  No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

<sup>a</sup> Basic Minimum hourly volume

<sup>b</sup> Used for combination of Conditions A and B after adequate trial of other remedial measures

<sup>c</sup> May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7:00 - 8:00 AM	8:00 - 9:00 AM	12:00 - 1:00 PM	2:00 - 3:00 PM	3:00 - 4:00 PM	4:00 - 5:00 PM	5:00 - 6:00 PM	6:00 - 7:00 PM
Major	847	975	797	800	833	928	1,158	940
Minor	200	192	67	120	106	99	114	130

Existing Volumes

**TRAFFIC SIGNAL WARRANT SUMMARY****Condition B - Interruption of Continuous Traffic**

*Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.*

Applicable:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
100% Satisfied:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
80% Satisfied:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
70% Satisfied:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

<sup>a</sup> Basic Minimum hourly volume<sup>b</sup> Used for combination of Conditions A and B after adequate trial of other remedial measures<sup>c</sup> May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours								
Street	7:00 - 8:00 AM	8:00 - 9:00 AM	12:00 - 1:00 PM	2:00 - 3:00 PM	3:00 - 4:00 PM	4:00 - 5:00 PM	5:00 - 6:00 PM	6:00 - 7:00 PM
Major	847	975	797	800	833	928	1,158	940
Minor	200	192	67	120	106	99	114	130

**Existing Volumes**

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Existing Conditions**  
 Date: **March 29, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 88th Street** Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY

70%  100%

**WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME**

If all four points lie above the appropriate line, then the warrant is satisfied.

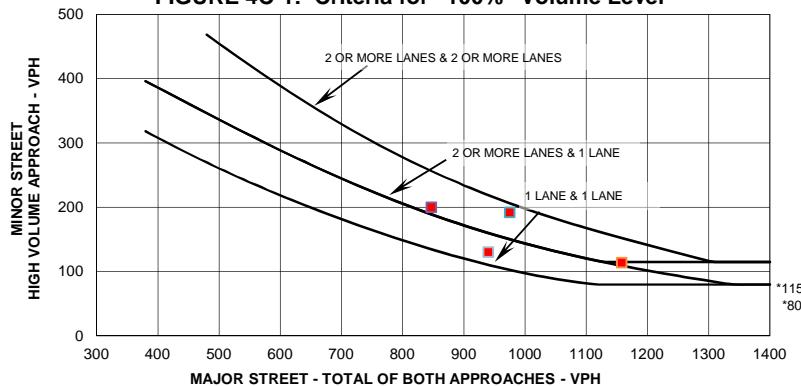
Applicable:  Yes  No

Satisfied:  Yes  No

Plot four volume combinations on the applicable figure below.

**100% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Minor Street
7:00 - 8:00 AM	847	200
8:00 - 9:00 AM	975	192
5:00 - 6:00 PM	1158	114
6:00 - 7:00 PM	940	130

**FIGURE 4C-1: Criteria for "100%" Volume Level**

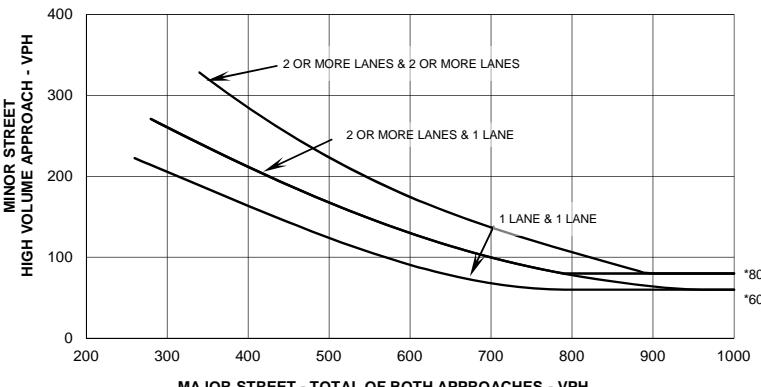
\* Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.

**70% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Minor Street

**FIGURE 4C-2: Criteria for "70%" Volume Level**

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



\* Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 88th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No
  2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No
- "70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**WARRANT 3 - PEAK HOUR**

If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Unusual condition justifying use of warrant:  
Industrial Complex  
 -

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
5:00 - 6:00 PM	1158	114

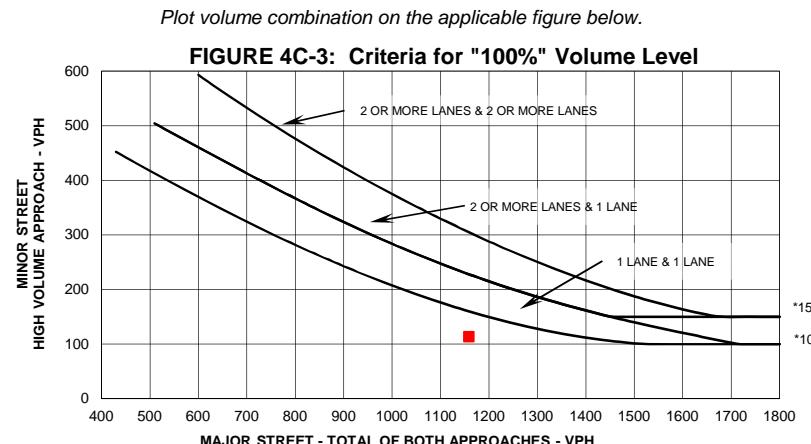
Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.

**Criteria**

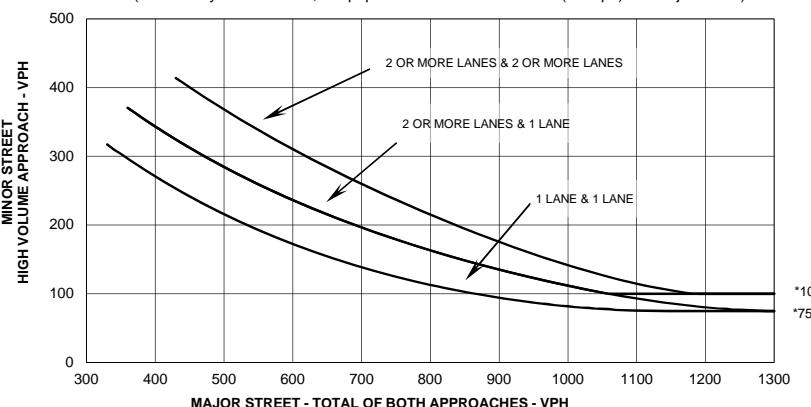
1. Delay on Minor Approach (vehicle-hours)		
Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

2. Volume on Minor Approach One-Direction *(vehicles per hour)		
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

3. Total Intersection Entering Volume *(vehicles per hour)		
No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No



**FIGURE 4C-4: Criteria for "70%" Volume Level**  
 (Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Existing Conditions**  
 Date: **March 29, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 88th Street** Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 35 mph?  Yes  No
  2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No
- "70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**Option**

Pedestrian volume crossing the major street **may** be reduced as much as 50% if the 15th-percentile crossing speed of pedestrians is less than 3.5 ft/sec. A walking speed study was conducted which reported a pedestrian speed less than 3.5 ft/sec for the 15th percentile.

Yes  No

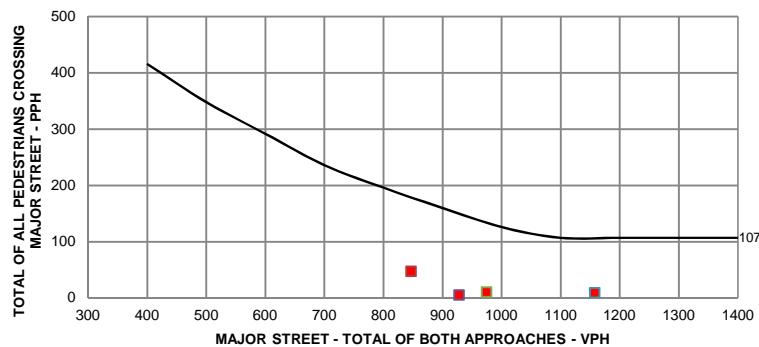
**WARRANT 4 - PEDESTRIAN VOLUME**

For each of any 4 hours of an average day, the plotted points lie above the appropriate line, then the warrant is satisfied.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Plot four volume combinations on the applicable figure below.

**Figure 4C-5. Criteria for "100%" Volume Level**

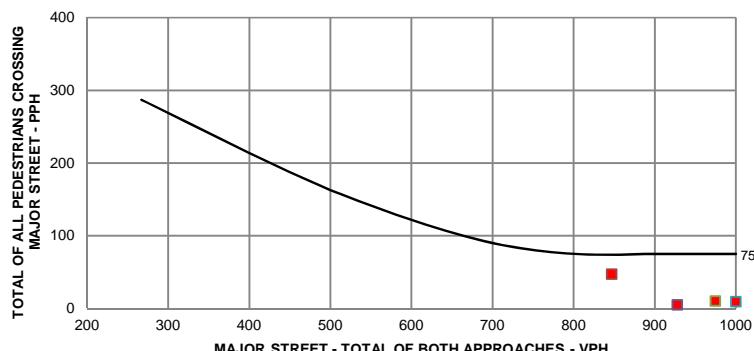
**100% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	847	47
8:00 - 9:00 AM	975	10
4:00 - 5:00 PM	928	5
4:00 - 5:00 PM	1158	9

**70% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	847	47
8:00 - 9:00 AM	975	10
4:00 - 5:00 PM	928	5
4:00 - 5:00 PM	1158	9

**Figure 4C-6 Criteria for "70%" Volume Level**



## WARRANT 4 - PEDESTRIAN VOLUME

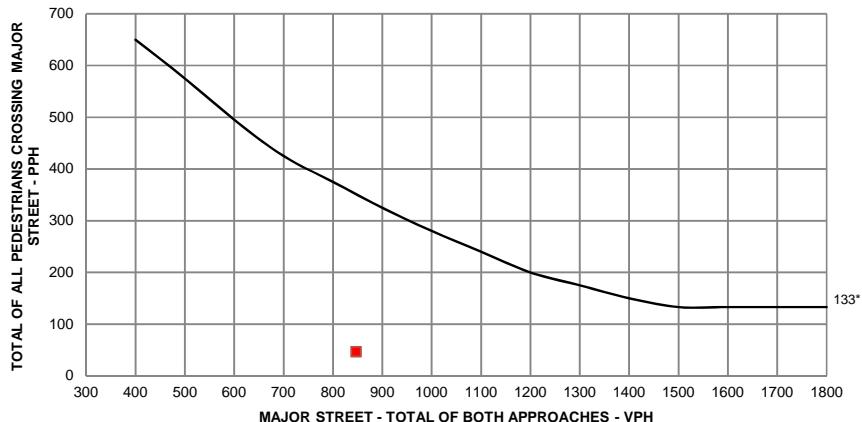
For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point falls above the appropriate line, then the warrant is satisfied.

Applicable:  Yes  No  
Satisfied:  Yes  No

Plot one volume combination on the applicable figure below.

100% Volume Level		
Peak Hour	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	847	47

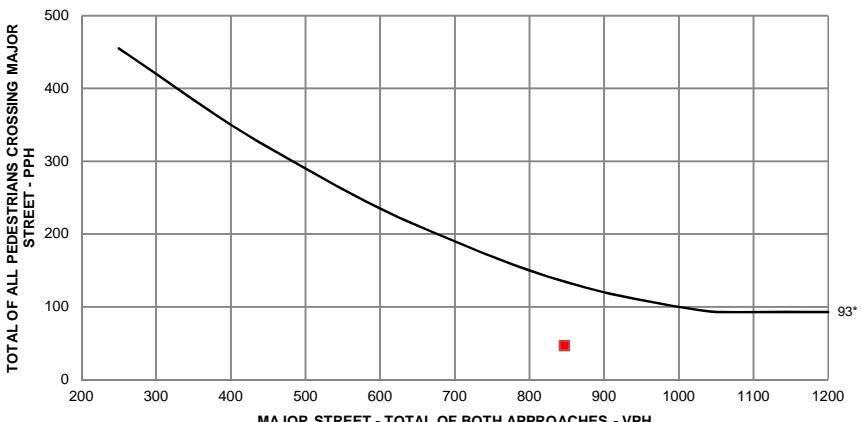
Figure 4C-7. Criteria for "100%" Volume Level - Peak Hour



\* Note: 133 pph applies as the lower threshold volume

70% Volume Level		
Peak Hour	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	847	47

Figure 4C-8 Criteria for "70%" Volume Level - Peak Hour



\* Note: 93 pph applies as the lower threshold volume

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Existing Conditions**  
 Date: **March 29, 2024**

Major Street: **NW 107th Avenue**  
 Minor Street: **NW 88th Street**

Lanes: **2** Major Approach Speed: **40**  
 Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 5 - SCHOOL CROSSING**

*Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.*

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria	Fulfilled?			
	Yes	No		
1. There are a minimum of 20 students crossing the major street during the highest crossing hour.	Students: <b>47</b>	Hour: <b>7:00 AM</b>	<b>Yes</b>	
2. There are fewer adequate gaps in the major street traffic stream during the period when the children are using the established school crossing than the number of minutes in the same period.	Minutes:	Gaps:		<b>No</b>
3. The nearest traffic signal along the major street is located more than 300 ft. (90 m) away, or the nearest signal is within 300 ft. (90 m) but the proposed traffic signal will not restrict the progressive movement of traffic.			<b>Yes</b>	

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 88th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 6 - COORDINATED SIGNAL SYSTEM**

*Indicate if the criteria are fulfilled in the boxes provided. The warrant is satisfied if either criterion is fulfilled. This warrant should not be applied when the resulting signal spacing would be less than 300 m (1,000 ft.).*

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria	Fulfilled?	
	Yes	No
1. On a one-way street or a street that has traffic predominately in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.		
2. On a two-way street, adjacent signals do not provide the necessary degree of platooning, and the proposed and adjacent signals will collectively provide a progressive operation.		

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Existing Conditions**  
 Date: **March 29, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 88th Street** Lanes: **1** Minor Approach Speed: **30**

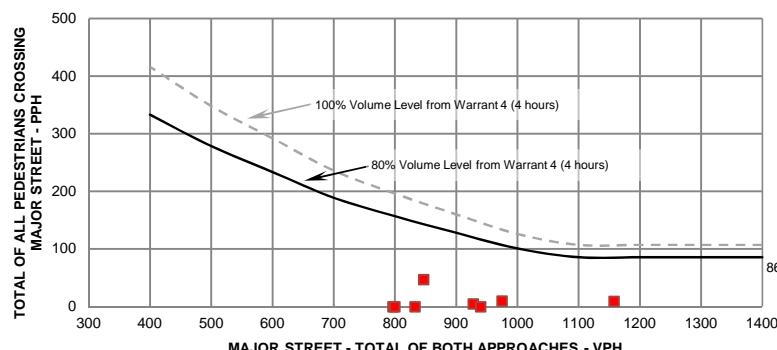
MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 7 - CRASH EXPERIENCE**

Record hours where criteria are fulfilled, the corresponding volume, and other information in the boxes provided. The warrant is satisfied if **all three** of the criteria are fulfilled.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria			Fulfilled?	
			Yes	No
1. Adequate trial of other remedial measure has failed to reduce crash frequency.	Measure tried:			
2. Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12-month period.	Observed Crash Types:		Number of crashes per 12 months:	
3. One of the following volume warrants is met:			Met?	
Warrant 1, Condition A (80% satisfied), or				No
Warrant 1, Condition B (80% satisfied), or				Yes
Warrant 4, Pedestrian Volume satisfied at 80% of volume requirements for any 8 hours of an average day.			Yes	

**Figure 4C-5. Criteria for "100%" Volume Level**

\* Note: 86 pph applies as the lower threshold volume for the 80% volume threshold.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue  
 Minor Street: NW 88th Street

Lanes: 2 Major Approach Speed: 40  
 Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 8 - ROADWAY NETWORK**

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the Major Route characteristics listed.

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria				Met?		Fulfilled?	
				Yes	No	Yes	No
Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.  b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.				Entering Volume:		
1.				Warrant:	1	2	3
				Satisfied?:			
2.	Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)				← Hour		
						← Volume	

Characteristics of Major Routes				Met?		Fulfilled?	
				Yes	No	Yes	No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.					Major Street:		
					Minor Street:		
2. Rural or suburban highway outside of, entering, or traversing a city.					Major Street:		
					Minor Street:		
3. Appears as a major route on an official plan.					Major Street:		
					Minor Street:		

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 88th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Approach Lane Criteria**

1. How many approach lanes are there at the track crossing?

1  2 or more

If there is 1 lane, use Figure 4C-9 and if there are 2 or more, use Figure 4C-10.

Fig 4C-9  Fig 4C-10

**WARRANT 9 - INTERSECTION NEAR A GRADE CROSSING**

*This signal warrant should be applied only after adequate consideration has been given to other alternatives or after a trial of an alternative has failed to alleviate the safety concerns associated with the grade crossing.*

Indicate if both criteria are fulfilled in the boxes provided. The warrant is satisfied if both criteria are met.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Criteria	Fulfilled?	
	Yes	No
1. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. During the highest traffic volume hour during which the rail uses the crossing, the plotted point falls above the applicable curve for the existing combination of approach lanes over the track and the distance D (clear storage distance).	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Use the following tables (4C-2, 4C-3, and 4C-4 to appropriately adjust the minor-street approach volume).

**Inputs**

Occurrences of Rail traffic per day  
% of High Occupancy Buses on Approach Lane at Track Crossing  
Enter D (feet)  
% of Tractor-Trailer Trucks on Approach Lane at Track Crossing

**Adjustment Factors from Tables**

	
	1.00
	

**Table 4C-2. Adjustment Factor for Daily Frequency of Rail Traffic**

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

**Table 4C-3. Adjustment Factor for Percentage of High-Occupancy Buses**

% of High-Occupancy Buses* on Minor Street Approach	Adjustment Factor
0%	1.00
2%	1.09
4%	1.19
6% or more	1.32

\* A high-occupancy bus is defined as a bus occupied by at least 20 people

**Table 4C-4. Adjustment Factor for Percentage of Tractor-Trailer Trucks**

% of Tractor-Trailer Trucks on Minor Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

*Input the major and minor street volumes before adjustment factors are applied*

1 Approach Lane		
D (ft)	Major Vol.	Minor Vol.

*After adjustment factors are applied*

1 Approach Lane w/Factors		
D (ft)	Major Vol.	Minor Vol.

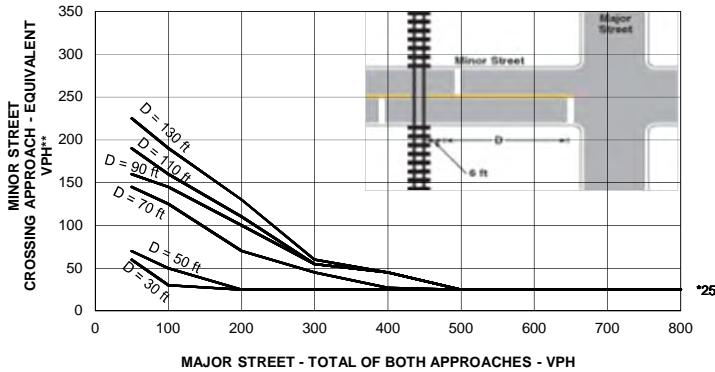
*Input D and the major and minor street volumes before adjustment factors are applied*

2 or more Approach Lanes		
D (ft)	Major Vol.	Minor Vol.

*After adjustment factors are applied*

2+ Approach Lane w/Factors		
D (ft)	Major Vol.	Minor Vol.

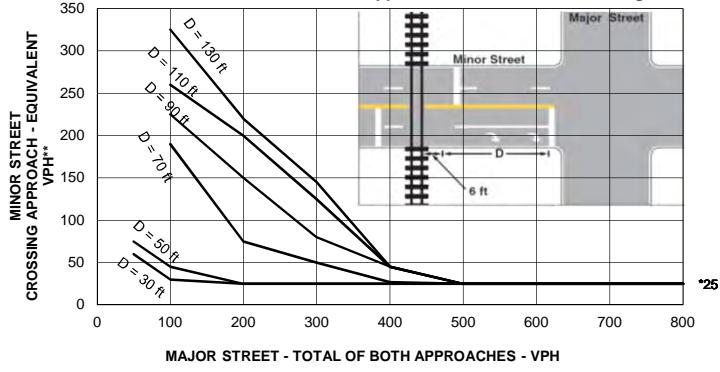
**FIGURE 4C-9: Criteria for 1 Approach Lane at the Track Crossing**



\* Note: 25 vph applies as the lower threshold volume

\* \*Note: VPH after applying the adjustment factors in Tables 4C-2, 4C, and or 4C-4, if appropriate

**FIGURE 4C-10: Criteria for 2+ Approach Lanes at Track Crossing**



\* Note: 25 vph applies as the lower threshold volume

\* \*Note: VPH after applying the adjustment factors in Tables 4C-2, 4C, and or 4C-4, if appropriate

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Existing Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue  
 Minor Street: NW 88th Street

Lanes: 2 Major Approach Speed: 40  
 Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**CONCLUSIONS**

Remarks:

**WARRANTS SATISFIED:**

Warrant 1	<input type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 2	<input type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 3	<input type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 4	<input type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 5	<input type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 6	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 7	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 8	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 9	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met

## TRAFFIC SIGNAL WARRANT SUMMARY

Form 750-020-01  
TRAFFIC ENGINEERING

### Introduction

- The Signal Warrant Analysis Spreadsheets are a tool for assisting traffic engineers when evaluating the need for a traffic signal installation
  - The filled spreadsheets can be used as part of the supporting documents for the signal warrant evaluation
- Note: These templates are a useful resource, but it remains necessary to apply engineering judgment and to consider specific environmental, traffic, geometric, and operational conditions

### Instructions

*Fill in "Orange" areas only*

*Automated cells based on Input Data in "orange" cells*

#### General Information

Fill in below the general information including:

District, County (drop-down menu)

City, Engineer, Date

Major and Minor Street with corresponding number of lanes and speed limits

#### Enter Eight Hour Volumes

Any 8 hours of an average day. Major-street and minor-street volumes shall be for the same 8 hours; however, the 8 hours satisfied in Condition A shall **not** be required to be the same 8 hours satisfied in Condition B **for 80% columns only**. On the minor street, the higher volume shall not be required to be on the same approach during each of the 8 hours.

#### Enter Four Hour Volumes

Any 4 hours of an average day. Vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor-street approach (one direction only, not required to be on the same approach during each of the 4 hours)

#### Enter Pedestrian Volumes (4-h Pedestrians per hour crossing the major street (total of all crossings)

#### Enter Peak Hour Volumes

Vehicular: Any four consecutive 15-minute periods of an average day

Pedestrian: Any four consecutive 15-minute periods of an average day representing the vehicles per hour on the major street (total of both approaches) and the corresponding pedestrians per hour crossing the major street (total of all crossings)

### Input Data

City:	Doral
County:	87 – Miami Dade
District:	Six

Engineer: IPA - Future Conditions  
Date: March 29, 2024

Major Street: NW 107th Avenue  
Minor Street: NW 88th Street

Major Street # Lanes: 2  
Minor Street # Lanes: 1

Major Approach Speed: 40  
Minor Approach Speed: 30

Eight Hour Volumes (Condition A)			For Warrant 7
Hours	Major Street (total of both approaches)	Minor Street (one direction only)	Ped Crossings on Major Street
7:00 - 8:00 AM	1,067	269	47
8:00 - 9:00 AM	1,189	266	10
12:00 - 1:00 PM	1,040	128	
2:00 - 3:00 PM	1,019	174	
3:00 - 4:00 PM	1,068	162	
4:00 - 5:00 PM	1,238	178	5
5:00 - 6:00 PM	1,468	178	9
6:00 - 7:00 PM	1,223	189	

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7:00 - 8:00 AM	1,067	269
8:00 - 9:00 AM	1,189	266
12:00 - 1:00 PM	1,040	128
2:00 - 3:00 PM	1,019	174
3:00 - 4:00 PM	1,068	162
4:00 - 5:00 PM	1,238	178
5:00 - 6:00 PM	1,468	178
6:00 - 7:00 PM	1,223	189

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
8:00 - 9:00 AM	1,189	266
4:00 - 5:00 PM	1,238	178
5:00 - 6:00 PM	1,468	178
6:00 - 7:00 PM	1,223	189

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
7:00 - 8:00 AM	1,097	47
8:00 - 9:00 AM	1,216	10
4:00 - 5:00 PM	1,258	5
5:00 - 6:00 PM	1,479	9

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
5:00 - 6:00 PM	1,468	178	1,646

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
7:00 - 8:00 AM	1,097	47

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Future Conditions**  
 Date: **March 29, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 88th Street** Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No  
 2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**WARRANT 1 - EIGHT-HOUR VEHICULAR VOLUME**

*Warrant 1 is satisfied if Condition A **or** Condition B is "100%" satisfied for eight hours.*  Yes  No

*Warrant 1 is also satisfied if both Condition A **and** Condition B are "80%" satisfied (should only be applied after an adequate trial of other alternatives that could cause less delay and inconvenience to traffic has failed to solve the traffic problems).*  Yes  No

*Warrant 1 is satisfied if Condition A **or** Condition B is "70%" satisfied for eight hours.*  Yes  No

**Condition A - Minimum Vehicular Volume**

Applicable:  Yes  No

100% Satisfied:  Yes  No

80% Satisfied:  Yes  No

70% Satisfied:  Yes  No

*Condition A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal.*

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>
1	1	500	400	350	150	120	105
2 or more	1	600	480	420	150	120	105
2 or more	2 or more	600	480	420	200	160	140
1	2 or more	500	400	350	200	160	140

<sup>a</sup> Basic Minimum hourly volume

<sup>b</sup> Used for combination of Conditions A and B after adequate trial of other remedial measures

<sup>c</sup> May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Street	Eight Highest Hours							
	7:00 - 8:00 AM	8:00 - 9:00 AM	12:00 - 1:00 PM	2:00 - 3:00 PM	3:00 - 4:00 PM	4:00 - 5:00 PM	5:00 - 6:00 PM	6:00 - 7:00 PM
Major	1,067	1,189	1,040	1,019	1,068	1,238	1,468	1,223
Minor	269	266	128	174	162	178	178	189

Existing Volumes

**TRAFFIC SIGNAL WARRANT SUMMARY****Condition B - Interruption of Continuous Traffic**

*Condition B is intended for application where Condition A is not satisfied and the traffic volume on a major street is so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.*

Applicable:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
100% Satisfied:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
80% Satisfied:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
70% Satisfied:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Number of Lanes for moving traffic on each approach		Vehicles per hour on major-street (total of both approaches)			Vehicles per hour on minor-street (one direction only)		
Major	Minor	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>	100% <sup>a</sup>	80% <sup>b</sup>	70% <sup>c</sup>
1	1	750	600	525	75	60	53
2 or more	1	900	720	630	75	60	53
2 or more	2 or more	900	720	630	100	80	70
1	2 or more	750	600	525	100	80	70

<sup>a</sup> Basic Minimum hourly volume<sup>b</sup> Used for combination of Conditions A and B after adequate trial of other remedial measures<sup>c</sup> May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

Record 8 highest hours and the corresponding major-street and minor-street volumes in the Instructions Sheet.

Eight Highest Hours									
Street	7:00 - 8:00 AM	8:00 - 9:00 AM	12:00 - 1:00 PM	2:00 - 3:00 PM	3:00 - 4:00 PM	4:00 - 5:00 PM	5:00 - 6:00 PM	6:00 - 7:00 PM	
Major	1,067	1,189	1,040	1,019	1,068	1,238	1,468	1,223	
Minor	269	266	128	174	162	178	178	189	

**Existing Volumes**

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Future Conditions**  
 Date: **March 29, 2024**

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
 Minor Street: **NW 88th Street** Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No
2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No

"70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"

MAY

70%  100%

**WARRANT 2 - FOUR-HOUR VEHICULAR VOLUME**

If all four points lie above the appropriate line, then the warrant is satisfied.

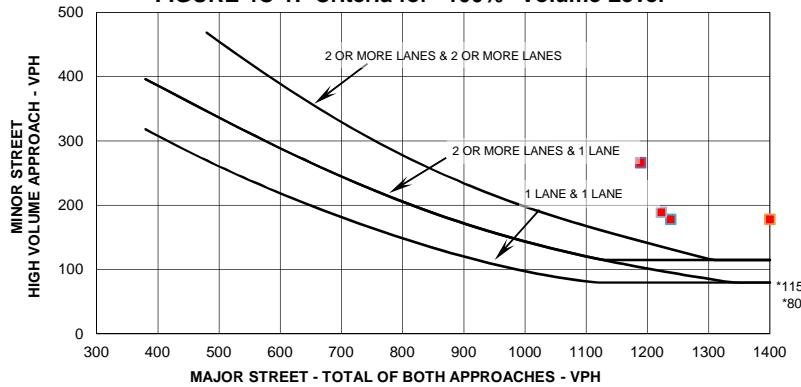
Applicable:  Yes  No

Satisfied:  Yes  No

Plot four volume combinations on the applicable figure below.

**100% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Minor Street
8:00 - 9:00 AM	1189	266
4:00 - 5:00 PM	1238	178
5:00 - 6:00 PM	1468	178
6:00 - 7:00 PM	1223	189

**FIGURE 4C-1: Criteria for "100%" Volume Level**

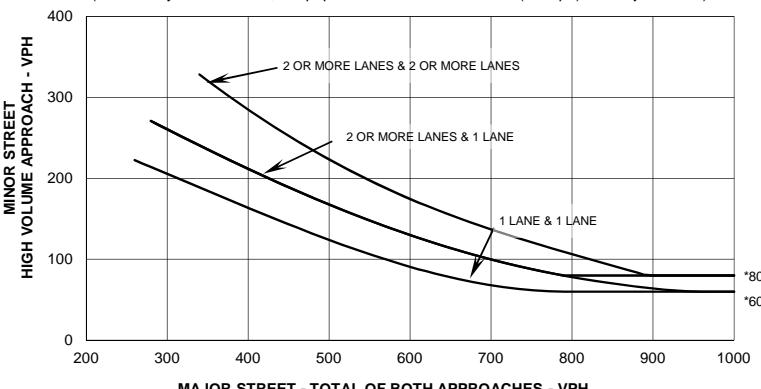
\* Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.

**70% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Minor Street

**FIGURE 4C-2: Criteria for "70%" Volume Level**

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



\* Note: 80 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 60 ph. applies as the lower threshold volume threshold for a minor street approach with one lane.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 88th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 40 mph?  Yes  No
  2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No
- "70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**WARRANT 3 - PEAK HOUR**

If all three criteria are fulfilled **or** the plotted point lies above the appropriate line, then the warrant is satisfied.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Unusual condition justifying use of warrant:  
Industrial Complex  
 -

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour 100% Volume		
Time	Major Vol.	Minor Vol.
5:00 - 6:00 PM	1468	178

Peak Hour 70% Volume		
Time	Major Vol.	Minor Vol.

**Criteria****1. Delay on Minor Approach  
(vehicle-hours)**

Approach Lanes	1	2
Delay Criteria*	4.0	5.0
Delay*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**2. Volume on Minor Approach  
One-Direction \*(vehicles per hour)**

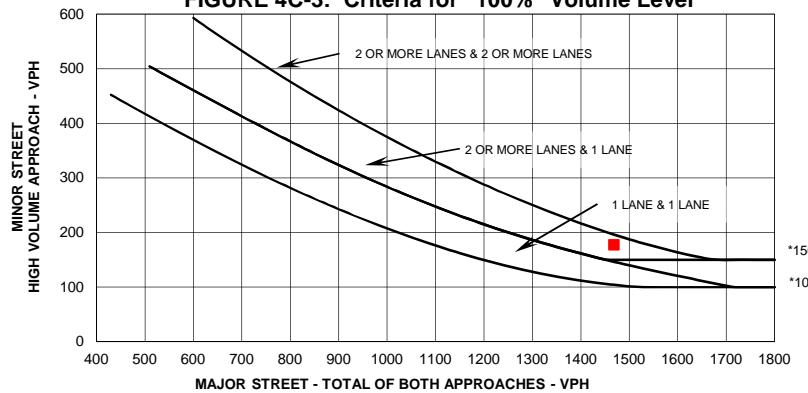
Approach Lanes	1	2
Volume Criteria*	100	150
Volume*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

**3. Total Intersection Entering Volume \*(vehicles per hour)**

No. of Approaches	3	4
Volume Criteria*	650	800
Volume*		
Fulfilled?:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Plot volume combination on the applicable figure below.

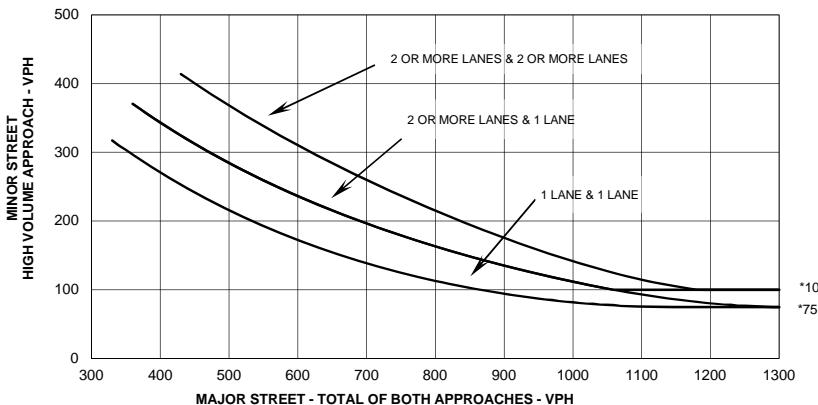
**FIGURE 4C-3: Criteria for "100%" Volume Level**



\* Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.

**FIGURE 4C-4: Criteria for "70%" Volume Level**

(Community Less than 10,000 population or above 70 km/hr. (40 mph) on Major Street)



\* Note: 100 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 75 phi applies as the lower threshold volume threshold for a minor street approach with one lane.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Future Conditions**  
 Date: **March 29, 2024**

Major Street: **NW 107th Avenue**  
 Minor Street: **NW 88th Street**

Lanes: **2**  
 Major Approach Speed: **40**  
 Lanes: **1**  
 Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Volume Level Criteria**

1. Is the posted speed or 85th-percentile of major street > 35 mph?  Yes  No
  2. Is the intersection in a built-up area of an isolated community with a population < 10,000?  Yes  No
- "70%" volume level **may** be used if Question 1 **or** 2 above is answered "Yes"  MAY  70%  100%

**Option**

Pedestrian volume crossing the major street **may** be reduced as much as 50% if the 15th-percentile crossing speed of pedestrians is less than 3.5 ft/sec. A walking speed study was conducted which reported a pedestrian speed less than 3.5 ft/sec for the 15th percentile.

Yes  No

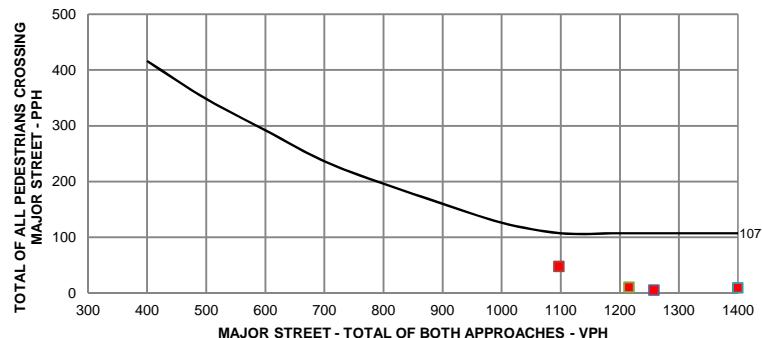
**WARRANT 4 - PEDESTRIAN VOLUME**

For each of any 4 hours of an average day, the plotted points lie above the appropriate line, then the warrant is satisfied.

Applicable:  Yes  No  
 Satisfied:  Yes  No

Plot four volume combinations on the applicable figure below.

**Figure 4C-5. Criteria for "100%" Volume Level**

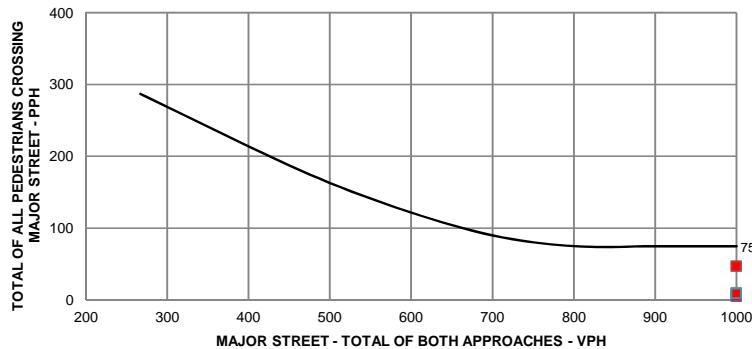
**100% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	1097	47
8:00 - 9:00 AM	1216	10
4:00 - 5:00 PM	1258	5
4:00 - 5:00 PM	1479	9

**70% Volume Level**

Four Highest Hours	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	1097	47
8:00 - 9:00 AM	1216	10
4:00 - 5:00 PM	1258	5
4:00 - 5:00 PM	1479	9

**Figure 4C-6 Criteria for "70%" Volume Level**



## WARRANT 4 - PEDESTRIAN VOLUME

For 1 hour (any four consecutive 15-minute periods) of an average day, the plotted point falls above the appropriate line, then the warrant is satisfied.

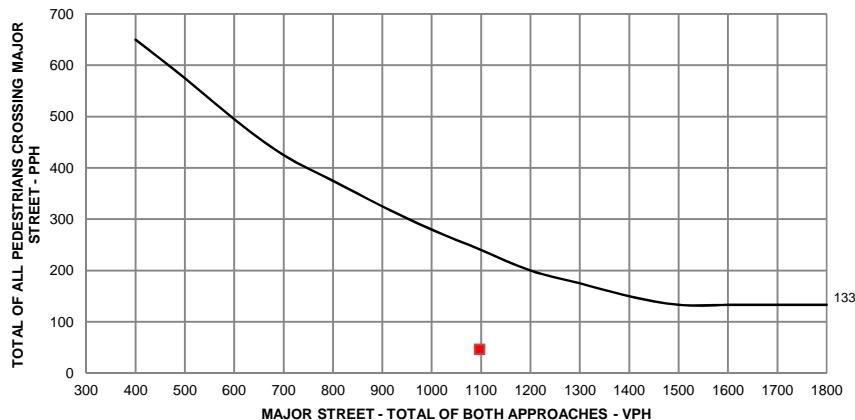
Applicable:  Yes  No  
Satisfied:  Yes  No

Plot one volume combination on the applicable figure below.

### 100% Volume Level

Peak Hour	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	1097	47

**Figure 4C-7. Criteria for "100%" Volume Level - Peak Hour**

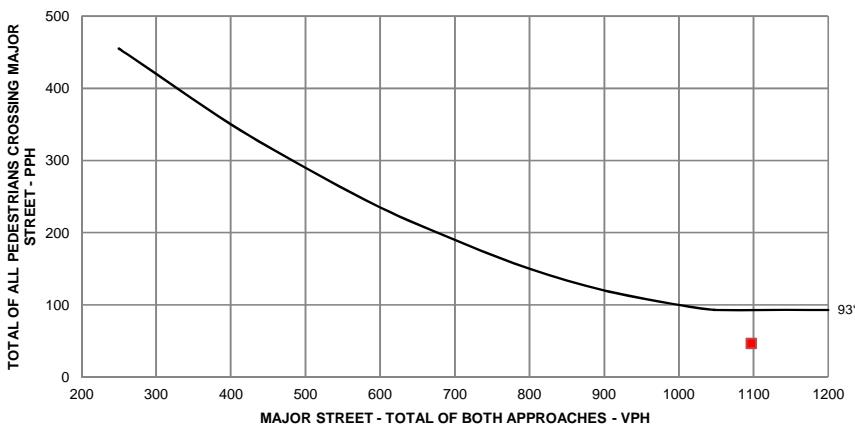


\* Note: 133 pph applies as the lower threshold volume

### 70% Volume Level

Peak Hour	Volumes	
	Major Street	Pedestrian Total
7:00 - 8:00 AM	1097	47

**Figure 4C-8 Criteria for "70%" Volume Level - Peak Hour**



\* Note: 93 pph applies as the lower threshold volume

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
 County: **87 – Miami Dade**  
 District: **Six**

Engineer: **DPA - Future Conditions**  
 Date: **March 29, 2024**

Major Street: **NW 107th Avenue**  
 Minor Street: **NW 88th Street**

Lanes: **2** Major Approach Speed: **40**  
 Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 5 - SCHOOL CROSSING**

Record hours where criteria are fulfilled and the corresponding volume or gap frequency in the boxes provided. The warrant is satisfied if all three of the criteria are fulfilled.

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria	Fulfilled?			
	Yes	No		
1. There are a minimum of 20 students crossing the major street during the highest crossing hour.	Students: <b>47</b>	Hour: <b>7:00am</b>	<b>Yes</b>	
2. There are fewer adequate gaps in the major street traffic stream during the period when the children are using the established school crossing than the number of minutes in the same period.	Minutes:	Gaps:		<b>No</b>
3. The nearest traffic signal along the major street is located more than 300 ft. (90 m) away, or the nearest signal is within 300 ft. (90 m) but the proposed traffic signal will not restrict the progressive movement of traffic.			<b>Yes</b>	

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 88th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 6 - COORDINATED SIGNAL SYSTEM**

*Indicate if the criteria are fulfilled in the boxes provided. The warrant is satisfied if either criterion is fulfilled. This warrant should not be applied when the resulting signal spacing would be less than 300 m (1,000 ft.).*

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria	Fulfilled?	
	Yes	No
1. On a one-way street or a street that has traffic predominately in one direction, the adjacent signals are so far apart that they do not provide the necessary degree of vehicle platooning.		
2. On a two-way street, adjacent signals do not provide the necessary degree of platooning, and the proposed and adjacent signals will collectively provide a progressive operation.		

# **TRAFFIC SIGNAL WARRANT SUMMARY**

City: **Doral**  
County: **87 – Miami Dade**  
District: **Six**

**Engineer:** DPA - Future Conditions  
**Date:** March 29, 2024

Major Street: **NW 107th Avenue** Lanes: **2** Major Approach Speed: **40**  
Minor Street: **NW 88th Street** Lanes: **1** Minor Approach Speed: **30**

MUTCD Electronic Reference to Chapter 4:  
<http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

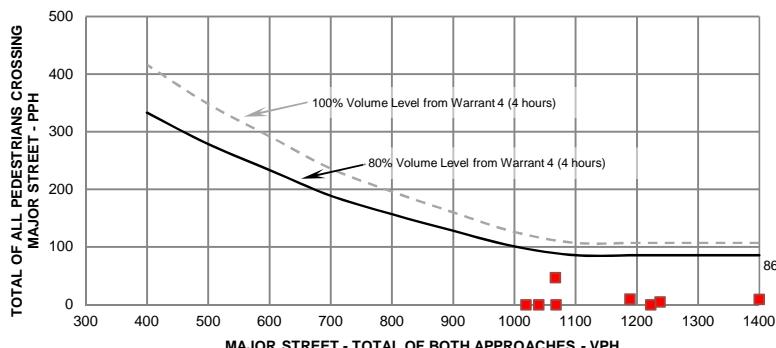
## **WARRANT 7 - CRASH EXPERIENCE**

Record hours where criteria are fulfilled, the corresponding volume, and other information in the boxes provided. The warrant is satisfied if **all three** of the criteria are fulfilled.

Applicable:  Yes  No

Criteria				Fulfilled?			
	Yes	No					
1. Adequate trial of other remedial measure has failed to reduce crash frequency.	Measure tried:						
2. Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12-month period.	Observed Crash Types:		Number of crashes per 12 months:				
3. One of the following volume warrants is met:				Met?			
Warrant 1, Condition A (80% satisfied), or				No			
Warrant 1, Condition B (80% satisfied), or				Yes			
Warrant 4, Pedestrian Volume satisfied at 80% of volume requirements for any 8 hours of an average day.	Hour	Major Street Volume	Ped Crossings Volume	Yes			
	:00 - 8:00 AM	1067	47				
	:00 - 9:00 AM	1189	10				
	2:00 - 1:00 PM	1040					
	:00 - 3:00 PM	1019					
	:00 - 4:00 PM	1068					
	:00 - 5:00 PM	1238	5				
	:00 - 6:00 PM	1468	9				
	:00 - 7:00 PM	1223					

**Figure 4C-5. Criteria for "100%" Volume Level**



\* Note: 86 ppb applies as the lower threshold volume for the 80% volume threshold.

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue  
 Minor Street: NW 88th Street

Lanes: 2 Major Approach Speed: 40  
 Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**WARRANT 8 - ROADWAY NETWORK**

Record hours where criteria are fulfilled, and the corresponding volume or other information in the boxes provided. The warrant is satisfied if at least one of the criteria is fulfilled and if all intersecting routes have one or more of the Major Route characteristics listed.

Applicable:  Yes  No

Satisfied:  Yes  No

Criteria				Met?		Fulfilled?	
				Yes	No	Yes	No
1. Both of the criteria to the right are met.	a. Total entering volume of at least 1,000 veh/hr during a typical weekday peak hour.			Entering Volume:			
	b. Five-year projected volumes that satisfy one or more of Warrants 1, 2, or 3.			Warrant:	1    2    3		
				Satisfied?:			
2. Total entering volume at least 1,000 veh/hr for each of any 5 hrs of a non-normal business day (Sat. or Sun.)						← Hour	
						← Volume	

Characteristics of Major Routes				Met?		Fulfilled?	
				Yes	No	Yes	No
1. Part of the street or highway system that serves as the principal roadway network for through traffic flow.				Major Street:			
				Minor Street:			
2. Rural or suburban highway outside of, entering, or traversing a city.				Major Street:			
				Minor Street:			
3. Appears as a major route on an official plan.				Major Street:			
				Minor Street:			

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue Lanes: 2 Major Approach Speed: 40  
 Minor Street: NW 88th Street Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**Approach Lane Criteria**

1. How many approach lanes are there at the track crossing?

1  2 or more

If there is 1 lane, use Figure 4C-9 and if there are 2 or more, use Figure 4C-10.

Fig 4C-9  Fig 4C-10

**WARRANT 9 - INTERSECTION NEAR A GRADE CROSSING**

*This signal warrant should be applied only after adequate consideration has been given to other alternatives or after a trial of an alternative has failed to alleviate the safety concerns associated with the grade crossing.*

Indicate if both criteria are fulfilled in the boxes provided. The warrant is satisfied if both criteria are met.

Applicable:  Yes  No  
 Satisfied:  Yes  No

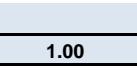
Criteria	Fulfilled?	
	Yes	No
1. A grade crossing exists on an approach controlled by a STOP or YIELD sign and the center of the track nearest to the intersection is within 140 feet of the stop line or yield line on the approach; and	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. During the highest traffic volume hour during which the rail uses the crossing, the plotted point falls above the applicable curve for the existing combination of approach lanes over the track and the distance D (clear storage distance).	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Use the following tables (4C-2, 4C-3, and 4C-4 to appropriately adjust the minor-street approach volume).

**Inputs**

Occurrences of Rail traffic per day  
% of High Occupancy Buses on Approach Lane at Track Crossing  
Enter D (feet)  
% of Tractor-Trailer Trucks on Approach Lane at Track Crossing

**Adjustment Factors from Tables**

	
	1.00
	

**Table 4C-2. Adjustment Factor for Daily Frequency of Rail Traffic**

Rail Traffic per Day	Adjustment Factor
1	0.67
2	0.91
3 to 5	1.00
6 to 8	1.18
9 to 11	1.25
12 or more	1.33

**Table 4C-3. Adjustment Factor for Percentage of High-Occupancy Buses**

% of High-Occupancy Buses* on Minor Street Approach	Adjustment Factor
0%	1.00
2%	1.09
4%	1.19
6% or more	1.32

\* A high-occupancy bus is defined as a bus occupied by at least 20 people

**Table 4C-4. Adjustment Factor for Percentage of Tractor-Trailer Trucks**

% of Tractor-Trailer Trucks on Minor Street Approach	Adjustment Factor	
	D less than 70 feet	D of 70 feet or more
0% to 2.5%	0.50	0.50
2.6% to 7.5%	0.75	0.75
7.6% to 12.5%	1.00	1.00
12.6% to 17.5%	2.30	1.15
17.6% to 22.5%	2.70	1.35
22.6% to 27.5%	3.28	1.64
More than 27.5%	4.18	2.09

*Input the major and minor street volumes before adjustment factors are applied*

1 Approach Lane		
D (ft)	Major Vol.	Minor Vol.

*After adjustment factors are applied*

1 Approach Lane w/Factors		
D (ft)	Major Vol.	Minor Vol.

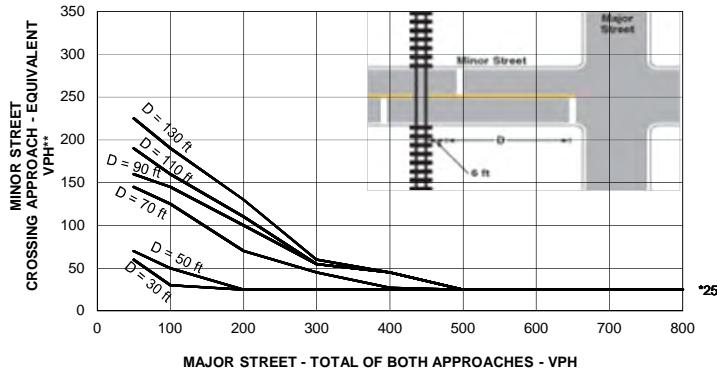
*Input D and the major and minor street volumes before adjustment factors are applied*

2 or more Approach Lanes		
D (ft)	Major Vol.	Minor Vol.

*After adjustment factors are applied*

2+ Approach Lane w/Factors		
D (ft)	Major Vol.	Minor Vol.

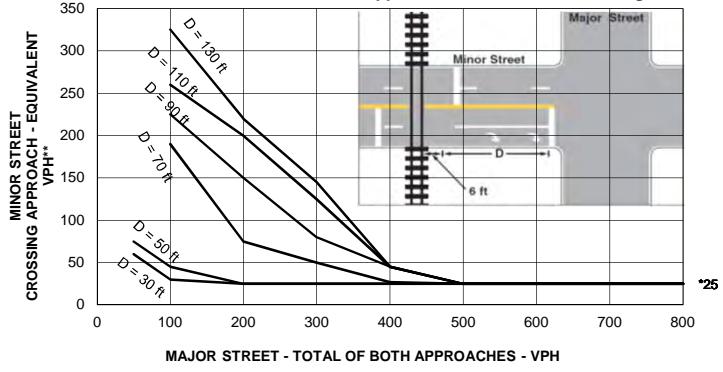
**FIGURE 4C-9: Criteria for 1 Approach Lane at the Track Crossing**



\* Note: 25 vph applies as the lower threshold volume

\* \*Note: VPH after applying the adjustment factors in Tables 4C-2, 4C, and or 4C-4, if appropriate

**FIGURE 4C-10: Criteria for 2+ Approach Lanes at Track Crossing**



\* Note: 25 vph applies as the lower threshold volume

\* \*Note: VPH after applying the adjustment factors in Tables 4C-2, 4C, and or 4C-4, if appropriate

**TRAFFIC SIGNAL WARRANT SUMMARY**

City: Doral  
 County: 87 – Miami Dade  
 District: Six

Engineer: DPA - Future Conditions  
 Date: March 29, 2024

Major Street: NW 107th Avenue  
 Minor Street: NW 88th Street

Lanes: 2 Major Approach Speed: 40  
 Lanes: 1 Minor Approach Speed: 30

MUTCD Electronic Reference to Chapter 4: <http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pdf>

**CONCLUSIONS**

Remarks:

**WARRANTS SATISFIED:**

Warrant 1	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 2	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 3	<input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Met	<input type="checkbox"/> Not Met
Warrant 4	<input type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 5	<input type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 6	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 7	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 8	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met
Warrant 9	<input checked="" type="checkbox"/> Not Applicable	<input type="checkbox"/> Met	<input checked="" type="checkbox"/> Not Met

**VOLUME****NW 107th Ave Bet. NW 88th St & NW 90th St**

Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_001

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					5,922	5,532	0	0	11,454								
<b>15-Minutes Interval</b>																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	11	19			30	12:00	65	123			188	00:00	01:00	49	48		97
00:15	13	9			22	12:15	76	99			175	01:00	02:00	14	20		34
00:30	13	10			23	12:30	92	106			198	02:00	03:00	26	10		36
00:45	12	10			22	12:45	83	94			177	03:00	04:00	23	12		35
01:00	8	6			14	13:00	74	87			161	04:00	05:00	62	27		89
01:15	2	5			7	13:15	87	78			165	05:00	06:00	153	74		227
01:30	2	3			5	13:30	72	86			158	06:00	07:00	244	180		424
01:45	2	6			8	13:45	76	66			142	07:00	08:00	390	329		719
02:00	3	6			9	14:00	84	76			160	08:00	09:00	464	449		913
02:15	7	4			11	14:15	73	74			147	09:00	10:00	291	335		626
02:30	4	0			4	14:30	105	92			197	10:00	11:00	231	207		438
02:45	12	0			12	14:45	86	94			180	11:00	12:00	273	262		535
03:00	4	2			6	15:00	76	99			175	12:00	13:00	316	422		738
03:15	5	2			7	15:15	72	100			172	13:00	14:00	309	317		626
03:30	7	5			12	15:30	82	101			183	14:00	15:00	348	336		684
03:45	7	3			10	15:45	82	78			160	15:00	16:00	312	378		690
04:00	8	4			12	16:00	77	98			175	16:00	17:00	389	369		758
04:15	15	4			19	16:15	87	82			169	17:00	18:00	535	450		985
04:30	17	12			29	16:30	114	111			225	18:00	19:00	450	384		834
04:45	22	7			29	16:45	111	78			189	19:00	20:00	277	254		531
05:00	32	11			43	17:00	120	124			244	20:00	21:00	238	215		453
05:15	19	17			36	17:15	136	116			252	21:00	22:00	247	196		443
05:30	57	16			73	17:30	154	110			264	22:00	23:00	168	174		342
05:45	45	30			75	17:45	125	100			225	23:00	00:00	113	84		197
06:00	42	20			62	18:00	133	115			248	<b>STATISTICS</b>					
06:15	51	48			99	18:15	120	101			221		NB	SB	EB	WB	TOTAL
06:30	75	51			126	18:30	100	92			192	Peak Period	00:00	to	12:00		
06:45	76	61			137	18:45	97	76			173	Volume	2220	1953			4173
07:00	69	95			164	19:00	88	74			162	Peak Hour	7:45	8:00			7:45
07:15	88	88			176	19:15	70	72			142	Peak Volume	494	449			923
07:30	109	73			182	19:30	51	63			114	Peak Hour Factor	0.908	0.898			0.919
07:45	124	73			197	19:45	68	45			113	Peak Period					
08:00	108	125			233	20:00	54	55			109	12:00	to	00:00			
08:15	136	115			251	20:15	59	51			110	Volume	3702	3579			7281
08:30	126	116			242	20:30	64	53			117	Peak Hour	17:15	17:00			17:15
08:45	94	93			187	20:45	61	56			117	Peak Volume	548	450			989
09:00	81	96			177	21:00	58	62			120	Peak Hour Factor	0.890	0.907			0.937
09:15	69	102			171	21:15	69	46			115	Peak Period					
09:30	68	78			146	21:30	52	48			100	07:00	to	09:00			
09:45	73	59			132	21:45	68	40			108	Volume	854	778			1632
10:00	60	62			122	22:00	53	48			101	Peak Hour	7:45	8:00			7:45
10:15	52	50			102	22:15	43	54			97	Peak Volume	494	449			923
10:30	58	46			104	22:30	33	45			78	Peak Hour Factor	0.908	0.898			0.919
10:45	61	49			110	22:45	39	27			66	Peak Period					
11:00	65	73			138	23:00	29	29			58	16:00	to	18:00			
11:15	65	56			121	23:15	29	18			47	Volume	924	819			1743
11:30	76	56			132	23:30	28	21			49	Peak Hour	17:00	17:00			17:00
11:45	67	77			144	23:45	27	16			43	Peak Volume	535	450			985
<b>TOTALS</b>	<b>2220</b>	<b>1953</b>	<b>0</b>	<b>0</b>	<b>4173</b>	<b>TOTALS</b>	<b>3702</b>	<b>3579</b>	<b>0</b>	<b>0</b>	<b>7281</b>	<b>Peak Hour Factor</b>	<b>0.869</b>	<b>0.907</b>			<b>0.933</b>
SPLIT %	53%	47%	0%	0%	36%	SPLIT %	51%	49%	0%	0%	64%						

**VOLUME****NW 107th Ave Bet. NW 88th St & NW 90th St**

Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_001

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					5,753	5,387	0	0	11,140								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	23	24			47	12:00	71	110			181	00:00	67	62			129
00:15	18	11			29	12:15	89	96			185	01:00	28	30			58
00:30	10	13			23	12:30	92	103			195	02:00	18	13			31
00:45	16	14			30	12:45	76	97			173	03:00	29	12			41
01:00	9	14			23	13:00	85	87			172	04:00	79	29			108
01:15	7	7			14	13:15	99	84			183	05:00	158	69			227
01:30	5	3			8	13:30	95	72			167	06:00	231	202			433
01:45	7	6			13	13:45	103	79			182	07:00	399	297			696
02:00	6	2			8	14:00	83	104			187	08:00	418	416			834
02:15	2	4			6	14:15	76	91			167	09:00	252	296			548
02:30	3	7			10	14:30	95	74			169	10:00	244	264			508
02:45	7	0			7	14:45	73	79			152	11:00	219	257			476
03:00	5	1			6	15:00	83	83			166	12:00	328	406			734
03:15	7	8			15	15:15	81	84			165	13:00	382	322			704
03:30	6	2			8	15:30	71	109			180	14:00	327	348			675
03:45	11	1			12	15:45	96	107			203	15:00	331	383			714
04:00	10	6			16	16:00	84	106			190	16:00	417	398			815
04:15	15	8			23	16:15	107	91			198	17:00	531	462			993
04:30	19	11			30	16:30	102	103			205	18:00	362	311			673
04:45	35	4			39	16:45	124	98			222	19:00	287	239			526
05:00	19	15			34	17:00	123	123			246	20:00	225	179			404
05:15	36	11			47	17:15	129	133			262	21:00	213	182			395
05:30	57	25			82	17:30	138	95			233	22:00	131	117			248
05:45	46	18			64	17:45	141	111			252	23:00	77	93			170
06:00	41	35			76	18:00	99	107			206	STATISTICS					
06:15	58	41			99	18:15	100	73			173	Peak Period	00:00 to 12:00				
06:30	58	64			122	18:30	82	61			143	Volume	2142	1947			4089
06:45	74	62			136	18:45	81	70			151	Peak Hour	7:30	7:45			7:45
07:00	64	71			135	19:00	67	75			142	Peak Volume	464	416			862
07:15	106	68			174	19:15	87	47			134	Peak Hour Factor	0.823	0.860			0.859
07:30	113	89			202	19:30	65	62			127	Peak Period	12:00 to 00:00				
07:45	116	69			185	19:45	68	55			123	Volume	3611	3440			7051
08:00	94	116			210	20:00	58	58			116	Peak Hour	17:00	17:00			17:00
08:15	141	110			251	20:15	66	45			111	Peak Volume	531	462			993
08:30	95	121			216	20:30	58	37			95	Peak Hour Factor	0.941	0.868			0.948
08:45	88	69			157	20:45	43	39			82	Peak Period	07:00 to 09:00				
09:00	69	93			162	21:00	64	55			119	Volume	817	713			1530
09:15	66	74			140	21:15	63	47			110	Peak Hour	7:30	7:45			7:45
09:30	60	65			125	21:30	39	45			84	Peak Volume	464	416			862
09:45	57	64			121	21:45	47	35			82	Peak Hour Factor	0.823	0.860			0.859
10:00	68	70			138	22:00	34	33			67	Peak Period	16:00 to 18:00				
10:15	56	67			123	22:15	43	28			71	Volume	948	860			1808
10:30	64	64			128	22:30	28	32			60	Peak Hour	17:00	17:00			17:00
10:45	56	63			119	22:45	26	24			50	Peak Volume	531	462			993
11:00	51	43			94	23:00	16	33			49	Peak Hour Factor	0.941	0.868			0.948
11:15	53	77			130	23:15	27	23			50						
11:30	58	69			127	23:30	16	19			35						
11:45	57	68			125	23:45	18	18			36						
<b>TOTALS</b>	<b>2142</b>	<b>1947</b>	<b>0</b>	<b>0</b>	<b>4089</b>	<b>TOTALS</b>	<b>3611</b>	<b>3440</b>	<b>0</b>	<b>0</b>	<b>7051</b>	<b>SPLIT %</b>	<b>52%</b>	<b>48%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>
<b>SPLIT %</b>	<b>52%</b>	<b>48%</b>	<b>0%</b>	<b>0%</b>	<b>37%</b>	<b>SPLIT %</b>	<b>51%</b>	<b>49%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>						



**VOLUME****NW 107th Ave Bet. NW 88th St & NW 90th St**

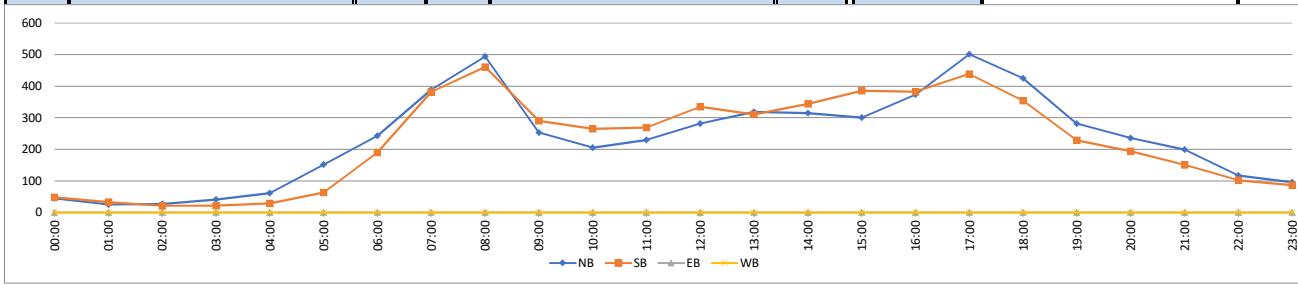
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_001

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					5,605	5,383	0	0	10,988								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	15	11			26	12:00	63	106			169	00:00	45	48			93
00:15	17	12			29	12:15	73	68			141	01:00	25	33			58
00:30	8	8			16	12:30	71	71			142	02:00	27	21			48
00:45	5	17			22	12:45	74	90			164	03:00	41	22			63
01:00	12	11			23	13:00	88	91			179	04:00	61	29			90
01:15	2	16			18	13:15	72	63			135	05:00	151	63			214
01:30	3	2			5	13:30	76	79			155	06:00	243	190			433
01:45	8	4			12	13:45	83	78			161	07:00	389	381			770
02:00	10	6			16	14:00	78	80			158	08:00	494	461			955
02:15	5	6			11	14:15	80	73			153	09:00	253	290			543
02:30	4	4			8	14:30	72	91			163	10:00	205	265			470
02:45	8	5			13	14:45	85	100			185	11:00	229	269			498
03:00	10	3			13	15:00	91	92			183	12:00	281	335			616
03:15	11	4			15	15:15	67	110			177	13:00	319	311			630
03:30	9	11			20	15:30	74	97			171	14:00	315	344			659
03:45	11	4			15	15:45	68	87			155	15:00	300	386			686
04:00	6	7			13	16:00	83	80			163	16:00	373	382			755
04:15	10	5			15	16:15	88	95			183	17:00	501	438			939
04:30	19	7			26	16:30	81	100			181	18:00	425	354			779
04:45	26	10			36	16:45	121	107			228	19:00	281	228			509
05:00	25	10			35	17:00	108	95			203	20:00	235	194			429
05:15	32	11			43	17:15	132	102			234	21:00	199	150			349
05:30	45	14			59	17:30	119	122			241	22:00	117	102			219
05:45	49	28			77	17:45	142	119			261	23:00	96	87			183
06:00	43	25			68	18:00	116	97			213	STATISTICS					
06:15	53	40			93	18:15	118	105			223	Peak Period	00:00	to	12:00		
06:30	72	41			113	18:30	105	89			194	Volume	2163	2072			4235
06:45	75	84			159	18:45	86	63			149	Peak Hour	7:45	7:45			7:45
07:00	69	97			166	19:00	67	59			126	Peak Volume	529	471			1000
07:15	97	88			185	19:15	85	56			141	Peak Hour Factor	0.931	0.823			0.877
07:30	90	97			187	19:30	63	41			104	Peak Period	12:00	to	00:00		
07:45	133	99			232	19:45	66	72			138	Volume	3442	3311			6753
08:00	126	113			239	20:00	49	53			102	Peak Hour	17:15	17:30			17:15
08:15	128	116			244	20:15	67	52			119	Peak Volume	509	443			949
08:30	142	143			285	20:30	66	51			117	Peak Hour Factor	0.896	0.908			0.909
08:45	98	89			187	20:45	53	38			91	Peak Period	07:00	to	09:00		
09:00	67	77			144	21:00	56	40			96	Volume	883	842			1725
09:15	74	86			160	21:15	56	33			89	Peak Hour	7:45	7:45			7:45
09:30	63	78			141	21:30	49	31			80	Peak Volume	529	471			1000
09:45	49	49			98	21:45	38	46			84	Peak Hour Factor	0.931	0.823			0.877
10:00	59	70			129	22:00	32	27			59	Peak Period	16:00	to	18:00		
10:15	44	68			112	22:15	30	33			63	Volume	874	820			1694
10:30	48	51			99	22:30	30	16			46	Peak Hour	17:00	17:00			17:00
10:45	54	76			130	22:45	25	26			51	Peak Volume	501	438			939
11:00	41	53			94	23:00	28	24			52	Peak Hour Factor	0.882	0.898			0.899
11:15	57	71			128	23:15	36	31			67						
11:30	62	62			124	23:30	13	17			30						
11:45	69	83			152	23:45	19	15			34						
<b>TOTALS</b>	<b>2163</b>	<b>2072</b>	<b>0</b>	<b>0</b>	<b>4235</b>	<b>TOTALS</b>	<b>3442</b>	<b>3311</b>	<b>0</b>	<b>0</b>	<b>6753</b>	<b>SPLIT %</b>	<b>51%</b>	<b>49%</b>	<b>0%</b>	<b>0%</b>	<b>61%</b>
<b>SPLIT %</b>	<b>51%</b>	<b>49%</b>	<b>0%</b>	<b>0%</b>	<b>39%</b>	<b>SPLIT %</b>	<b>51%</b>	<b>49%</b>	<b>0%</b>	<b>0%</b>	<b>61%</b>						



**VOLUME**

NW 88th St W/O NW 107th Ave

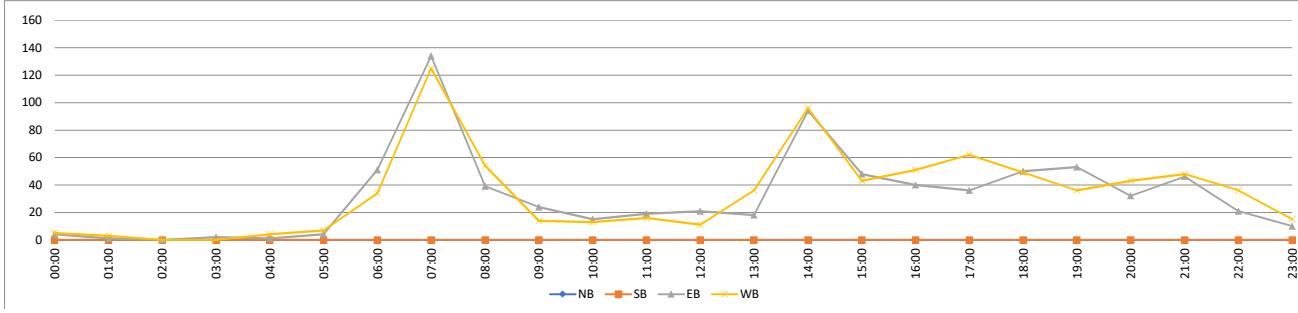
Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_002

DAILY TOTALS					NB 0	SB 0	EB 763	WB 801	Total 1,564	DAILY TOTALS							
15-Minutes Interval					Hourly Intervals												
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			1	2	3	12:00			4	3	7	00:00	01:00		4	5	9
0:15			1	2	3	12:15			5	4	9	01:00	02:00		1	3	4
0:30			1	0	1	12:30			7	2	9	02:00	03:00		0	0	0
0:45			1	1	2	12:45			5	2	7	03:00	04:00		2	0	2
1:00			0	0	0	13:00			1	8	9	04:00	05:00		1	4	5
1:15			0	2	2	13:15			5	2	7	05:00	06:00		4	7	11
1:30			1	1	2	13:30			6	12	18	06:00	07:00		51	34	85
1:45			0	0	0	13:45			6	14	20	07:00	08:00		134	125	259
2:00			0	0	0	14:00			4	27	31	08:00	09:00		39	54	93
2:15			0	0	0	14:15			33	25	58	09:00	10:00		24	14	38
2:30			0	0	0	14:30			44	27	71	10:00	11:00		15	13	28
2:45			0	0	0	14:45			13	17	30	11:00	12:00		19	16	35
3:00			0	0	0	15:00			11	17	28	12:00	13:00		21	11	32
3:15			0	0	0	15:15			14	9	23	13:00	14:00		18	36	54
3:30			1	0	1	15:30			9	10	19	14:00	15:00		94	96	190
3:45			1	0	1	15:45			14	7	21	15:00	16:00		48	43	91
4:00			0	2	2	16:00			11	8	19	16:00	17:00		40	51	91
4:15			0	1	1	16:15			7	18	25	17:00	18:00		36	62	98
4:30			0	1	1	16:30			9	8	17	18:00	19:00		50	49	99
4:45			1	0	1	16:45			13	17	30	19:00	20:00		53	36	89
5:00			1	1	2	17:00			10	12	22	20:00	21:00		32	43	75
5:15			1	3	4	17:15			6	15	21	21:00	22:00		46	48	94
5:30			1	1	2	17:30			9	13	22	22:00	23:00		21	36	57
5:45			1	2	3	17:45			11	22	33	23:00	00:00		10	15	25
6:00			2	3	5	18:00			15	12	27	STATISTICS					
6:15			3	4	7	18:15			13	15	28						
6:30			11	5	16	18:30			16	9	25						
6:45			35	22	57	18:45			6	13	19						
7:00			63	82	145	19:00			18	8	26						
7:15			54	31	85	19:15			24	14	38						
7:30			9	5	14	19:30			8	9	17						
7:45			8	7	15	19:45			3	5	8						
8:00			5	22	27	20:00			8	13	21						
8:15			13	18	31	20:15			9	10	19						
8:30			12	7	19	20:30			8	12	20						
8:45			9	7	16	20:45			7	8	15						
9:00			7	5	12	21:00			6	14	20						
9:15			6	3	9	21:15			16	10	26						
9:30			5	3	8	21:30			11	8	19						
9:45			6	3	9	21:45			13	16	29						
10:00			3	3	6	22:00			10	14	24						
10:15			6	6	12	22:15			4	7	11						
10:30			1	2	3	22:30			2	9	11						
10:45			5	2	7	22:45			5	6	11						
11:00			3	7	10	23:00			7	5	12						
11:15			2	2	4	23:15			1	4	5						
11:30			5	3	8	23:30			1	5	6						
11:45			9	4	13	23:45			1	1	2						
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>294</b>	<b>275</b>	<b>569</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>469</b>	<b>526</b>	<b>995</b>						
SPLIT %	0%	0%	52%	48%	36%	SPLIT %	0%	0%	47%	53%	64%						



**VOLUME**

NW 88th St W/O NW 107th Ave

Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_002

DAILY TOTALS					NB 0	SB 0	EB 647	WB 694	Total 1,341	DAILY TOTALS							
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			1	5	6	12:00			6	6	12	00:00	01:00		4	13	17
0:15			1	5	6	12:15			8	8	16	01:00	02:00		2	2	4
0:30			1	2	3	12:30			10	2	12	02:00	03:00		1	2	3
0:45			1	1	2	12:45			7	5	12	03:00	04:00		0	2	2
1:00			1	0	1	13:00			5	6	11	04:00	05:00		0	4	4
1:15			0	1	1	13:15			2	3	5	05:00	06:00		4	7	11
1:30			0	0	0	13:30			9	9	18	06:00	07:00		44	33	77
1:45			1	1	2	13:45			7	9	16	07:00	08:00		104	102	206
2:00			1	0	1	14:00			10	24	34	08:00	09:00		43	44	87
2:15			0	1	1	14:15			39	40	79	09:00	10:00		22	22	44
2:30			0	1	1	14:30			32	20	52	10:00	11:00		19	15	34
2:45			0	0	0	14:45			8	13	21	11:00	12:00		19	15	34
3:00			0	1	1	15:00			10	9	19	12:00	13:00		31	21	52
3:15			0	0	0	15:15			10	13	23	13:00	14:00		23	27	50
3:30			0	1	1	15:30			14	10	24	14:00	15:00		89	97	186
3:45			0	0	0	15:45			5	11	16	15:00	16:00		39	43	82
4:00			0	1	1	16:00			11	8	19	16:00	17:00		32	27	59
4:15			0	1	1	16:15			7	9	16	17:00	18:00		44	51	95
4:30			0	1	1	16:30			6	4	10	18:00	19:00		31	58	89
4:45			0	1	1	16:45			8	6	14	19:00	20:00		32	32	64
5:00			0	0	0	17:00			9	12	21	20:00	21:00		22	26	48
5:15			2	2	4	17:15			13	12	25	21:00	22:00		27	25	52
5:30			2	3	5	17:30			9	12	21	22:00	23:00		10	14	24
5:45			0	2	2	17:45			13	15	28	23:00	00:00		5	12	17
6:00			3	3	6	18:00			9	18	27	STATISTICS					
6:15			3	5	8	18:15			11	21	32	NB SB EB WB TOTAL					
6:30			11	6	17	18:30			6	7	13	Peak Period	00:00 to 12:00		262	261	523
6:45			27	19	46	18:45			5	12	17	Volume			6:30	6:45	6:30
7:00			60	65	125	19:00			11	6	17	Peak Hour			13	112	243
7:15			34	21	55	19:15			13	7	20	Peak Volume			132	112	243
7:30			5	7	12	19:30			5	11	16	Peak Hour Factor			0.550	0.431	0.486
7:45			5	9	14	19:45			3	8	11	Peak Period					
8:00			13	19	32	20:00			8	4	12	Volume	12:00 to 00:00		385	433	818
8:15			14	15	29	20:15			7	6	13	Peak Hour			14:00	14:00	14:00
8:30			13	8	21	20:30			2	8	10	Peak Volume			89	97	186
8:45			3	2	5	20:45			5	8	13	Peak Hour Factor			0.571	0.606	0.589
9:00			6	9	15	21:00			9	7	16	Peak Period					
9:15			5	6	11	21:15			13	9	22	Volume	07:00 to 09:00		147	146	293
9:30			3	3	6	21:30			4	4	8	Peak Hour			7:00	7:00	7:00
9:45			8	4	12	21:45			1	5	6	Peak Volume			104	102	206
10:00			4	3	7	22:00			2	4	6	Peak Hour Factor			0.433	0.392	0.412
10:15			6	2	8	22:15			2	3	5	Peak Period					
10:30			6	7	13	22:30			3	3	6	Volume	16:00 to 18:00		76	78	154
10:45			3	3	6	22:45			3	4	7	Peak Hour			17:00	17:00	17:00
11:00			5	2	7	23:00			2	2	4	Peak Volume			44	51	95
11:15			4	4	8	23:15			2	5	7	Peak Hour Factor			0.846	0.850	0.848
11:30			5	5	10	23:30			1	2	3						
11:45			5	4	9	23:45			0	3	3						
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>262</b>	<b>261</b>	<b>523</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>385</b>	<b>433</b>	<b>818</b>						
SPLIT %	0%	0%	50%	50%	39%	SPLIT %	0%	0%	47%	53%	61%						



**VOLUME**

NW 88th St W/O NW 107th Ave

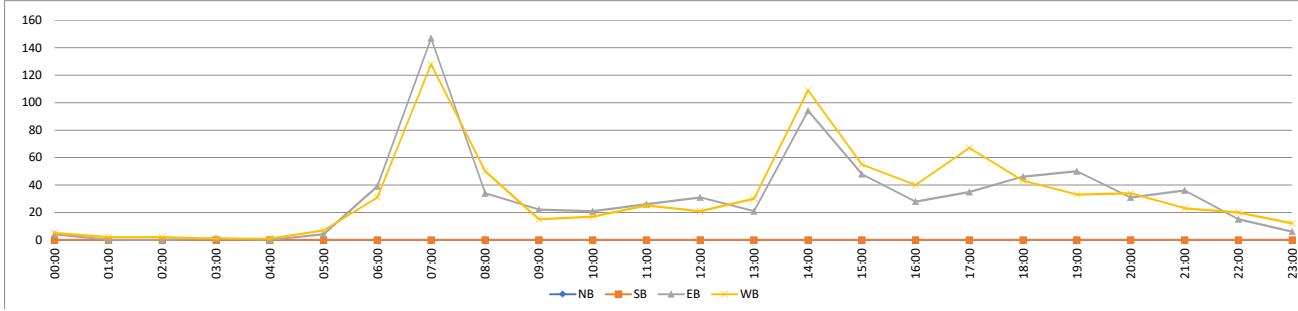
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_002

DAILY TOTALS					NB 0	SB 0	EB 739	WB 771	Total 1,510	DAILY TOTALS							
15-Minutes Interval					Hourly Intervals												
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
0:00			2	1	3	12:00			6	6	12	00:00	01:00		4	5	9
0:15			2	2	4	12:15			8	8	16	01:00	02:00		0	2	2
0:30			0	2	2	12:30			10	2	12	02:00	03:00		0	2	2
0:45			0	0	0	12:45			7	5	12	03:00	04:00		1	1	2
1:00			0	1	1	13:00			5	5	10	04:00	05:00		0	1	1
1:15			0	1	1	13:15			5	3	8	05:00	06:00		4	7	11
1:30			0	0	0	13:30			9	13	22	06:00	07:00		39	31	70
1:45			0	0	0	13:45			2	9	11	07:00	08:00		147	128	275
2:00			0	0	0	14:00			6	30	36	08:00	09:00		34	50	84
2:15			0	0	0	14:15			37	41	78	09:00	10:00		22	15	37
2:30			0	2	2	14:30			45	15	60	10:00	11:00		21	17	38
2:45			0	0	0	14:45			6	23	29	11:00	12:00		26	25	51
3:00			0	1	1	15:00			13	23	36	12:00	13:00		31	21	52
3:15			0	0	0	15:15			22	10	32	13:00	14:00		21	30	51
3:30			0	0	0	15:30			6	12	18	14:00	15:00		94	109	203
3:45			1	0	1	15:45			7	10	17	15:00	16:00		48	55	103
4:00			0	1	1	16:00			5	9	14	16:00	17:00		28	40	68
4:15			0	0	0	16:15			6	13	19	17:00	18:00		35	67	102
4:30			0	0	0	16:30			3	8	11	18:00	19:00		46	43	89
4:45			0	0	0	16:45			14	10	24	19:00	20:00		50	33	83
5:00			2	0	2	17:00			11	13	24	20:00	21:00		31	34	65
5:15			1	1	2	17:15			7	18	25	21:00	22:00		36	23	59
5:30			0	2	2	17:30			8	12	20	22:00	23:00		15	20	35
5:45			1	4	5	17:45			9	24	33	23:00	00:00		6	12	18
6:00			2	1	3	18:00			13	13	26	STATISTICS					
6:15			1	4	5	18:15			11	10	21	NB SB EB WB TOTAL					
6:30			9	4	13	18:30			6	12	18	Peak Period	00:00 to 12:00				
6:45			27	22	49	18:45			16	8	24	Volume		298	284		582
7:00			76	76	152	19:00			16	8	24	Peak Hour		6:30	6:45		6:45
7:15			54	36	90	19:15			12	11	23	Peak Volume		166	140		306
7:30			9	6	15	19:30			12	7	19	Peak Hour Factor		0.546	0.461		0.503
7:45			8	10	18	19:45			10	7	17	Peak Period					
8:00			10	23	33	20:00			5	7	12	Volume	12:00 to 00:00				
8:15			8	16	24	20:15			12	12	24	Peak Hour		441	487		928
8:30			9	6	15	20:30			5	7	12	Peak Volume		14:15	14:00		14:00
8:45			7	5	12	20:45			9	8	17	Peak Hour Factor		101	109		203
9:00			3	6	9	21:00			11	6	17	Peak Period					
9:15			7	2	9	21:15			13	4	17	Volume	07:00 to 09:00				
9:30			3	5	8	21:30			8	5	13	Peak Hour		181	178		359
9:45			9	2	11	21:45			4	8	12	Peak Volume		7:00	7:00		7:00
10:00			3	2	5	22:00			7	4	11	Peak Hour Factor		147	128		275
10:15			2	7	9	22:15			6	6	12	Peak Period					
10:30			10	4	14	22:30			2	9	11	Volume	16:00 to 18:00				
10:45			6	4	10	22:45			0	1	1	Peak Hour		63	107		170
11:00			10	6	16	23:00			1	5	6	Peak Volume		16:45	17:00		17:00
11:15			4	5	9	23:15			2	5	7	Peak Hour Factor		40	67		102
11:30			7	10	17	23:30			2	2	4	Split %					
11:45			5	4	9	23:45			1	0	1	Split %	0%	0%	48%	52%	61%
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>298</b>	<b>284</b>	<b>582</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>441</b>	<b>487</b>	<b>928</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>51%</b>	<b>49%</b>	<b>39%</b>



**VOLUME**

NW 88th St E/O NW 107th Ave

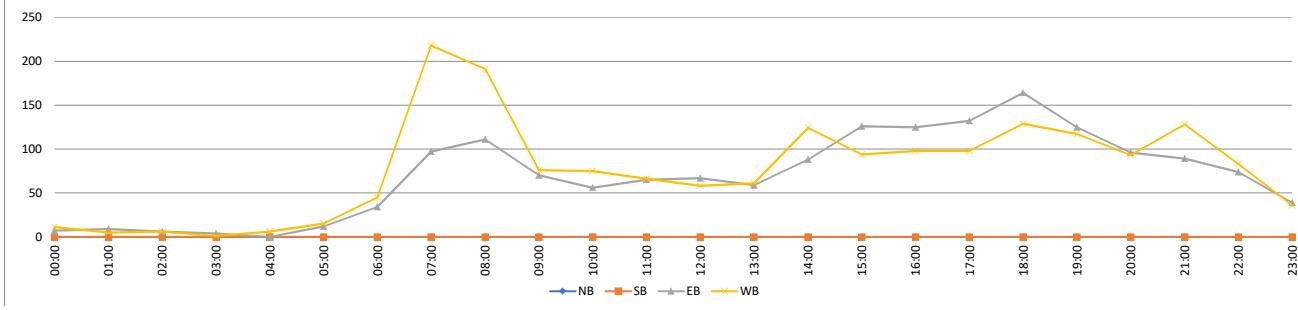
Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_003

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS								
					0	0	1,655	1,834	3,489									
15-Minutes Interval																		
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	
00:00			2	4	6	12:00			13	10	23	00:00	01:00		7	11	18	
00:15			1	2	3	12:15			14	21	35	01:00	02:00		9	5	14	
00:30			0	0	0	12:30			19	16	35	02:00	03:00		6	6	12	
00:45			4	5	9	12:45			21	11	32	03:00	04:00		4	1	5	
01:00			3	0	3	13:00			12	16	28	04:00	05:00		0	6	6	
01:15			4	2	6	13:15			17	14	31	05:00	06:00		12	15	27	
01:30			2	3	5	13:30			14	16	30	06:00	07:00		34	45	79	
01:45			0	0	0	13:45			16	15	31	07:00	08:00		97	218	315	
02:00			1	1	2	14:00			22	27	49	08:00	09:00		111	191	302	
02:15			2	1	3	14:15			17	36	53	09:00	10:00		70	76	146	
02:30			3	2	5	14:30			35	37	72	10:00	11:00		56	75	131	
02:45			0	2	2	14:45			14	24	38	11:00	12:00		65	66	131	
03:00			0	0	0	15:00			26	33	59	12:00	13:00		67	58	125	
03:15			1	0	1	15:15			36	21	57	13:00	14:00		59	61	120	
03:30			1	0	1	15:30			23	20	43	14:00	15:00		88	124	212	
03:45			2	1	3	15:45			41	20	61	15:00	16:00		126	94	220	
04:00			0	2	2	16:00			36	19	55	16:00	17:00		125	98	223	
04:15			0	1	1	16:15			35	18	53	17:00	18:00		132	98	230	
04:30			0	0	0	16:30			26	31	57	18:00	19:00		164	129	293	
04:45			0	3	3	16:45			28	30	58	19:00	20:00		125	117	242	
05:00			1	2	3	17:00			31	26	57	20:00	21:00		96	93	189	
05:15			0	4	4	17:15			34	23	57	21:00	22:00		89	128	217	
05:30			0	5	5	17:30			36	24	60	22:00	23:00		74	83	157	
05:45			11	4	15	17:45			31	25	56	23:00	00:00		39	36	75	
06:00			7	4	11	18:00			42	24	66	STATISTICS						
06:15			6	5	11	18:15			38	31	69		NB	SB	EB	WB	TOTAL	
06:30			7	11	18	18:30			50	32	82		Peak Period	00:00 to 12:00				
06:45			14	25	39	18:45			34	42	76		Volume		471	715	1186	
07:00			31	65	96	19:00			44	37	81		Peak Hour		8:00	7:00	7:45	
07:15			36	53	89	19:15			29	35	64		Peak Volume		111	218	323	
07:30			11	43	54	19:30			33	22	55		Peak Hour Factor		0.661	0.838	0.928	
07:45			19	57	76	19:45			19	23	42		Peak Period	12:00 to 00:00				
08:00			25	62	87	20:00			24	27	51		Volume		1184	1119	2303	
08:15			24	54	78	20:15			22	23	45		Peak Hour		18:15	18:30	18:15	
08:30			42	40	82	20:30			22	26	48		Peak Volume		166	146	308	
08:45			20	35	55	20:45			28	17	45		Peak Hour Factor		0.830	0.869	0.939	
09:00			21	25	46	21:00			22	36	58		Peak Period	07:00 to 09:00				
09:15			11	15	26	21:15			19	35	54		Volume		208	409	617	
09:30			20	18	38	21:30			21	27	48		Peak Hour		8:00	7:00	7:45	
09:45			18	18	36	21:45			27	30	57		Peak Volume		111	218	323	
10:00			13	23	36	22:00			26	38	64		Peak Hour Factor		0.661	0.838	0.928	
10:15			15	18	33	22:15			13	20	33		Peak Period	16:00 to 18:00				
10:30			13	22	35	22:30			18	14	32		Volume		257	196	453	
10:45			15	12	27	22:45			17	11	28		Peak Hour		17:00	16:30	16:45	
11:00			17	18	35	23:00			16	13	29		Peak Volume		132	110	232	
11:15			10	15	25	23:15			9	10	19		Peak Hour Factor		0.917	0.887	0.967	
11:30			24	18	42	23:30			5	7	12							
11:45			14	15	29	23:45			9	6	15							
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>471</b>	<b>715</b>	<b>1186</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1184</b>	<b>1119</b>	<b>2303</b>							
SPLIT %	0%	0%	40%	60%	34%	SPLIT %	0%	0%	51%	49%	66%							



**VOLUME**

NW 88th St E/O NW 107th Ave

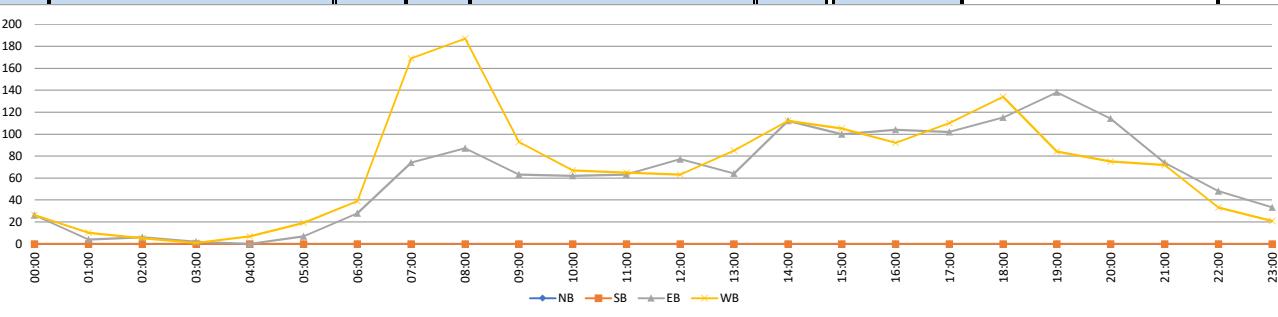
Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_003

DAILY TOTALS					NB 0	SB 0	EB 1,503	WB 1,674	Total 3,177	DAILY TOTALS								
15-Minutes Interval										Hourly Intervals								
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	
00:00			8	6	14	12:00			21	12	33	00:00	01:00		26	26	52	
00:15			9	9	18	12:15			21	19	40	01:00	02:00		4	10	14	
00:30			3	8	11	12:30			24	15	39	02:00	03:00		6	5	11	
00:45			6	3	9	12:45			11	17	28	03:00	04:00		2	1	3	
01:00			1	6	7	13:00			14	18	32	04:00	05:00		0	7	7	
01:15			2	0	2	13:15			17	20	37	05:00	06:00		7	19	26	
01:30			0	2	2	13:30			14	20	34	06:00	07:00		28	39	67	
01:45			1	2	3	13:45			19	27	46	07:00	08:00		74	169	243	
02:00			2	4	6	14:00			34	28	62	08:00	09:00		87	187	274	
02:15			2	1	3	14:15			22	32	54	09:00	10:00		63	93	156	
02:30			2	0	2	14:30			32	29	61	10:00	11:00		62	67	129	
02:45			0	0	0	14:45			24	23	47	11:00	12:00		63	65	128	
03:00			2	1	3	15:00			23	30	53	12:00	13:00		77	63	140	
03:15			0	0	0	15:15			25	28	53	13:00	14:00		64	85	149	
03:30			0	0	0	15:30			21	24	45	14:00	15:00		112	112	224	
03:45			0	0	0	15:45			31	23	54	15:00	16:00		100	105	205	
04:00			0	0	0	16:00			33	21	54	16:00	17:00		104	92	196	
04:15			0	4	4	16:15			26	23	49	17:00	18:00		102	110	212	
04:30			0	2	2	16:30			28	27	55	18:00	19:00		115	134	249	
04:45			0	1	1	16:45			17	21	38	19:00	20:00		138	84	222	
05:00			0	1	1	17:00			23	29	52	20:00	21:00		114	75	189	
05:15			3	5	8	17:15			29	27	56	21:00	22:00		74	72	146	
05:30			4	5	9	17:30			21	29	50	22:00	23:00		48	33	81	
05:45			0	8	8	17:45			29	25	54	23:00	00:00		33	21	54	
06:00			9	3	12	18:00			21	32	53	STATISTICS						
06:15			5	6	11	18:15			31	40	71		NB	SB	EB	WB	TOTAL	
06:30			5	9	14	18:30			32	33	65		Peak Period	00:00 to 12:00				
06:45			9	21	30	18:45			31	29	60		Volume		422	688	1110	
07:00			18	52	70	19:00			40	19	59		Peak Hour		8:15	7:45	7:45	
07:15			34	35	69	19:15			48	26	74		Peak Volume		94	197	274	
07:30			13	44	57	19:30			18	16	34		Peak Hour Factor		0.870	0.895	0.835	
07:45			9	38	47	19:45			32	23	55		Peak Period	12:00 to 00:00				
08:00			17	50	67	20:00			36	16	52		Volume		1081	986	2067	
08:15			27	55	82	20:15			35	25	60		Peak Hour		18:30	18:00	18:30	
08:30			24	54	78	20:30			21	14	35		Peak Volume		151	134	258	
08:45			19	28	47	20:45			22	20	42		Peak Hour Factor		0.786	0.838	0.872	
09:00			24	24	48	21:00			20	26	46		Peak Period	07:00 to 09:00				
09:15			12	27	39	21:15			24	18	42		Volume		161	356	517	
09:30			13	25	38	21:30			22	15	37		Peak Hour		8:00	7:45	7:45	
09:45			14	17	31	21:45			8	13	21		Peak Volume		87	197	274	
10:00			16	11	27	22:00			13	16	29		Peak Hour Factor		0.806	0.895	0.835	
10:15			12	20	32	22:15			13	4	17		Peak Period	16:00 to 18:00				
10:30			19	15	34	22:30			9	5	14		Volume		206	202	408	
10:45			15	21	36	22:45			13	8	21		Peak Hour		16:00	17:00	17:00	
11:00			19	14	33	23:00			13	4	17		Peak Volume		104	110	212	
11:15			11	16	27	23:15			6	4	10		Peak Hour Factor		0.788	0.948	0.946	
11:30			17	21	38	23:30			6	5	11							
11:45			16	14	30	23:45			8	8	16							
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>422</b>	<b>688</b>	<b>1110</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1081</b>	<b>986</b>	<b>2067</b>							
SPLIT %	0%	0%	38%	62%	35%	SPLIT %	0%	0%	52%	48%	65%							



**VOLUME**

NW 88th St E/O NW 107th Ave

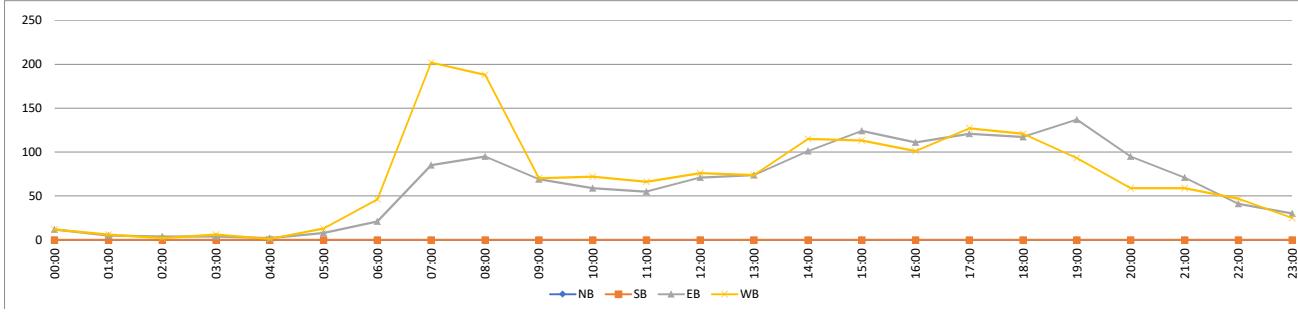
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_003

DAILY TOTALS					NB 0	SB 0	EB 1,512	WB 1,694	Total 3,206	DAILY TOTALS							
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00			2	6	8	12:00			16	16	32	00:00	01:00		12	12	24
00:15			5	5	10	12:15			23	31	54	01:00	02:00		5	6	11
00:30			4	0	4	12:30			16	12	28	02:00	03:00		4	2	6
00:45			1	1	2	12:45			16	17	33	03:00	04:00		4	6	10
01:00			2	4	6	13:00			26	20	46	04:00	05:00		2	1	3
01:15			2	0	2	13:15			13	19	32	05:00	06:00		8	13	21
01:30			0	2	2	13:30			20	20	40	06:00	07:00		21	46	67
01:45			1	0	1	13:45			15	15	30	07:00	08:00		85	202	287
02:00			0	0	0	14:00			17	32	49	08:00	09:00		95	188	283
02:15			1	1	2	14:15			23	35	58	09:00	10:00		69	70	139
02:30			1	1	2	14:30			37	18	55	10:00	11:00		59	72	131
02:45			2	0	2	14:45			24	30	54	11:00	12:00		55	66	121
03:00			1	4	5	15:00			36	36	72	12:00	13:00		71	76	147
03:15			1	1	2	15:15			39	31	70	13:00	14:00		74	74	148
03:30			1	1	2	15:30			25	21	46	14:00	15:00		101	115	216
03:45			1	0	1	15:45			24	25	49	15:00	16:00		124	113	237
04:00			1	0	1	16:00			23	16	39	16:00	17:00		111	101	212
04:15			1	0	1	16:15			29	25	54	17:00	18:00		121	127	248
04:30			0	0	0	16:30			29	31	60	18:00	19:00		117	121	238
04:45			0	1	1	16:45			30	29	59	19:00	20:00		137	93	230
05:00			1	0	1	17:00			38	28	66	20:00	21:00		95	59	154
05:15			0	4	4	17:15			28	23	51	21:00	22:00		71	59	130
05:30			0	4	4	17:30			26	43	69	22:00	23:00		41	47	88
05:45			7	5	12	17:45			29	33	62	23:00	00:00		30	25	55
06:00			4	3	7	18:00			39	35	74	STATISTICS					
06:15			2	5	7	18:15			35	36	71	NB SB EB WB TOTAL					
06:30			3	7	10	18:30			18	21	39	Peak Period	00:00 to 12:00		419	684	1103
06:45			12	31	43	18:45			25	29	54	Volume			7:45	7:30	7:45
07:00			24	55	79	19:00			27	26	53	Peak Hour			95	229	317
07:15			34	39	73	19:15			46	27	73	Peak Volume			0.819	0.881	0.871
07:30			13	52	65	19:30			42	15	57	Peak Hour Factor					
07:45			14	56	70	19:45			22	25	47	Peak Period					
08:00			26	65	91	20:00			26	14	40	Peak Period	12:00 to 00:00		1093	1010	2103
08:15			26	56	82	20:15			28	14	42	Volume			18:45	17:30	17:30
08:30			29	45	74	20:30			23	13	36	Peak Hour			140	147	276
08:45			14	22	36	20:45			18	18	36	Peak Volume			0.761	0.855	0.932
09:00			16	18	34	21:00			18	15	33	Peak Hour Factor					
09:15			23	14	37	21:15			19	12	31	Peak Period					
09:30			14	17	31	21:30			12	18	30	Peak Period	07:00 to 09:00		180	390	570
09:45			16	21	37	21:45			22	14	36	Volume			7:45	7:30	7:45
10:00			12	21	33	22:00			15	12	27	Peak Hour			95	229	317
10:15			11	14	25	22:15			11	17	28	Peak Volume			0.819	0.881	0.871
10:30			22	22	44	22:30			8	10	18	Peak Hour Factor					
10:45			14	15	29	22:45			7	8	15	Peak Period					
11:00			16	14	30	23:00			8	7	15	Peak Period	16:00 to 18:00		232	228	460
11:15			15	16	31	23:15			8	7	15	Volume			16:15	17:00	17:00
11:30			12	19	31	23:30			8	5	13	Peak Hour			126	127	248
11:45			12	17	29	23:45			6	6	12	Peak Volume			0.829	0.738	0.899
<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>419</b>	<b>684</b>	<b>1103</b>	<b>TOTALS</b>	<b>0</b>	<b>0</b>	<b>1093</b>	<b>1010</b>	<b>2103</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>38%</b>	<b>62%</b>	<b>34%</b>
<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>38%</b>	<b>62%</b>	<b>34%</b>	<b>SPLIT %</b>	<b>0%</b>	<b>0%</b>	<b>52%</b>	<b>48%</b>	<b>66%</b>						



**VOLUME****NW 107th Ave Bet. NW 86th St & NW 88th St**

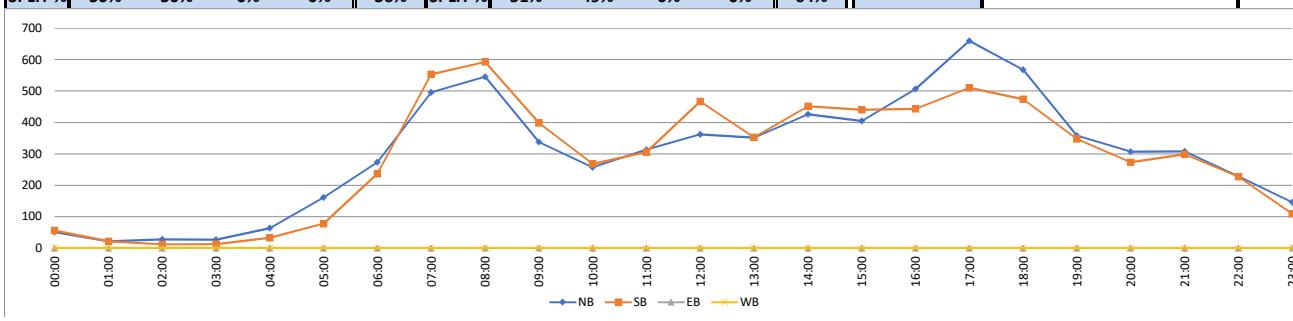
Day: Tuesday

Date: 10/31/2023

City: Doral

Project #: FL23\_140439\_004

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					7,195	6,958	0	0	14,153								
15-Minutes Interval										Hourly Intervals							
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	12	23			35	12:00	76	124			200	00:00	01:00	51	56		107
00:15	12	9			21	12:15	81	117			198	01:00	02:00	21	21		42
00:30	13	10			23	12:30	105	125			230	02:00	03:00	27	11		38
00:45	14	14			28	12:45	100	101			201	03:00	04:00	26	12		38
01:00	11	5			16	13:00	72	95			167	04:00	05:00	63	32		95
01:15	6	6			12	13:15	98	85			183	05:00	06:00	161	77		238
01:30	2	4			6	13:30	84	101			185	06:00	07:00	273	236		509
01:45	2	6			8	13:45	98	72			170	07:00	08:00	495	554		1049
02:00	2	5			7	14:00	117	88			205	08:00	09:00	545	593		1138
02:15	8	4			12	14:15	88	106			194	09:00	10:00	337	398		735
02:30	6	0			6	14:30	127	150			277	10:00	11:00	257	268		525
02:45	11	2			13	14:45	94	108			202	11:00	12:00	313	306		619
03:00	4	2			6	15:00	96	114			210	12:00	13:00	362	467		829
03:15	7	2			9	15:15	92	114			206	13:00	14:00	352	353		705
03:30	6	5			11	15:30	105	123			228	14:00	15:00	426	452		878
03:45	9	3			12	15:45	112	89			201	15:00	16:00	405	440		845
04:00	7	5			12	16:00	102	107			209	16:00	17:00	507	443		950
04:15	15	4			19	16:15	126	91			217	17:00	18:00	660	511		1171
04:30	18	12			30	16:30	133	136			269	18:00	19:00	568	474		1042
04:45	23	11			34	16:45	146	109			255	19:00	20:00	358	347		705
05:00	31	12			43	17:00	150	143			293	20:00	21:00	307	273		580
05:15	20	18			38	17:15	170	128			298	21:00	22:00	308	298		606
05:30	55	18			73	17:30	181	122			303	22:00	23:00	228	227		455
05:45	55	29			84	17:45	159	118			277	23:00	00:00	145	109		254
06:00	47	26			73	18:00	167	135			302	STATISTICS					
06:15	55	49			104	18:15	146	123			269	Peak Period	00:00	to	12:00		
06:30	83	63			146	18:30	132	111			243	Volume	2569	2564		5133	
06:45	88	98			186	18:45	123	105			228	Peak Hour	7:45	7:45		7:45	
07:00	119	132			251	19:00	115	105			220	Peak Volume	575	594		1169	
07:15	120	177			297	19:15	84	104			188	Peak Hour Factor	0.910	0.874		0.958	
07:30	117	122			239	19:30	79	77			156	Peak Period					
07:45	139	123			262	19:45	80	61			141	Volume	12:00	to	00:00		
08:00	133	170			303	20:00	67	72			139	Peak Hour	17:15	16:30		17:15	
08:15	145	154			299	20:15	77	66			143	Peak Volume	677	516		1180	
08:30	158	147			305	20:30	81	72			153	Peak Hour Factor	0.935	0.902		0.974	
08:45	109	122			231	20:45	82	63			145	Peak Period					
09:00	93	113			206	21:00	76	88			164	Volume	07:00	to	09:00		
09:15	75	117			192	21:15	75	72			147	Peak Hour	7:45	7:45		7:45	
09:30	84	93			177	21:30	73	74			147	Peak Volume	575	594		1169	
09:45	85	75			160	21:45	84	64			148	Peak Hour Factor	0.910	0.874		0.958	
10:00	69	83			152	22:00	69	70			139	Peak Period					
10:15	65	67			132	22:15	57	76			133	Volume	16:00	to	18:00		
10:30	54	59			113	22:30	47	48			95	Peak Hour	17:00	16:30		17:00	
10:45	69	59			128	22:45	55	33			88	Peak Volume	660	516		1171	
11:00	78	83			161	23:00	40	41			81	Peak Hour Factor	0.912	0.902		0.966	
11:15	70	65			135	23:15	40	25			65						
11:30	95	69			164	23:30	32	24			56						
11:45	70	89			159	23:45	33	19			52						
<b>TOTALS</b>	<b>2569</b>	<b>2564</b>	<b>0</b>	<b>0</b>	<b>5133</b>	<b>TOTALS</b>	<b>4626</b>	<b>4394</b>	<b>0</b>	<b>0</b>	<b>9020</b>						
SPLIT %	50%	50%	0%	0%	36%	SPLIT %	51%	49%	0%	0%	64%						



**VOLUME****NW 107th Ave Bet. NW 86th St & NW 88th St**

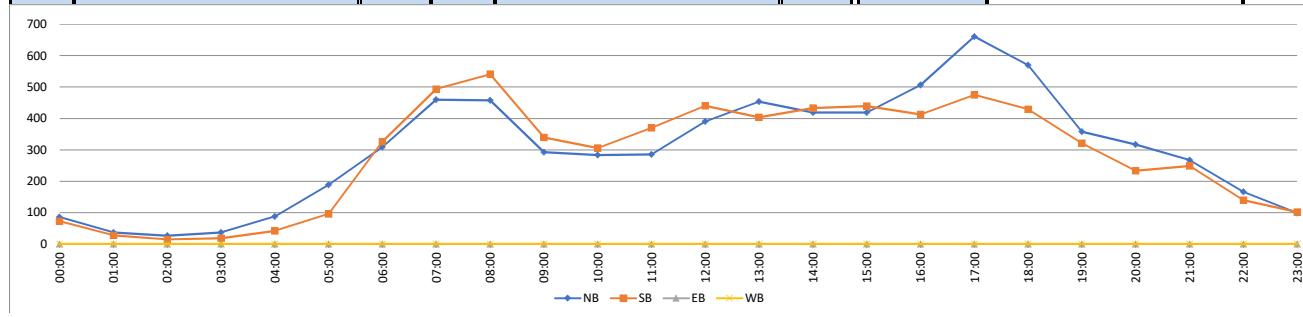
Day: Wednesday

Date: 11/01/2023

City: Doral

Project #: FL23\_140439\_004

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					7,172	6,720	0	0	13,892								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	30	26			56	12:00	100	107			207	00:00	85	72			157
00:15	23	13			36	12:15	109	120			229	01:00	36	27			63
00:30	11	17			28	12:30	84	113			197	02:00	26	14			40
00:45	21	16			37	12:45	97	100			197	03:00	36	18			54
01:00	9	7			16	13:00	117	90			207	04:00	87	41			128
01:15	12	11			23	13:15	99	92			191	05:00	188	96			284
01:30	10	5			15	13:30	124	95			219	06:00	309	326			635
01:45	5	4			9	13:45	114	127			241	07:00	460	493			953
02:00	5	5			10	14:00	103	115			218	08:00	458	541			999
02:15	7	8			15	14:15	121	120			241	09:00	292	339			631
02:30	7	0			7	14:30	94	96			190	10:00	283	306			589
02:45	7	1			8	14:45	101	102			203	11:00	285	370			655
03:00	7	8			15	15:00	94	101			195	12:00	390	440			830
03:15	7	2			9	15:15	92	136			228	13:00	454	404			858
03:30	12	2			14	15:30	121	121			242	14:00	419	433			852
03:45	10	6			16	15:45	112	81			193	15:00	419	439			858
04:00	14	10			24	16:00	102	101			203	16:00	507	413			920
04:15	18	10			28	16:15	126	83			209	17:00	661	475			1136
04:30	36	6			42	16:30	133	130			263	18:00	570	429			999
04:45	19	15			34	16:45	146	99			245	19:00	358	321			679
05:00	39	14			53	17:00	150	132			282	20:00	317	233			550
05:15	56	25			81	17:15	170	122			292	21:00	267	249			516
05:30	43	22			65	17:30	182	114			296	22:00	166	139			305
05:45	50	35			85	17:45	159	107			266	23:00	99	102			201
06:00	62	48			110	18:00	167	117			284	STATISTICS					
06:15	58	65			123	18:15	146	109			255	Peak Period	00:00	to	12:00		
06:30	91	95			186	18:30	133	107			240	Volume	2545	2643			5188
06:45	98	118			216	18:45	124	96			220	Peak Hour	7:15	7:45			7:30
07:00	118	109			227	19:00	115	95			210	Peak Volume	506	592			1082
07:15	122	125			247	19:15	84	95			179	Peak Hour Factor	0.771	0.851			0.843
07:30	123	101			224	19:30	79	74			153	Peak Period					
07:45	97	158			255	19:45	80	57			137	Volume	4627	4077			8704
08:00	164	157			321	20:00	77	67			144	Peak Hour	17:15	16:30			17:15
08:15	108	174			282	20:15	97	62			159	Peak Volume	678	483			1138
08:30	106	103			209	20:30	80	50			130	Peak Hour Factor	0.931	0.915			0.961
08:45	80	107			187	20:45	63	54			117	Peak Period					
09:00	75	95			170	21:00	73	71			144	Volume	918	1034			1952
09:15	68	86			154	21:15	79	70			149	Peak Hour	7:15	7:45			7:30
09:30	70	76			146	21:30	59	61			120	Peak Volume	506	592			1082
09:45	79	82			161	21:45	56	47			103	Peak Hour Factor	0.771	0.851			0.843
10:00	61	88			149	22:00	47	43			90	Peak Period					
10:15	80	78			158	22:15	50	33			83	Volume	1168	888			2056
10:30	72	84			156	22:30	34	33			67	Peak Hour	17:00	16:30			17:00
10:45	70	56			126	22:45	35	30			65	Peak Volume	661	483			1136
11:00	57	89			146	23:00	22	34			56	Peak Hour Factor	0.908	0.915			0.959
11:15	71	87			158	23:15	33	27			60	Peak Period					
11:30	64	76			140	23:30	24	23			47	Volume	0	0			0
11:45	93	118			211	23:45	20	18			38	Peak Hour	0	0			0
<b>TOTALS</b>	<b>2545</b>	<b>2643</b>	<b>0</b>	<b>0</b>	<b>5188</b>	<b>TOTALS</b>	<b>4627</b>	<b>4077</b>	<b>0</b>	<b>0</b>	<b>8704</b>	<b>SPLIT %</b>	<b>49%</b>	<b>51%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>
<b>SPLIT %</b>	<b>49%</b>	<b>51%</b>	<b>0%</b>	<b>0%</b>	<b>37%</b>	<b>SPLIT %</b>	<b>53%</b>	<b>47%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>						



**VOLUME****NW 107th Ave Bet. NW 86th St & NW 88th St**

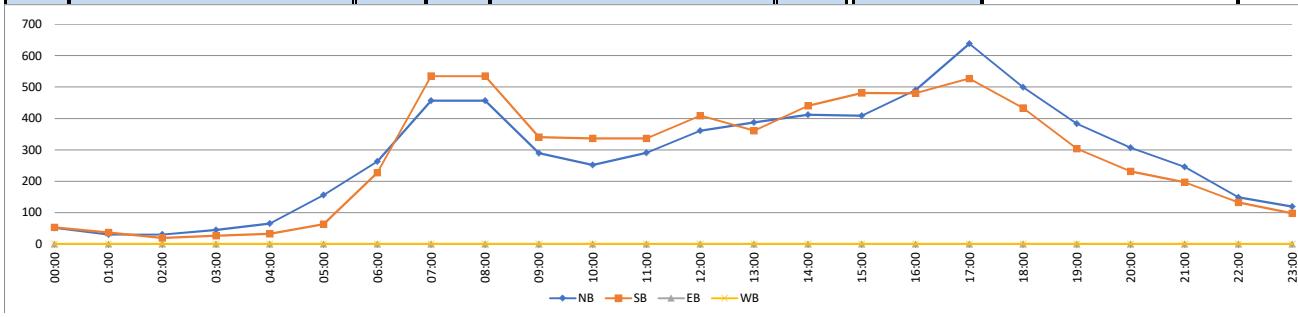
Day: Thursday

Date: 11/02/2023

City: Doral

Project #: FL23\_140439\_004

DAILY TOTALS					NB	SB	EB	WB	Total	DAILY TOTALS							
					6,784	6,631	0	0	13,415								
15-Minutes Interval																	
TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL	TIME	NB	SB	EB	WB	TOTAL
00:00	13	14			27	12:00	76	114			190	00:00	01:00	52	53		105
00:15	19	13			32	12:15	91	96			187	01:00	02:00	30	36		66
00:30	14	9			23	12:30	95	90			185	02:00	03:00	30	19		49
00:45	6	17			23	12:45	99	109			208	03:00	04:00	44	26		70
01:00	13	11			24	13:00	107	103			210	04:00	05:00	65	32		97
01:15	5	17			22	13:15	94	79			173	05:00	06:00	156	63		219
01:30	5	4			9	13:30	82	98			180	06:00	07:00	263	227		490
01:45	7	4			11	13:45	104	81			185	07:00	08:00	457	535		992
02:00	10	6			16	14:00	97	93			190	08:00	09:00	457	535		992
02:15	4	5			9	14:15	116	108			224	09:00	10:00	289	340		629
02:30	6	3			9	14:30	90	126			216	10:00	11:00	252	336		588
02:45	10	5			15	14:45	109	113			222	11:00	12:00	290	336		626
03:00	12	5			17	15:00	122	117			239	12:00	13:00	361	409		770
03:15	12	6			18	15:15	77	137			214	13:00	14:00	387	361		748
03:30	8	12			20	15:30	104	115			219	14:00	15:00	412	440		852
03:45	12	3			15	15:45	106	112			218	15:00	16:00	409	481		890
04:00	7	8			15	16:00	111	101			212	16:00	17:00	490	480		970
04:15	12	6			18	16:15	126	115			241	17:00	18:00	638	527		1165
04:30	19	7			26	16:30	113	125			238	18:00	19:00	499	433		932
04:45	27	11			38	16:45	140	139			279	19:00	20:00	383	304		687
05:00	25	11			36	17:00	155	122			277	20:00	21:00	307	231		538
05:15	30	12			42	17:15	174	124			298	21:00	22:00	245	197		442
05:30	43	13			56	17:30	143	150			293	22:00	23:00	149	132		281
05:45	58	27			85	17:45	166	131			297	23:00	00:00	119	98		217
06:00	41	25			66	18:00	148	123			271	STATISTICS					
06:15	57	41			98	18:15	139	130			269	NB	SB	EB	WB	TOTAL	
06:30	72	50			122	18:30	115	97			212	Peak Period	00:00	to	12:00		
06:45	93	111			204	18:45	97	83			180	Volume	2385	2538			4923
07:00	117	153			270	19:00	87	85			172	Peak Hour	7:15	7:30			7:30
07:15	120	127			247	19:15	120	70			190	Peak Volume	507	584			1076
07:30	122	100			222	19:30	97	57			154	Peak Hour Factor	0.759	0.854			0.828
07:45	98	155			253	19:45	79	92			171	Peak Period	12:00	to	00:00		
08:00	167	158			325	20:00	73	66			139	Volume	4399	4093			8492
08:15	105	171			276	20:15	93	61			154	Peak Hour	17:00	16:45			17:00
08:30	108	100			208	20:30	79	56			135	Peak Volume	638	535			1165
08:45	77	106			183	20:45	62	48			110	Peak Hour Factor	0.917	0.892			0.977
09:00	78	92			170	21:00	66	55			121	Peak Period	07:00	to	09:00		
09:15	67	88			155	21:15	67	44			111	Volume	914	1070			1984
09:30	68	79			147	21:30	60	48			108	Peak Hour	7:15	7:30			7:30
09:45	76	81			157	21:45	52	50			102	Peak Volume	507	584			1076
10:00	69	90			159	22:00	45	34			79	Peak Hour Factor	0.759	0.854			0.828
10:15	61	85			146	22:15	34	51			85	Peak Period	16:00	to	18:00		
10:30	61	77			138	22:30	39	16			55	Volume	1128	1007			2135
10:45	61	84			145	22:45	31	31			62	Peak Hour	17:00	16:45			17:00
11:00	55	70			125	23:00	37	26			63	Peak Volume	638	535			1165
11:15	73	81			154	23:15	39	31			70	Peak Hour Factor	0.917	0.892			0.977
11:30	83	93			176	23:30	20	22			42						
11:45	79	92			171	23:45	23	19			42						
<b>TOTALS</b>	<b>2385</b>	<b>2538</b>	<b>0</b>	<b>0</b>	<b>4923</b>	<b>TOTALS</b>	<b>4399</b>	<b>4093</b>	<b>0</b>	<b>0</b>	<b>8492</b>						
<b>SPLIT %</b>	<b>48%</b>	<b>52%</b>	<b>0%</b>	<b>0%</b>	<b>37%</b>	<b>SPLIT %</b>	<b>52%</b>	<b>48%</b>	<b>0%</b>	<b>0%</b>	<b>63%</b>						



**Century Town Phase II Committed Development**  
**Hourly Distribution by Land Use**

Time Period		Mid-Rise Multifamily Housing- (Land Use 221) - 290 units						Retail (Land Use 820) - 1,450 SF						Century Town Phase II				
		Hourly Distribution		ITE LU 221	Entering		Exiting		Hourly Distribution		ITE LU 820	Entering		Exiting		Entering	Exiting	Total
		Residential	% IN % OUT		%	Trips	%	Trips	Residential	% IN % OUT		%	Trips	%	Trips	4,455	4,455	8,910
12:00 AM	01:00 AM	1.17%	0.38%	0.8%	0.58%	21	0.19%	7	0.05%	0.13%	0.1%	0.02%	1	0.06%	3	23	10	33
01:00 AM	02:00 AM	0.56%	0.33%	0.4%	0.28%	10	0.17%	6	0.03%	0.04%	0.0%	0.01%	1	0.02%	1	11	7	18
02:00 AM	03:00 AM	0.29%	0.11%	0.2%	0.14%	5	0.06%	2	0.03%	0.03%	0.0%	0.02%	1	0.02%	1	6	3	9
03:00 AM	04:00 AM	0.25%	0.23%	0.2%	0.11%	4	0.11%	4	0.03%	0.09%	0.0%	0.01%	0	0.02%	1	5	5	10
04:00 AM	05:00 AM	0.11%	0.53%	1.2%	0.21%	8	0.96%	35	0.07%	0.09%	0.1%	0.02%	1	0.03%	2	9	37	46
05:00 AM	06:00 AM	0.41%	2.04%	1.2%	0.21%	8	1.02%	38	0.13%	0.06%	0.2%	0.12%	6	0.06%	3	14	41	55
06:00 AM	07:00 AM	0.97%	7.77%	4.5%	0.50%	18	3.97%	146	0.86%	0.41%	0.6%	0.41%	21	0.19%	10	40	156	196
07:00 AM	08:00 AM	2.50%	15.58%	8.9%	1.23%	45	7.67%	282	2.01%	1.08%	1.2%	0.79%	42	0.43%	22	87	304	391
08:00 AM	09:00 AM	3.75%	10.71%	6.0%	1.56%	58	4.47%	164	3.79%	2.31%	3.7%	2.30%	120	1.40%	73	178	238	416
09:00 AM	10:00 AM	2.19%	6.87%	4.5%	1.10%	40	3.44%	127	4.95%	3.16%	4.0%	2.46%	129	1.57%	82	169	209	378
10:00 AM	11:00 AM	2.74%	4.58%	3.8%	1.42%	52	2.36%	87	7.01%	5.27%	6.1%	3.50%	183	2.64%	138	235	225	460
11:00 AM	12:00 PM	3.38%	3.97%	3.7%	1.69%	62	1.99%	73	8.47%	7.29%	7.7%	4.14%	216	3.56%	186	279	259	538
12:00 PM	01:00 PM	4.31%	4.81%	4.6%	2.15%	79	2.41%	88	9.64%	8.71%	9.2%	4.85%	254	4.38%	229	333	318	651
01:00 PM	02:00 PM	4.37%	4.38%	4.3%	2.13%	78	2.13%	78	8.79%	8.85%	8.4%	4.21%	220	4.23%	222	298	300	598
02:00 PM	03:00 PM	4.08%	3.71%	3.9%	2.02%	74	1.83%	67	7.77%	8.54%	8.2%	3.92%	205	4.31%	226	279	293	572
03:00 PM	04:00 PM	5.91%	3.82%	5.3%	3.22%	118	2.08%	76	8.07%	8.46%	8.3%	4.04%	211	4.23%	221	330	298	627
04:00 PM	05:00 PM	8.58%	5.45%	7.5%	4.60%	169	2.93%	108	8.72%	9.48%	8.9%	4.27%	224	4.65%	243	393	351	744
05:00 PM	06:00 PM	12.93%	6.08%	9.6%	6.53%	240	3.07%	113	8.75%	8.88%	8.7%	4.33%	227	4.40%	230	467	343	810
06:00 PM	07:00 PM	12.09%	6.21%	9.0%	5.96%	219	3.06%	113	7.58%	7.69%	7.7%	3.85%	201	3.90%	204	420	317	737
07:00 PM	08:00 PM	9.44%	5.42%	7.4%	4.70%	173	2.70%	99	6.54%	6.95%	6.7%	3.25%	170	3.45%	181	343	280	623
08:00 PM	09:00 PM	7.71%	3.12%	5.4%	3.85%	142	1.56%	57	3.87%	6.21%	5.1%	1.96%	102	3.14%	164	244	222	466
09:00 PM	10:00 PM	6.51%	1.52%	4.0%	3.25%	119	0.76%	28	1.86%	4.32%	3.3%	0.99%	52	2.29%	120	171	148	319
10:00 PM	11:00 PM	3.66%	1.60%	2.4%	1.70%	62	0.74%	27	0.66%	1.25%	1.0%	0.35%	18	0.67%	35	81	62	143
11:00 PM	12:00 AM	2.09%	0.79%	1.2%	0.86%	32	0.33%	12	0.34%	0.69%	0.5%	0.17%	9	0.35%	18	41	30	71
<b>TOTAL</b>		100.00%	100.00%	<b>100.00%</b>	50.00%	1839	50.00%	1839	100.00%	100.00%	<b>100.00%</b>	49.99%	2616	50.01%	2616	4455	4455	8910

<sup>1</sup>ITE Trip Generation Manual, 10<sup>th</sup> Edition

<sup>2</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices

**Century Town Phase III Committed Development**  
**Hourly Distribution by Land Use**

Time Period		Mid-Rise Multifamily Housing- (Land Use 221) - 492 units						Century Town Phase III								
		Hourly Distribution		ITE LU 221	Entering <sup>1</sup>		Exiting <sup>1</sup>		Entering		Exiting		Total			
		Residential <sup>2</sup>	% IN % OUT		%	Trips	%	Trips	1,150	1,150	1,150	1,150	2,300			
12:00 AM	01:00 AM	1.17%	0.38%	0.8%	0.6%	13	0.19%	4	13	4	18					
01:00 AM	02:00 AM	0.56%	0.33%	0.4%	0.3%	6	0.17%	4	6	4	10					
02:00 AM	03:00 AM	0.29%	0.11%	0.2%	0.1%	3	0.06%	1	3	1	5					
03:00 AM	04:00 AM	0.25%	0.23%	0.2%	0.1%	3	0.11%	3	3	3	5					
04:00 AM	05:00 AM	0.11%	0.53%	0.3%	0.1%	1	0.26%	6	1	6	7					
05:00 AM	06:00 AM	0.41%	2.04%	1.2%	0.2%	5	1.02%	24	5	24	28					
06:00 AM	07:00 AM	0.97%	7.77%	4.4%	0.5%	11	3.9%	90	11	90	101					
07:00 AM	08:00 AM	3.73%	12.69%	8.9%	2.02%	47	6.88%	158	47	158	205					
08:00 AM	09:00 AM	3.56%	12.50%	7.5%	1.65%	38	5.80%	133	38	133	171					
09:00 AM	10:00 AM	2.19%	6.87%	4.5%	1.10%	25	3.44%	79	25	79	104					
10:00 AM	11:00 AM	2.74%	4.58%	3.7%	1.37%	32	2.29%	53	32	53	84					
11:00 AM	12:00 PM	3.38%	3.97%	3.7%	1.69%	39	1.99%	46	39	46	85					
12:00 PM	01:00 PM	4.82%	5.23%	4.7%	2.25%	52	2.45%	56	52	56	108					
01:00 PM	02:00 PM	4.37%	4.38%	4.4%	2.19%	50	2.19%	50	50	50	101					
02:00 PM	03:00 PM	4.08%	3.71%	3.9%	2.04%	47	1.86%	43	47	43	90					
03:00 PM	04:00 PM	5.91%	3.82%	4.9%	2.95%	68	1.91%	44	68	44	112					
04:00 PM	05:00 PM	9.23%	5.12%	8.0%	5.16%	119	2.86%	66	119	66	184					
05:00 PM	06:00 PM	9.92%	6.40%	8.3%	5.07%	117	3.27%	75	117	75	192					
06:00 PM	07:00 PM	12.89%	5.97%	9.1%	6.22%	143	2.88%	66	143	66	209					
07:00 PM	08:00 PM	9.44%	5.42%	7.4%	4.72%	108	2.71%	62	108	62	171					
08:00 PM	09:00 PM	7.71%	3.12%	5.4%	3.85%	88	1.56%	36	88	36	124					
09:00 PM	10:00 PM	6.51%	1.52%	4.0%	3.25%	75	0.76%	17	75	17	92					
10:00 PM	11:00 PM	3.66%	2.54%	2.6%	1.55%	36	1.08%	25	36	25	60					
11:00 PM	12:00 AM	2.09%	0.79%	1.4%	1.04%	24	0.39%	9	24	9	33					
<b>TOTAL</b>		100.00%	100.00%	<b>100.00%</b>	50.00%	1150	50.00%	1150	1150	1150	2,300					

<sup>1</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition

<sup>2</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices

### Midtown Doral Phases IV and V

#### Hourly Distribution by Land Use

Multifamily Mid-Rise (Land Use 221) - 349 units				Strip Retail Plaza (<40k) (Land Use 822) - 11,370 SF				Midtown Doral Phases IV and V										
Time Period	Hourly Distribution Residential <sup>2</sup>		ITE LU 221	Entering <sup>1</sup>		Exiting <sup>1</sup>	Hourly Distribution Retail <sup>3</sup>		ITE LU 814	Entering <sup>1</sup>		Exiting <sup>1</sup>	Entering	Exiting	Total			
	% IN	% OUT		%	Trips	%	Trips	% IN	% OUT		%	Trips	%	Trips	1,164	1,164	2,328	
	12:00 AM	01:00 AM	1.2%	0.4%	0.3%	0.2%	4	0.1%	1	0.0%	0.1%	0.0%	0.0%	0	4	1	5	
01:00 AM	02:00 AM	0.6%	0.3%	0.4%	0.3%	5	0.2%	3	0.0%	0.0%	0.0%	0.0%	0	5	3	8		
02:00 AM	03:00 AM	0.3%	0.1%	0.2%	0.1%	2	0.1%	1	0.0%	0.0%	0.0%	0.0%	0	2	1	3		
03:00 AM	04:00 AM	0.2%	0.2%	0.2%	0.1%	2	0.1%	2	0.0%	0.0%	0.0%	0.0%	0	2	2	4		
04:00 AM	05:00 AM	0.0%	0.3%	0.3%	0.0%	0	0.3%	5	0.1%	0.0%	0.0%	0.0%	0	0	5	5		
05:00 AM	06:00 AM	0.2%	2.0%	1.2%	0.1%	2	1.1%	18	0.1%	0.1%	0.0%	0.0%	0	2	18	20		
06:00 AM	07:00 AM	1.0%	7.8%	4.6%	0.5%	8	4.1%	66	0.9%	0.5%	0.0%	0.0%	0	8	66	74		
07:00 AM	08:00 AM	2.9%	14.2%	8.1%	1.4%	22	6.7%	109	1.9%	1.2%	1.1%	0.7%	5	0.4%	3	27	112	139
08:00 AM	09:00 AM	4.2%	13.9%	8.8%	2.0%	33	6.8%	109	3.6%	2.4%	3.7%	2.2%	16	1.5%	11	49	120	169
09:00 AM	10:00 AM	2.2%	6.9%	4.5%	1.1%	18	3.4%	56	4.9%	3.2%	4.0%	2.5%	17	1.6%	11	35	67	102
10:00 AM	11:00 AM	2.7%	4.6%	3.7%	1.4%	22	2.3%	37	7.0%	5.3%	6.1%	3.5%	25	2.6%	19	47	56	103
11:00 AM	12:00 PM	3.4%	4.0%	3.7%	1.7%	27	2.0%	32	8.5%	7.3%	7.2%	3.9%	25	3.3%	24	54	56	110
12:00 PM	01:00 PM	4.3%	4.8%	4.6%	2.2%	35	2.4%	39	9.4%	8.9%	10.1%	5.2%	37	4.9%	35	72	74	146
01:00 PM	02:00 PM	4.0%	4.0%	4.4%	2.2%	35	2.2%	35	8.7%	9.0%	8.3%	4.1%	29	4.2%	30	64	65	129
02:00 PM	03:00 PM	4.1%	3.7%	3.9%	2.0%	33	1.9%	30	7.8%	8.6%	8.2%	3.9%	28	4.3%	31	61	61	122
03:00 PM	04:00 PM	5.9%	3.8%	4.9%	3.0%	48	1.9%	31	8.1%	8.5%	8.3%	4.0%	29	4.2%	30	77	61	138
04:00 PM	05:00 PM	9.8%	6.3%	8.4%	5.1%	83	3.3%	53	9.3%	9.3%	12.2%	6.1%	43	6.1%	43	126	96	222
05:00 PM	06:00 PM	11.3%	5.1%	8.9%	6.1%	99	2.8%	45	8.1%	7.9%	7.5%	3.8%	27	3.7%	26	126	71	197
06:00 PM	07:00 PM	12.1%	6.0%	9.0%	6.0%	98	3.0%	48	7.7%	7.8%	7.1%	3.5%	25	3.6%	25	123	73	196
07:00 PM	08:00 PM	9.7%	5.4%	7.4%	4.8%	77	2.7%	43	6.5%	7.0%	6.4%	3.1%	22	3.3%	23	99	66	165
08:00 PM	09:00 PM	7.7%	2.5%	4.4%	3.3%	54	1.1%	17	4.3%	6.3%	5.3%	2.1%	15	3.2%	23	69	40	109
09:00 PM	10:00 PM	6.5%	1.5%	4.0%	3.2%	53	0.8%	12	1.9%	4.6%	3.3%	0.9%	7	2.3%	17	60	29	89
10:00 PM	11:00 PM	3.7%	1.6%	2.6%	1.8%	30	0.8%	13	0.8%	1.2%	1.0%	0.4%	3	0.6%	4	33	17	50
11:00 PM	12:00 AM	2.1%	0.5%	1.4%	1.2%	19	0.3%	4	0.3%	0.7%	0.1%	0.0%	0	0.0%	0	19	4	23
<b>TOTAL</b>		100.0%	100.0%	<b>100.0%</b>	49.9%	<b>809</b>	50.1%	<b>809</b>	100.00%	100.00%	<b>100.0%</b>	49.92%	<b>355</b>	49.95%	<b>355</b>	<b>1164</b>	<b>1164</b>	<b>2328</b>

<sup>1</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition

<sup>2</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices

<sup>3</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices for LU 820 due to insufficient hourly distribution for LU 822

### Midtown Doral Phase VI

#### Hourly Distribution by Land Use

Multifamily Mid-Rise (Land Use 221) - 203 units				Strip Retail Plaza (<40k) (Land Use 822) - 11,370 SF				Midtown Doral Phase VI										
Time Period	Hourly Distribution Residential <sup>2</sup>		ITE LU 221	Entering <sup>1</sup>		Exiting <sup>1</sup>	Hourly Distribution Retail <sup>3</sup>		ITE LU 814	Entering <sup>1</sup>		Exiting <sup>1</sup>	Entering	Exiting	Total			
	% IN	% OUT		%	Trips	%	Trips	% IN	% OUT		%	Trips	%	Trips	816	816	1,632	
12:00 AM	01:00 AM	1.2%	0.4%	1.1%	0.8%	7	0.3%	2	0.0%	0.1%	0.0%	0.0%	0	0.0%	0	7	2	9
01:00 AM	02:00 AM	0.6%	0.3%	0.4%	0.3%	3	0.2%	2	0.0%	0.0%	0.0%	0.0%	0	0.0%	0	3	2	5
02:00 AM	03:00 AM	0.3%	0.1%	0.2%	0.1%	1	0.1%	1	0.0%	0.0%	0.0%	0.0%	0	0.0%	0	1	1	2
03:00 AM	04:00 AM	0.2%	0.2%	0.2%	0.1%	1	0.1%	1	0.0%	0.0%	0.0%	0.0%	0	0.0%	0	1	1	2
04:00 AM	05:00 AM	0.1%	0.5%	0.3%	0.1%	1	0.3%	2	0.1%	0.0%	0.0%	0.0%	0	0.0%	0	1	2	3
05:00 AM	06:00 AM	0.4%	2.0%	1.2%	0.2%	2	1.0%	9	0.1%	0.1%	0.0%	0.0%	0	0.0%	0	2	9	11
06:00 AM	07:00 AM	1.0%	7.8%	4.4%	0.5%	4	3.9%	36	0.9%	0.5%	0.0%	0.0%	0	0.0%	0	4	36	40
07:00 AM	08:00 AM	2.5%	14.7%	8.2%	1.2%	11	7.0%	65	1.9%	1.2%	1.1%	0.7%	5	0.4%	3	16	68	84
08:00 AM	09:00 AM	3.6%	12.1%	8.5%	1.9%	18	6.6%	60	3.6%	2.4%	3.7%	2.2%	16	1.5%	11	34	71	105
09:00 AM	10:00 AM	2.2%	6.9%	4.5%	1.1%	10	3.4%	32	4.9%	3.2%	4.0%	2.5%	17	1.6%	11	27	43	70
10:00 AM	11:00 AM	2.7%	4.6%	3.7%	1.4%	13	2.3%	21	7.0%	5.3%	6.1%	3.5%	25	2.6%	19	38	40	78
11:00 AM	12:00 PM	3.4%	4.0%	3.7%	1.7%	16	2.0%	18	8.5%	7.3%	7.2%	3.9%	27	3.3%	24	43	42	85
12:00 PM	01:00 PM	4.3%	4.4%	4.6%	2.3%	21	2.3%	21	9.4%	8.9%	10.1%	5.2%	37	4.9%	35	58	56	114
01:00 PM	02:00 PM	4.4%	4.4%	4.1%	2.0%	19	2.1%	19	8.7%	9.0%	8.3%	4.1%	29	4.2%	30	48	49	97
02:00 PM	03:00 PM	4.1%	3.7%	3.9%	2.0%	19	1.9%	17	7.8%	8.6%	8.2%	3.9%	28	4.3%	31	47	48	95
03:00 PM	04:00 PM	5.9%	3.8%	4.9%	3.0%	27	1.9%	18	8.1%	8.5%	8.3%	4.0%	29	4.2%	30	56	48	104
04:00 PM	05:00 PM	9.4%	6.1%	8.5%	5.2%	48	3.3%	31	9.3%	9.3%	12.2%	6.1%	43	6.1%	43	91	74	165
05:00 PM	06:00 PM	12.4%	5.8%	9.1%	6.2%	57	2.9%	27	8.1%	7.9%	7.5%	3.8%	27	3.7%	26	84	53	137
06:00 PM	07:00 PM	12.0%	6.0%	7.6%	5.1%	47	2.5%	23	7.7%	7.8%	7.1%	3.5%	25	3.6%	25	72	48	120
07:00 PM	08:00 PM	9.4%	5.2%	7.4%	4.8%	44	2.6%	24	6.5%	7.0%	6.4%	3.1%	22	3.3%	23	66	47	113
08:00 PM	09:00 PM	7.7%	3.1%	5.4%	3.8%	35	1.6%	14	4.3%	6.3%	5.3%	2.1%	15	3.2%	23	50	37	87
09:00 PM	10:00 PM	6.5%	1.5%	4.0%	3.2%	30	0.8%	7	1.9%	4.6%	3.3%	0.9%	7	2.3%	17	37	24	61
10:00 PM	11:00 PM	3.7%	1.6%	2.6%	1.8%	17	0.8%	7	0.8%	1.2%	1.0%	0.4%	3	0.6%	4	20	11	31
11:00 PM	12:00 AM	2.1%	0.8%	1.4%	1.0%	10	0.4%	4	0.3%	0.7%	0.1%	0.0%	0	0.0%	0	10	4	14
<b>TOTAL</b>		100.0%	100.0%	<b>100.0%</b>	49.9%	<b>461</b>	50.1%	<b>461</b>	100.00%	100.00%	<b>100.0%</b>	49.9%	<b>355</b>	49.9%	<b>355</b>	<b>816</b>	<b>816</b>	<b>1632</b>

<sup>1</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition

<sup>2</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices

<sup>3</sup>ITE Trip Generation Manual, 11<sup>th</sup> Edition Appendices for LU 820 due to insufficient hourly distribution for LU 822

# **Appendix I**

## **Response to City Comments**

# DAVID PLUMMER & ASSOCIATES

TRAFFIC ENGINEERING • CIVIL ENGINEERING • TRANSPORTATION PLANNING

1750 PONCE DE LEON BOULEVARD | CORAL GABLES, FLORIDA 33134  
305•447•0900 | DPA@DPLUMMER.COM

## MEMORANDUM

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**To:** Edna Sibila / City of Doral Transportation Manager  
**CC:** File  
**From:** David Plummer & Associates  
**Date:** June 18, 2024  
**RE:** Midtown Doral Phases IV, V, & VI Traffic Study Responses to City Comments – #23188

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David Plummer & Associates (DPA) has reviewed the comments for the Midtown Doral Phases IV, V, & VI Traffic Study dated April 2024 provided by the City of Doral on June 3, 2024. Below are DPA's responses. The comments are repeated for your convenience.

- 1. Provide in report a Daily internalization. This will be needed for future roadway impact fee calculation.**

*DPA Response: The daily internalization sheets have been added to Appendix F of the report.*

- 2. Exhibit 11 – NW 82 St and NW 107 Ave intersection in the future will be a traffic signal.**

*DPA Response: Exhibit 11 has been revised.*

- 3. Exhibit 12 – The proposed 45% outbound from the north driveway along NW 88 St appears too high. Vehicles that are expected to traverse through NW 74 St eastbound will most likely exit through south driveway towards NW 107 Ave. Adjust distribution with a higher percent of vehicles using the south driveway. The 8% SBL appears too low.**

*DPA Response: The proposed 45% outbound is only for Phases IV and V. It was assumed that vehicles that desire to travel eastbound on NW 74<sup>th</sup> Street will travel eastbound along NW 88<sup>th</sup> Street and southbound along NW 104<sup>th</sup> Avenue. Eight-five percent of outbound traffic from Phase VI will travel southbound along NW 107<sup>th</sup> Avenue. It should also be noted that specially during the AM peak hour, traffic exiting the site will avoid NW 107<sup>th</sup> Avenue because of the school traffic. This comment was discussed and resolved during a zoom meeting with City staff on 6/18/2024.*

4. Please note that collected data must be within a two-year period. Beyond that period, it will not be accepted as part of the analysis.

*DPA Response: Per MDC request the NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection was added as part of the analysis. Although the counts at this intersection are older than two years, on March 20, 2024, MDC confirmed that these counts were allowed to be used for the analysis.*

5. Provide left turn analysis at the median opening N of NW 88 St to assess the need for a left turn lane to avoid vehicles making U-turns at the NW 88 St and NW 107 Ave.

*DPA Response: A left turn lane analysis was provided at the Phase VI project driveway along NW 107<sup>th</sup> Avenue. Based on the low left turn volumes, an exclusive left turn lane is not warranted.*

6. Update all future condition exhibits based on comments above.

*DPA Response: The future condition exhibits remain the same as comment 3 was resolved.*

7. Update signal warrant analysis with comments above for the revised future volumes.

*DPA Response: The signal warrant analysis has been revised.*

8. Applicant shall provide a City of Doral Trolley Shelter at this proposed location. Provide this in the write up.

*DPA Response: The executive summary, Section 7.0, and Section 8.0 of the report have been updated to state that the project will be adding a trolley shelter at the proposed location.*

9. Provide mitigation for any individual movement in which the LOS/delay increases beyond the acceptable LOS due to the additional trips added by the proposed development.

*DPA Response: Signal timing improvements have been provided for the NW 107<sup>th</sup> Avenue / 74<sup>th</sup> Street intersection. Additionally, the installation of traffic signals at the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersections provide mitigation for the existing and the additional delays from the proposed project.*

10. If the developer proposes and it's approved by MDC for the removal of the all-way stop at NW 86 St and NW 107 Ave intersection to a two-way stop, coordination with the MDC school division is required to ensure it does not affect the school Traffic Operations Plan (TOP).

*DPA Response: The project will provide a traffic signal at the intersection of NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street.*

**11. Approval from Miami Dade County Traffic Engineering division is required for City PW Traffic Approval during the site plan process. Provide a copy of the approval.**

*DPA Response: Comment noted. A copy of the approval will be provided.*

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# **Appendix J**

## **Response to Miami-Dade County Comments**

# DAVID PLUMMER & ASSOCIATES

TRAFFIC ENGINEERING • CIVIL ENGINEERING • TRANSPORTATION PLANNING

1750 PONCE DE LEON BOULEVARD | CORAL GABLES, FLORIDA 33134  
305•447•0900 | DPA@DPLUMMER.COM

## MEMORANDUM

---

**To:** Yamilet Senespleda P.E., PTOE  
**Cc:** Anamersy Arce  
**From:** David Plummer & Associates  
**Date:** June 19, 2024  
**RE:** Midtown Doral Phases IV, V, & VI Traffic Study Responses to MDC Comments – #23188

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David Plummer & Associates (DPA) has reviewed the comments for the Midtown Doral Phases IV, V, & VI Traffic Study dated April 2024 provided by the Miami-Dade County on June 6, 2024. Below are DPA's responses. The comments are repeated for your convenience.

- 1. Please clarify if the subject site is required to plat. If yes, please provide the t-plat number.**

*DPA Response (April 2024): The subject site is not required to plat.*

*MDC Response (June 2024): Comment addressed. The subject site is not required to plat.*

- 2. Data Collection**

- Traffic Counts. One of the comments provided as part of the traffic study methodology reviewed, was to incorporate the intersection of NW 107<sup>th</sup> Avenue and NW 74<sup>th</sup> Street into the Data Collection and Intersection Analysis. Nevertheless, the intersection was excluded from the traffic study. Please revise accordingly.**

*DPA Response (April 2024): The NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection has been added to the analysis.*

*MDC Response (June 2024): Comment addressed. The NW 107<sup>th</sup> Avenue and NW 74<sup>th</sup> Street intersection has been added to the analysis.*

- b. Intersection Capacity Analysis. Please update according to the previous comment as needed.**

*DPA Response (April 2024): The analysis and report have been added according to the previous comment.*

**MDC Response (June 2024):** Comment addressed. The NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection has been added to the analysis.

### **3. Future Traffic Conditions**

- a. Please note that the traffic study assumes the signalization of the intersection of NW 107<sup>th</sup> Avenue and NW 82<sup>nd</sup> Street. Please advise on the timeline for the completion of the traffic signal installation at this intersection.**

*DPA Response (April 2024): The signalization plans have been approved by Miami-Dade County. Currently, the signal installation at the NW 107<sup>th</sup> Avenue / NW 82<sup>nd</sup> Street intersection is under construction and should be fully operational by the completion of the project.*

**MDC Response (June 2024):** Comment addressed. The signalization plans have been approved by Miami-Dade County. Currently, the signal installation at the NW 107<sup>th</sup> Avenue and NW 82<sup>nd</sup> Street intersection is under construction and should be fully operational by the completion of the project.

- b. Project Trip Assignment. Please ensure that the figures depict the trip distribution percentages and assignments at each study intersection in the entire project network. Furthermore, ensure that the total trip assignments at each proposed driveway during the AM Peak Hour, as depicted in Figures 13 and 14, align with the total incoming trips specified in Table 9.**

*DPA Response (April 2024): The exhibits have been revised.*

**MDC Response (June 2024):** Comment addressed. The exhibits have been revised.

### **4. Signal Warrant Analysis**

- a. Please revise the signal warrant analysis for the intersection of NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street to include the evaluation of Warrant 4 and 5. Please note that Ronald W. Reagan Senior High School is located on NW 107th Avenue between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street.**

*DPA Response (April 2024): The signal warrant for the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street has been revised to include the evaluation of Warrants 4 and 5. The signal warrant analysis shows that for existing and future conditions, no warrants are satisfied at the subject intersection. Therefore, a traffic signal is not warranted at NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection.*

*MDC Response (June 2024): Comment partially addressed. The signal warrant analysis for NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street has been updated to include the evaluation of Warrants 4 and 5. However, the study indicates that Warrant 5 is not applicable. Despite this, the warrant was analyzed, and the results show that the warrant is not satisfied. Please note that Warrant 5 is intended for situations where the primary reason to consider installing a traffic control signal is the presence of schoolchildren crossing the major street. Therefore, Warrant 5 is applicable. Additionally, it should be noted that two of the three criteria to meet the warrant are satisfied. The second condition (adequate gaps) could not be measured because the intersection is currently under all-way stop control, which provides gaps to cross NW 107<sup>th</sup> Avenue. However, in the absence of stop control on NW 107<sup>th</sup> Avenue, this condition would most likely be met based on hourly volumes. Therefore, signalization of the intersection of NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street, with the provision of pedestrian crosswalks is recommended.*

*DPA Response (June 2024): Per the meeting with MDC TED staff on 6/25/2024, the signal warrant at the intersection of NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street was revised to use a less conservative right turn deduction along the minor roadway. Upon reanalysis of the signal warrant, a traffic signal is warranted at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection. The project is committed to install the traffic signal at this location.*

## **5. Future Traffic With Intersection Improvements**

- a. In order to mitigate the delays at the NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street intersection, it is recommended to convert the existing all-way stop control to a stop-controlled intersection for eastbound/westbound traffic. However, the proposed change shows a concern regarding the proposed pedestrian crossing on the north leg of the intersection depicted in the provided site plan sheets. If the intersection changes to eastbound/westbound stop control, the crosswalk will lack a stop condition, potentially creating difficulty for pedestrians/students to cross NW 107<sup>th</sup> Avenue. As mentioned before, Ronald W. Reagan Senior High School is located along NW 107<sup>th</sup> Avenue between NW 86<sup>th</sup> Street and NW 88<sup>th</sup> Street, and according with the data collected at the intersection of NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street, the pedestrian activity peaks at 7:00 AM, with 39 crossings on NW 107<sup>th</sup> Avenue, coinciding with the school's arrival time.

*DPA Response (April 2024): The proposed crosswalks on the north and south legs of the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection have been removed since it is recommended to convert the existing all-way stop control to a stop-controlled intersection for the eastbound/westbound approaches. Currently, there are no crosswalks on the north and south legs of the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection. Therefore, it is unsafe for pedestrians to cross NW 107<sup>th</sup> Avenue at this location. The project is proposing to change the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection from an existing all-way stop control to a signalized intersection and add a high emphasis crosswalk on the south leg of this intersection. Converting this intersection from stop-controlled to a signalized intersection will allow students/pedestrians to cross NW 107<sup>th</sup> Avenue in a safe and protected manner.*

**MDC Response (June 2024):** Comment partially addressed. Please refer to comment No 4a. The conversion of the existing all-way stop control to a stop-controlled intersection for the eastbound/westbound approaches is not recommended at the intersection of NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street.

*DPA Response (June 2024): Per the meeting with MDC TED staff on 6/25/2024, the signal warrant at the intersection of NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street was revised to use a less conservative right turn deduction along the minor roadway. Upon reanalysis of the signal warrant, a traffic signal is warranted at the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection. The project is committed to install the traffic signal at this location.*

- 6. Please specify if all the proposed off-site improvements shown on the plans submitted will be constructed by the project. If so, the traffic study should incorporate these recommendations.**

*DPA Response (April 2024): All the proposed off-site improvements will be constructed by the project. The report has been revised to include the off-site improvements proposed by the project.*

**MDC Response (June 2024):** Comment addressed. All the proposed off-site improvements will be constructed by the project. The report has been revised to include the off-site improvements proposed by the project.

- 7. The report states that the project is committed to adding southbound left-turning lanes at the intersections of NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street, as well as NW 107<sup>th</sup> Avenue and NW 88<sup>th</sup> Street at the completion of the project. However, the site plans provided only depict an exclusive southbound left-turn lane at the intersection of the NW 107<sup>th</sup> Avenue and NW 86<sup>th</sup> Street. Also, the traffic study must specify that the development will**

**install the southbound left-turn lanes at both intersections even though not warranted.  
Please revise accordingly.**

*DPA Response (April 2024): The revised site plan depicting the southbound left turn lane at the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street is included in Appendix A of the report. The report has also been revised to include the off-site improvements proposed by the project.*

*MDC Response (June 2024): Comment addressed. The revised site plan depicting the southbound left turn lane at the NW 107<sup>th</sup> Avenue and NW 88<sup>th</sup> Street is included in the report. The report has also been revised to include the off-site improvements proposed by the project.*

- 8. Please provide mitigation for any movements and/or approaches in which the LOS/delay increases beyond the County's acceptable LOS (LOS E) due to the additional trips added by the proposed development. Please also consider the delay for each individual movement which must be operating at LOS E or better. In addition, the study must specify if the existing turn lanes have sufficient storage capacity to accommodate the future 95th percentile queues at the intersections impacted by the subject project.**

*DPA Response (April 2024): Signal timing improvements have been proposed for the NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection. Additionally, converting the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street intersection from an all-way stop control to a signalized intersection and reconfiguring the NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersection from an all-way stop control to a two-way stop control intersection mitigates the approach and overall delays at these intersections.*

*MDC Response (June 2024): Comment partially addressed. Please update based on previous comments as needed.*

*DPA Response (June 2024): Signal timing improvements have been proposed for the NW 107<sup>th</sup> Avenue / NW 74<sup>th</sup> Street intersection. Additionally, converting the NW 107<sup>th</sup> Avenue / NW 88<sup>th</sup> Street and NW 107<sup>th</sup> Avenue / NW 86<sup>th</sup> Street intersections from an all-way stop control to a signalized intersection mitigates the approach and overall delays at these intersections.*