TRAFFIC ENGINEERING STUDY

INTERSECTION OF
NW 112TH AVENUE AND NW 82ND STREET

City of Doral, Miami-Dade County, Florida
Work Order No. 4
Continuing Professional Services Agreement for General Engineering and Architectural Services (RFQ 2023-08)

Prepared for:
City of Doral

Prepared By:
Stantec Consulting Services Inc.
Stantec Project No.: 215811501

October 2025

TABLE OF CONTENTS

FIGURES

TABLES

LIST OF APPENDICES

PROFESSIONAL ENGINEERING CERTIFICATION

I hereby certify that I am a registered Professional Engineer in the State of Florida practicing with Stantec Consulting Services Inc. ("Stantec"), an organization authorized to operate as an engineering business by the State of Florida Department of Business and Professional Regulation, Florida Board of Professional Engineers, and that I have prepared or approved the evaluation, findings, opinions, conclusions, or technical advice for the following project:

Project: NW 112th Avenue and NW 82nd Street Intersection Study

Location: City of Doral, Miami-Dade County, Florida

Prepared for: City of Doral

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

Christopher Benitez, P.E., PTOE, RSP
Print/Type Name

74035
Professional Engineer (PE) License No.

Senior Engineer
Title

Stantec Consulting Services Inc.
Company

Date: 10/13/2025

This item has been digitally signed and sealed by Christopher Benitez on the date adjacent to the seal.

Signature must be verified on any electronic copies.

EXECUTIVE SUMMARY

The City of Doral has conducted a traffic engineering evaluation at the intersection of NW 112th Avenue and NW 82nd Street in Miami-Dade County, Florida. This assessment was conducted to examine traffic interactions at this intersection, which serves local residential areas, visitors to Doral Legacy Park, and nearby schools. Currently, the intersection uses a two-way stop control with NW 82nd Street operating under free-flow conditions and NW 112th Avenue under stop-control.

The City of Doral selected Stantec Consulting Services Inc., to assist with this evaluation. The study included a desktop analysis of existing conditions, historical crash analysis, signal warrant analysis, all-way stop control analysis, turn lane warrant analysis, and operational analysis using Synchro software. The purpose of the study is to identify potential mobility and safety enhancements, including traffic control modifications, new turn lanes, and improved intersection configurations.

The following is a summary of the analysis results:

- **Desktop analysis** revealed potential improvement opportunities.
- **Safety Analysis** indicated that this intersection predominantly experiences angle-type crashes which may be correlated to intersection traffic control. There was one incapacitating injury in the 5 ½ year study period.
- **Signal Warrants** were not satisfied.
- **All-way stop warrants** were satisfied based on the crash experience warrant.
- **Turn lane warrants** revealed that an eastbound left-turn lane is warranted.
- **Traffic operational analysis** revealed that the existing conditions and other analysis scenarios are operating adequately.

The following is a summary of the recommendations based on this analysis:

- **Traffic Control:**
    - **Short-Term Improvement:**

      Install **all-way stop control**. This control is warranted based on the All-Way Stop Control evaluation (Section 5.2). The intersection is projected to operate at Level of Service (LOS) B or better during the AM and PM peak hours (Section 6), and the improvement represents a major safety enhancement according to the FHWA Crash Modification Factors (Section 4.8). However, this alternative is not the highest-performing traffic control in terms of operations.
    - **Long-Term Improvement:**

      Install a **roundabout**. This control type is expected to provide the best overall operational performance (Section 6) and is a major safety enhancement per the FHWA Crash Modification Factors (Section 4.8). A high-level review indicates that a mini-roundabout with an inscribed circle diameter of approximately 45 feet can likely be accommodated within the existing right-of-way. The bicycle lanes would terminate prior to the roundabout, with bicyclists rerouted onto the sidewalk. A wider sidewalk could be considered to enhance bicycle accommodation and comfort.
- **Turn Lanes:**

  An eastbound left-turn lane is warranted at this location. However, if the roundabout is selected as the preferred long-term improvement, it is not recommended to install the left-turn lane under the all-way stop control configuration. The intersection is projected to operate acceptably without this turn lane under all-way stop control conditions.

Implementing the eastbound left-turn lane would require reducing the existing westbound left-turn lane into Doral Legacy Park. The available space to accommodate both left-turn lanes is approximately 220 feet. Assuming a 50-foot taper for each approach, this would provide about 120 feet of total storage, to be shared between both turn lanes. A traffic separator should be installed in this configuration to delineate and separate the opposing left-turn lanes, improving driver guidance and safety.

- **Curb ramp at the northwest corner of the intersection**:

  Installed a detectable warning pad.

- **South leg of the intersection**:

  Add a standard crosswalk and install a curb ramp/detectable warning at southwest corner of curb. This is a stop-controlled approach but there is no designated crosswalk even though there is a curb ramp at the southwest corner.

- **Traveling south just south of NW 82nd Street:**

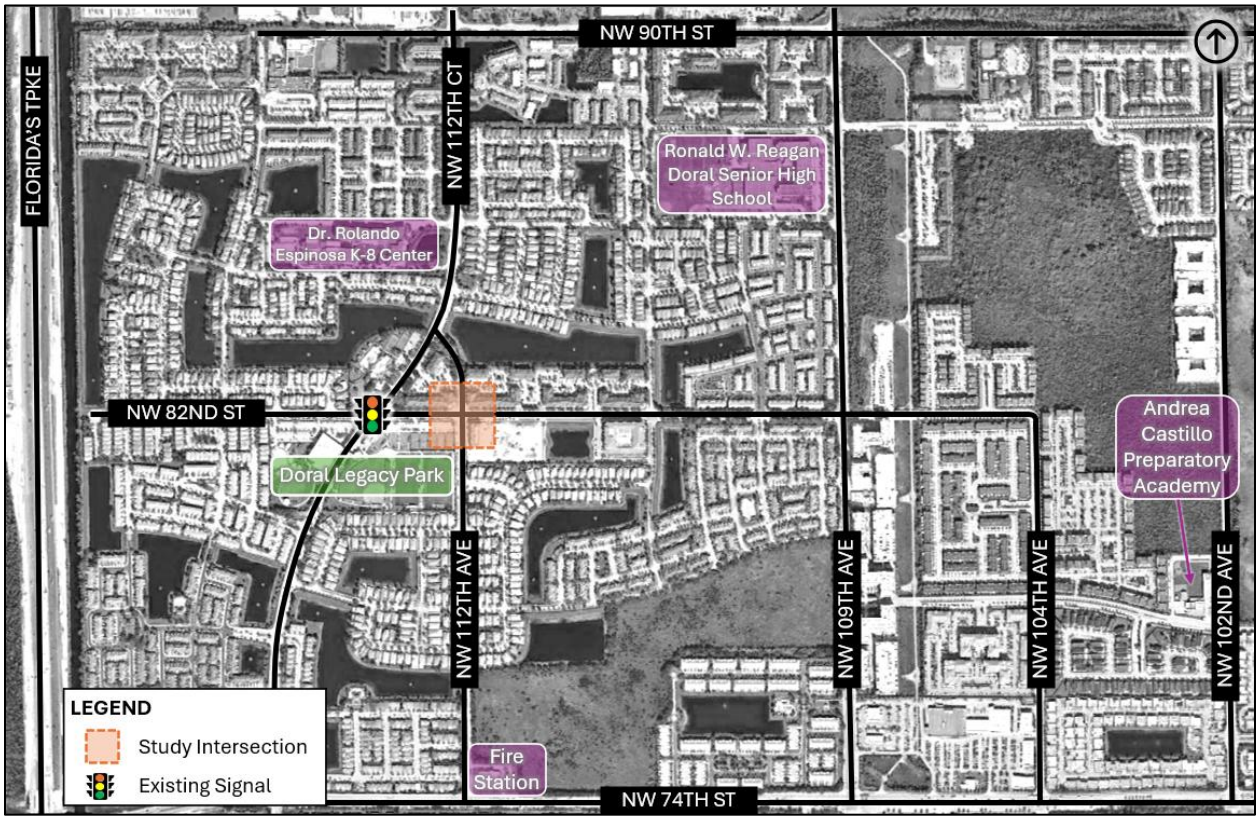
  Remove the sign "Begin Right turn lane Yield to Bikes". There is on-street parking instead of a right turn lane in this area.

1 INTRODUCTION

The City of Doral has conducted a traffic engineering evaluation at the intersection of NW 112th Avenue and NW 82nd Street in Miami-Dade County, Florida. This assessment was conducted to examine traffic interactions at this intersection, which serves local residential areas, visitors to Doral Legacy Park, and nearby schools. Currently, the intersection uses a two-way stop control with NW 82nd Street operating under free-flow conditions and NW 112th Avenue under stop-control. A project location map is presented in **Figure 1**.

The City of Doral selected Stantec Consulting Services Inc. to assist with this evaluation. The study included a desktop analysis of existing conditions, historical crash analysis, signal warrant analysis, all-way stop control analysis, turn lane warrant analysis, and operational analysis using Synchro software. The purpose of the study is to identify potential mobility and safety enhancements, including traffic control modifications, new turn lanes, and improved intersection configurations.

Figure 1 - Project Location Map



2 EXISTING CONDITIONS

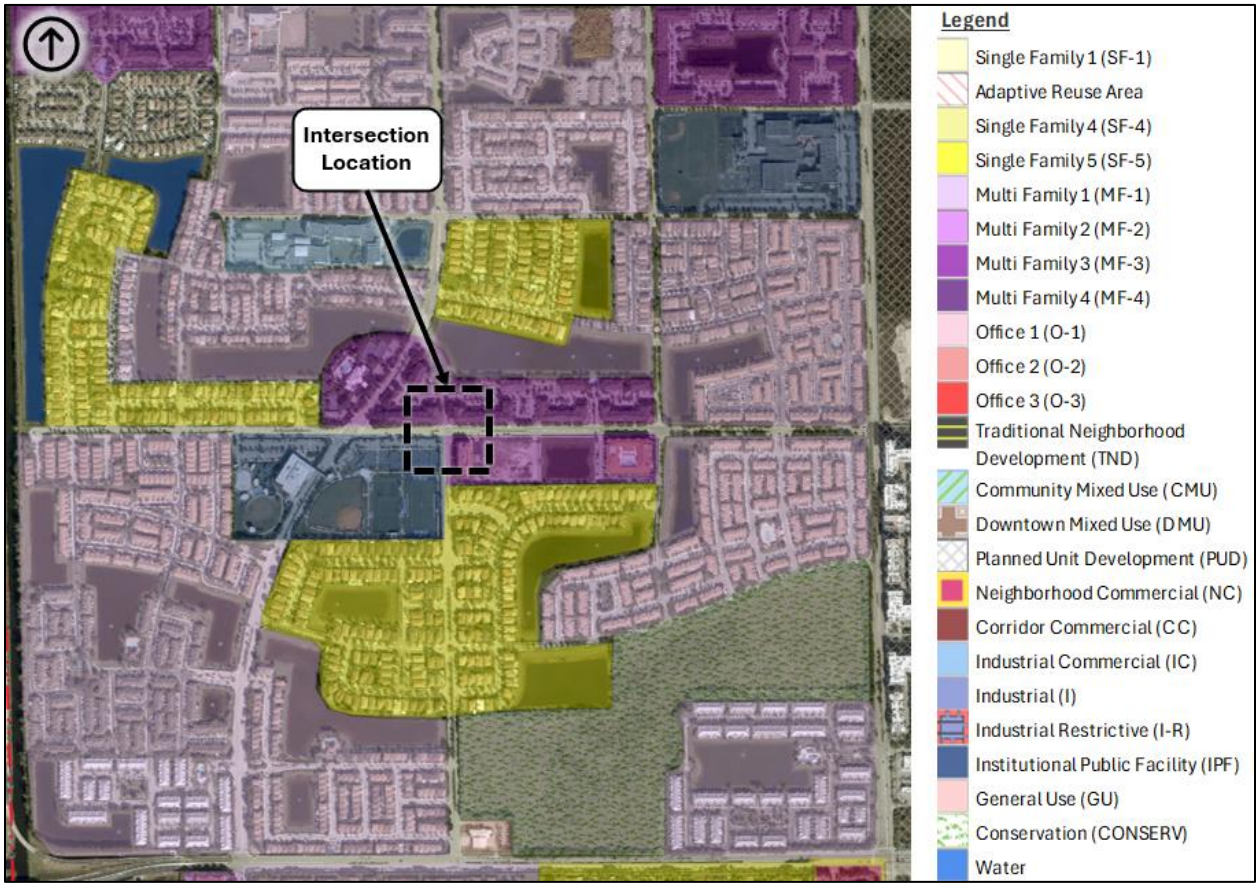
2.1 Land Use Characteristics

The immediate vicinity of the subject intersection is dominated by multi-family and single-family residential land uses. The Dr. Rolando Espinosa K-8 Center, Ronald W. Reagan Doral Senior High School, and Andrea Castillo Preparatory Academy schools are located in the vicinity. There are also numerous industrial facilities to the north of the study area. To the south of the intersection location on NW 74th Street is Miami-Dade Fire-Rescue Station 69.

The Doral Legacy Park is located to the southwest corner of the intersection. The park includes over 18 acres of space for baseball, soccer, football, tennis, basketball, volleyball, children's playground, splash pad, and a walking path, alongside a modern two-story indoor recreation center with a gymnasium, and multi-purpose rooms. There are a total of 253 on-site parking spaces including 12 accessible parking spaces.

Based on the land use characteristics and the transportation network, the intersection is expected to primarily serve local residents, visitors to the park, and the parents, employees, and students to the nearby public schools.

Figure 2 - Existing Land Use Map



2.2 Roadway Geometry

The following provides a description of the two intersecting roadways:

- **NW 82nd Street**: This roadway is a two-lane, east-west local road maintained by the City of Doral with a posted speed limit of 30 mph. The typical section includes two travel lanes (one in each direction), a raised median with left-turn bays, with bicycle lanes, curb and gutter, and a sidewalk on both sides of the road. On-street parking is provided on the south side by Doral Legacy Park.
- **NW 112th Avenue:** This roadway is a two-lane, north-south local road maintained by the City of Doral with a posted speed limit of 30 mph. There are two distinct typical sections north and south of NW 82nd Street. To the north, the typical section includes two travel lanes undivided with flush shoulders and a swale with sod and sidewalks on both sides of the road. South of NW 82nd Street, the typical section is urbanized with two travel lanes (one in each direction), a raised median with left-turn bays, bicycle lanes, on-street parking adjacent to the Doral Legacy Park, curb and gutter, and sidewalks.

2.3 Multimodal Connectivity

2.3.1 Bicycle and Pedestrian

The study area consists of a well-connected sidewalk network and bicycle lanes to support bicyclist and pedestrian mobility. At the study intersection, bicycle lanes are provided along NW 82nd Street and along NW 112th Avenue south of NW 82nd Street. Crosswalks are provided along the stop-controlled approaches of NW 112th Avenue. In order to cross NW 82nd Street, the nearest crossing is approximately 500 feet to the west at the signalized intersection of NW 82nd Street and NW 114th Avenue. To the east, the nearest crossing is over 2,500 feet at the intersection of NW 107th Avenue and NW 82nd Street.

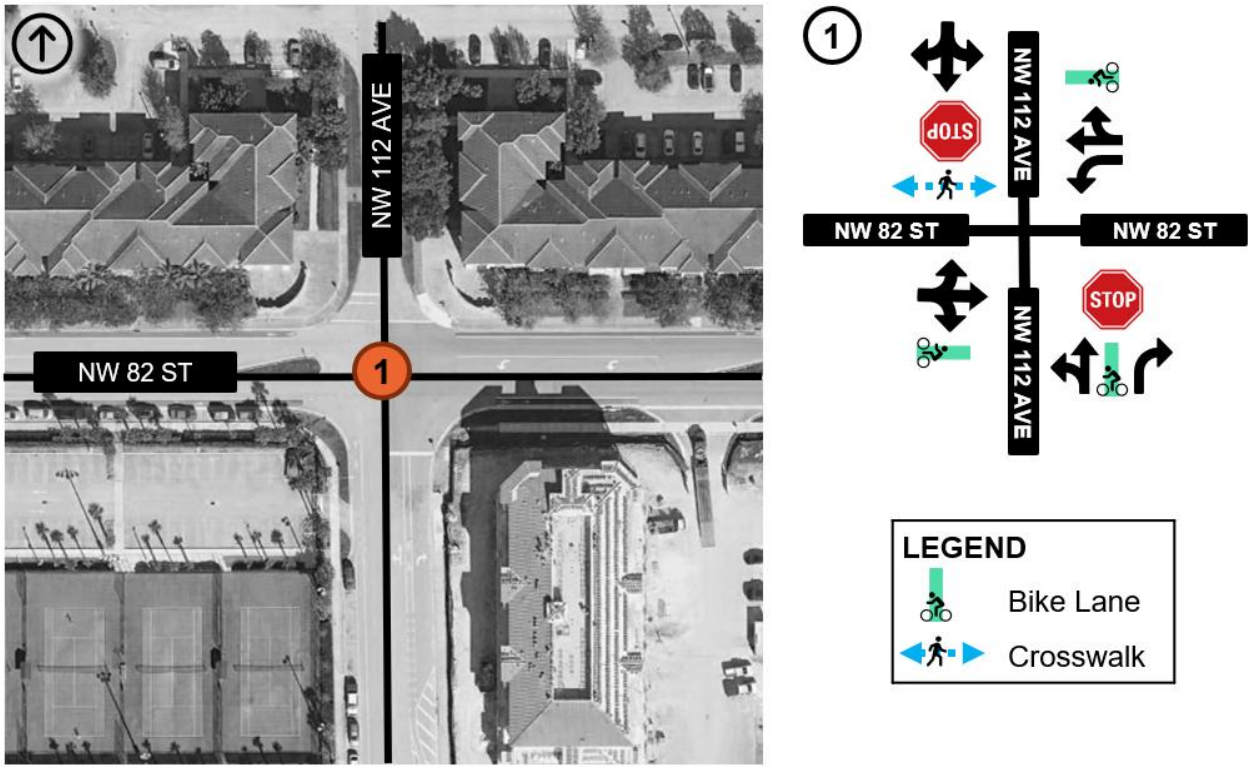
2.3.2 Transit

The City of Doral provides Doral Trolley service near the study intersection. A transit stop for Doral Trolley Route 1 is located on the east side of the intersection in the westbound direction.

2.4 Intersection Characteristics

The subject intersection is two-way stop controlled, with NW 82nd Street operating under free-flow conditions. The eastbound approach (NW 82nd Street west leg) includes a single shared lane for all movements, while the westbound approach (NW 82nd Street east leg) includes one shared lane for through and right movements and a left turn lane with approximately 150 feet of storage. The northbound approach (NW 112th Avenue south leg) includes a shared lane for left and through movements and a right-turn lane with approximately 130 feet of storage. The southbound approach (NW 112th Avenue north leg) includes a single shared lane for all movements. A crosswalk is provided on NW 112th Avenue at the southbound approach. There are bicycle lanes present on all legs of the intersection except for the north leg. The intersection lane geometry is depicted in **Figure 3**.

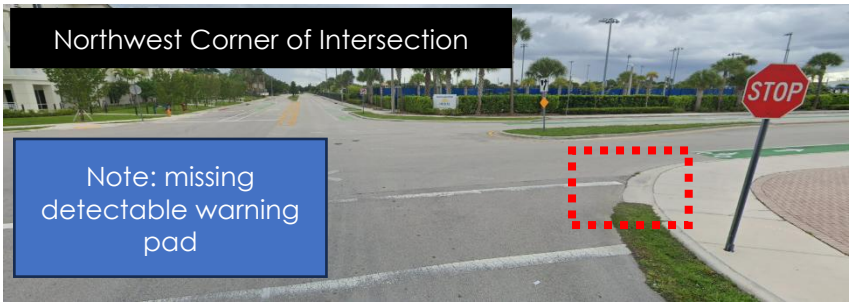
Figure 3 - Intersection Lane Configuration



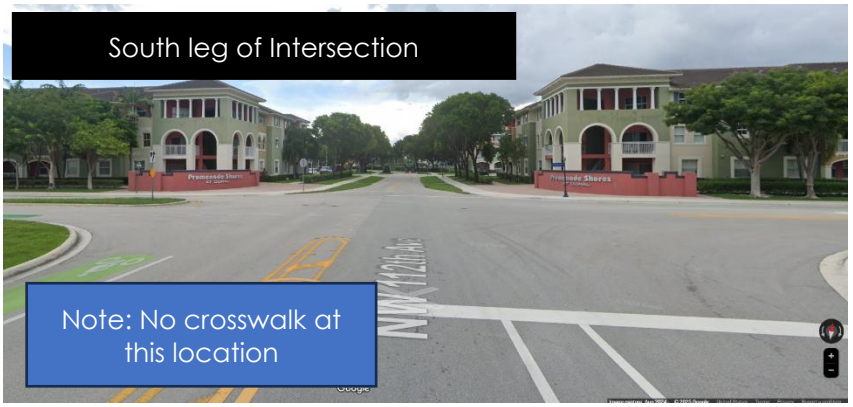
2.5 Intersection Condition

A desktop review of the intersection condition revealed several improvement opportunities. The following is a list of the proposed improvements:

- **Curb ramp at the northwest corner of intersection**: A detectable warning pad should be installed.



- **South leg of the intersection**: This is a stop-controlled approach but there is no designated crosswalk even though there is a curb ramp at the southeast corner. Consider adding standard crosswalk pavement markings and install a curb ramp/detectable warning at southwest corner of curb.



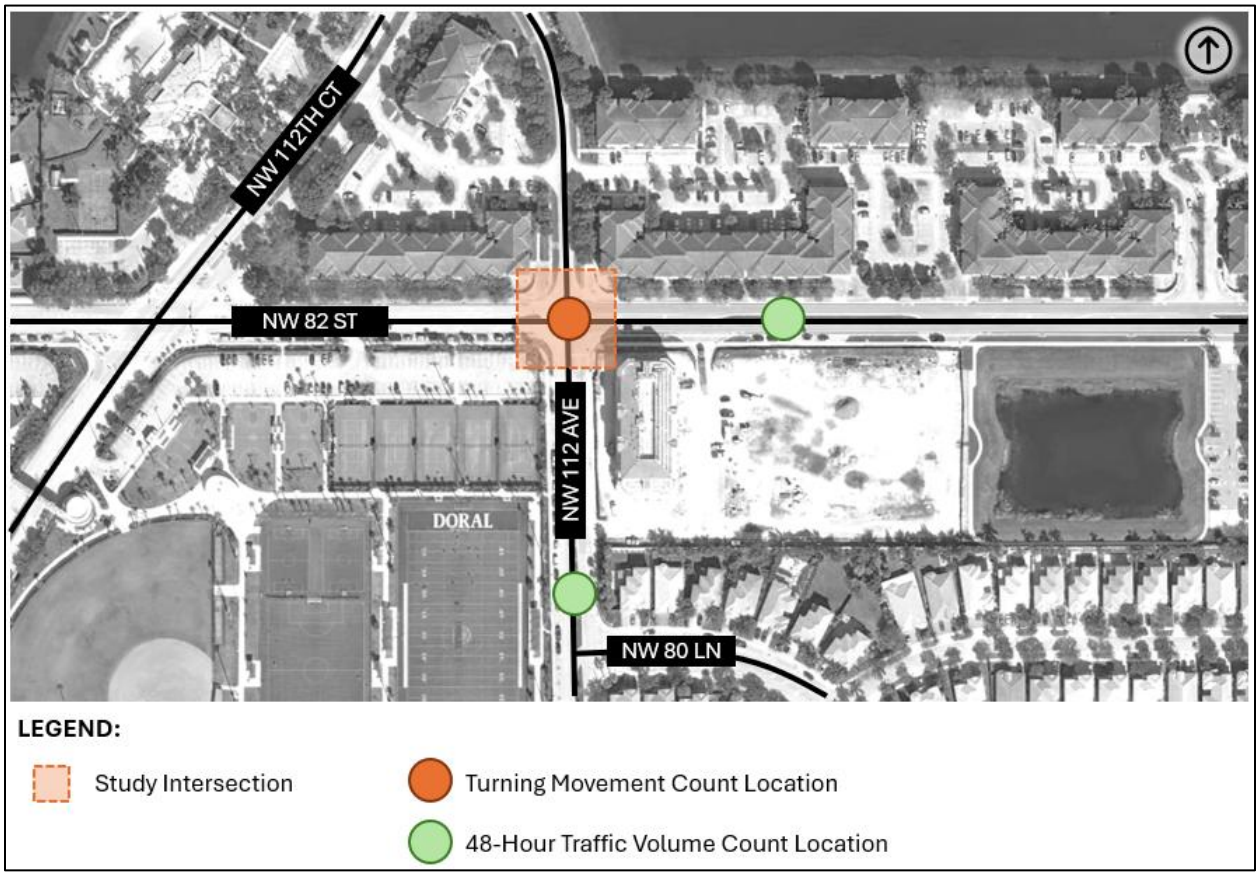
Traveling south just south of NW 82nd Street: Consider removing the sign "Begin Right turn lane Yield to Bikes" sign. There is on-street parking instead of a right turn lane in this area.

2.6 Traffic Volumes

2.6.1 Traffic Data Collection

The traffic data collection for this study included 48-hour traffic volume counts and 12-hour intersection Turning Movement Counts. The data is summarized in the following sections and provided in **Appendix A**.

Figure 4 - Traffic Count Location Map



2.6.1.1 Traffic Volume Counts

The 48-hour traffic volume counts were collected between Wednesday, May 7th, 2025, and Thursday, May 8th, 2025, at the following locations:

- NW 82nd Street east of NW 112th Avenue
- NW 112th Avenue south of NW 82nd Street

2.6.1.2 Intersection Turning Movement Counts (TMCs)

The intersection Turning Movement Counts (TMCs) were collected at the study intersection for a 12-hour period between 7:00 AM and 7:00 PM on Wednesday, May 7th, 2025.

2.6.1.3 Factors

This study utilizes the following traffic factors:

- Seasonal Factor: 1.00 based on Florida Department of Transportation (FDOT) 2024 Peak Season Factor Category Report for North Miami-Dade County
- Peak Hour Factor: 0.84 during the AM peak hour and 0.91 during the PM peak hour based on the intersection TMCs
- Truck Factor: Less than 1% of the intersection serviced trucks based on the intersection TMCs. A conservative 2% was used for intersection analysis.

2.6.2 Average Annual Daily Traffic (AADT)

The Average Annual Daily Traffic (AADT) was estimated by averaging the 48-hour traffic volume counts and applying the seasonal factor. The estimated AADT volumes along NW 82nd Street, just east of the subject intersection, is 6,300 vehicles. Along NW 112th Avenue just south of the subject intersection, the estimated AADT is 2,100 vehicles. The AADT map is shown in **Figure 5**.

Figure 5 - AADT Map

2.6.3 Hourly Directional Volumes

The peak periods of vehicles entering the intersection was approximately between 6:45 AM to 8:45 AM and between 4:45 PM to 7:45 PM based on the traffic volume diagram presented in **Figure 6.** Along NW 82nd Street, the AM peak period did not have a clear directionality, but the PM peak period showed a higher westbound directionality based on **Figure 7.** Along NW 112th Avenue south of NW 82nd Street, both the AM and PM peak periods showed a higher directionality in the northbound direction towards the intersection with NW 82nd Street as presented in **Figure 8.**

Figure 6 – Total Volume Entering Intersection by 15-Minute Period

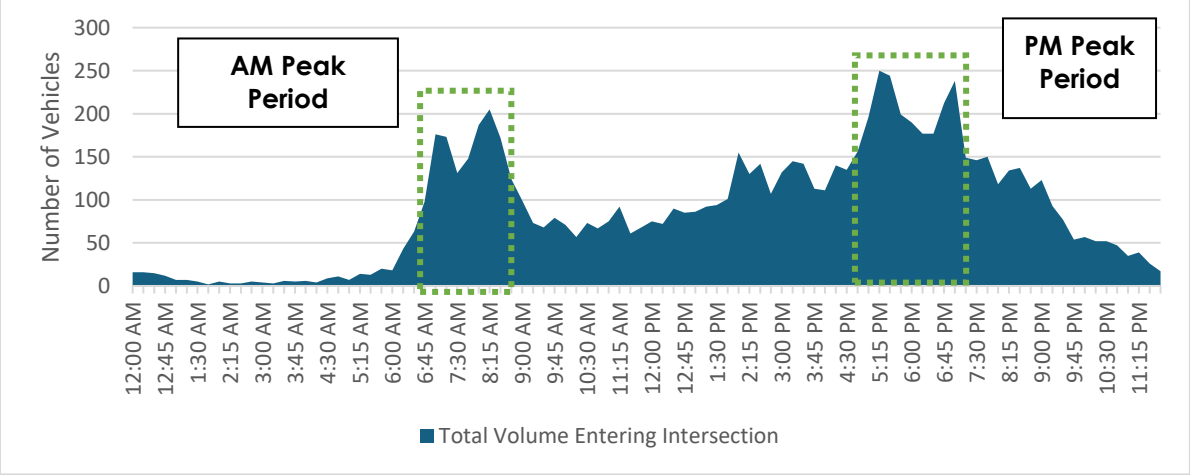


Figure 7 - Hourly Directional Volume Distribution of NW 82nd St

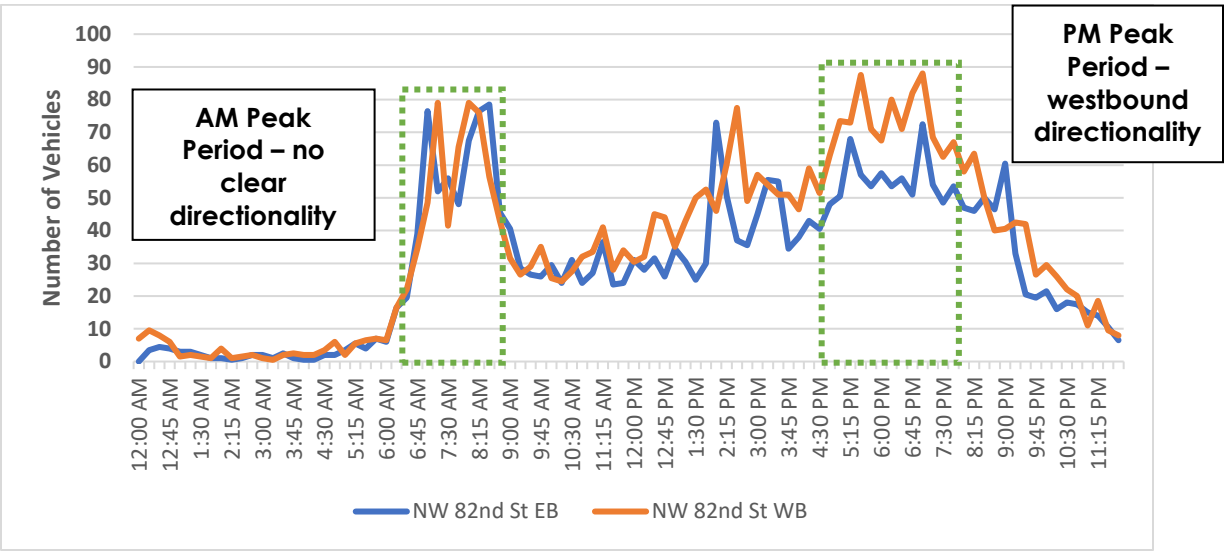
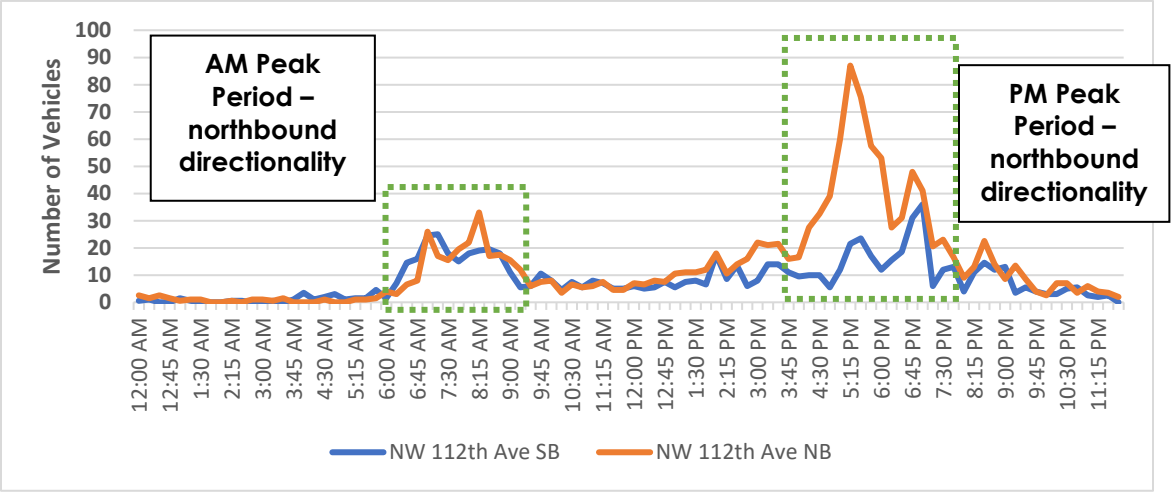


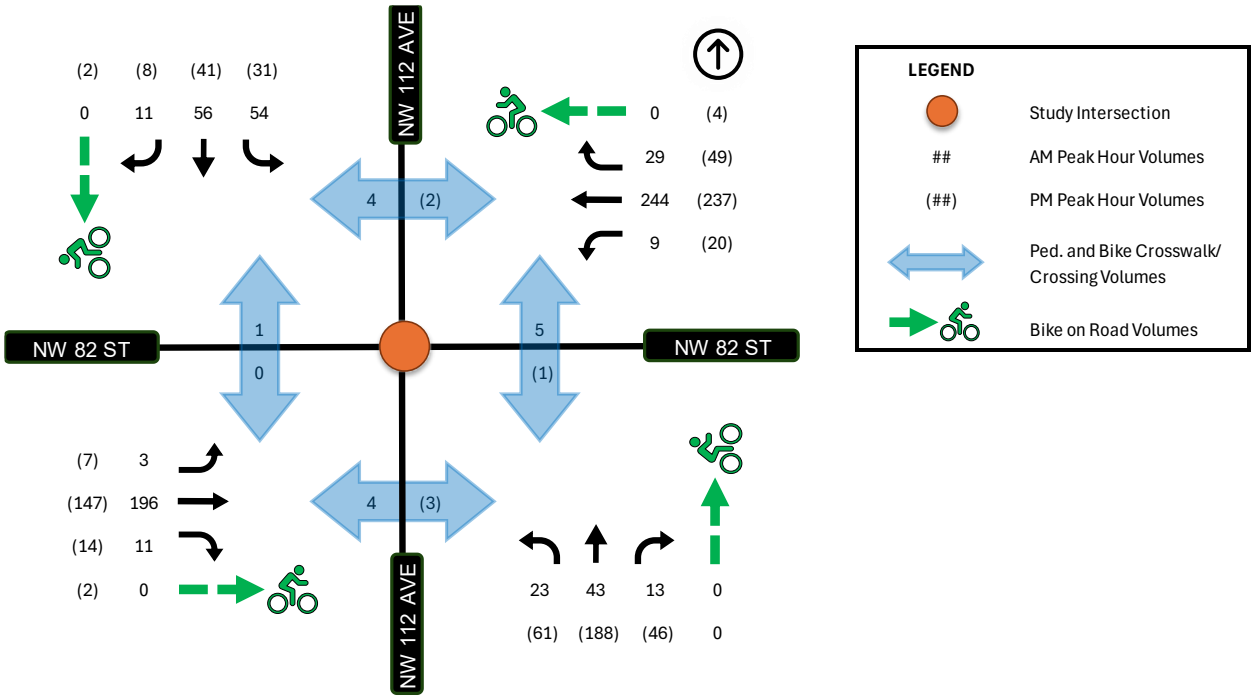
Figure 8 - Hourly Directional Volume Distribution of NW 112th Ave



2.6.4 Peak Hour Volumes

The intersection AM and PM peak hour volumes were estimated using the intersection TMCs. The AM peak hour was 7:45 AM to 8:30 AM and the PM peak hour was 5:00 PM to 6:00 PM. The intersection peak hour traffic volumes were adjusted with a seasonal factor. The peak hour traffic volumes and multimodal demand are depicted in **Figure 9.**

Figure 9 - Intersection Peak Hour Volumes

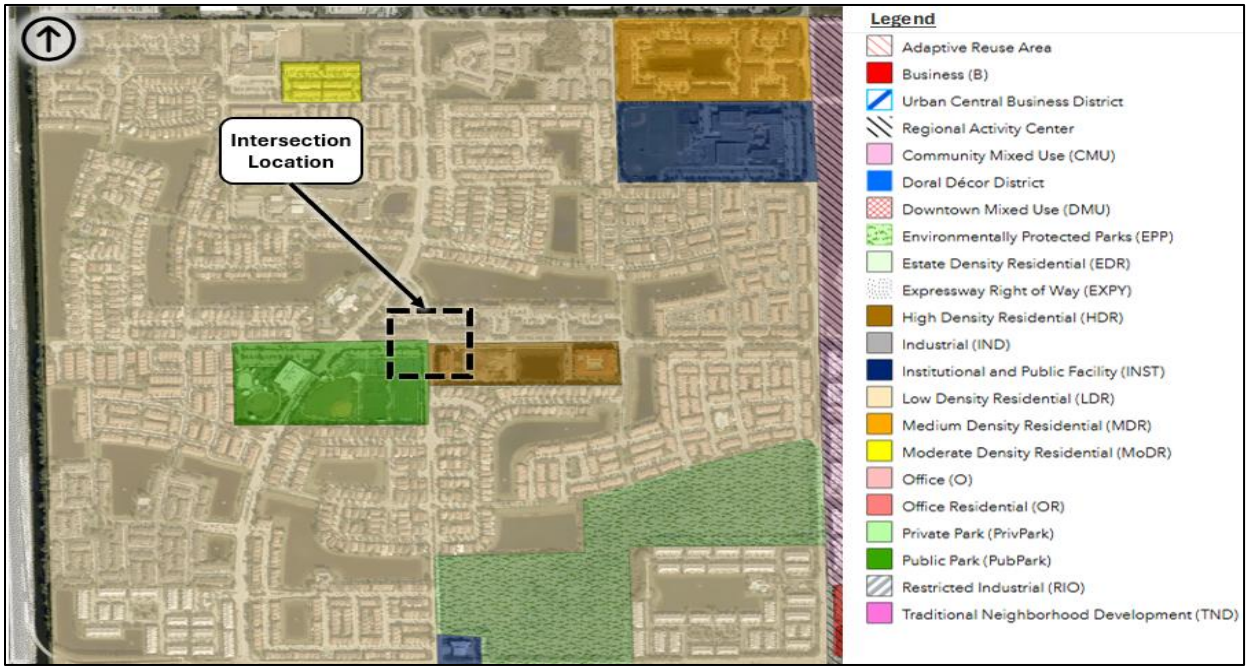


3 FUTURE CONDITIONS

3.1 Land Use Characteristics

The future land uses near the project vicinity remains as mostly low density residential with small areas of moderate density residential, medium density residential, high density residential, Institutional and public facilities, and public parks and recreation.

Figure 10 - Future Land Use Map



3.2 Future Transportation Improvements

The Miami-Dade Transportation Planning Organization (TPO) 2025 Transportation Improvement Program (TIP) was reviewed to identify future programmed improvements. Based on this review, no projects were identified in the vicinity of the study area. The City of Doral Open Data Hub was also reviewed to identify City Right of Way Projects. Based on this review, a traffic signal project is being advertised for the nearby signalized intersection NW 114th Avenue and NW 82nd Street.

3.3 Committed Developments

Committed development projects have been approved for construction near the study intersection. The projects are listed in the City of Doral Open Data Hub. These projects are expected to increase traffic volumes in the study area. The approved developments are as follows:

- Midtown PUD Phase II: Generally located at the SE and NE corner of NW 82nd Street and NW 107th Avenue, this proposed mixed use development encompasses 58,052 SF clubhouse, 61,064 SF of gross leasable commercial use, and 734 dwelling units.
- Midtown Doral PUD/ Century Towne Center: Generally located at the SE and NE corner of NW 82nd Street and NW 107th Avenue, this proposed mixed used development includes 675 residential units, 47,000 SF clubhouse, and 93,000 SF leasable commercial use.

4 SAFETY ANALYSIS

4.1 Crash Data

A review of historical crashes was conducted at the study intersection using crash data downloaded from Signal Four Analytics for the five-year period between January 1, 2020, through December 31, 2024. The crash data area was selected using the "intersection" feature and an offset of 200 ft in all directions to capture crashes that may be operationally related to the intersection. Additionally, police reports were received from the City of Doral Police Department for the period of January 2022 to June 2025. The police reports included several crashes that had not been accounted for in the crash data downloaded from Signal Four Analytics. The crash data was reviewed and cleaned by recategorizing crashes coded as "Other" or "Unknown" to the extent practicable. The crash data is summarized in **Appendix B**.

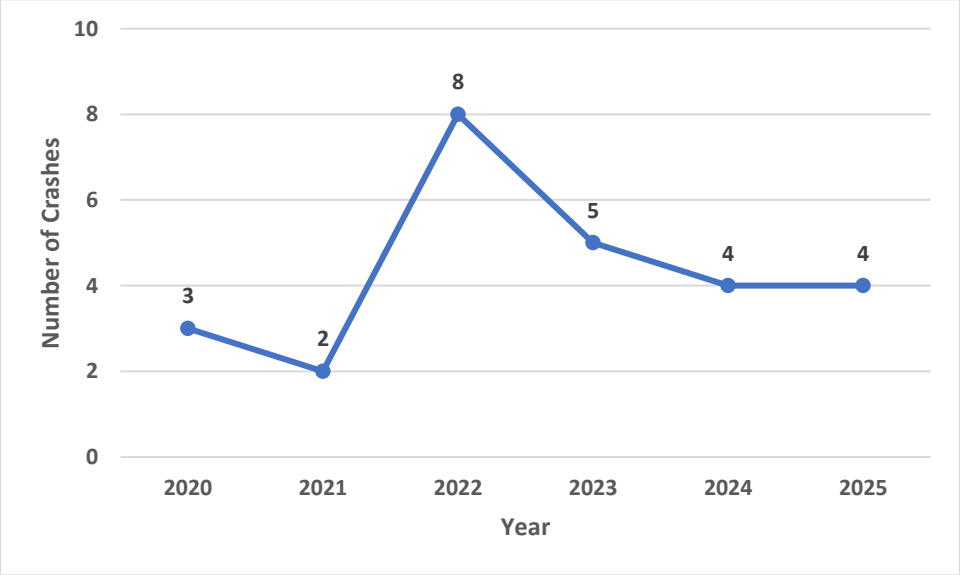
Signal Four Analytics (https://signal4analytics.com/), which is operated by the GeoPlan Center at the University of Florida, is the FDOT recommended crash database which receives data directly from the Department of Florida Highway Safety and Motor Vehicles (FHSMV). The FHSMV are the Florida custodians of crash data and all law enforcement. Signal Four Analytics typically receives crash data within months from the crash occurrence which they then geocoded into their GIS-based system for registered user download.

4.2 Crashes by Year

During the 5 ½ - year study period (5 full calendar years plus 6 months in 2025), a total of 26 crashes occurred within the study intersection limits. This equates to an average of between 3 crashes per year (Signal Four Analytics dataset) and 6 crashes per year (Signal Four Analytics and City Police reports for a 3 year period between 2022 and 2024).

The total number of crashes ranged from a low of 2 crashes in 2021 to a high of 8 crashes in 2022. Overall, there were no significant changes to the total number of crashes between each year, and no clear trend observed throughout the study period except for a dip in crashes during 2021 which was a recovery year following COVID pandemic lockdowns. The total number of crashes is depicted in **Figure 11**.

Figure 11 - Crashes by Year



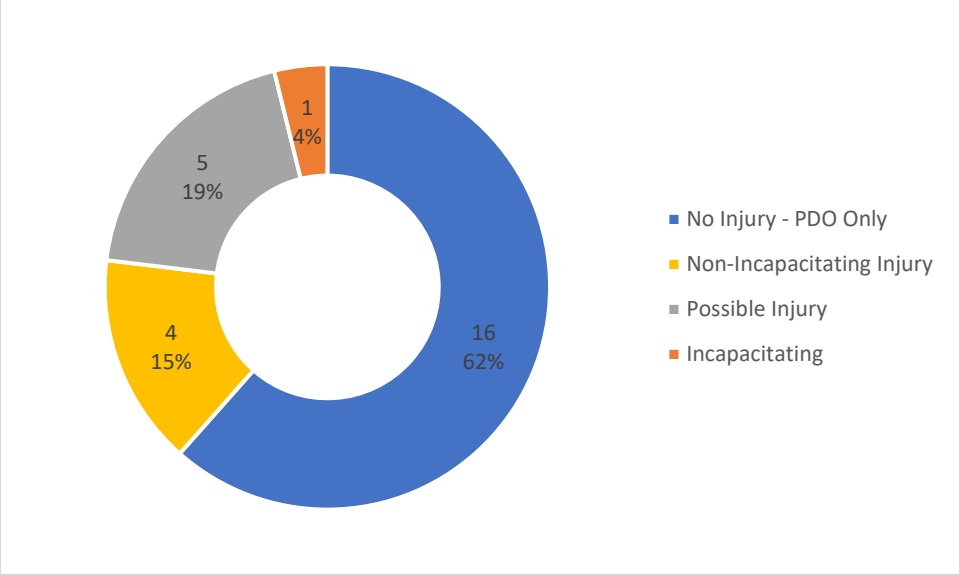
4.3 Crashes by Severity

Crashes are coded by the highest level of severity from Fatal, Serious Injury (Incapacitating Injury), Moderate Injury (Non-incapacitating Injury), Minor Injury (Possible Injury), and No Injury (Property Damage Only).

Within the project limits and study period, the crash severities consisted of 1 crash coded as Serious Injury (Incapacitating Injury) (4% of crashes), 4 crashes coded as Moderate Injury (Non-incapacitating Injury) (15% of crashes), 5 crashes coded as Minor Injury (Possible Injury) (19% of crashes), and the remaining crashes coded as No Injury (Property Damage Only) (16 crashes, 62% of total crashes). The crash severity for the project corridor is depicted in **Figure 12**.

The study intersection crash severities were more severe compared to the latest available countywide averages for similar locations (urban intersection with one lane in each direction, divided) from the year 2022. The countywide average shows 14.5% coded for injuries (includes both moderate and minor injuries) and 85.1% coded as No Injury (Property Damage Only).

Figure 12 - Crashes by Severity



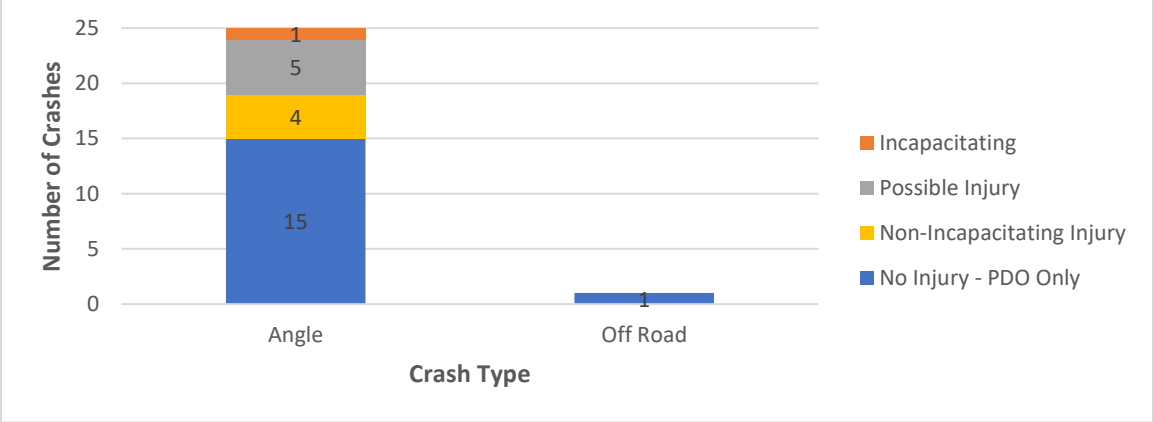
4.4 Crashes by Type

The majority of crashes involved angle crash type with 25 crashes accounting for 96% of the total crashes. Off-road crashes were the only other type reported, comprising of 1 crash (4% of crashes). In terms of severity, angle crashes accounted for all injury-related crashes, including 1 incapacitating injury crash, 5 possible injury crashes and 4 non-incapacitating injury crashes. The remaining 15 angle crashes and the single off-road crash were property damage only. Crashes by type are summarized in **Table 1.** The crash type and severity relationship is illustrated in **Figure 13**.

Table 1 - Crashes by Type

Crash Type	Number of Crashes	Percent
Angle	25	96%
Off Road	1	4%
Grand Total	26	100%

Figure 13 - Crashes by Type and Severity



4.5 Environmental Conditions

The crashes were evaluated for lighting, weather, and road surface conditions. Based on this assessment, most of the crashes occurred during the daylight conditions (73%) followed by Dark – Lighted conditions (12%). 3 crashes occurred under Dark – Not Lighted conditions (12%) and 1 crash occurred during dusk (4%). Most crash events took place in clear weather and dry road surface conditions (88%), with rain, cloudy and wet road surface conditions present in 3 crashes (12%). Based on this assessment, no concerning patterns were observed.

The crashes by lighting condition, weather condition, and road surface condition are summarized in **Table 2**, **Table 3**, **Table 4** respectively.

Table 2 - Crashes by Lighting Condition

Light Condition	Number of Crashes	Percent
Daylight	19	73%
Dark - Lighted	3	12%
Dark – Not Lighted	3	12%
Dusk	1	4%
Grand Total	**26**	**100%**

Table 3 - Crashes by Weather Condition

Weather Condition	Number of Crashes	Percent
Clear	23	88%
Cloudy	1	4%
Rain	2	8%
Grand Total	**26**	**100%**

Table 4 - Crashes by Road Surface Condition

Road Surface Condition	Number of Crashes	Percent
Dry	23	88%
Wet	3	12%
Grand Total	**26**	**100%**

4.6 Contributing Causes

A detailed review of the crashes along the study corridor was performed to determine possible correlations between crash type and its contributing cause. Overall, the predominant contributing cause of the crashes within the project limits was failure to yield right-of-way, accounting for 17 crashes (65%). This was followed by careless or negligent driving, which contributed to 5 crashes (19%).

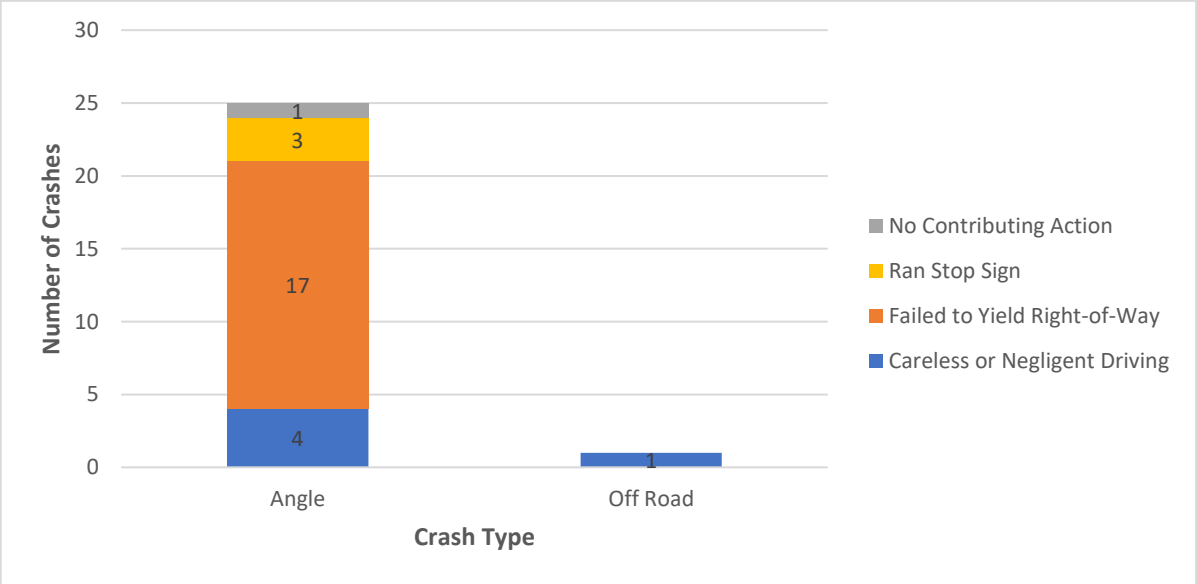
All "failure to yield right of way" crashes were associated with angle crash types, indicating a strong relationship between this contributing factor and conflicts at the intersection turning movements. Careless or negligent driving was attributed to both angle crashes (4 crashes) and the single off-road crash.

The contributing causes of the crashes are summarized in **Table 5** and the relationship between crash types and contributing causes is depicted in **Figure 14**.

Table 5 - Crashes by Contributing Cause

Contributing Cause	Number of Crashes	Percent
Failed to Yield Right-of-Way	17	65%
Careless or Negligent Driving	5	19%
Ran Stop Sign	3	12%
No Contributing Action	1	4%
Grand Total	**26**	**100%**

Figure 14 - Crashes by Type and Contributing Cause



4.7 Crash Rate

The crash rate was calculated using the following formula:

$$Crash\ Rate = \frac{Total\ number\ of\ Crashes\ x\ 1{,}000{,}000}{Total\ Intersection\ Entering\ Volume\ Per\ Day\ x(number\ of\ years\ x\ 365)}$$

Where:

Total Number of Crashes = Total number of crashes in the study period (e.g., five years)

Total Intersection Entering Volume = Sum of daily traffic volume (AADT or ADT) entering an intersection from each approach

The intersection crash rate was estimated at 1.4351 which is lower than the Countywide crash rate for similar intersections at 1.6844. Based on the available crash data, this intersection does not present a safety concern relative to other locations in the county.

4.8 Crash Modification Factors

The Federal Highway Administration's (FHWA) Crash Modification Factor (CMF) Clearinghouse was reviewed to identify CMFs associated with changing traffic control from two-way stop control to other intersection control types. The results of this review are summarized below:

- **All-Way Stop Control:** CMF of 0.25 applied to angle crashes in an urban setting (*CMF ID 310; 4 out of 5 stars*).
- **Traffic Signal:** CMF of 0.77 applied to all crash types and severities except property-damage-only crashes (*CMF ID 319; 4 out of 5 stars*).
- **Roundabout:** CMF of 0.18 applied to all crash types and severities except property-damage-only crashes (*CMF ID 228; 3 out of 5 stars*).

These CMF values indicate that conversion to all-way stop control or a roundabout offers the greatest potential for crash reduction, particularly for angle and injury crashes. A traffic signal is also expected to improve overall safety performance, though to a lesser extent compared to the other two options.

5 INTERSECTION WARRANTS

5.1 Signal Warrant Analysis

The signal warrant analysis was conducted using the FDOT 2021 *Manual on Uniform Traffic Studies*, *Traffic Signal Warrant Summary* forms (Form No. 750-020-01) from October 2020 and the 2023 *Manual on Uniform Traffic Control Devices* (MUTCD) *11th Edition*. These documents consider nine warrants. NW 82nd Street was considered as the major street and NW 112th Avenue was considered as a minor street. The approach speed was selected as the posted speed limit which is 30 mph for both streets.

The following statements from the MUTCD were considered to determine the appropriate number of approach lanes and volumes for the signal warrant analysis:

MUTCD, Section 4C.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.*

The subject intersection includes turn lanes at the northbound and westbound approaches. In order to determine the applicability of the approach lanes and volumes for the signal warrant analysis, turning volumes were compared to the total approach volumes from the 12-hour intersection TMCs. The calculation shows that the northbound right-turn lane volumes accounted for 22% of the total approach volumes. The westbound left-turn lane volumes accounted for 4% of the total approach volumes. Due to the low volumes at the turn lanes, the signal warrant analysis was conducted assuming one lane approach for both streets.

The results of the signal warrant analysis shows that a traffic signal is not warranted at the subject intersection. **Table 6** summarizes the results of the signal warrant analysis. The signal warrant analysis sheets are included in **Appendix C.**

Table 6 - Signal Warrant Summary

Warrant		Satisfied?	Summary / Comments
1A	Minimum Vehicular Volume	No	Warrant not satisfied
1B	Interruption of Continuous Traffic	No	Warrant not satisfied
2	Four Hour Vehicular Volume	No	Warrant not satisfied
3	Peak Hour	n/a	Warrant is not applicable
4	Pedestrian Volume	No	Warrant not satisfied
5	School Crossing	n/a	Warrant is not applicable
6	Coordinated Signal System	n/a	Warrant is not applicable
7	Crash Experience	No	Warrant not satisfied
8	Roadway Network	n/a	Warrant is not applicable
9	Grade Crossing	n/a	Warrant is not applicable

The following is a narrative summary of the applicable signal warrants:

- **Warrant 1** requires that all intersections meet 100% of the volume thresholds for Condition A or Condition B, or 80% of the volume thresholds for both Condition A and Condition B.

Condition A was not satisfied for any of the eight hours for the 100% volume threshold. For the 80% volume threshold, two out of the eight hours met the criteria, but all eight hours must meet this criteria in order to satisfy. Condition B was not satisfied in any hour for both the 100% and 80% volume threshold. This indicates that there are insufficient traffic volumes throughout the day to warrant a traffic signal.

- **Warrant 2** is a measure of the highest four-hour period. The analysis showed that only one out of four of the highest volume hours exceeded the minimum threshold, so this warrant was not satisfied.
- **Warrant 4** is the pedestrian volume warrant. This warrant was not satisfied because none of the hours produced a high enough pedestrian demand.
- **Warrant 7** is the crash experience warrant. The crash data indicates a total of 26 crashes at the subject intersection within the 5 ½ - year study period (5 full calendar years plus 6 months in 2025), 25 of which were angle crashes. Although eight angle crashes occurred in 2022, meeting the crash-frequency criterion, the associated volume and remedial-measure criteria were not met; therefore, this warrant is not satisfied.

The remaining warrants were not applicable (Warrants 3, 5, 6, 8, and 9). Note that Warrant 5 is the peak hour warrant which is only applicable in special circumstances where high traffic demand is encountered at peak hours such as a largely staffed industrial facility with specific staffing schedules.

5.2 All-Way Stop Control Warrant

The all-way stop control warrant analysis was conducted using the *MUTCD 11th Edition, section 2B.12 All-way Stop Control.* The MUTCD includes five warrants.

The results of the All-way Stop Control Warrant indicate that the Crash Experience warrant is satisfied; therefore, All-way Stop Control is warranted. **Table 7** summarizes the results of the All-way Stop Control Warrant.

Table 7 - All-way Stop Control Warrant Summary

Warrant		Satisfied?	Summary / Comments
A	Crash Experience	**Yes**	Eight angle crashes in 2022
B	Sight Distance	No	Warrant not satisfied
C	Transition to Signal Control or Transition to Yield Control at a Circular Intersection	N/A	Warrant is not applicable
D	8-Hour Volume (Vehicles, Pedestrians, Bicycles)	No	Warrant not satisfied
E	Other Factors	No	Warrant not satisfied

The following is a narrative summary of the applicable signal warrants:

- **Warrant A: Crash Experience** is warranted should there be five or more reported crashes in a 12-month period or six or more reported crashes in a 36-month period that were of a type susceptible to correction by the installation of all-way stop control. All angle crashes were identified as susceptible. The analysis showed 8 reported crashes in the 12-month period of the year 2022; therefore, this warrant is satisfied.
- **Warrant B: Sight Distance** is used where an engineering study indicates that the sight distance on the minor-road approaches controlled by a STOP sign is not adequate for a vehicle to turn onto or cross the major (uncontrolled) road. At such a location, a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting

cross traffic is also required to stop. An intersection sight triangle assessment was conducted based on the *Florida Manual for Uniform Minimum Standards for Design, Construction and Maintenance for Street and Highways* (also known as the *Florida Greenbook*), 2018, *section C.9.b.4 Sight Distance for Intersection Maneuvers*. The intersection sight distance formula is as follows:

$$ISD = 1.47V_{major}t_g$$

Where:

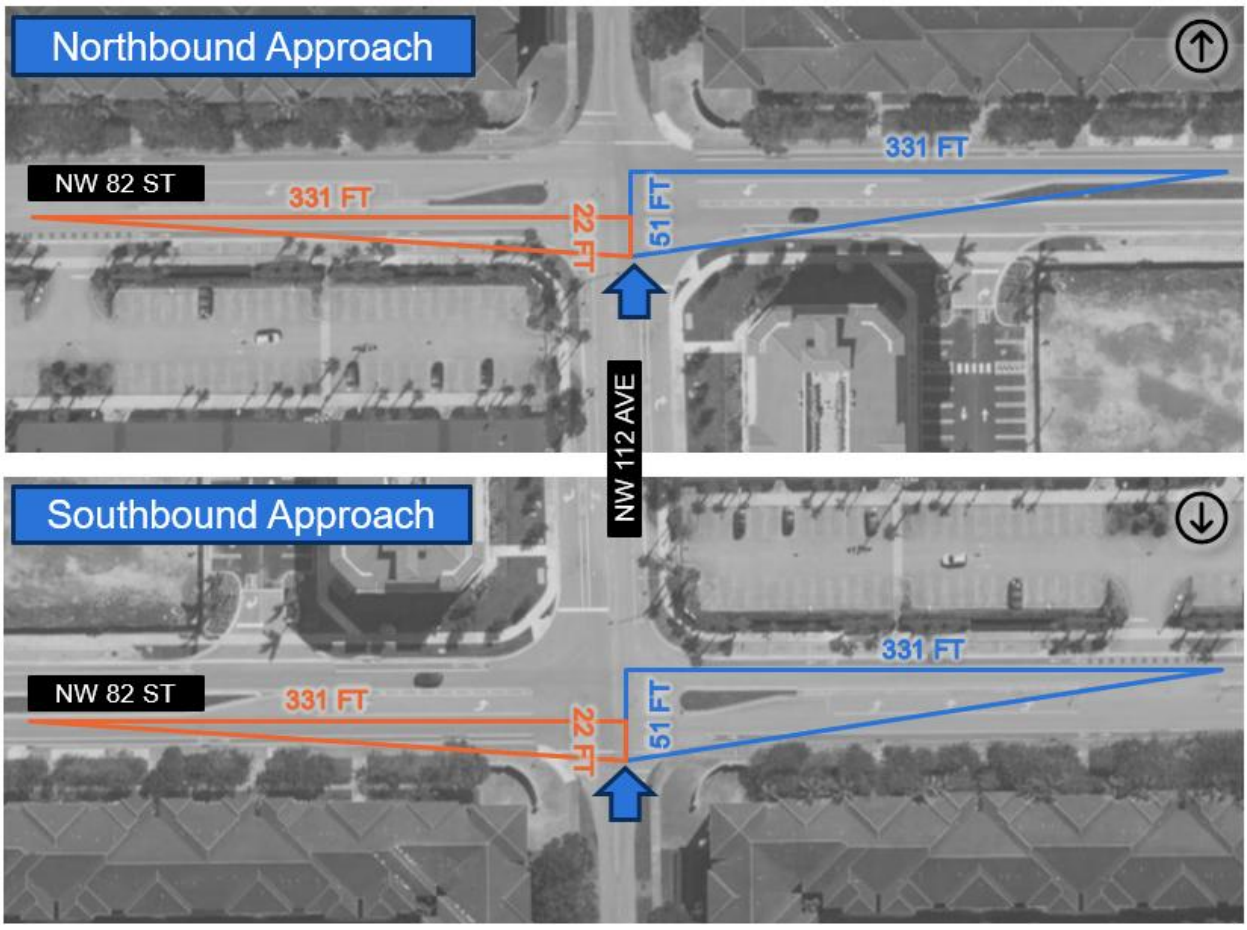
ISD=Intersection Sight Distance (ft.) – length of leg of sight triangle along the major road.

Vmajor= Design Speed (mph) of the Major Road

tg= Time gap (sec.) for minor road vehicle to enter the major road.

A 30 mph design speed was used along NW 82nd Street which resulted in an intersection sight distance of 331 feet. The time gap was conservatively based on Case B1 for both left and right/throughs which shows a passenger car design vehicle with a 7.5 second time gap. These values resulted in an ISD of 331 feet. The ISD was overlayed into CADD software to verify if vertical obstructions were within the triangle areas as presented in **Figure 15.** The results shows that no vertical obstructions are within the sight triangles so there is sufficient sight distance for the drivers approaching the minor approaches.

Figure 15 – Intersection Sight Distance



- **Warrant C: Transition to Signal Control or Transition to Yield Control at a Circular Intersection** does not apply since traffic signal is not warranted so all-way stop control would not be an interim measure.
- **Warrant D: 8-Hour Volume (Vehicles, Pedestrians, Bicycles)** this warrant did not satisfy the volume criteria as summarized in **Table 8.** The major street approach reaches the volume threshold for seven out of the eight hours and the minor street approaches only reaches the volume threshold for three out of the eight hours.

Table 8 – All-Way Stop Control Warrant D Volumes Summary

Hour	Major Street Approach (>300)				Minor Street Approach (>200)			
	Vehicles	Pedestrians	Bicycles	Total	Vehicles	Pedestrians	Bicycles	Total
7:45 AM	492	6	0	498	200	8	0	208
10:30 AM	229	1	0	230	70	4	0	74
12:30 PM	309	2	1	312	94	4	0	98
1:45 PM	423	2	2	427	132	6	0	138
3:00 PM	360	2	3	365	131	2	0	133
4:00 PM	367	0	1	368	149	3	0	152
5:00 PM	474	1	6	481	375	5	2	382
6:00 PM	481	12	2	495	225	20	1	246

- **Warrant E: Other Factors** was not satisfied because there does not seem to be a need to control left-turn conflicts; the intersection does not serve two collector designated streets; and pedestrian and bicyclist movements do not seem to need this type of traffic control based on crash data and roadway geometry.

5.3 Turn Lane Warrant

5.3.1 Right Turn Lane Warrant

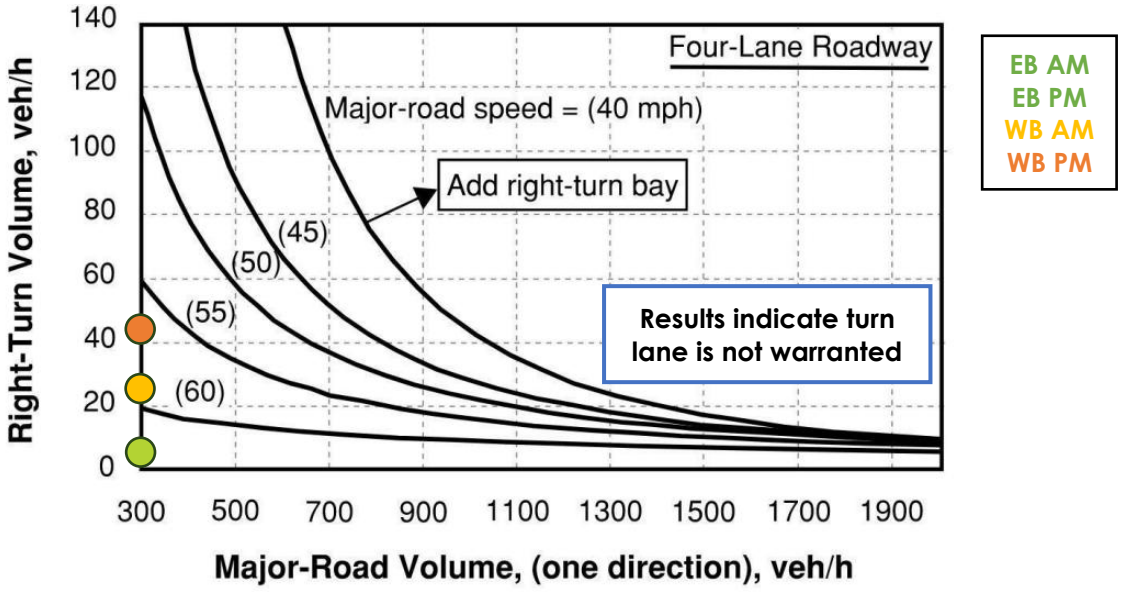
A right-turn lane warrant analysis was conducted for the eastbound and westbound approaches of the study intersection using the NCHRP Report 457, *Evaluating Intersection Improvements: An Engineering Study Guide, Chapter 2, Add a Right-Turn Bay on the Major Road*. The AM and PM peak hours were evaluated. The data used for the analysis is based on the AM and PM peak hour volumes. The right-turn lane warrant input variables are summarized in **Table 9.**

Table 9 – Right-Turn Lane Warrant Variables

Intersection Configuration:		Four-legged	
# of Lanes Main Roadway:		Two-lane	
Posted Speed:		30 mph	
Direction & Time	**Right Turn Lane Volume (veh/h)**	**Major-Road Volume (one direction) (veh/h)**	**% of Right Turns**
Eastbound AM Peak Hour	11	210	5%
Eastbound PM Peak Hour	14	168	8%
Westbound AM Peak Hour	29	282	10%
Westbound PM Peak Hour	49	306	16%

Based on the comparison of the data with the NCHRP 457 Figure 2-6(a) chart, right-turn lanes are not warranted at the study intersection. Note that the minimum speed available from the NCHRP for this type of analysis is 40 mph. The result of the analysis is depicted in **Figure 16**. The relevant pages from the NCHRP 457 are included in **Appendix D**.

Figure 16 - Right Turn Lane Warrant Results



5.3.2 Left Turn Lane Warrant

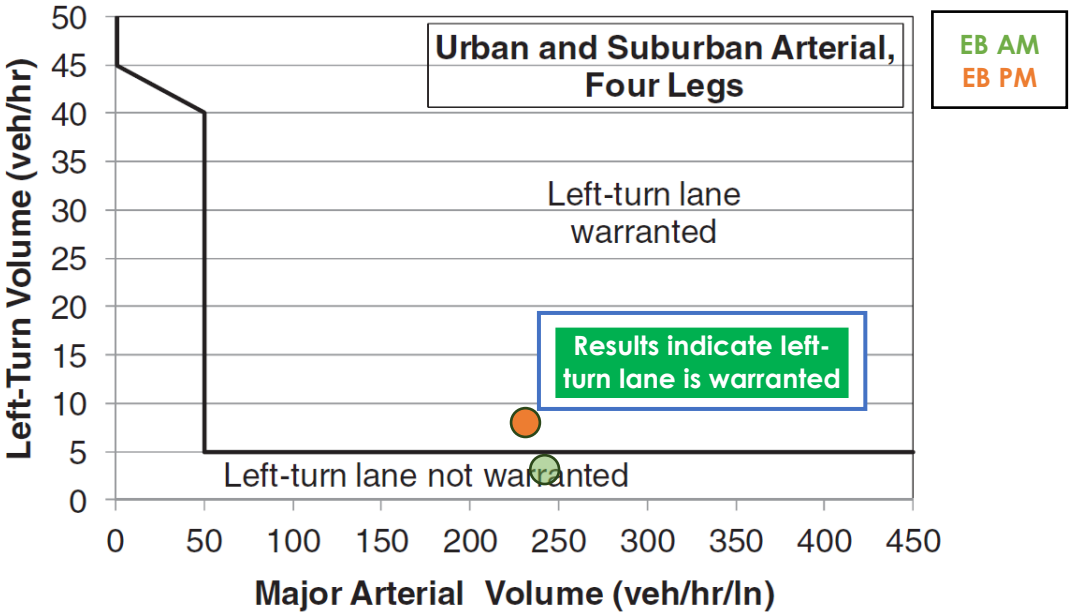
A left-turn lane warrant analysis was conducted for the eastbound approach of the study intersection using the NCHRP Report 745, *Left-Turn Accommodations at Unsignalized Intersections* (2013). The westbound approach already includes a left-turn lane. The AM and PM peak hours were evaluated. The left-turn lane warrant input variables are summarized in **Table 10.**

Table 10 – Left-Turn Lane Warrant Variables

Location Type:		Urban and Suburban Arterial	
Intersection Configuration:		Four-legged	
# of Lanes Main Roadway:		Two-lane	
Posted Speed:		30 mph	
Direction & Time	**Left-turn Lane Volume (veh/hr)**	**Major Arterial Total Volume (veh/hr)**	**Major Arterial Total Volume (veh/hr/ln)**
Eastbound AM Peak Hour	3	492	246
Eastbound PM Peak Hour	7	474	237

Based on the comparison of the data with the NCHRP 745 Figure 4(b) chart, left-turn lanes are warranted at the study intersection. The result of the analysis is depicted in **Figure 17**. The relevant pages from the NCHRP 457 are included in **Appendix D**.

Figure 17 - Left Turn Lane Warrant Results



6 TRAFFIC OPERATIONAL ANALYSIS

Traffic operational analysis was conducted using Cubic Transportation System Synchro software version 12. The analysis results were based on the traffic analysis methodologies detailed in the Highway Capacity Manual (HCM) 7th Edition. The AM and PM peak hour volumes were used for the analysis. The analysis scenarios included the following:

- **Existing conditions (two-way stop control)**
- **Two-way stop control with Eastbound Left-Turn Lane**
- **All-way stop control (maintained existing lane configuration)**
- **Traffic signal (maintained existing lane configuration)**
- **Roundabout (one lane roundabout and one lane approaches)**

The two-way stop control with eastbound left turn lane scenario was included in the analysis since the left-turn lane is warranted.

6.1 Level of Service (LOS)

The LOS is a quantitative stratification of a performance measure or measures that represent quality of service, measured on an A-F scale, with LOS A representing the best operating conditions from the traveler's perspective and LOS F the worst. The results of the analysis show that during the AM and PM peak hours, the roundabout is projected to have the best operations followed by the existing, two-way stop control configuration. The existing scenario shows the best operations for the NW 82nd Street approach, which is the higher volume approach due to the free flow condition. The minor, stop-controlled approaches of the existing scenario are operating adequately at LOS C. The improvement scenario with an eastbound left-turn lane showed similar results as the existing conditions scenario. The results also showed that the All-way stop control and traffic signal are projected to operate at LOS B or better. The traffic analysis results are presented in **Table 11.** The traffic analysis software output is provided in **Appendix E.**

Table 11 - Intersection Operational Analysis Results

Scenario	Measure	Approaches				Intersection
		EB	WB	NB	SB	
AM Peak Hour						
Existing - Two-way Stop Control (Existing)	V/C < 1 (1)	OK	OK	OK	OK	
	Delay (s/veh)	0.1	0.2	15.5	18.9	5.2
	LOS			C	C	
Existing - Two-way Stop Control with EBL	V/C < 1 (1)	OK	OK	OK	OK	
	Delay (s/veh)	0.1	0.2	15.5	18.9	5.2
	LOS			C	C	
All-way Stop Control (maintained existing configuration)	V/C < 1 (1)	OK	OK	OK	OK	
	Delay (s/veh)	12.8	13.6	10.2	11.7	12.6
	LOS	B	B	B	B	B
Signalized (maintained existing configuration)	V/C < 1 (1)	OK	OK	OK	OK	
	Delay (s/veh)	10.3	11.7	8.6	9.3	10.5
	LOS	B	B	A	A	B
	V/C < 1 (1)	OK	OK	OK	OK	

Scenario	Measure	Approaches				Intersection
		EB	WB	NB	SB	
Roundabout (one lane roundabout and one lane approaches)	Delay (s/veh)	5.0	5.3	4.5	5.1	5.1
	LOS	A	A	A	A	A
PM Peak Hour						
Existing -Two-way Stop Control (Existing)	V/C < 1 (1)	OK	OK	OK	OK	
	Delay (s/veh)	0.3	0.5	24.1	21.1	10.6
	LOS			C	C	
Existing - Two-way Stop Control with EBL	V/C < 1 (1)	OK	OK	OK	OK	
	Delay (s/veh)	0.3	0.5	24.1	21.1	10.6
	LOS			C	C	
All-way Stop Control (maintained existing configuration)	V/C < 1 (1)	OK	OK	OK	OK	
	Delay (s/veh)	12.6	14.9	14.1	11.2	13.8
	LOS	B	B	B	B	B
Signalized (maintained existing configuration)	V/C < 1 (1)	OK	OK	OK	OK	
	Delay (s/veh)	9.7	11.5	10.3	8.9	10.5
	LOS	A	B	B	A	B
Roundabout (one lane roundabout and one lane approaches)	V/C < 1 (1)	OK	OK	OK	OK	
	Delay (s/veh)	4.2	7.0	6.1	4.7	5.9
	LOS	A	A	A	A	A

Notes:
1) An "OK" indicates all movements are operating with a V/C less than 1
2) Analysis based on HCM 7th Edition

6.2 Queueing

A queuing analysis was also conducted of the turn lanes. The 95th percentile queue results were extracted from the synchro model based on HCM 7th Edition methodologies. The results were provided in vehicles which was then converted to feet using an average vehicle length of 25 feet.

The two-way stop control with eastbound left turn lane scenario was included in the analysis since the left-turn lane is warranted. The eastbound left turn lane was modeled with a 50-foot storage length which would reduce the existing storage for the westbound left-turn lane into the Doral Legacy Park.

The results indicate that there is sufficient storage length at the existing turn lanes in all scenarios as well as the potential eastbound left-turn lane improvement in that scenario. The analysis results are presented in **Table 12.** The traffic analysis software output is provided in **Appendix E.** Note that the roundabout configuration does not include exclusive turn lanes; therefore, results for individual turning movements were not provided. However, the queuing analysis indicates that the maximum number of vehicles in queue at any approach is one vehicle during both the AM and PM peak hours.

Table 12 – Turn Lane Queuing

Scenario	Measure	Turn Lane		
		EBL	WBL	NBR
AM Peak Hour				
Existing -Two-way Stop Control (Existing)	Storage Capacity (ft)	130		150
	Queue length (ft)	3		0
	Sufficient Length?	Yes		Yes
Existing - Two-way Stop Control with EBL	Storage Capacity (ft)	130	50	150
	Queue length (ft)	3	0	0
	Sufficient Length?	Yes	Yes	Yes
All-way Stop Control (maintained existing configuration)	Storage Capacity (ft)	130		150
	Queue length (ft)	3		3
	Sufficient Length?	Yes		Yes
Signalized (maintained existing configuration)	Storage Capacity (ft)	130		150
	Queue length (ft)	3		3
	Sufficient Length?	Yes		Yes
Roundabout (one lane roundabout and one lane approaches) (2)	Storage Capacity (ft)			
	Queue length (ft)			
	Sufficient Length?			
PM Peak Hour				
Existing -Two-way Stop Control (Existing)	Storage Capacity (ft)	130		150
	Queue length (ft)	5		0
	Sufficient Length?	Yes		Yes
Existing - Two-way Stop Control with EBL	Storage Capacity (ft)	130	50	150
	Queue length (ft)	5	0	0
	Sufficient Length?	Yes	Yes	Yes
All-way Stop Control (maintained existing configuration)	Storage Capacity (ft)	130		150
	Queue length (ft)	8		3
	Sufficient Length?	Yes		Yes
Signalized (maintained existing configuration)	Storage Capacity (ft)	130		150
	Queue length (ft)	13		5
	Sufficient Length?	Yes		Yes
Roundabout (one lane roundabout and one lane approaches) (2)	Storage Capacity (ft)			
	Queue length (ft)			
	Sufficient Length?			

Notes:

1) Analysis based on HCM 7th Edition and applying an average vehicle length of 25 feet per vehicle
2) Roundabout configuration does not include exclusive turn lanes; therefore, results for individual turning movements were not provided. However, the queuing analysis indicates that the maximum number of vehicles in queue at any approach is one vehicle during both the AM and PM peak hours.

7 RECOMMENDATIONS

The following is a summary of the recommendations based on this analysis:

- **Traffic Control:**
    - **Short-Term Improvement:**

      Install **all-way stop control**. This control is warranted based on the All-Way Stop Control evaluation (Section 5.2). The intersection is projected to operate at LOS B or better during the AM and PM peak hours (Section 6), and the improvement represents a major safety enhancement according to the FHWA Crash Modification Factors (Section 4.8). However, this alternative is not the highest-performing traffic control in terms of operations.

    - **Long-Term Improvement:**

      Install a **roundabout**. This control type is expected to provide the best overall operational performance (Section 6) and is a major safety enhancement per the FHWA Crash Modification Factors (Section 4.8). A high-level review indicates that a mini-roundabout with an inscribed circle diameter of approximately 45 feet can likely be accommodated within the existing right-of-way. The bicycle lanes would terminate prior to the roundabout, with bicyclists rerouted onto the sidewalk. A wider sidewalk could be considered to enhance bicycle accommodation and comfort.

- **Turn Lanes:**

  An eastbound left-turn lane is warranted at this location. However, if the roundabout is selected as the preferred long-term improvement, it is not recommended to install the left-turn lane under the all-way stop control configuration. The intersection is projected to operate acceptably without this turn lane under all-way stop control conditions.

  Implementing the eastbound left-turn lane would require reducing the existing westbound left-turn lane into Doral Legacy Park. The available space to accommodate both left-turn lanes is approximately 220 feet. Assuming a 50-foot taper for each approach, this would provide about 120 feet of total storage, to be shared between both turn lanes. A traffic separator should be installed in this configuration to delineate and separate the opposing left-turn lanes, improving driver guidance and safety.

- **Curb ramp at the northwest corner of the intersection**:

  Installed a detectable warning pad.

- **South leg of the intersection**:

  Add a standard crosswalk and install a curb ramp/detectable warning at southwest corner of curb. This is a stop-controlled approach but there is no designated crosswalk even though there is a curb ramp at the southwest corner.

- **Traveling south just south of NW 82nd Street:**

  Remove the sign "Begin Right turn lane Yield to Bikes". There is on-street parking instead of a right turn lane in this area.

APPENDIX A

Traffic Data

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM			9	2		6			6	
12:15 AM			4	3		4			4	
12:30 AM			3	6		5			5	
12:45 AM			3	5		4			4	
01:00 AM			4	2		3			3	
01:15 AM			0	6		3			3	
01:30 AM			0	4		2			2	
01:45 AM			1	1		1			1	
02:00 AM			2	0		1			1	
02:15 AM			1	0		1			1	
02:30 AM			0	2		1			1	
02:45 AM			3	1		2			2	
03:00 AM			1	3		2			2	
03:15 AM			1	1		1			1	
03:30 AM			2	3		3			3	
03:45 AM			1	1		1			1	
04:00 AM			0	1		1			1	
04:15 AM			1	0		1			1	
04:30 AM			0	4		2			2	
04:45 AM			1	3		2			2	
05:00 AM			6	1		4			4	
05:15 AM			7	4		6			6	
05:30 AM			3	5		4			4	
05:45 AM			7	7		7			7	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM			9	3		6			6	
06:15 AM			12	21		17			17	
06:30 AM			20	19		20			20	
06:45 AM			42	36		39			39	
07:00 AM			**79**	74		77			77	
07:15 AM			52	52		52			52	
07:30 AM			57	55		56			56	
07:45 AM			43	53		48			48	
08:00 AM			67	68		68			68	
08:15 AM			78	75		77			77	
08:30 AM			75	**82**		**79**			**79**	
08:45 AM			41	50		46			46	
09:00 AM			38	43		41			41	
09:15 AM			28	29		29			29	
09:30 AM			25	28		27			27	
09:45 AM			26	26		26			26	
10:00 AM			26	33		30			30	
10:15 AM			30	18		24			24	
10:30 AM			28	34		31			31	
10:45 AM			24	24		24			24	
11:00 AM			25	29		27			27	
11:15 AM			35	38		37			37	
11:30 AM			28	19		24			24	
11:45 AM			20	28		24			24	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM			30	32		31			31	
12:15 PM			32	24		28			28	
12:30 PM			36	27		32			32	
12:45 PM			26	26		26			26	
01:00 PM			41	28		35			35	
01:15 PM			30	31		31			31	
01:30 PM			26	24		25			25	
01:45 PM			29	31		30			30	
02:00 PM			**90**	56		**73**			**73**	
02:15 PM			58	43		51			51	
02:30 PM			40	34		37			37	
02:45 PM			36	35		36			36	
03:00 PM			40	50		45			45	
03:15 PM			37	**74**		56			56	
03:30 PM			49	61		55			55	
03:45 PM			41	28		35			35	
04:00 PM			41	35		38			38	
04:15 PM			41	45		43			43	
04:30 PM			44	37		41			41	
04:45 PM			46	50		48			48	
05:00 PM			53	48		51			51	
05:15 PM			62	74		68			68	
05:30 PM			53	61		57			57	
05:45 PM			56	51		54			54	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** EB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM			63	52		58			58	
06:15 PM			52	55		54			54	
06:30 PM			52	60		56			56	
06:45 PM			55	47		51			51	
07:00 PM			73	72		73			73	
07:15 PM			54	54		54			54	
07:30 PM			47	50		49			49	
07:45 PM			60	47		54			54	
08:00 PM			50	44		47			47	
08:15 PM			40	52		46			46	
08:30 PM			54	46		50			50	
08:45 PM			36	57		47			47	
09:00 PM			47	74		61			61	
09:15 PM			36	30		33			33	
09:30 PM			25	16		21			21	
09:45 PM			17	22		20			20	
10:00 PM			19	24		22			22	
10:15 PM			16	16		16			16	
10:30 PM			16	20		18			18	
10:45 PM			15	20		18			18	
11:00 PM			15	15		15			15	
11:15 PM			18	10		14			14	
11:30 PM			8	13		11			11	
11:45 PM			5	8		7			7	
Day Total			2878	2911		2917			2917	
% Weekday Average			98.7%	99.8%						
% Week Average			98.7%	99.8%		100%				
AM Peak 15-min Vol			7:00 AM 79	8:30 AM 82		8:30 AM 79			8:30 AM 79	
PM Peak 15-min Vol			2:00 PM 90	3:15 PM 74		2:00 PM 73			2:00 PM 73	

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** EB, WB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM			15	10		13			13	
12:15 AM			16	10		13			13	
12:30 AM			8	17		13			13	
12:45 AM			9	11		10			10	
01:00 AM			4	5		5			5	
01:15 AM			3	7		5			5	
01:30 AM			3	4		4			4	
01:45 AM			1	3		2			2	
02:00 AM			4	6		5			5	
02:15 AM			3	0		2			2	
02:30 AM			3	2		3			3	
02:45 AM			6	2		4			4	
03:00 AM			3	3		3			3	
03:15 AM			2	1		2			2	
03:30 AM			4	5		5			5	
03:45 AM			2	5		4			4	
04:00 AM			1	4		3			3	
04:15 AM			3	2		3			3	
04:30 AM			5	6		6			6	
04:45 AM			7	9		8			8	
05:00 AM			8	3		6			6	
05:15 AM			13	9		11			11	
05:30 AM			9	12		11			11	
05:45 AM			13	15		14			14	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** EB, WB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM			18	7		13			13	
06:15 AM			29	37		33			33	
06:30 AM			44	39		42			42	
06:45 AM			78	69		74			74	
07:00 AM			130	120		125			125	
07:15 AM			129	133		131			131	
07:30 AM			95	100		98			98	
07:45 AM			112	115		114			114	
08:00 AM			140	**153**		147			147	
08:15 AM			**162**	143		**153**			**153**	
08:30 AM			130	140		135			135	
08:45 AM			80	97		89			89	
09:00 AM			70	74		72			72	
09:15 AM			52	58		55			55	
09:30 AM			50	61		56			56	
09:45 AM			63	59		61			61	
10:00 AM			55	55		55			55	
10:15 AM			57	40		49			49	
10:30 AM			54	63		59			59	
10:45 AM			58	54		56			56	
11:00 AM			57	64		61			61	
11:15 AM			78	77		78			78	
11:30 AM			54	49		52			52	
11:45 AM			51	65		58			58	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** EB, WB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM			62	61		62			62	
12:15 PM			63	57		60			60	
12:30 PM			92	61		77			77	
12:45 PM			74	66		70			70	
01:00 PM			79	60		70			70	
01:15 PM			78	69		74			74	
01:30 PM			80	70		75			75	
01:45 PM			88	77		83			83	
02:00 PM			144	94		119			119	
02:15 PM			123	99		111			111	
02:30 PM			106	123		115			115	
02:45 PM			83	86		85			85	
03:00 PM			95	109		102			102	
03:15 PM			86	133		110			110	
03:30 PM			101	111		106			106	
03:45 PM			95	76		86			86	
04:00 PM			81	88		85			85	
04:15 PM			101	103		102			102	
04:30 PM			102	82		92			92	
04:45 PM			109	113		111			111	
05:00 PM			131	117		124			124	
05:15 PM			141	141		141			141	
05:30 PM			133	156		145			145	
05:45 PM			126	123		125			125	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St
QC JOB #: 16976902
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Doral, FL
DATE: May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM			127	123		125			125	
06:15 PM			137	130		134			134	
06:30 PM			127	127		127			127	
06:45 PM			124	142		133			133	
07:00 PM			**157**	**164**		**161**			**161**	
07:15 PM			111	134		123			123	
07:30 PM			107	115		111			111	
07:45 PM			135	106		121			121	
08:00 PM			109	101		105			105	
08:15 PM			103	116		110			110	
08:30 PM			97	103		100			100	
08:45 PM			76	97		87			87	
09:00 PM			86	116		101			101	
09:15 PM			76	75		76			76	
09:30 PM			68	57		63			63	
09:45 PM			49	43		46			46	
10:00 PM			47	55		51			51	
10:15 PM			49	35		42			42	
10:30 PM			36	44		40			40	
10:45 PM			29	46		38			38	
11:00 PM			25	27		26			26	
11:15 PM			36	29		33			33	
11:30 PM			14	26		20			20	
11:45 PM			12	17		15			15	
Day Total			6301	6326		6339			6339	
% Weekday Average			99.4%	99.8%						
% Week Average			99.4%	99.8%		100%				
AM Peak 15-min Vol			8:15 AM 162	8:00 AM 153		8:15 AM 153			8:15 AM 153	
PM Peak 15-min Vol			7:00 PM 157	7:00 PM 164		7:00 PM 161			7:00 PM 161	

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM			6	8		7			7	
12:15 AM			12	7		10			10	
12:30 AM			5	11		8			8	
12:45 AM			6	6		6			6	
01:00 AM			0	3		2			2	
01:15 AM			3	1		2			2	
01:30 AM			3	0		2			2	
01:45 AM			0	2		1			1	
02:00 AM			2	6		4			4	
02:15 AM			2	0		1			1	
02:30 AM			3	0		2			2	
02:45 AM			3	1		2			2	
03:00 AM			2	0		1			1	
03:15 AM			1	0		1			1	
03:30 AM			2	2		2			2	
03:45 AM			1	4		3			3	
04:00 AM			1	3		2			2	
04:15 AM			2	2		2			2	
04:30 AM			5	2		4			4	
04:45 AM			6	6		6			6	
05:00 AM			2	2		2			2	
05:15 AM			6	5		6			6	
05:30 AM			6	7		7			7	
05:45 AM			6	8		7			7	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM			9	4		7			7	
06:15 AM			17	16		17			17	
06:30 AM			24	20		22			22	
06:45 AM			36	33		35			35	
07:00 AM			51	46		49			49	
07:15 AM			77	81		**79**			**79**	
07:30 AM			38	45		42			42	
07:45 AM			69	62		66			66	
08:00 AM			73	**85**		79			79	
08:15 AM			**84**	68		76			76	
08:30 AM			55	58		57			57	
08:45 AM			39	47		43			43	
09:00 AM			32	31		32			32	
09:15 AM			24	29		27			27	
09:30 AM			25	33		29			29	
09:45 AM			37	33		35			35	
10:00 AM			29	22		26			26	
10:15 AM			27	22		25			25	
10:30 AM			26	29		28			28	
10:45 AM			34	30		32			32	
11:00 AM			32	35		34			34	
11:15 AM			43	39		41			41	
11:30 AM			26	30		28			28	
11:45 AM			31	37		34			34	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St | **QC JOB #:** 16976902

SPECIFIC LOCATION: | **DIRECTION:** WB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM			32	29		31			31	
12:15 PM			31	33		32			32	
12:30 PM			56	34		45			45	
12:45 PM			48	40		44			44	
01:00 PM			38	32		35			35	
01:15 PM			48	38		43			43	
01:30 PM			54	46		50			50	
01:45 PM			59	46		53			53	
02:00 PM			54	38		46			46	
02:15 PM			65	56		61			61	
02:30 PM			66	89		78			78	
02:45 PM			47	51		49			49	
03:00 PM			55	59		57			57	
03:15 PM			49	59		54			54	
03:30 PM			52	50		51			51	
03:45 PM			54	48		51			51	
04:00 PM			40	53		47			47	
04:15 PM			60	58		59			59	
04:30 PM			58	45		52			52	
04:45 PM			63	63		63			63	
05:00 PM			78	69		74			74	
05:15 PM			79	67		73			73	
05:30 PM			80	**95**		**88**			**88**	
05:45 PM			70	72		71			71	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: NW 82nd St
QC JOB #: 16976902
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Doral, FL
DATE: May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM			64	71		68			68	
06:15 PM			**85**	75		80			80	
06:30 PM			75	67		71			71	
06:45 PM			69	95		82			82	
07:00 PM			84	92		88			88	
07:15 PM			57	80		69			69	
07:30 PM			60	65		63			63	
07:45 PM			75	59		67			67	
08:00 PM			59	57		58			58	
08:15 PM			63	64		64			64	
08:30 PM			43	57		50			50	
08:45 PM			40	40		40			40	
09:00 PM			39	42		41			41	
09:15 PM			40	45		43			43	
09:30 PM			43	41		42			42	
09:45 PM			32	21		27			27	
10:00 PM			28	31		30			30	
10:15 PM			33	19		26			26	
10:30 PM			20	24		22			22	
10:45 PM			14	26		20			20	
11:00 PM			10	12		11			11	
11:15 PM			18	19		19			19	
11:30 PM			6	13		10			10	
11:45 PM			7	9		8			8	
Day Total			3423	3415		3439			3439	
% Weekday Average			99.5%	99.3%						
% Week Average			99.5%	99.3%		100%				
AM Peak 15-min Vol			8:15 AM 84	8:00 AM 85		7:15 AM 79			7:15 AM 79	
PM Peak 15-min Vol			6:15 PM 85	5:30 PM 95		5:30 PM 88			5:30 PM 88	

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** NB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM			4	1		3			3	
12:15 AM			1	2		2			2	
12:30 AM			1	4		3			3	
12:45 AM			3	0		2			2	
01:00 AM			1	0		1			1	
01:15 AM			0	2		1			1	
01:30 AM			0	2		1			1	
01:45 AM			0	0		0			0	
02:00 AM			0	0		0			0	
02:15 AM			0	1		1			1	
02:30 AM			0	0		0			0	
02:45 AM			2	0		1			1	
03:00 AM			2	0		1			1	
03:15 AM			0	1		1			1	
03:30 AM			2	1		2			2	
03:45 AM			0	0		0			0	
04:00 AM			0	0		0			0	
04:15 AM			0	0		0			0	
04:30 AM			0	2		1			1	
04:45 AM			0	0		0			0	
05:00 AM			0	0		0			0	
05:15 AM			1	1		1			1	
05:30 AM			1	1		1			1	
05:45 AM			0	3		2			2	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** NB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM			6	2		4			4	
06:15 AM			2	4		3			3	
06:30 AM			9	4		7			7	
06:45 AM			9	7		8			8	
07:00 AM			**26**	26		26			26	
07:15 AM			18	16		17			17	
07:30 AM			15	16		16			16	
07:45 AM			21	18		20			20	
08:00 AM			20	24		22			22	
08:15 AM			25	**41**		**33**			**33**	
08:30 AM			13	21		17			17	
08:45 AM			16	19		18			18	
09:00 AM			19	12		16			16	
09:15 AM			11	13		12			12	
09:30 AM			7	5		6			6	
09:45 AM			7	8		8			8	
10:00 AM			11	5		8			8	
10:15 AM			4	3		4			4	
10:30 AM			4	9		7			7	
10:45 AM			4	7		6			6	
11:00 AM			7	5		6			6	
11:15 AM			5	10		8			8	
11:30 AM			6	3		5			5	
11:45 AM			6	3		5			5	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** NB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM			8	6		7			7	
12:15 PM			8	5		7			7	
12:30 PM			6	10		8			8	
12:45 PM			9	6		8			8	
01:00 PM			15	6		11			11	
01:15 PM			13	9		11			11	
01:30 PM			15	7		11			11	
01:45 PM			16	8		12			12	
02:00 PM			28	8		18			18	
02:15 PM			8	13		11			11	
02:30 PM			10	18		14			14	
02:45 PM			16	16		16			16	
03:00 PM			16	28		22			22	
03:15 PM			21	21		21			21	
03:30 PM			18	25		22			22	
03:45 PM			17	15		16			16	
04:00 PM			18	15		17			17	
04:15 PM			23	32		28			28	
04:30 PM			23	42		33			33	
04:45 PM			30	48		39			39	
05:00 PM			62	58		60			60	
05:15 PM			**86**	**88**		**87**			**87**	
05:30 PM			86	65		76			76	
05:45 PM			61	54		58			58	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** NB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM			46	60		53			53	
06:15 PM			30	25		28			28	
06:30 PM			28	34		31			31	
06:45 PM			51	45		48			48	
07:00 PM			42	40		41			41	
07:15 PM			22	19		21			21	
07:30 PM			19	27		23			23	
07:45 PM			15	18		17			17	
08:00 PM			11	7		9			9	
08:15 PM			15	11		13			13	
08:30 PM			20	25		23			23	
08:45 PM			12	16		14			14	
09:00 PM			5	12		9			9	
09:15 PM			12	15		14			14	
09:30 PM			9	8		9			9	
09:45 PM			5	3		4			4	
10:00 PM			2	3		3			3	
10:15 PM			5	9		7			7	
10:30 PM			7	7		7			7	
10:45 PM			4	3		4			4	
11:00 PM			4	8		6			6	
11:15 PM			3	5		4			4	
11:30 PM			3	4		4			4	
11:45 PM			2	2		2			2	
Day Total			1274	1311		1313			1313	
% Weekday Average			97%	99.8%						
% Week Average			97%	99.8%		100%				
AM Peak 15-min Vol			7:00 AM 26	8:15 AM 41		8:15 AM 33			8:15 AM 33	
PM Peak 15-min Vol			5:15 PM 86	5:15 PM 88		5:15 PM 87			5:15 PM 87	

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** NB, SB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM			5	1		3			3	
12:15 AM			2	3		3			3	
12:30 AM			1	4		3			3	
12:45 AM			3	0		2			2	
01:00 AM			2	2		2			2	
01:15 AM			0	3		2			2	
01:30 AM			0	2		1			1	
01:45 AM			0	0		0			0	
02:00 AM			0	0		0			0	
02:15 AM			0	2		1			1	
02:30 AM			0	1		1			1	
02:45 AM			2	0		1			1	
03:00 AM			2	0		1			1	
03:15 AM			1	1		1			1	
03:30 AM			2	1		2			2	
03:45 AM			0	2		1			1	
04:00 AM			3	4		4			4	
04:15 AM			2	0		1			1	
04:30 AM			2	4		3			3	
04:45 AM			4	2		3			3	
05:00 AM			1	1		1			1	
05:15 AM			2	3		3			3	
05:30 AM			1	4		3			3	
05:45 AM			5	7		6			6	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** NB, SB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM			8	3		6			6	
06:15 AM			9	11		10			10	
06:30 AM			25	17		21			21	
06:45 AM			23	25		24			24	
07:00 AM			**51**	50		51			51	
07:15 AM			45	39		42			42	
07:30 AM			35	32		34			34	
07:45 AM			37	32		35			35	
08:00 AM			38	42		40			40	
08:15 AM			48	**56**		**52**			**52**	
08:30 AM			32	41		37			37	
08:45 AM			35	36		36			36	
09:00 AM			29	24		27			27	
09:15 AM			19	16		18			18	
09:30 AM			12	12		12			12	
09:45 AM			17	19		18			18	
10:00 AM			20	12		16			16	
10:15 AM			9	7		8			8	
10:30 AM			10	18		14			14	
10:45 AM			11	11		11			11	
11:00 AM			16	12		14			14	
11:15 AM			11	18		15			15	
11:30 AM			11	8		10			10	
11:45 AM			11	8		10			10	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** NB, SB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM			13	13		13			13	
12:15 PM			13	10		12			12	
12:30 PM			12	15		14			14	
12:45 PM			19	11		15			15	
01:00 PM			21	11		16			16	
01:15 PM			20	17		19			19	
01:30 PM			25	13		19			19	
01:45 PM			26	11		19			19	
02:00 PM			48	23		36			36	
02:15 PM			16	22		19			19	
02:30 PM			23	32		28			28	
02:45 PM			24	20		22			22	
03:00 PM			26	34		30			30	
03:15 PM			28	42		35			35	
03:30 PM			37	34		36			36	
03:45 PM			29	25		27			27	
04:00 PM			29	23		26			26	
04:15 PM			33	42		38			38	
04:30 PM			32	53		43			43	
04:45 PM			35	54		45			45	
05:00 PM			72	72		72			72	
05:15 PM			**110**	**107**		**109**			**109**	
05:30 PM			109	89		99			99	
05:45 PM			79	70		75			75	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** NB, SB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM			57	73		65			65	
06:15 PM			48	38		43			43	
06:30 PM			48	51		50			50	
06:45 PM			80	78		79			79	
07:00 PM			69	85		77			77	
07:15 PM			27	26		27			27	
07:30 PM			30	40		35			35	
07:45 PM			26	33		30			30	
08:00 PM			16	10		13			13	
08:15 PM			22	26		24			24	
08:30 PM			34	40		37			37	
08:45 PM			23	29		26			26	
09:00 PM			20	23		22			22	
09:15 PM			18	16		17			17	
09:30 PM			16	12		14			14	
09:45 PM			9	7		8			8	
10:00 PM			3	8		6			6	
10:15 PM			9	11		10			10	
10:30 PM			13	11		12			12	
10:45 PM			8	10		9			9	
11:00 PM			7	10		9			9	
11:15 PM			5	7		6			6	
11:30 PM			4	8		6			6	
11:45 PM			2	2		2			2	
Day Total			2075	2093		2103			2103	
% Weekday Average			98.7%	99.5%						
% Week Average			98.7%	99.5%		100%				
AM Peak 15-min Vol			7:00 AM 51	8:15 AM 56		8:15 AM 52			8:15 AM 52	
PM Peak 15-min Vol			5:15 PM 110	5:15 PM 107		5:15 PM 109			5:15 PM 109	

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** SB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM			1	0		1			1	
12:15 AM			1	1		1			1	
12:30 AM			0	0		0			0	
12:45 AM			0	0		0			0	
01:00 AM			1	2		2			2	
01:15 AM			0	1		1			1	
01:30 AM			0	0		0			0	
01:45 AM			0	0		0			0	
02:00 AM			0	0		0			0	
02:15 AM			0	1		1			1	
02:30 AM			0	1		1			1	
02:45 AM			0	0		0			0	
03:00 AM			0	0		0			0	
03:15 AM			1	0		1			1	
03:30 AM			0	0		0			0	
03:45 AM			0	2		1			1	
04:00 AM			3	4		4			4	
04:15 AM			2	0		1			1	
04:30 AM			2	2		2			2	
04:45 AM			4	2		3			3	
05:00 AM			1	1		1			1	
05:15 AM			1	2		2			2	
05:30 AM			0	3		2			2	
05:45 AM			5	4		5			5	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** SB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM			2	1		2			2	
06:15 AM			7	7		7			7	
06:30 AM			16	13		15			15	
06:45 AM			14	18		16			16	
07:00 AM			25	**24**		**25**			**25**	
07:15 AM			**27**	23		25			25	
07:30 AM			20	16		18			18	
07:45 AM			16	14		15			15	
08:00 AM			18	18		18			18	
08:15 AM			23	15		19			19	
08:30 AM			19	20		20			20	
08:45 AM			19	17		18			18	
09:00 AM			10	12		11			11	
09:15 AM			8	3		6			6	
09:30 AM			5	7		6			6	
09:45 AM			10	11		11			11	
10:00 AM			9	7		8			8	
10:15 AM			5	4		5			5	
10:30 AM			6	9		8			8	
10:45 AM			7	4		6			6	
11:00 AM			9	7		8			8	
11:15 AM			6	8		7			7	
11:30 AM			5	5		5			5	
11:45 AM			5	5		5			5	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** SB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM			5	7		6			6	
12:15 PM			5	5		5			5	
12:30 PM			6	5		6			6	
12:45 PM			10	5		8			8	
01:00 PM			6	5		6			6	
01:15 PM			7	8		8			8	
01:30 PM			10	6		8			8	
01:45 PM			10	3		7			7	
02:00 PM			20	15		18			18	
02:15 PM			8	9		9			9	
02:30 PM			13	14		14			14	
02:45 PM			8	4		6			6	
03:00 PM			10	6		8			8	
03:15 PM			7	21		14			14	
03:30 PM			19	9		14			14	
03:45 PM			12	10		11			11	
04:00 PM			11	8		10			10	
04:15 PM			10	10		10			10	
04:30 PM			9	11		10			10	
04:45 PM			5	6		6			6	
05:00 PM			10	14		12			12	
05:15 PM			24	19		22			22	
05:30 PM			23	24		24			24	
05:45 PM			18	16		17			17	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of report: Midblock Count - Volume Data

LOCATION: Northwest 80th Lane | **QC JOB #:** 16976903

SPECIFIC LOCATION: | **DIRECTION:** SB

CITY/STATE: Doral, FL | **DATE:** May 7 2025 - May 8 2025

Start Time	Mon	Tue	Wed 7 May 25	Thu 8 May 25	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM			11	13		12			12	
06:15 PM			18	13		16			16	
06:30 PM			20	17		19			19	
06:45 PM			**29**	33		31			31	
07:00 PM			27	**45**		**36**			**36**	
07:15 PM			5	7		6			6	
07:30 PM			11	13		12			12	
07:45 PM			11	15		13			13	
08:00 PM			5	3		4			4	
08:15 PM			7	15		11			11	
08:30 PM			14	15		15			15	
08:45 PM			11	13		12			12	
09:00 PM			15	11		13			13	
09:15 PM			6	1		4			4	
09:30 PM			7	4		6			6	
09:45 PM			4	4		4			4	
10:00 PM			1	5		3			3	
10:15 PM			4	2		3			3	
10:30 PM			6	4		5			5	
10:45 PM			4	7		6			6	
11:00 PM			3	2		3			3	
11:15 PM			2	2		2			2	
11:30 PM			1	4		3			3	
11:45 PM			0	0		0			0	
Day Total			801	782		811			811	
% Weekday Average			98.8%	96.4%						
% Week Average			98.8%	96.4%		100%				
AM Peak 15-min Vol			7:15 AM 27	7:00 AM 24		7:00 AM 25			7:00 AM 25	
PM Peak 15-min Vol			6:45 PM 29	7:00 PM 45		7:00 PM 36			7:00 PM 36	

Comments:

Report generated on 5/12/2025 3:58 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

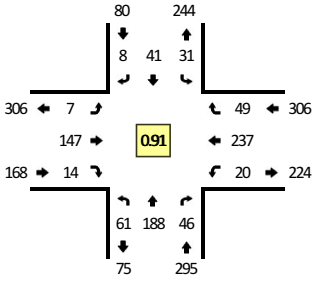
Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

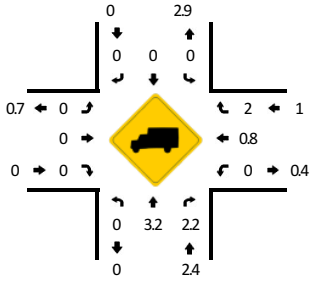
LOCATION: NW 112th Ave -- NW 82nd St
CITY/STATE: Doral, FL

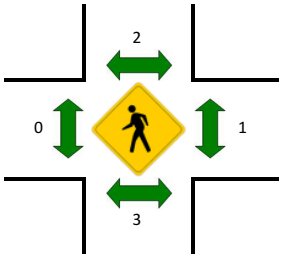
QC JOB #: 16976901
DATE: Wed, May 7 2025

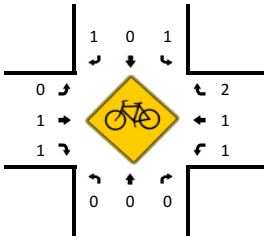
Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

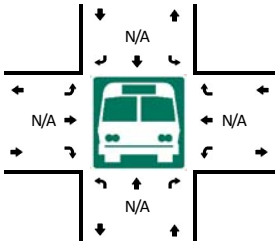


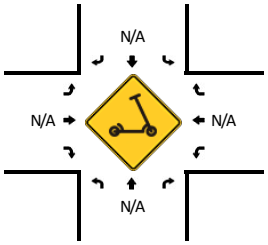
TRUE DATA TO IMPROVE MOBILITY











15-Min Count Period Beginning At	NW 112th Ave (Northbound)				NW 112th Ave (Southbound)				NW 82nd St (Eastbound)				NW 82nd St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	2	23	0	5	17	6	0	0	51	5	0	3	47	1	0	161	
7:15 AM	3	8	7	0	15	19	3	0	0	30	2	0	7	65	5	0	164	
7:30 AM	3	7	5	0	10	17	4	0	2	42	1	0	1	33	4	0	129	
7:45 AM	5	15	1	0	12	11	2	0	0	30	0	0	5	60	5	0	146	600
8:00 AM	8	9	3	0	13	14	4	0	0	51	1	0	3	67	3	0	176	615
8:15 AM	7	11	7	0	16	18	4	0	0	55	4	0	1	69	14	0	206	657
8:30 AM	3	8	2	0	13	13	1	0	3	60	6	0	0	48	7	0	164	692
8:45 AM	2	9	5	0	5	16	1	0	0	31	2	0	1	34	4	0	110	656
9:00 AM	3	10	7	0	6	7	2	0	1	26	1	0	2	27	3	0	95	575
9:15 AM	1	8	2	0	5	6	3	0	0	21	1	0	1	19	4	0	71	440
9:30 AM	1	5	2	0	4	2	0	0	0	19	2	0	1	21	3	0	60	336
9:45 AM	1	3	3	0	3	8	2	0	0	20	2	0	0	31	6	0	79	305
10:00 AM	2	6	3	0	6	9	2	0	2	17	0	0	0	24	6	0	77	287
10:15 AM	1	1	2	0	8	3	1	0	0	20	2	0	0	23	4	0	65	281
10:30 AM	2	1	1	0	6	5	4	0	0	21	1	0	0	21	5	0	67	288
10:45 AM	0	2	2	0	3	3	1	0	2	19	0	0	4	24	6	0	66	275
11:00 AM	2	2	3	0	2	4	5	0	2	20	3	0	2	26	4	0	75	273
11:15 AM	1	3	1	0	9	5	3	0	0	25	1	0	0	37	6	0	91	299
11:30 AM	1	3	2	0	5	4	3	0	0	21	0	1	1	20	5	0	66	298
11:45 AM	2	2	3	0	6	3	0	0	2	12	1	0	1	25	5	0	62	294
12:00 PM	5	0	3	0	3	4	0	0	2	24	0	0	1	26	5	0	73	292
12:15 PM	3	5	0	0	3	3	1	0	0	29	1	0	1	25	5	0	76	277
12:30 PM	1	3	2	0	5	5	2	0	2	29	1	0	0	48	8	0	106	317
12:45 PM	5	6	1	0	2	8	3	0	2	23	2	0	1	39	8	0	100	355
1:00 PM	4	8	3	0	4	7	1	0	1	34	0	0	0	33	5	0	100	382
1:15 PM	2	10	1	0	6	4	1	0	1	23	1	0	1	43	4	0	97	403
1:30 PM	6	9	0	0	6	7	1	0	1	20	3	0	0	44	10	0	107	404
1:45 PM	6	8	2	0	5	7	4	0	0	22	1	0	2	45	12	0	114	418
2:00 PM	12	8	9	0	14	9	0	0	2	67	8	0	3	41	10	0	183	501
2:15 PM	1	4	3	0	9	8	1	0	2	46	0	0	0	53	11	0	138	542
2:30 PM	1	6	3	0	4	7	1	0	0	33	0	0	6	54	5	0	120	555
2:45 PM	3	9	4	0	9	2	1	0	0	23	1	0	5	34	8	0	99	540
3:00 PM	5	9	2	0	2	7	3	0	2	36	2	0	1	50	5	0	124	481
3:15 PM	6	10	5	0	3	5	5	0	1	29	1	0	1	39	9	0	114	457
3:30 PM	7	5	6	0	4	13	2	0	1	39	4	0	2	44	6	0	133	470
3:45 PM	6	8	4	0	5	8	1	0	0	32	3	0	1	42	10	0	120	491
4:00 PM	7	8	3	0	4	8	4	0	0	34	1	0	2	35	3	1	110	477
4:15 PM	7	15	2	0	7	7	1	0	0	32	2	0	1	43	16	0	133	496

15-Min Count Period Beginning At	NW 112th Ave (Northbound)				NW 112th Ave (Southbound)				NW 82nd St (Eastbound)				NW 82nd St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:30 PM	4	16	2	0	6	6	3	0	0	36	1	1	2	43	13	0	133	496
4:45 PM	6	21	4	0	5	3	0	0	2	37	1	0	1	49	13	0	142	518
5:00 PM	12	37	13	0	9	8	3	0	2	31	1	0	2	62	13	0	193	601
5:15 PM	15	55	16	0	8	16	2	0	1	38	4	0	4	69	6	0	234	702
5:30 PM	20	58	8	0	8	9	1	0	3	37	4	0	10	55	15	0	228	797
5:45 PM	14	38	9	0	6	8	2	0	1	41	5	0	4	51	15	0	194	849
6:00 PM	12	23	11	0	14	4	1	0	0	39	5	0	2	51	11	0	173	829
6:15 PM	13	11	7	0	5	14	3	0	1	39	3	0	2	72	11	0	181	776
6:30 PM	13	7	8	0	5	5	3	0	4	39	6	0	8	55	12	0	165	713
6:45 PM	28	10	14	0	4	6	4	0	1	37	14	0	9	50	10	0	187	706

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	60	220	64	0	32	64	8	0	4	152	16	0	16	276	24	0	936
Heavy Trucks	0	8	0		0	0	0		0	0	0		0	4	0		12
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		4	4	0		8
Scooters																	

Comments:

Report generated on 5/16/2025 11:40 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8700 MIAMI-DADE NORTH

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.07	1.13
2	01/07/2024 - 01/13/2024	1.03	1.08
3	01/14/2024 - 01/20/2024	1.00	1.05
4	01/21/2024 - 01/27/2024	0.98	1.03
* 5	01/28/2024 - 02/03/2024	0.97	1.02
* 6	02/04/2024 - 02/10/2024	0.96	1.01
* 7	02/11/2024 - 02/17/2024	0.95	1.00
* 8	02/18/2024 - 02/24/2024	0.95	1.00
* 9	02/25/2024 - 03/02/2024	0.94	0.99
*10	03/03/2024 - 03/09/2024	0.94	0.99
*11	03/10/2024 - 03/16/2024	0.94	0.99
*12	03/17/2024 - 03/23/2024	0.94	0.99
*13	03/24/2024 - 03/30/2024	0.95	1.00
*14	03/31/2024 - 04/06/2024	0.95	1.00
*15	04/07/2024 - 04/13/2024	0.96	1.01
*16	04/14/2024 - 04/20/2024	0.97	1.02
*17	04/21/2024 - 04/27/2024	0.98	1.03
18	04/28/2024 - 05/04/2024	0.99	1.04
19	05/05/2024 - 05/11/2024	1.00	1.05
20	05/12/2024 - 05/18/2024	1.02	1.07
21	05/19/2024 - 05/25/2024	1.03	1.08
22	05/26/2024 - 06/01/2024	1.04	1.09
23	06/02/2024 - 06/08/2024	1.05	1.11
24	06/09/2024 - 06/15/2024	1.06	1.12
25	06/16/2024 - 06/22/2024	1.05	1.11
26	06/23/2024 - 06/29/2024	1.04	1.09
27	06/30/2024 - 07/06/2024	1.03	1.08
28	07/07/2024 - 07/13/2024	1.02	1.07
29	07/14/2024 - 07/20/2024	1.02	1.07
30	07/21/2024 - 07/27/2024	1.01	1.06
31	07/28/2024 - 08/03/2024	1.01	1.06
32	08/04/2024 - 08/10/2024	1.01	1.06
33	08/11/2024 - 08/17/2024	1.01	1.06
34	08/18/2024 - 08/24/2024	1.01	1.06
35	08/25/2024 - 08/31/2024	1.01	1.06
36	09/01/2024 - 09/07/2024	1.01	1.06
37	09/08/2024 - 09/14/2024	1.01	1.06
38	09/15/2024 - 09/21/2024	1.01	1.06
39	09/22/2024 - 09/28/2024	1.01	1.06
40	09/29/2024 - 10/05/2024	1.01	1.06
41	10/06/2024 - 10/12/2024	1.01	1.06
42	10/13/2024 - 10/19/2024	1.02	1.07
43	10/20/2024 - 10/26/2024	1.02	1.07
44	10/27/2024 - 11/02/2024	1.02	1.07
45	11/03/2024 - 11/09/2024	1.02	1.07
46	11/10/2024 - 11/16/2024	1.03	1.08
47	11/17/2024 - 11/23/2024	1.03	1.08
48	11/24/2024 - 11/30/2024	1.04	1.09
49	12/01/2024 - 12/07/2024	1.05	1.11
50	12/08/2024 - 12/14/2024	1.06	1.12
51	12/15/2024 - 12/21/2024	1.07	1.13
52	12/22/2024 - 12/28/2024	1.03	1.08
53	12/29/2024 - 12/31/2024	1.00	1.05

* PEAK SEASON

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8701 MIAMI-DADE SOUTH

MOCF: 0.98

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.05	1.07
2	01/07/2024 - 01/13/2024	1.02	1.04
3	01/14/2024 - 01/20/2024	0.99	1.01
4	01/21/2024 - 01/27/2024	0.99	1.01
5	01/28/2024 - 02/03/2024	0.98	1.00
6	02/04/2024 - 02/10/2024	0.98	1.00
7	02/11/2024 - 02/17/2024	0.97	0.99
* 8	02/18/2024 - 02/24/2024	0.97	0.99
* 9	02/25/2024 - 03/02/2024	0.98	1.00
*10	03/03/2024 - 03/09/2024	0.98	1.00
*11	03/10/2024 - 03/16/2024	0.98	1.00
*12	03/17/2024 - 03/23/2024	0.98	1.00
*13	03/24/2024 - 03/30/2024	0.98	1.00
*14	03/31/2024 - 04/06/2024	0.98	1.00
*15	04/07/2024 - 04/13/2024	0.98	1.00
*16	04/14/2024 - 04/20/2024	0.98	1.00
*17	04/21/2024 - 04/27/2024	0.98	1.00
*18	04/28/2024 - 05/04/2024	0.98	1.00
*19	05/05/2024 - 05/11/2024	0.97	0.99
*20	05/12/2024 - 05/18/2024	0.97	0.99
21	05/19/2024 - 05/25/2024	0.98	1.00
22	05/26/2024 - 06/01/2024	0.99	1.01
23	06/02/2024 - 06/08/2024	0.99	1.01
24	06/09/2024 - 06/15/2024	1.00	1.02
25	06/16/2024 - 06/22/2024	1.01	1.03
26	06/23/2024 - 06/29/2024	1.02	1.04
27	06/30/2024 - 07/06/2024	1.02	1.04
28	07/07/2024 - 07/13/2024	1.03	1.05
29	07/14/2024 - 07/20/2024	1.04	1.06
30	07/21/2024 - 07/27/2024	1.03	1.05
31	07/28/2024 - 08/03/2024	1.02	1.04
32	08/04/2024 - 08/10/2024	1.00	1.02
33	08/11/2024 - 08/17/2024	0.99	1.01
34	08/18/2024 - 08/24/2024	0.99	1.01
35	08/25/2024 - 08/31/2024	0.99	1.01
36	09/01/2024 - 09/07/2024	0.99	1.01
37	09/08/2024 - 09/14/2024	0.99	1.01
38	09/15/2024 - 09/21/2024	0.99	1.01
39	09/22/2024 - 09/28/2024	1.00	1.02
40	09/29/2024 - 10/05/2024	1.01	1.03
41	10/06/2024 - 10/12/2024	1.02	1.04
42	10/13/2024 - 10/19/2024	1.03	1.05
43	10/20/2024 - 10/26/2024	1.02	1.04
44	10/27/2024 - 11/02/2024	1.01	1.03
45	11/03/2024 - 11/09/2024	1.00	1.02
46	11/10/2024 - 11/16/2024	1.00	1.02
47	11/17/2024 - 11/23/2024	1.01	1.03
48	11/24/2024 - 11/30/2024	1.02	1.04
49	12/01/2024 - 12/07/2024	1.03	1.05
50	12/08/2024 - 12/14/2024	1.04	1.06
51	12/15/2024 - 12/21/2024	1.05	1.07
52	12/22/2024 - 12/28/2024	1.02	1.04
53	12/29/2024 - 12/31/2024	0.99	1.01

* PEAK SEASON

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8702 MIAMI DADE NORTH EXP

MOCF: 0.98

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.02	1.04
2	01/07/2024 - 01/13/2024	1.02	1.04
3	01/14/2024 - 01/20/2024	1.01	1.03
4	01/21/2024 - 01/27/2024	1.00	1.02
5	01/28/2024 - 02/03/2024	1.00	1.02
6	02/04/2024 - 02/10/2024	0.99	1.01
* 7	02/11/2024 - 02/17/2024	0.98	1.00
* 8	02/18/2024 - 02/24/2024	0.98	1.00
* 9	02/25/2024 - 03/02/2024	0.98	1.00
*10	03/03/2024 - 03/09/2024	0.98	1.00
*11	03/10/2024 - 03/16/2024	0.98	1.00
*12	03/17/2024 - 03/23/2024	0.98	1.00
*13	03/24/2024 - 03/30/2024	0.98	1.00
*14	03/31/2024 - 04/06/2024	0.97	0.99
*15	04/07/2024 - 04/13/2024	0.97	0.99
*16	04/14/2024 - 04/20/2024	0.97	0.99
*17	04/21/2024 - 04/27/2024	0.98	1.00
*18	04/28/2024 - 05/04/2024	0.98	1.00
*19	05/05/2024 - 05/11/2024	0.99	1.01
20	05/12/2024 - 05/18/2024	0.99	1.01
21	05/19/2024 - 05/25/2024	1.00	1.02
22	05/26/2024 - 06/01/2024	1.00	1.02
23	06/02/2024 - 06/08/2024	1.01	1.03
24	06/09/2024 - 06/15/2024	1.01	1.03
25	06/16/2024 - 06/22/2024	1.01	1.03
26	06/23/2024 - 06/29/2024	1.01	1.03
27	06/30/2024 - 07/06/2024	1.01	1.03
28	07/07/2024 - 07/13/2024	1.01	1.03
29	07/14/2024 - 07/20/2024	1.01	1.03
30	07/21/2024 - 07/27/2024	1.01	1.03
31	07/28/2024 - 08/03/2024	1.01	1.03
32	08/04/2024 - 08/10/2024	1.01	1.03
33	08/11/2024 - 08/17/2024	1.01	1.03
34	08/18/2024 - 08/24/2024	1.01	1.03
35	08/25/2024 - 08/31/2024	1.01	1.03
36	09/01/2024 - 09/07/2024	1.02	1.04
37	09/08/2024 - 09/14/2024	1.02	1.04
38	09/15/2024 - 09/21/2024	1.02	1.04
39	09/22/2024 - 09/28/2024	1.03	1.05
40	09/29/2024 - 10/05/2024	1.03	1.05
41	10/06/2024 - 10/12/2024	1.04	1.06
42	10/13/2024 - 10/19/2024	1.04	1.06
43	10/20/2024 - 10/26/2024	1.03	1.05
44	10/27/2024 - 11/02/2024	1.03	1.05
45	11/03/2024 - 11/09/2024	1.02	1.04
46	11/10/2024 - 11/16/2024	1.01	1.03
47	11/17/2024 - 11/23/2024	1.01	1.03
48	11/24/2024 - 11/30/2024	1.01	1.03
49	12/01/2024 - 12/07/2024	1.02	1.04
50	12/08/2024 - 12/14/2024	1.02	1.04
51	12/15/2024 - 12/21/2024	1.02	1.04
52	12/22/2024 - 12/28/2024	1.02	1.04
53	12/29/2024 - 12/31/2024	1.01	1.03

* PEAK SEASON

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8703 MIAMI DADE SOUTH EXP

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.06	1.09
2	01/07/2024 - 01/13/2024	1.04	1.07
3	01/14/2024 - 01/20/2024	1.03	1.06
4	01/21/2024 - 01/27/2024	1.02	1.05
5	01/28/2024 - 02/03/2024	1.01	1.04
6	02/04/2024 - 02/10/2024	1.00	1.03
7	02/11/2024 - 02/17/2024	0.99	1.02
8	02/18/2024 - 02/24/2024	0.99	1.02
9	02/25/2024 - 03/02/2024	0.99	1.02
*10	03/03/2024 - 03/09/2024	0.99	1.02
*11	03/10/2024 - 03/16/2024	0.99	1.02
*12	03/17/2024 - 03/23/2024	0.98	1.01
*13	03/24/2024 - 03/30/2024	0.97	1.00
*14	03/31/2024 - 04/06/2024	0.96	0.99
*15	04/07/2024 - 04/13/2024	0.95	0.98
*16	04/14/2024 - 04/20/2024	0.95	0.98
*17	04/21/2024 - 04/27/2024	0.95	0.98
*18	04/28/2024 - 05/04/2024	0.95	0.98
*19	05/05/2024 - 05/11/2024	0.95	0.98
*20	05/12/2024 - 05/18/2024	0.96	0.99
*21	05/19/2024 - 05/25/2024	0.97	1.00
*22	05/26/2024 - 06/01/2024	0.99	1.02
23	06/02/2024 - 06/08/2024	1.01	1.04
24	06/09/2024 - 06/15/2024	1.03	1.06
25	06/16/2024 - 06/22/2024	1.03	1.06
26	06/23/2024 - 06/29/2024	1.04	1.07
27	06/30/2024 - 07/06/2024	1.05	1.08
28	07/07/2024 - 07/13/2024	1.05	1.08
29	07/14/2024 - 07/20/2024	1.06	1.09
30	07/21/2024 - 07/27/2024	1.05	1.08
31	07/28/2024 - 08/03/2024	1.03	1.06
32	08/04/2024 - 08/10/2024	1.02	1.05
33	08/11/2024 - 08/17/2024	1.00	1.03
34	08/18/2024 - 08/24/2024	1.00	1.03
35	08/25/2024 - 08/31/2024	1.00	1.03
36	09/01/2024 - 09/07/2024	1.00	1.03
37	09/08/2024 - 09/14/2024	1.00	1.03
38	09/15/2024 - 09/21/2024	1.00	1.03
39	09/22/2024 - 09/28/2024	1.00	1.03
40	09/29/2024 - 10/05/2024	1.00	1.03
41	10/06/2024 - 10/12/2024	1.00	1.03
42	10/13/2024 - 10/19/2024	1.01	1.04
43	10/20/2024 - 10/26/2024	1.00	1.03
44	10/27/2024 - 11/02/2024	1.00	1.03
45	11/03/2024 - 11/09/2024	1.00	1.03
46	11/10/2024 - 11/16/2024	1.00	1.03
47	11/17/2024 - 11/23/2024	1.01	1.04
48	11/24/2024 - 11/30/2024	1.02	1.05
49	12/01/2024 - 12/07/2024	1.03	1.06
50	12/08/2024 - 12/14/2024	1.04	1.07
51	12/15/2024 - 12/21/2024	1.06	1.09
52	12/22/2024 - 12/28/2024	1.04	1.07
53	12/29/2024 - 12/31/2024	1.03	1.06

* PEAK SEASON

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8719 MIAMI-DADE I 195

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.00	1.05
2	01/07/2024 - 01/13/2024	1.00	1.05
3	01/14/2024 - 01/20/2024	0.99	1.04
4	01/21/2024 - 01/27/2024	0.99	1.04
5	01/28/2024 - 02/03/2024	0.98	1.03
6	02/04/2024 - 02/10/2024	0.98	1.03
7	02/11/2024 - 02/17/2024	0.97	1.02
8	02/18/2024 - 02/24/2024	0.97	1.02
* 9	02/25/2024 - 03/02/2024	0.97	1.02
*10	03/03/2024 - 03/09/2024	0.97	1.02
*11	03/10/2024 - 03/16/2024	0.97	1.02
*12	03/17/2024 - 03/23/2024	0.96	1.01
*13	03/24/2024 - 03/30/2024	0.96	1.01
*14	03/31/2024 - 04/06/2024	0.95	1.00
*15	04/07/2024 - 04/13/2024	0.95	1.00
*16	04/14/2024 - 04/20/2024	0.94	0.99
*17	04/21/2024 - 04/27/2024	0.94	0.99
*18	04/28/2024 - 05/04/2024	0.94	0.99
*19	05/05/2024 - 05/11/2024	0.94	0.99
*20	05/12/2024 - 05/18/2024	0.94	0.99
*21	05/19/2024 - 05/25/2024	0.97	1.02
22	05/26/2024 - 06/01/2024	1.00	1.05
23	06/02/2024 - 06/08/2024	1.03	1.08
24	06/09/2024 - 06/15/2024	1.06	1.12
25	06/16/2024 - 06/22/2024	1.05	1.11
26	06/23/2024 - 06/29/2024	1.04	1.09
27	06/30/2024 - 07/06/2024	1.02	1.07
28	07/07/2024 - 07/13/2024	1.01	1.06
29	07/14/2024 - 07/20/2024	1.00	1.05
30	07/21/2024 - 07/27/2024	1.01	1.06
31	07/28/2024 - 08/03/2024	1.03	1.08
32	08/04/2024 - 08/10/2024	1.04	1.09
33	08/11/2024 - 08/17/2024	1.05	1.11
34	08/18/2024 - 08/24/2024	1.05	1.11
35	08/25/2024 - 08/31/2024	1.05	1.11
36	09/01/2024 - 09/07/2024	1.06	1.12
37	09/08/2024 - 09/14/2024	1.06	1.12
38	09/15/2024 - 09/21/2024	1.06	1.12
39	09/22/2024 - 09/28/2024	1.06	1.12
40	09/29/2024 - 10/05/2024	1.07	1.13
41	10/06/2024 - 10/12/2024	1.07	1.13
42	10/13/2024 - 10/19/2024	1.07	1.13
43	10/20/2024 - 10/26/2024	1.06	1.12
44	10/27/2024 - 11/02/2024	1.05	1.11
45	11/03/2024 - 11/09/2024	1.04	1.09
46	11/10/2024 - 11/16/2024	1.03	1.08
47	11/17/2024 - 11/23/2024	1.02	1.07
48	11/24/2024 - 11/30/2024	1.02	1.07
49	12/01/2024 - 12/07/2024	1.01	1.06
50	12/08/2024 - 12/14/2024	1.01	1.06
51	12/15/2024 - 12/21/2024	1.00	1.05
52	12/22/2024 - 12/28/2024	1.00	1.05
53	12/29/2024 - 12/31/2024	0.99	1.04

* PEAK SEASON

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8739 MIAMI-DADE I 395

MOCF: 0.95

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.00	1.05
2	01/07/2024 - 01/13/2024	1.00	1.05
3	01/14/2024 - 01/20/2024	0.99	1.04
4	01/21/2024 - 01/27/2024	0.99	1.04
5	01/28/2024 - 02/03/2024	0.98	1.03
6	02/04/2024 - 02/10/2024	0.98	1.03
7	02/11/2024 - 02/17/2024	0.97	1.02
8	02/18/2024 - 02/24/2024	0.97	1.02
* 9	02/25/2024 - 03/02/2024	0.97	1.02
*10	03/03/2024 - 03/09/2024	0.97	1.02
*11	03/10/2024 - 03/16/2024	0.97	1.02
*12	03/17/2024 - 03/23/2024	0.96	1.01
*13	03/24/2024 - 03/30/2024	0.96	1.01
*14	03/31/2024 - 04/06/2024	0.95	1.00
*15	04/07/2024 - 04/13/2024	0.95	1.00
*16	04/14/2024 - 04/20/2024	0.94	0.99
*17	04/21/2024 - 04/27/2024	0.94	0.99
*18	04/28/2024 - 05/04/2024	0.94	0.99
*19	05/05/2024 - 05/11/2024	0.94	0.99
*20	05/12/2024 - 05/18/2024	0.94	0.99
*21	05/19/2024 - 05/25/2024	0.97	1.02
22	05/26/2024 - 06/01/2024	1.00	1.05
23	06/02/2024 - 06/08/2024	1.03	1.08
24	06/09/2024 - 06/15/2024	1.06	1.12
25	06/16/2024 - 06/22/2024	1.05	1.11
26	06/23/2024 - 06/29/2024	1.04	1.09
27	06/30/2024 - 07/06/2024	1.02	1.07
28	07/07/2024 - 07/13/2024	1.01	1.06
29	07/14/2024 - 07/20/2024	1.00	1.05
30	07/21/2024 - 07/27/2024	1.01	1.06
31	07/28/2024 - 08/03/2024	1.03	1.08
32	08/04/2024 - 08/10/2024	1.04	1.09
33	08/11/2024 - 08/17/2024	1.05	1.11
34	08/18/2024 - 08/24/2024	1.05	1.11
35	08/25/2024 - 08/31/2024	1.05	1.11
36	09/01/2024 - 09/07/2024	1.06	1.12
37	09/08/2024 - 09/14/2024	1.06	1.12
38	09/15/2024 - 09/21/2024	1.06	1.12
39	09/22/2024 - 09/28/2024	1.06	1.12
40	09/29/2024 - 10/05/2024	1.07	1.13
41	10/06/2024 - 10/12/2024	1.07	1.13
42	10/13/2024 - 10/19/2024	1.07	1.13
43	10/20/2024 - 10/26/2024	1.06	1.12
44	10/27/2024 - 11/02/2024	1.05	1.11
45	11/03/2024 - 11/09/2024	1.04	1.09
46	11/10/2024 - 11/16/2024	1.03	1.08
47	11/17/2024 - 11/23/2024	1.02	1.07
48	11/24/2024 - 11/30/2024	1.02	1.07
49	12/01/2024 - 12/07/2024	1.01	1.06
50	12/08/2024 - 12/14/2024	1.01	1.06
51	12/15/2024 - 12/21/2024	1.00	1.05
52	12/22/2024 - 12/28/2024	1.00	1.05
53	12/29/2024 - 12/31/2024	0.99	1.04

* PEAK SEASON

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8775 MIAMI-DADE I 75

MOCF: 0.98

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.00	1.02
2	01/07/2024 - 01/13/2024	1.01	1.03
3	01/14/2024 - 01/20/2024	1.03	1.05
4	01/21/2024 - 01/27/2024	1.01	1.03
5	01/28/2024 - 02/03/2024	1.00	1.02
6	02/04/2024 - 02/10/2024	0.99	1.01
* 7	02/11/2024 - 02/17/2024	0.98	1.00
* 8	02/18/2024 - 02/24/2024	0.98	1.00
* 9	02/25/2024 - 03/02/2024	0.98	1.00
*10	03/03/2024 - 03/09/2024	0.98	1.00
*11	03/10/2024 - 03/16/2024	0.98	1.00
*12	03/17/2024 - 03/23/2024	0.97	0.99
*13	03/24/2024 - 03/30/2024	0.97	0.99
*14	03/31/2024 - 04/06/2024	0.97	0.99
*15	04/07/2024 - 04/13/2024	0.97	0.99
*16	04/14/2024 - 04/20/2024	0.97	0.99
*17	04/21/2024 - 04/27/2024	0.98	1.00
*18	04/28/2024 - 05/04/2024	0.98	1.00
*19	05/05/2024 - 05/11/2024	0.99	1.01
20	05/12/2024 - 05/18/2024	0.99	1.01
21	05/19/2024 - 05/25/2024	1.00	1.02
22	05/26/2024 - 06/01/2024	1.01	1.03
23	06/02/2024 - 06/08/2024	1.01	1.03
24	06/09/2024 - 06/15/2024	1.02	1.04
25	06/16/2024 - 06/22/2024	1.02	1.04
26	06/23/2024 - 06/29/2024	1.03	1.05
27	06/30/2024 - 07/06/2024	1.03	1.05
28	07/07/2024 - 07/13/2024	1.03	1.05
29	07/14/2024 - 07/20/2024	1.04	1.06
30	07/21/2024 - 07/27/2024	1.03	1.05
31	07/28/2024 - 08/03/2024	1.03	1.05
32	08/04/2024 - 08/10/2024	1.02	1.04
33	08/11/2024 - 08/17/2024	1.02	1.04
34	08/18/2024 - 08/24/2024	1.02	1.04
35	08/25/2024 - 08/31/2024	1.02	1.04
36	09/01/2024 - 09/07/2024	1.02	1.04
37	09/08/2024 - 09/14/2024	1.02	1.04
38	09/15/2024 - 09/21/2024	1.02	1.04
39	09/22/2024 - 09/28/2024	1.02	1.04
40	09/29/2024 - 10/05/2024	1.02	1.04
41	10/06/2024 - 10/12/2024	1.02	1.04
42	10/13/2024 - 10/19/2024	1.02	1.04
43	10/20/2024 - 10/26/2024	1.01	1.03
44	10/27/2024 - 11/02/2024	1.01	1.03
45	11/03/2024 - 11/09/2024	1.00	1.02
46	11/10/2024 - 11/16/2024	1.00	1.02
47	11/17/2024 - 11/23/2024	1.00	1.02
48	11/24/2024 - 11/30/2024	1.00	1.02
49	12/01/2024 - 12/07/2024	1.00	1.02
50	12/08/2024 - 12/14/2024	1.00	1.02
51	12/15/2024 - 12/21/2024	1.00	1.02
52	12/22/2024 - 12/28/2024	1.01	1.03
53	12/29/2024 - 12/31/2024	1.03	1.05

* PEAK SEASON

2024 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8795 MIAMI-DADE I 95

MOCF: 0.98

WEEK	DATES	SF	PSCF
1	01/01/2024 - 01/06/2024	1.01	1.03
2	01/07/2024 - 01/13/2024	1.01	1.03
3	01/14/2024 - 01/20/2024	1.01	1.03
4	01/21/2024 - 01/27/2024	1.00	1.02
5	01/28/2024 - 02/03/2024	1.00	1.02
6	02/04/2024 - 02/10/2024	0.99	1.01
* 7	02/11/2024 - 02/17/2024	0.98	1.00
* 8	02/18/2024 - 02/24/2024	0.98	1.00
* 9	02/25/2024 - 03/02/2024	0.98	1.00
*10	03/03/2024 - 03/09/2024	0.97	0.99
*11	03/10/2024 - 03/16/2024	0.97	0.99
*12	03/17/2024 - 03/23/2024	0.97	0.99
*13	03/24/2024 - 03/30/2024	0.97	0.99
*14	03/31/2024 - 04/06/2024	0.97	0.99
*15	04/07/2024 - 04/13/2024	0.97	0.99
*16	04/14/2024 - 04/20/2024	0.97	0.99
*17	04/21/2024 - 04/27/2024	0.98	1.00
*18	04/28/2024 - 05/04/2024	0.98	1.00
*19	05/05/2024 - 05/11/2024	0.99	1.01
20	05/12/2024 - 05/18/2024	0.99	1.01
21	05/19/2024 - 05/25/2024	1.00	1.02
22	05/26/2024 - 06/01/2024	1.00	1.02
23	06/02/2024 - 06/08/2024	1.01	1.03
24	06/09/2024 - 06/15/2024	1.01	1.03
25	06/16/2024 - 06/22/2024	1.01	1.03
26	06/23/2024 - 06/29/2024	1.01	1.03
27	06/30/2024 - 07/06/2024	1.01	1.03
28	07/07/2024 - 07/13/2024	1.01	1.03
29	07/14/2024 - 07/20/2024	1.01	1.03
30	07/21/2024 - 07/27/2024	1.01	1.03
31	07/28/2024 - 08/03/2024	1.01	1.03
32	08/04/2024 - 08/10/2024	1.01	1.03
33	08/11/2024 - 08/17/2024	1.01	1.03
34	08/18/2024 - 08/24/2024	1.01	1.03
35	08/25/2024 - 08/31/2024	1.01	1.03
36	09/01/2024 - 09/07/2024	1.02	1.04
37	09/08/2024 - 09/14/2024	1.02	1.04
38	09/15/2024 - 09/21/2024	1.02	1.04
39	09/22/2024 - 09/28/2024	1.03	1.05
40	09/29/2024 - 10/05/2024	1.03	1.05
41	10/06/2024 - 10/12/2024	1.04	1.06
42	10/13/2024 - 10/19/2024	1.04	1.06
43	10/20/2024 - 10/26/2024	1.03	1.05
44	10/27/2024 - 11/02/2024	1.03	1.05
45	11/03/2024 - 11/09/2024	1.02	1.04
46	11/10/2024 - 11/16/2024	1.01	1.03
47	11/17/2024 - 11/23/2024	1.01	1.03
48	11/24/2024 - 11/30/2024	1.01	1.03
49	12/01/2024 - 12/07/2024	1.01	1.03
50	12/08/2024 - 12/14/2024	1.01	1.03
51	12/15/2024 - 12/21/2024	1.01	1.03
52	12/22/2024 - 12/28/2024	1.01	1.03
53	12/29/2024 - 12/31/2024	1.01	1.03

* PEAK SEASON

APPENDIX B

Crash Data

	CRASH SUMMARY										
	ROADWAY LIMITS:	**Intersection of NW 112th Ave & NW 82nd St**								ENGINEER:	**C. Benitez**
	STUDY PERIOD:	FROM	**1/ 2020**		TO	**12 2024**				COUNTY:	**Miami-Dade County**
Crash Report Number	No.	DATE	DAY	TIME	CRASH TYPE	FATAL	INJURY	PDO	DAY / NIGHT	WET / DRY	CONTRIBUTING CAUSE
89325371	1	01/06/20	Mon	4:59 PM	Angle	0	0	1	DAY	Dry	Failed to Yield Right-of-Way
89325517	2	01/20/20	Mon	4:04 PM	Angle	0	1	0	DAY	Dry	Careless or Negligent Driving
89326504	3	06/26/20	Fri	9:48 PM	Off Road	0	0	1	NIGHT	Dry	Careless or Negligent Driving
24057363	4	10/29/21	Fri	7:05 AM	Angle	0	0	1	DAY	Wet	No Contributing Action
24620688	5	11/18/21	Thu	6:41 PM	Angle	0	0	1	DAY	Wet	Careless or Negligent Driving
24621074	6	01/02/22	Sun	4:07 PM	Angle	0	1	0	DAY	Dry	Failed to Yield Right-of-Way
24621084	7	01/03/22	Mon	9:11 PM	Angle	0	0	1	0.000	Dry	Failed to Yield Right-of-Way
24621731	8	03/16/22	Wed	9:30 PM	Angle	0	1	0	0.000	Dry	Failed to Yield Right-of-Way
24621900	9	04/01/22	Fri	4:46 PM	Angle	0	0	1	DAY	Dry	Failed to Yield Right-of-Way
24622695	10	06/29/22	Wed	11:31 AM	Angle	0	1	0	DAY	Dry	Failed to Yield Right-of-Way
24623486	11	09/20/22	Tue	9:28 AM	Angle	0	0	1	0.000	Dry	Ran Stop Sign
25393653	12	12/27/22	Tue	6:56 PM	Angle	0	1	0	0.000	Dry	Ran Stop Sign
25394286	13	03/02/23	Thu	5:09 PM	Angle	0	1	0	DAY	Dry	Failed to Yield Right-of-Way
25395389	14	06/23/23	Fri	9:15 AM	Angle	0	0	1	DAY	Dry	Failed to Yield Right-of-Way
25396391	15	10/06/23	Fri	6:01 PM	Angle	0	0	1	0.000	Dry	Failed to Yield Right-of-Way
25396687	16	11/06/23	Mon	12:42 PM	Angle	0	0	1	DAY	Dry	Failed to Yield Right-of-Way
25397010	17	12/08/23	Fri	9:44 PM	Angle	0	0	1	NIGHT	Dry	Failed to Yield Right-of-Way
25397550	18	02/06/24	Tue	4:12 PM	Angle	0	0	1	0.000	Dry	Failed to Yield Right-of-Way
26604242	19	05/29/24	Wed	7:20 AM	Angle	0	0	1	DAY	Dry	Failed to Yield Right-of-Way
26605466	20	10/16/24	Wed	5:55 PM	Angle	0	1	0	0.000	Dry	Ran Stop Sign
26714688	21	10/25/24	Fri	5:17 PM	Angle	0	1	0	DAY	Dry	Careless or Negligent Driving
26606667	22	02/28/25	Fri	9:13 PM	Angle	0	0	1	0.000	Dry	Failed to Yield Right-of-Way
26606774	23	03/12/25	Wed	5:21 PM	Angle	0	0	1	0.000	Dry	Failed to Yield Right-of-Way
26607224	24	05/01/25	Thu	6:06 PM	Angle	0	1	0	0.000	Dry	Failed to Yield Right-of-Way
26607502	25	06/03/25	Tue	3:34 PM	Angle	0	1	0	0.000	Wet	Failed to Yield Right-of-Way
24622508	26	06/05/55	Sat	4:28 PM	Angle	0	0	1	0.000	Dry	Careless or Negligent Driving
	Total No.	Fatal	Injury	PDO	Angle	Off Road					
	26	**0**	**10**	**16**	**25**	**1**					
		0.00%	*38.46%*	*61.54%*	*96.15%*	*3.85%*					

APPENDIX C

Signal Warrant Analysis Forms

TRAFFIC SIGNAL WARRANT SUMMARY

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: This 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 in 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

Form 750-020-01
TRAFFIC ENGINEERING
October 2020

City: **Doral**
County: **87 – Miami Dade**
District: **Six**
Engineer: **Christopher Benitez**
Date: **July 1, 2025**

Major Street: **NW 82 St**
Minor Street: **NW 112 Ave**
Major Street # Lanes: **1**
Minor Street # Lanes: **1**
Major Approach Speed: **30**
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
7:30 AM	451	81	9
8:30 AM	302	60	4
12:15 PM	297	41	2
1:15 PM	364	73	0
3:00 PM	360	73	2
4:00 PM	367	95	0
5:00 PM	474	295	1
6:00 PM	481	157	12

Eight Hour Volumes (Condition B)		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7:45 AM	492	79
10:30 AM	229	20
12:30 PM	309	46
1:45 PM	423	63
3:00 PM	360	73
4:00 PM	367	95
5:00 PM	474	295
6:00 PM	481	157

Highest Four Hour Vehicular Volumes		
Hours	Major Street (total of both approaches)	Minor Street (one direction only)
7:45 AM	492	79
1:45 PM	423	63
5:00 PM	474	295
6:00 PM	481	157

Highest Four Hour Pedestrian Volumes		
Hours	Major Street (total of both approaches)	Pedestrian Crossings on Major Street
7:00 AM	399	11
8:00 AM	464	5
2:15 PM	377	5
6:00 PM	481	12

Vehicular Peak Hour Volumes			
Peak Hour	Major Street (total of both approaches)	Minor Street (one direction only)	Total Entering Volume
5:00 PM	375	306	849

Pedestrian Peak Hour Volumes		
Peak Hour	Major Street (total of both approaches)	Pedestrian Crossing Volumes on Major Street
6:00 PM	481	12

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Doral**	Engineer:	**Christopher Benitez**
County:	**87 – Miami Dade**	Date:	**July 1, 2025**
District:	**Six**		

Major Street:	**NW 82 St**	Lanes:	**1**	Major Approach Speed:	**30**
Minor Street:	**NW 112 Ave**	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

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.

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%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
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

[a] Basic Minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] 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							
	7:30 AM	**8:30 AM**	**12:15 PM**	**1:15 PM**	**3:00 PM**	**4:00 PM**	**5:00 PM**	**6:00 PM**
Major	451	302	297	364	360	367	474	481
Minor	81	60	41	73	73	95	295	157

Existing Volumes

State of Florida Department of Transportation

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:	☑ 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%[a]**	**80%[b]**	**70%[c]**	**100%[a]**	**80%[b]**	**70%[c]**
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

[a] Basic Minimum hourly volume

[b] Used for combination of Conditions A and B after adequate trial of other remedial measures

[c] 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	**7:45 AM**	**10:30 AM**	**12:30 PM**	**1:45 PM**	**3:00 PM**	**4:00 PM**	**5:00 PM**	**6:00 PM**
Major	492	229	309	423	360	367	474	481
Minor	79	20	46	63	73	95	295	157

Existing Volumes

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	Doral	Engineer:	Christopher Benitez
County:	87 – Miami Dade	Date:	July 1, 2025
District:	Six		

Major Street:	NW 82 St	Lanes:	1	Major Approach Speed:	30
Minor Street:	NW 112 Ave	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.

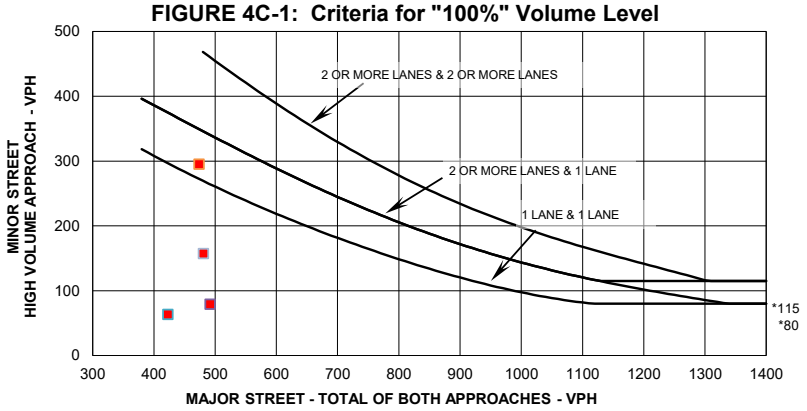
Applicable: ☑ Yes ☐ No
Satisfied: ☐ Yes ☑ No

Plot four volume combinations on the applicable figure below.

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Minor Street
7:45 AM	492	79
1:45 PM	423	63
5:00 PM	474	295
6:00 PM	481	157

FIGURE 4C-1: Criteria for "100%" Volume Level



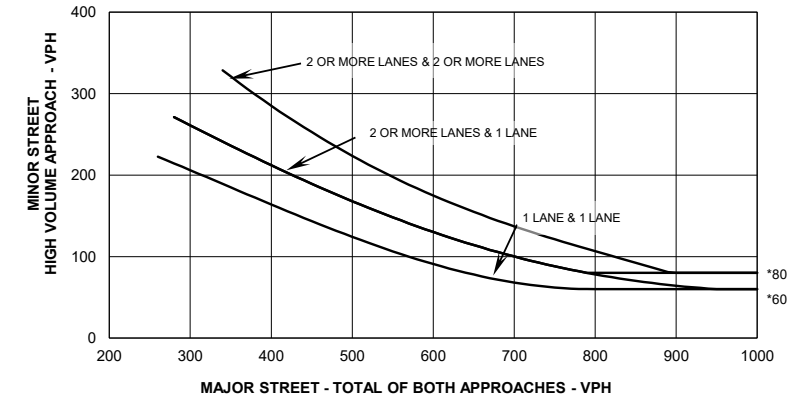
** Note: 115 ph. applies as the lower threshold volume for a minor street approach with two or more lanes and 80 mph applies as the lower threshold volume threshold for a minor street approach with one lane.*

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.*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Doral**	Engineer:	**Christopher Benitez**
County:	**87 – Miami Dade**	Date:	**July 1, 2025**
District:	**Six**		

Major Street:	**NW 82 St**	Lanes:	**1**	Major Approach Speed:	**30**
Minor Street:	**NW 112 Ave**	Lanes:	**1**	Minor Approach Speed:	**30**

MUTCD Electronic Reference to Chapter 4: http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/part4.pd

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

100% Volume Level

Four Highest Hours	Volumes	
	Major Street	Pedestrian Total
7:00 AM	399	11
8:00 AM	464	5
2:15 PM	377	5
2:15 PM	481	12

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

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
6:00 PM	481	12

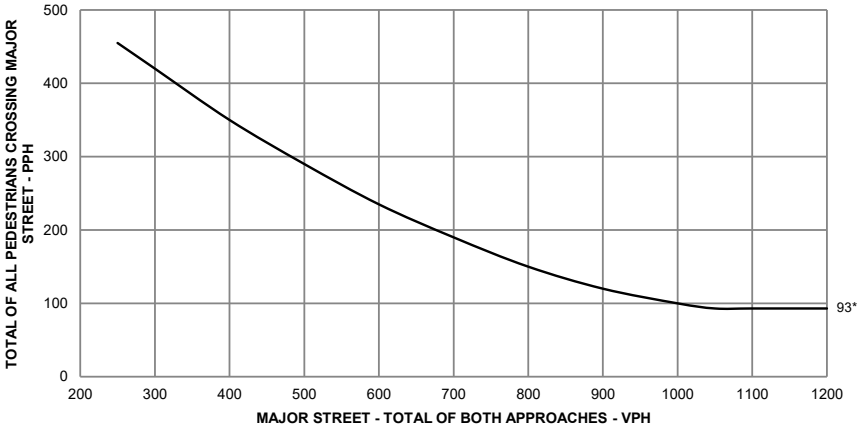
Figure 4C-7. Criteria for "100%" Volume Level - Peak Hour

** Note: 133 pph applies as the lower threshold volume*

70% Volume Level

Peak Hour	Volumes	
	Major Street	Pedestrian Total

Figure 4C-8 Criteria for "70%" Volume Level - Peak Hour



** Note: 93 pph applies as the lower threshold volume*

State of Florida Department of Transportation

TRAFFIC SIGNAL WARRANT SUMMARY

City:	**Doral**	Engineer:	**Christopher Benitez**
County:	**87 – Miami Dade**	Date:	**July 1, 2025**
District:	**Six**		

Major Street:	**NW 82 St**	Lanes:	**1**	Major Approach Speed:	**30**
Minor Street:	**NW 112 Ave**	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	Fulfilled? No
1. Adequate trial of other remedial measure has failed to reduce crash frequency.	Measure tried:	No other measures have been implemented				No
2. Five or more reported crashes, of types susceptible to correction by signal, have occurred within a 12-month period.	Observed Crash Types:	13	Number of crashes per 12 months:	3		No

3. **One of the following volume warrants is met:** — **Met?**

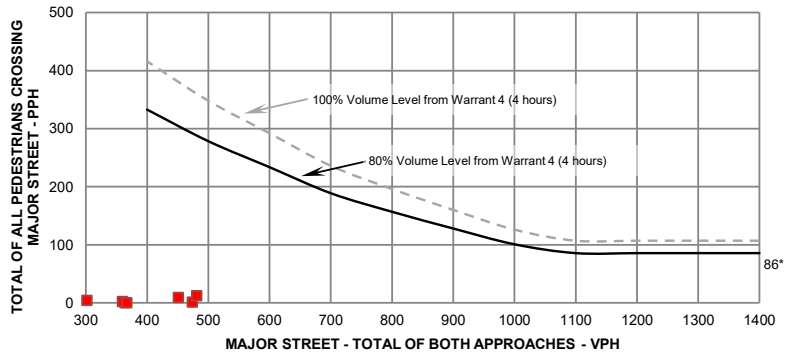
	Met?
Warrant 1, Condition A (80% satisfied), or	No
Warrant 1, Condition B (80% satisfied), or	No

Warrant 4, Pedestrian Volume satisfied at 80% of volume requirements for any 8 hours of an average day. — Met? No

Hour	Major Street Volume	Ped Crossings Volume
7:30 AM	451	9
8:30 AM	302	4
12:15 PM	297	2
1:15 PM	364	
3:00 PM	360	2
4:00 PM	367	
5:00 PM	474	1
6:00 PM	481	12

Fulfilled? No

Figure 4C-5. Criteria for "100%" Volume Level



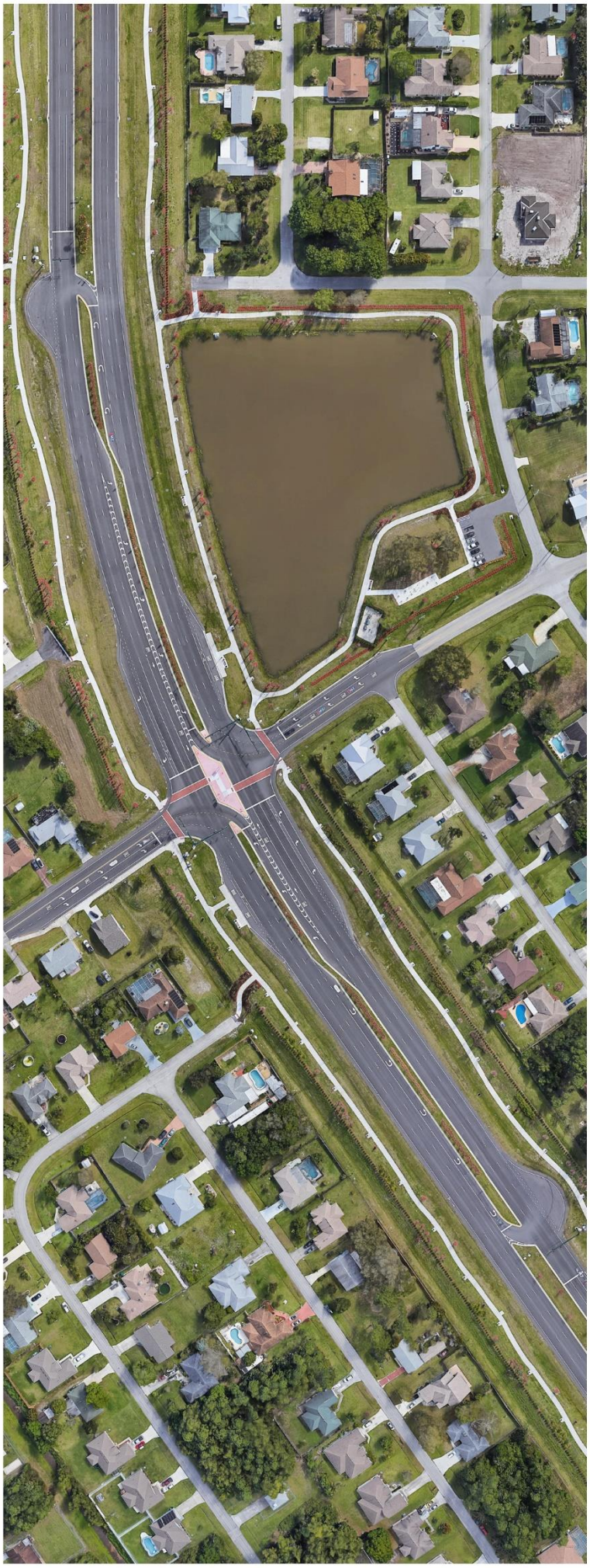
* Note: 86 pph applies as the lower threshold volume for the 80% volume threshold.

APPENDIX D

Turn Lane Warrants

Multimodal Access Management Guidebook

October 2023



STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
SYSTEMS IMPLEMENTATION OFFICE
605 Suwannee Street, MS 19 • Tallahassee, FL 32399
www.fdot.gov/planning

Chapter 6: Turn Lanes and U-Turns

6.1 Overview

For driveways, medians, and median openings, the placement and design of turn lanes and U-turns are critical to avoid potential traffic safety issues. For example, a median opening placed across a left-turn lane at an intersection could create conditions leading to a vehicular crash (See ***Figure 27*** or ***Figure 28***). Locating these roadway openings is discussed in greater detail in ***Chapter 2: Roadway Openings***. This chapter will instead focus on where to locate and design turn lanes and U-turns and how they relate to driveways, medians, and median openings.

6.2 Exclusive Right-Turn Lanes

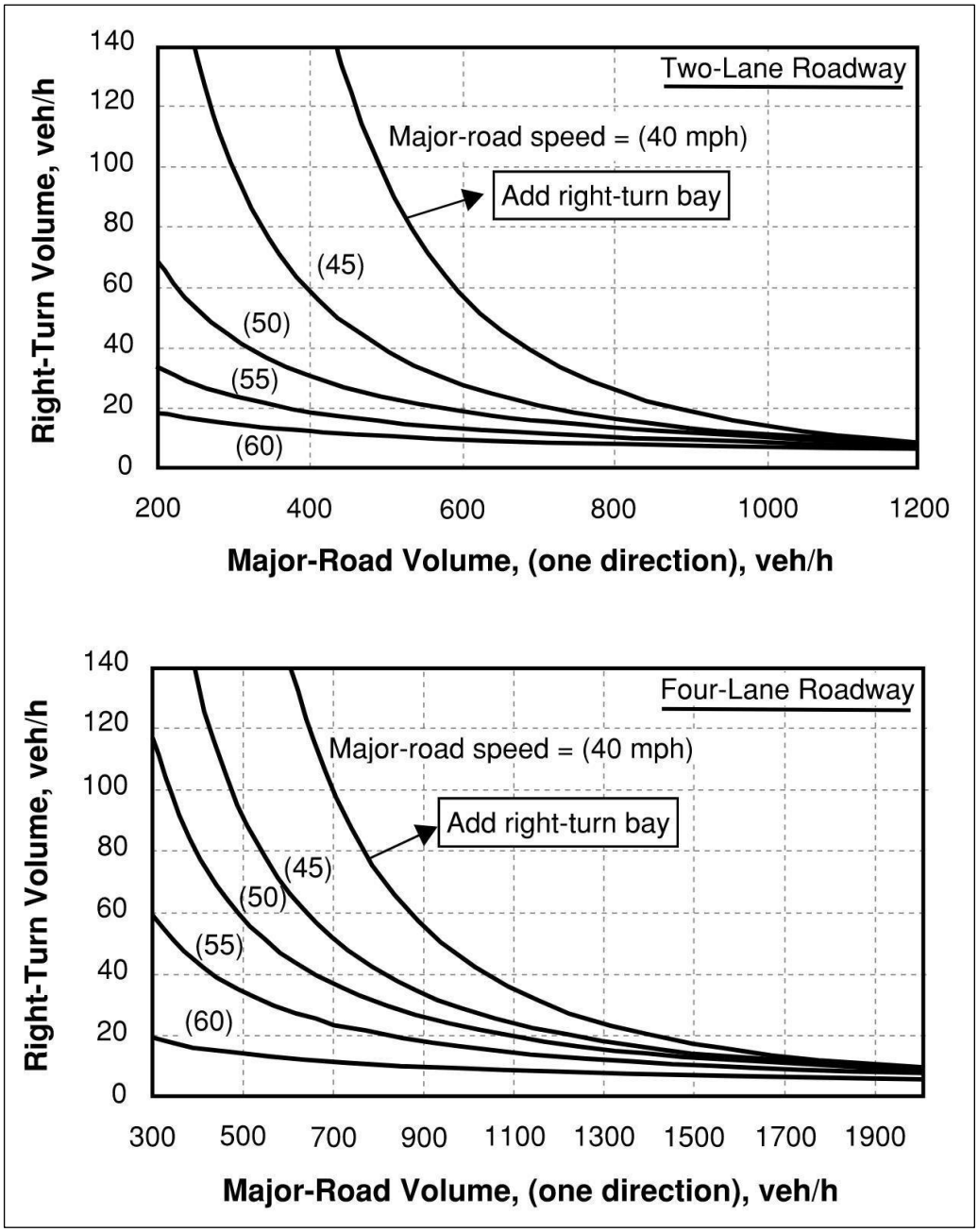
At driveways and intersections, an exclusive right-turn lane separates vehicles that are slowing or stopped to turn from the major road through traffic lanes. This separation minimizes turn-related collisions and eliminates unnecessary delay to through vehicles. Exclusive right-turn lanes are useful where a combination of high roadway speeds, and high right-turn volumes into a driveway are expected. Congestion on the roadway may also be a good reason to use an exclusive right-turn lane. If properly built, they remove the turning vehicle from the through lanes, thereby decreasing the operational and safety impact of right turning vehicles on the through traffic.

It is also important to consider potential pedestrian conflicts since the addition of a right-turn lane increases the crossing distance, time, and exposure for pedestrians. A well-designed right-turn lane can help to reduce pedestrian conflicts by slowing vehicle speeds, increasing pedestrian visibility, and reducing pedestrian exposure with a pedestrian refuge area.

6.2.1 When to Consider Exclusive Right-Turn Lanes

There are instances when adding an exclusive right-turn lane for unsignalized driveways and intersections is beneficial to traffic operations and safety. ***Figure 74*** provides guidance for two-lane and four-lane roadways based on the speed limit of the major roadway, major roadway approach volume, and how many right turns occur per hour. These recommendations are based primarily on the research done in *NCHRP Report 457, Evaluating Intersection Improvements: An Engineering Study Guide, Chapter 2 – Add a Right-Turn Bay on the Major Road*.

Figure 74 | Recommended Guidelines for Exclusive Right-Turn Lanes to Unsignalized Driveway/Intersection



Source: NCHRP Report 457, TDOT Highway System Access Manual

Here are some additional situations when adding an exclusive right-turn lane may be required:

- Facilities having a high volume of buses, trucks, or trailers (2 or 3 per hour), including:
  - Trucking facilities (or other locations that have a high volume of large vehicle traffic such as water ports, train stations, etc.)
  - Recreational facilities attracting boats, trailers, and other large recreation vehicles
  - Transit facilities
  - School driveways to drop-off and pick-up areas
- Poor internal site design of a driveway facility causing potential backups in the through lanes
- Heavier than normal peak flows on the main roadway
- Very high operating speeds (such as 55 mph or above) and in rural locations where turns are not expected by through drivers
- Highways with curves or hills where sight distance is impacted
- Gated entrances
- Crash experience, especially rear end collisions
- Intersections or driveways just after signalized intersections where acceleration or driver expectancy would make a separate right-turn lane desirable
- Severe skewed angle of intersection requiring right-turn vehicle to slow greatly

6.2.2 When Not to Consider Exclusive Right-Turn Lanes

- Dense or built-out corridors with limited space
- Right-turn lane that would negatively impact pedestrians or bicyclists
- Vehicular movements from driveways or median openings that cross the right-turn lane resulting in multiple threat crashes
- Context classifications C2T, C4, C5, or C6

6.2.3 Exclusive Right-Turn Lane Design

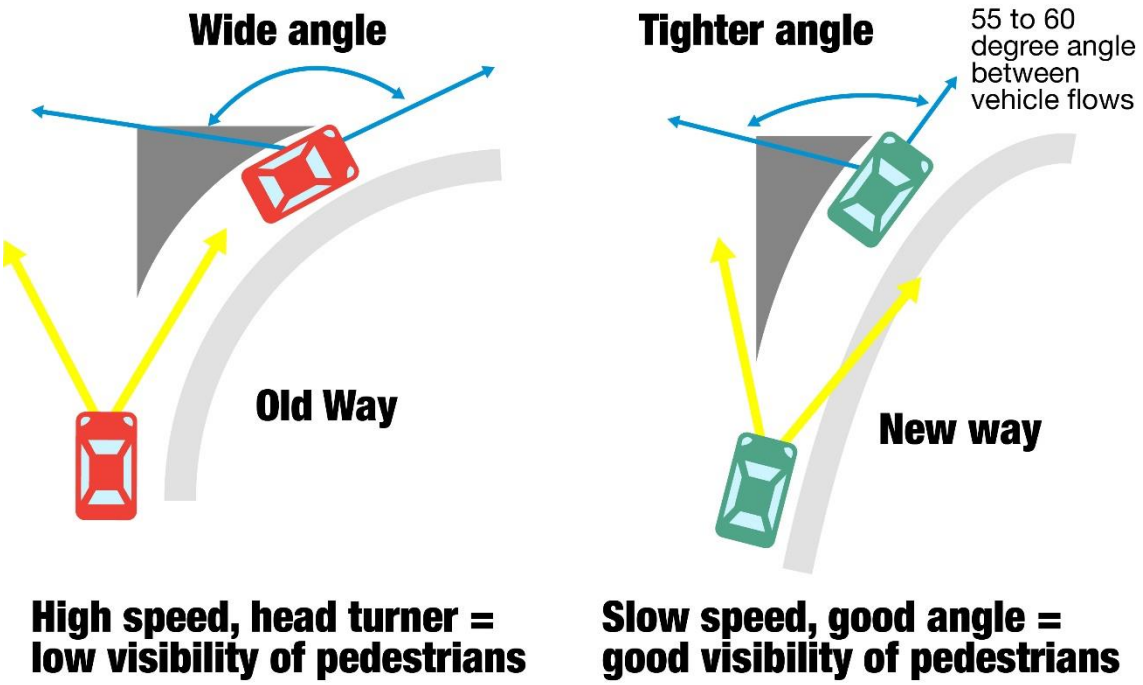
For information on exclusive right-turn lane design, refer to *FDM 212 - Intersections* and *Standard Plans, Index 711-001*. The FDM states that “Right-turn lane tapers and lengths are identical to left-turn lanes under stop control conditions. Right-turn lane tapers and lengths are site-specific for free-flow or yield conditions.” Sheet 11 of Standard Plans, Index 711-001 provides requirements for clearance distance, brake to stop distance and deceleration distance by design speed for both curbed and uncurbed roadways. ***Section 3.1.2: Median Opening Failures*** provides discussion on the various parameters used in turn lane design such as decision distance, stopping distance, etc.

6.2.4 Important Considerations

Right-Turn Channelization

Where right-turn exiting channelization is used, be careful to provide a traffic entry angle that is easy for the exiting driver to negotiate while trying to enter traffic. ***Figure 75*** illustrates how driver head turn angles between 120°-125° (Tighter Angle) are more comfortable than the 145°-150° (Wide Angle) associated with more traditional designs. The tighter angle also encourages drivers to slow down, which provides more time for a thorough scan for conflicts.

Figure 75 | Right-Turn Channelization



Source: NCHRP No. 279 (Intersection Channelization Design Guide) and Chapter 9 of the AASHTO Green Book

Proper right-turn channelization at intersections can also improve safety performance for bicyclists and pedestrians by improving visibility to turning motorists. The "old way" for channelized right-turn lanes with a 30-40° angle-of-entry (Wide Angle) entering the roadway decreases driver's view of pedestrians and increases pedestrian crossing distance. The driver's head must turn further to merge successfully and can easily miss a crossing pedestrian or bicyclist.

Research performed by Schattler and Hanson showed a 44% overall reduction in intersection crashes and a CMF of 0.56 when the angle-of-entry of channelized right turns was reduced. This resulted in a reduction of the angle drivers had to turn their heads to scan for traffic and pedestrians. This "new way" improves the line-of-sight of right-turning passenger vehicles by reducing the angle-of-entry, while at the same time continuing to accommodate large semi-tractor trailer trucks to make right turns without encroachment.[12] This countermeasure is included in the *CMF Clearinghouse* as "Improve angle of channelized right turn lane."[13]

Right-Turn Lane Design for Pedestrians

Right-turn lanes can create potential hazards for pedestrians since they increase their crossing distance and exposure at the intersection. Right-turn lanes can be designed to enhance pedestrian safety by improving pedestrian visibility, decreasing vehicle speeds, and reducing crossing distance with the following features:

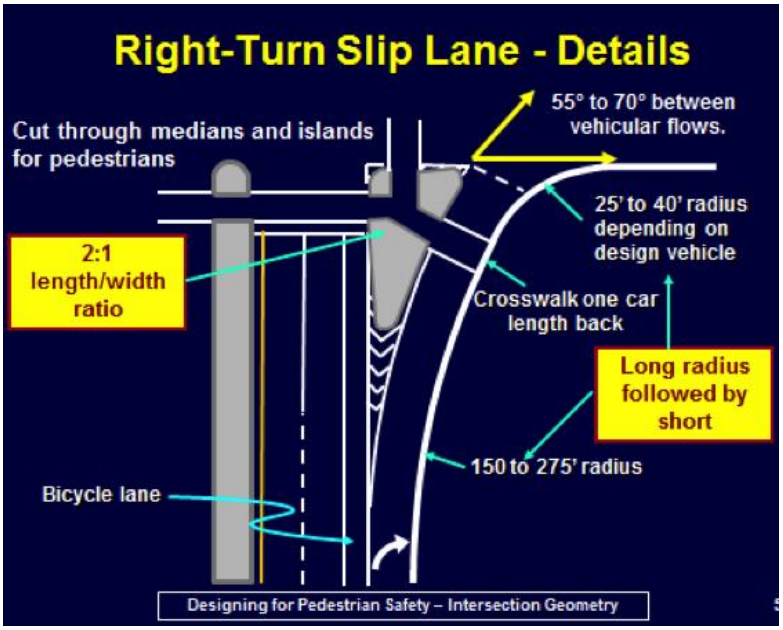
[12] Schattler, K. and T. Hanson. "Safety Impacts of a Modified Right Turn Lane Design at Intersections". Presented at the 95th Annual Meeting of the Transportation Research Board, Paper No. 16-0790, Washington, D.C., (2016).

[13] *https://apps.ict.illinois.edu/projects/getfile.asp?id=4949*

- Reduce corner radius to slow vehicle speeds and to reduce the crossing distance for pedestrians
- Consider channelization in order to provide an island large enough to accommodate pedestrians to serve as a refuge with accessibility features
- Reduce right-turn lane width to encourage slower vehicle speeds
- Optimize sight lines between vehicles and pedestrians
- Orient the crosswalk at a 90-degree angle to the right-turn lane (***Figure 76***)
- Upon entering the right-turn lane, provide enough distance for a vehicle to come to a complete stop if needed
- Use high-visibility pavement markings and signage to increase pedestrian visibility
- Consider other enhancements, such as raised crosswalks (***Figure 77***), where appropriate
- Provide accessibility features such as rumble strips
- To encourage slower speeds, do not provide for an uncontrolled, free flow right-turn movement, which includes providing an acceleration lane for right-turning vehicles
- If channelized, position the crosswalk one car length away from the cross street to allow a vehicle to wait for a gap to complete their right turn without blocking the crosswalk (***Figure 76***)
- If channelized, use a tighter angle of entry for the vehicles (***Figure 76***), as previously discussed in ***Right-Turn Channelization***

These features should be considered for contexts C2T, C4, C5, C6, and in locations with anticipated pedestrians.

Figure 76 | Recommended Pedestrian Design Elements for Right-Turn Channelization



Source: PEDSAFE – Pedestrian Safety Guide and Countermeasure Selection System

Figure 77 | Raised Crosswalk at Channelized Right Turn

Source: City of Los Angeles Supplemental Street Design Guide

6.3 Exclusive Left-Turn Lanes

While some principles for right-turn lanes apply to left-turn lanes, there are inherent differences between them.

6.3.1 When Exclusive Left-Turn Lanes are Beneficial

There are several situations when a left-turn lane should be built on the roadway. For example, if on a multilane roadway and there is a median opening that is serving a driveway, there should be a left-turn lane to allow for vehicles to move safely out the way of the through traffic. Exclusive left-turn lanes should be considered at any location serving the public, especially on curves and where speeds are in excess of 45 mph. The *AASHTO Green Book* contains guidance on this issue. However, the guidelines were developed based on delay rather than crash avoidance. Safety is the main reason behind exclusive left-turn lanes.

6.3.2 When to Consider Exclusive Left-Turn Lanes at Unsignalized Intersections and Driveways

Left-turn lane warrants at unsignalized intersections and driveways were included in *NCHRP Report 745, Left-Turn Accommodations at Unsignalized Intersections*. The recommended left-turn lane warrants are provided for the following roadway facilities.

- Rural, two-lane highways (***Figure 78***)
- Rural, four-lane highways (***Figure 79***)
- Urban and suburban roadways (***Figure 80***)

Alternatively, the left-turn warrants based on *NCHRP Report 457*, (See ***Figure 81***) can be used if it is found to be more appropriate and reasonable for a local condition. Engineering judgment should be used when deciding between the NCHRP 745, and NCHRP 457 guidelines.

Figure 78 | Left-Turn Lane Warrants for Two-Lane Rural Roadways (Unsignalized)

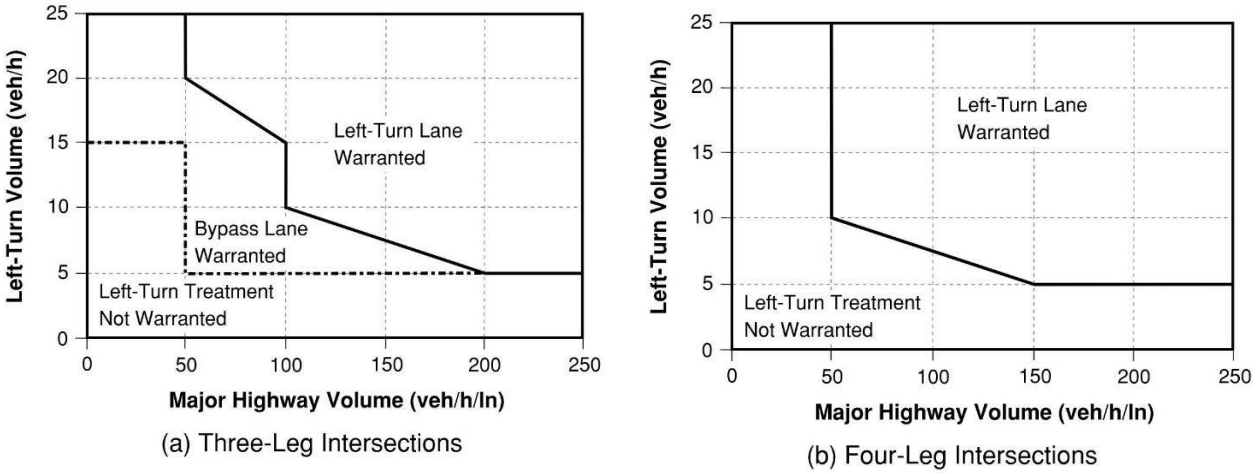


Figure 79 | Left-Turn Lane Warrants for Four-Lane Rural Roadways (Unsignalized)

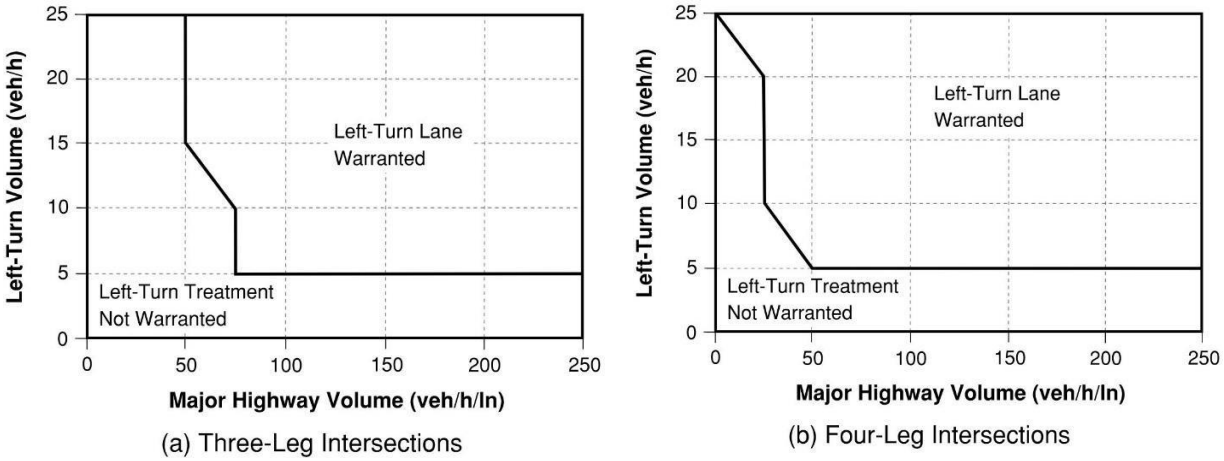
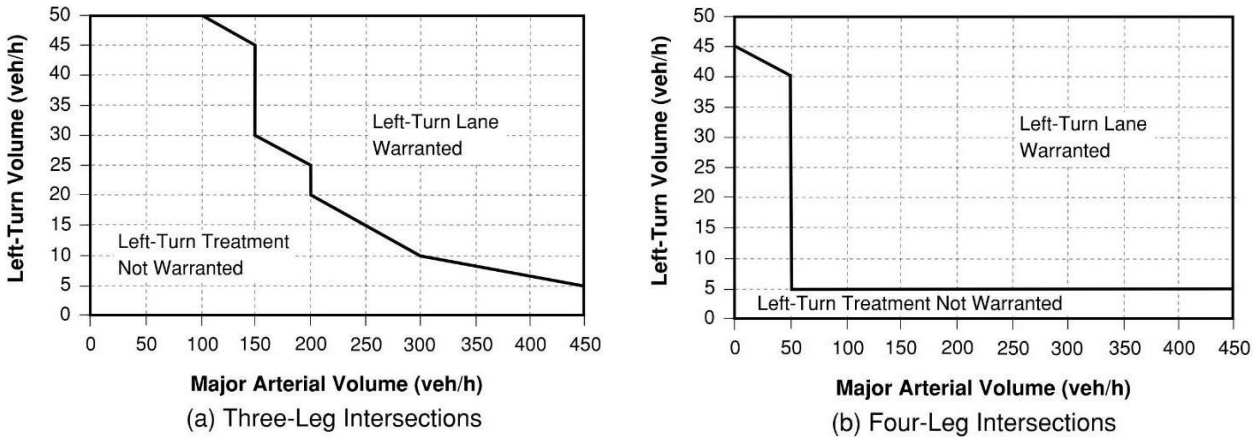


Figure 80 | Left-Turn Lane Warrants for Urban and Suburban Arterials



Source: NCHRP Report 745

APPENDIX E

Traffic Operational Analysis

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	196	11	9	244	29	23	43	13	54	56	11
Future Vol, veh/h	3	196	11	9	244	29	23	43	13	54	56	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	150	-	-	-	-	130	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	233	13	11	290	35	27	51	15	64	67	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	325	0	0	246	0	0	592	593	240	595	583	308
Stage 1	-	-	-	-	-	-	247	247	-	329	329	-
Stage 2	-	-	-	-	-	-	345	346	-	266	254	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1235	-	-	1320	-	-	418	418	799	416	424	732
Stage 1	-	-	-	-	-	-	757	702	-	684	646	-
Stage 2	-	-	-	-	-	-	670	635	-	739	697	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1235	-	-	1320	-	-	342	413	799	354	419	732
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	413	-	354	419	-
Stage 1	-	-	-	-	-	-	754	700	-	678	641	-
Stage 2	-	-	-	-	-	-	585	630	-	670	695	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.11	0.25	15.55	18.89
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	385	799	25	-	-	1320	-	-	402
HCM Lane V/C Ratio	0.204	0.019	0.003	-	-	0.008	-	-	0.359
HCM Ctrl Dly (s/v)	16.7	9.6	7.9	0	-	7.8	-	-	18.9
HCM Lane LOS	C	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.8	0.1	0	-	-	0	-	-	1.6

Intersection	
Int Delay, s/veh	10.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	147	14	20	237	49	61	188	46	31	41	8
Future Vol, veh/h	7	147	14	20	237	49	61	188	46	31	41	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	150	-	-	-	-	130	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	162	15	22	260	54	67	207	51	34	45	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	314	0	0	177	0	0	512	543	169	612	524	287
Stage 1	-	-	-	-	-	-	185	185	-	331	331	-
Stage 2	-	-	-	-	-	-	327	358	-	280	192	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1246	-	-	1399	-	-	473	447	875	406	458	752
Stage 1	-	-	-	-	-	-	817	747	-	682	645	-
Stage 2	-	-	-	-	-	-	686	628	-	726	741	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1246	-	-	1399	-	-	412	437	875	199	448	752
Mov Cap-2 Maneuver	-	-	-	-	-	-	412	437	-	199	448	-
Stage 1	-	-	-	-	-	-	812	742	-	671	635	-
Stage 2	-	-	-	-	-	-	620	618	-	491	736	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.33	0.5	24.12	21.13
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	430	875	74	-	-	1399	-	-	310
HCM Lane V/C Ratio	0.636	0.058	0.006	-	-	0.016	-	-	0.283
HCM Ctrl Dly (s/v)	26.8	9.4	7.9	0	-	7.6	-	-	21.1
HCM Lane LOS	D	A	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	4.3	0.2	0	-	-	0	-	-	1.1

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	196	11	9	244	29	23	43	13	54	56	11
Future Vol, veh/h	3	196	11	9	244	29	23	43	13	54	56	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	150	-	-	-	-	130	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	233	13	11	290	35	27	51	15	64	67	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	325	0	0	246	0	0	592	593	240	595	583	308
Stage 1	-	-	-	-	-	-	247	247	-	329	329	-
Stage 2	-	-	-	-	-	-	345	346	-	266	254	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1235	-	-	1320	-	-	418	418	799	416	424	732
Stage 1	-	-	-	-	-	-	757	702	-	684	646	-
Stage 2	-	-	-	-	-	-	670	635	-	739	697	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1235	-	-	1320	-	-	342	414	799	354	420	732
Mov Cap-2 Maneuver	-	-	-	-	-	-	342	414	-	354	420	-
Stage 1	-	-	-	-	-	-	755	700	-	678	641	-
Stage 2	-	-	-	-	-	-	585	630	-	670	695	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.11	0.25	15.54	18.88
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	385	799	1235	-	-	1320	-	-	402
HCM Lane V/C Ratio	0.204	0.019	0.003	-	-	0.008	-	-	0.358
HCM Ctrl Dly (s/v)	16.7	9.6	7.9	-	-	7.8	-	-	18.9
HCM Lane LOS	C	A	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.8	0.1	0	-	-	0	-	-	1.6

Intersection	
Int Delay, s/veh	10.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	147	14	20	237	49	61	188	46	31	41	8
Future Vol, veh/h	7	147	14	20	237	49	61	188	46	31	41	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	150	-	-	-	-	130	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	162	15	22	260	54	67	207	51	34	45	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	314	0	0	177	0	0	512	543	169	612	524	287
Stage 1	-	-	-	-	-	-	185	185	-	331	331	-
Stage 2	-	-	-	-	-	-	327	358	-	280	192	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1246	-	-	1399	-	-	473	447	875	406	458	752
Stage 1	-	-	-	-	-	-	817	747	-	682	645	-
Stage 2	-	-	-	-	-	-	686	628	-	726	741	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1246	-	-	1399	-	-	412	437	875	199	448	752
Mov Cap-2 Maneuver	-	-	-	-	-	-	412	437	-	199	448	-
Stage 1	-	-	-	-	-	-	812	742	-	671	635	-
Stage 2	-	-	-	-	-	-	620	618	-	491	737	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.33	0.5	24.09	21.11
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	431	875	1246	-	-	1399	-	-	310
HCM Lane V/C Ratio	0.635	0.058	0.006	-	-	0.016	-	-	0.283
HCM Ctrl Dly (s/v)	26.8	9.4	7.9	-	-	7.6	-	-	21.1
HCM Lane LOS	D	A	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	4.3	0.2	0	-	-	0	-	-	1.1

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	196	11	9	244	29	23	43	13	54	56	11
Future Vol, veh/h	3	196	11	9	244	29	23	43	13	54	56	11
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	233	13	11	290	35	27	51	15	64	67	13
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay, s/veh	12.8	13.6	10.2	11.7
HCM LOS	B	B	B	B

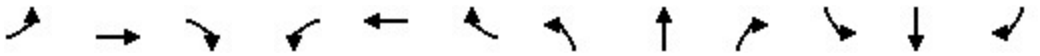
Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	35%	0%	1%	100%	0%	45%
Vol Thru, %	65%	0%	93%	0%	89%	46%
Vol Right, %	0%	100%	5%	0%	11%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	13	210	9	273	121
LT Vol	23	0	3	9	0	54
Through Vol	43	0	196	0	244	56
RT Vol	0	13	11	0	29	11
Lane Flow Rate	79	15	250	11	325	144
Geometry Grp	5	5	4b	5	5	4b
Degree of Util (X)	0.145	0.025	0.404	0.018	0.503	0.257
Departure Headway (Hd)	6.644	5.755	5.816	6.156	5.575	6.426
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	540	621	620	582	647	559
Service Time	4.387	3.498	3.85	3.886	3.306	4.467
HCM Lane V/C Ratio	0.146	0.024	0.403	0.019	0.502	0.258
HCM Control Delay, s/veh	10.5	8.6	12.8	9	13.8	11.7
HCM Lane LOS	B	A	B	A	B	B
HCM 95th-tile Q	0.5	0.1	2	0.1	2.8	1

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	147	14	20	237	49	61	188	46	31	41	8
Future Vol, veh/h	7	147	14	20	237	49	61	188	46	31	41	8
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	162	15	22	260	54	67	207	51	34	45	9
Number of Lanes	0	1	0	1	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	2	1
HCM Control Delay, s/veh	12.6	14.9	14.1	11.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	24%	0%	4%	100%	0%	39%
Vol Thru, %	76%	0%	88%	0%	83%	51%
Vol Right, %	0%	100%	8%	0%	17%	10%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	249	46	168	20	286	80
LT Vol	61	0	7	20	0	31
Through Vol	188	0	147	0	237	41
RT Vol	0	46	14	0	49	8
Lane Flow Rate	274	51	185	22	314	88
Geometry Grp	5	5	4b	5	5	4b
Degree of Util (X)	0.486	0.078	0.328	0.041	0.526	0.166
Departure Headway (Hd)	6.398	5.563	6.398	6.65	6.021	6.805
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	561	641	559	537	597	524
Service Time	4.156	3.321	4.461	4.403	3.774	4.883
HCM Lane V/C Ratio	0.488	0.08	0.331	0.041	0.526	0.168
HCM Control Delay, s/veh	15.1	8.8	12.6	9.7	15.3	11.2
HCM Lane LOS	C	A	B	A	C	B
HCM 95th-tile Q	2.6	0.3	1.4	0.1	3.1	0.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	196	11	9	244	29	23	43	13	54	56	11
Future Volume (veh/h)	3	196	11	9	244	29	23	43	13	54	56	11
Initial Q (Qb), 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		1.00	1.00		1.00	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	233	13	11	290	35	27	51	15	64	67	13
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	698	38	657	655	79	287	493	634	355	344	58
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	7	1745	96	1134	1637	198	449	1233	1585	600	859	145
Grp Volume(v), veh/h	250	0	0	11	0	325	78	0	15	144	0	0
Grp Sat Flow(s),veh/h/ln	1848	0	0	1134	0	1835	1682	0	1585	1604	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	5.8	0.0	0.0	0.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.2	0.0	0.0	0.2	0.0	5.8	1.2	0.0	0.3	2.3	0.0	0.0
Prop In Lane	0.02		0.05	1.00		0.11	0.35		1.00	0.44		0.09
Lane Grp Cap(c), veh/h	820	0	0	657	0	734	781	0	634	757	0	0
V/C Ratio(X)	0.30	0.00	0.00	0.02	0.00	0.44	0.10	0.00	0.02	0.19	0.00	0.00
Avail Cap(c_a), veh/h	820	0	0	657	0	734	781	0	634	757	0	0
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(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.4	0.0	0.0	8.2	0.0	9.8	8.5	0.0	8.2	8.8	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	1.9	0.3	0.0	0.1	0.6	0.0	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	2.8	0.0	0.0	0.1	0.0	4.0	0.8	0.0	0.1	1.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	10.3	0.0	0.0	8.2	0.0	11.8	8.7	0.0	8.2	9.3	0.0	0.0
LnGrp LOS	B			A		B	A		A	A		
Approach Vol, veh/h		250			336			93			144	
Approach Delay, s/veh		10.3			11.7			8.6			9.3	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0				
Max Q Clear Time (g_c+I1), s		3.2		6.2		4.3		7.8				
Green Ext Time (p_c), s		0.3		1.1		0.6		1.4				

Intersection Summary	
HCM 7th Control Delay, s/veh	10.5
HCM 7th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	147	14	20	237	49	61	188	46	31	41	8
Future Volume (veh/h)	7	147	14	20	237	49	61	188	46	31	41	8
Initial Q (Qb), 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		1.00	1.00		1.00	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	162	15	22	260	54	67	207	51	34	45	9
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	662	59	681	601	125	214	590	634	279	338	58
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	23	1656	148	1207	1502	312	286	1474	1585	420	844	144
Grp Volume(v), veh/h	185	0	0	22	0	314	274	0	51	88	0	0
Grp Sat Flow(s),veh/h/ln	1827	0	0	1207	0	1814	1760	0	1585	1408	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	0.9	0.1	0.0	0.0
Cycle Q Clear(g_c), s	3.0	0.0	0.0	0.3	0.0	5.7	4.6	0.0	0.9	4.7	0.0	0.0
Prop In Lane	0.04		0.08	1.00		0.17	0.24		1.00	0.39		0.10
Lane Grp Cap(c), veh/h	814	0	0	681	0	726	804	0	634	674	0	0
V/C Ratio(X)	0.23	0.00	0.00	0.03	0.00	0.43	0.34	0.00	0.08	0.13	0.00	0.00
Avail Cap(c_a), veh/h	814	0	0	681	0	726	804	0	634	674	0	0
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(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.0	0.0	0.0	8.2	0.0	9.8	9.5	0.0	8.4	8.5	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.1	0.0	1.9	1.2	0.0	0.2	0.4	0.0	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	2.0	0.0	0.0	0.2	0.0	3.8	3.1	0.0	0.5	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.7	0.0	0.0	8.3	0.0	11.7	10.6	0.0	8.6	8.9	0.0	0.0
LnGrp LOS	A			A		B	B		A	A		
Approach Vol, veh/h		185			336			325			88	
Approach Delay, s/veh		9.7			11.5			10.3			8.9	
Approach LOS		A			B			B			A	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	22.5	22.5	22.5	22.5
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	18.0	18.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	6.6	5.0	6.7	7.7
Green Ext Time (p_c), s	1.3	0.8	0.3	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	10.5
HCM 7th LOS	B

Intersection	
Intersection Delay, s/veh	5.1
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	250	336	93	144
Demand Flow Rate, veh/h	255	343	95	146
Vehicles Circulating, veh/h	144	84	307	335
Vehicles Exiting, veh/h	337	318	92	92
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.0	5.3	4.5	5.1
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	255	343	95	146
Cap Entry Lane, veh/h	1191	1267	1009	981
Entry HV Adj Factor	0.982	0.980	0.979	0.984
Flow Entry, veh/h	250	336	93	144
Cap Entry, veh/h	1170	1241	987	965
V/C Ratio	0.214	0.271	0.094	0.149
Control Delay, s/veh	5.0	5.3	4.5	5.1
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	1

Intersection	
Intersection Delay, s/veh	5.9
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	185	336	325	88
Demand Flow Rate, veh/h	188	342	331	90
Vehicles Circulating, veh/h	103	287	208	355
Vehicles Exiting, veh/h	342	252	83	274
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.2	7.0	6.1	4.7
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
A (Intercept)	1380	1380	1380	1380
B (Slope)	1.02e-3	1.02e-3	1.02e-3	1.02e-3
Entry Flow, veh/h	188	342	331	90
Cap Entry Lane, veh/h	1242	1030	1116	961
Entry HV Adj Factor	0.983	0.982	0.981	0.979
Flow Entry, veh/h	185	336	325	88
Cap Entry, veh/h	1221	1011	1095	940
V/C Ratio	0.151	0.332	0.297	0.094
Control Delay, s/veh	4.2	7.0	6.1	4.7
LOS	A	A	A	A
95th %tile Queue, veh	1	1	1	0